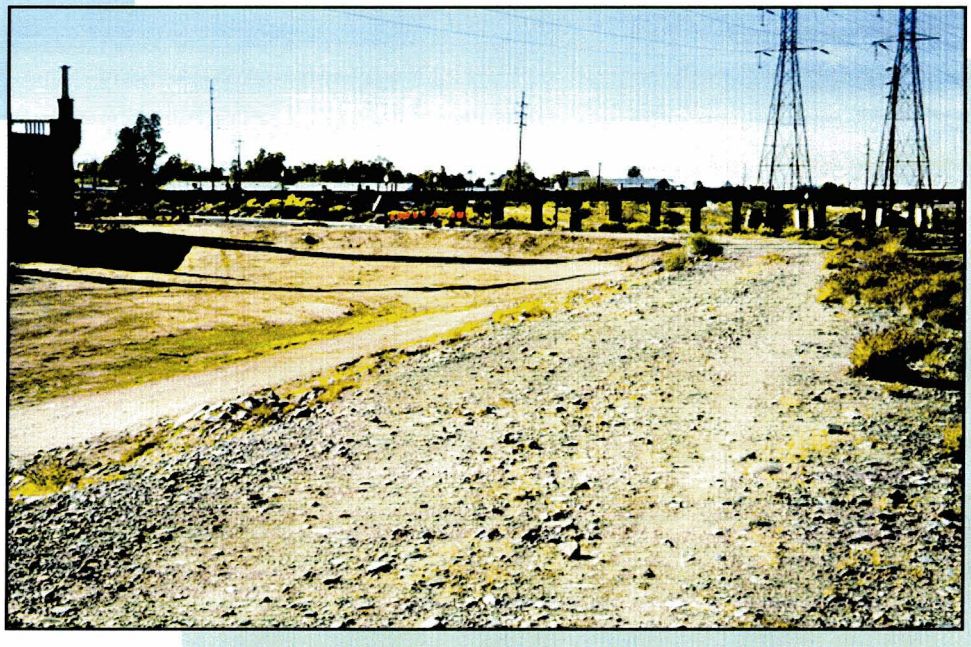
South Bank Levee Removal/Realignment

Application for Conditional Letter of Map Revision



Submitted to

Federal Emergency Management Agency

Submitted by

City of Tempe, Arizona

February 1999

LETTER OF TRANSMITTAL

Baker

To:	Chris Messer	S.O. No.	
	City of Tempe	Project:	Rio Salado – South Bank Levee Removal/Realignment
	Planning Department	Date:	February 19, 1999

We are forwarding the following: ☑ Attached Under Separate Cover

	NO. COPIES	TITLE OR DESCRIPTION	
	1 copy	Conditional Letter of Map Revision Application for the South Bank Levee Removal/Realignment Project	

Message:

Mr. Messer,

Attached is a copy of the Conditional Letter of Map Revision application which we have prepared for the South Bank Levee Removal/Realignment project. The original copy of this report is being submitted to the Federal Emergency Management Agency for their review. If you have any questions please call me at (602) 798-7519.

Thanks.

Sincerely,
Brian Calvert

THESE ARE TRANSMITTED as checked below:

As requested
For review and comment
☑ For your information

No exception taken
Rejected - See remarks
Proceed subject to corrections noted

Revise and resubmit
Submit specified items
_____

GENERAL COMMENTS:

MICHAEL BAKER JR., INC.

By: Brian Calvert
Title: Assistant Planner II
Page 1 of 1

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8200

Tempe

Public Works
Department

February 12, 1999

Mr. Michael Grimm, Project Officer
Federal Emergency Management Agency
Mitigation Directorate
Hazard Identification and Risk Assessment Division
500 C Street, SW
Washington, D.C. 20472

RE: South Bank Levee Removal/Realignmen t
Conditional Letter of Map Revision

Dear Mr. Grimm:

Enclosed herewith is our Conditional Letter of Map Revision application for the above referenced project.

This project involves the following modifications along the Salt River: 1) the removal and relocation of a levee along the south bank; 2) the construction of a seat wall along the north and south banks; and 3) the construction of two inflatable dams. There is currently a Letter of Map Revision (LOMR) application, which FEMA is reviewing for the Salt and Gila Rivers, that was submitted by the Flood Control District of Maricopa County. We have based our analyses on the modeling that was submitted with the Salt and Gila Rivers LOMR. In other words, we have considered the modeling and mapping submitted with the Salt and Gila Rivers LOMR as the effective study for this CLOMR request. It is our understanding that the Salt and Gila Rivers LOMR has been approved and that it should be issued shortly. In addition, as a condition of our CLOMR we have not submitted the necessary documentation to certify the realigned levee with regard to Section 65.10 of the National Flood Insurance Program and Related Regulations. This data will be supplied when our application for a LOMR is submitted following our anticipated receipt of this CLOMR and the completion of the levee, seat wall and dam projects.

Therefore, we are anticipating that this CLOMR will be issued: 1) based on the approval of the Salt and Gila Rivers LOMR; 2) with the condition that as a part of our subsequent LOMR application we will supply certification of the levee as outlined in Section 65.10 and the flood warning procedures related to the operation of the dams; and 3) as-built plans for the inflatable dams and seat walls. For more detailed information regarding this project please refer to the following Project Summary.

We hope that you will find this submittal complete. Please call me at (602) 350-8200 should you have any questions or require additional information.

Sincerely,

James E. Bond

James E. Bond, P.E.
Principal Civil Engineer

Project Summary and Tables

Project Summary

Overview

This project involves the following projects along the Salt River: 1) the removal and relocation of a levee along the south bank; 2) the construction of a seat wall along the north and south banks; and 3) the construction of two inflatable dams. There is currently a Letter of Map Revision (LOMR) application which FEMA is reviewing for the Salt and Gila Rivers that was submitted by the Flood Control District of Maricopa County (FCDMC). We have based our analyses on the modeling that was submitted with the Salt and Gila Rivers LOMR. In other words, we have considered the modeling and mapping submitted with the Salt and Gila Rivers LOMR as the effective study for this CLOMR request. It is our understanding that the review of the Salt and Gila Rivers LOMR has been completed and that a map revision should be issued shortly. In addition, as a condition of our CLOMR we have not submitted the necessary documentation to certify the realigned levee with regard to Section 65.10 of the National Flood Insurance Program Regulations. These data will be submitted when our application for a LOMR is submitted following our anticipated receipt of this CLOMR and the completion of the levee, seat wall and dam projects. Therefore, we are anticipating that this CLOMR will be issued: 1) based on the approval of the Salt and Gila Rivers LOMR; 2) with the condition that as a part of our subsequent LOMR application we will supply the required data in support of the levee as outlined in Section 65.10 and the flood warning procedures related to the operation of the dams; and 3) as-built plans for the inflatable dams and seat walls. Along the north bank of the river an additional levee project will be undertaken by the City of Tempe in the future. A final decision has not been made regarding the specifics of this project, so a CLOMR will be submitted in the near future for this north bank project. The seat walls are not being proposed as providing any type of protection during a flood event and thus no certification is being pursued for these structures.

Levee

The levee that is being removed and realigned as part of this project is located along the south bank of the Salt River from a point approximately 250 feet upstream of cross section 221.06 to a point approximately 75 feet upstream of cross section 221.31. The levee lowering extends from the downstream end of the levee to just downstream of Mill Avenue (North Bound) in the vicinity of cross section 221.24. The levee realignment extends from just downstream of Mill Avenue (North Bound) to a point approximately 75 feet upstream of cross section 221.31. Please refer to map sheet 1 of 4 for a graphical depiction of the location of the levee removal. No technical data or certification has been submitted as a part of this CLOMR application. Once the project is completed and a LOMR is applied for, all data necessary to certify the levee in accordance with Section 65.10 of the FEMA Regulations will be submitted to FEMA.

Inflatable Dams/Seat Walls

Two inflatable dam structures have been included in the HEC-RAS modeling at cross sections 220.752 and 222.68. The Salt River is generally dry due to the construction of Roosevelt Dam. In the unlikely event of a flood these dams are designed to be deflated to let flood waters pass. As a condition of the anticipated CLOMR, the City of Tempe will provide "as-built" plans for these inflatable dams when a subsequent LOMR is applied for as well as the adopted flood warning procedure associated with the deflating of these dams in the event of a flood event. The seat walls located along the north and south sides of the river extend from the downstream to the upstream inflatable dams.

Hydraulic Modeling

For this CLOMR the data that was submitted in support of a LOMR request by FCDMC was used as the effective study for both modeling and mapping. HEC-RAS Version 2.2 was used for all hydraulic analyses. The cross sections revised for this levee removal/realignment project, seat wall and inflatable dam additions extend from cross sections 220.73 to 222.65 with cross sections 220.735 through 220.756 and 222.660 through 222.700 being added. The effective geometry from the FCDMC model for the river bottom was used for this CLOMR application with the exception of cross sections 221.24 and 221.26. The FCDMC showed large scour holes at these cross sections which do not currently exist and thus these were removed from the modeling. New topography and survey data were used to update the channel sides and overbank data in the HEC-RAS model in the 220.73 to 221.31 reach. In addition, the seat wall was added along both sides of the river. Along the south overbank new topography dated July 1996, was used which is reflected on map sheet 1 of 4 which has been submitted as part of this application. Along the north overbank survey data was used between cross sections 220.82 and 221.26 which was generated by the City of Tempe in December 1998.

Bridge modeling, "n" values and cross section distances have not been changed from those shown in the HEC-RAS model submitted by FCDMC with the exception of the data reflected for Mill Avenue (South Bound) at cross section 221.195. The FCDMC model reflected 9 piers at this bridge with 7 of these piers being located between the river bank stations. However, the existing Mill Avenue (South Bound) bridge only has 8 piers (see enclosed survey notes) with 6 of these piers being located between the river bank station. Thus the revised model submitted with this CLOMR application reflects this change. In addition, a revised effective model has also been prepared which reflects the modifications to the Mill Avenue (South Bound) bridge. The comparisons between the effective (FCDMC) model and the revised effective model are shown on tables 1 through 3. Manning's "n" values used for the inflatable dams reflect values of 0.015 for concrete sections and 0.032 for rip-rap sections. The seat walls along the north and south overbanks between cross sections 220.82 and 221.26 have been established in the modeling as the limits of effective flow. Upstream of these sections the 100-year water surface elevation is too far above these seat walls for them to be considered effective flow limits.

The dam structures have been modeled as bridges since during a flood event the inflatable bladders will be deflated but the piers will remain. There is no road or structure along the top of the dams, however, one has been reflected in the modeling which reflects a high top of road and low chord elevation so that the piers would be recognized by the model. The floodway has been modified from that shown in the FCDMC model due to the addition of the seat walls and the revised channel bank/overbank data. The floodway widths match the revised effective model at cross section 220.73 at the downstream end and at cross section 223.08 at the upstream end although the floodway widths essentially tie back in to the revised effective widths at cross section 221.4 (see attached Table 6). The revised modeling reflects a difference in 100-year water surface elevations between cross sections 220.82 and 223.08 when compared to the revised effective model which range from -0.11 feet to 0.61 foot (see attached Table 4). Attached Tables 5 and 6 reflect the difference in floodway water surface elevations and floodway widths respectively between the revised effective HEC-RAS model and the HEC-RAS model submitted in support of this CLOMR

Mapping

As stated above, new mapping has been generated for the south overbank area along the Salt River in the vicinity of this project. This more detailed topography with a contour interval of 1 foot was used to delineate the new floodplain boundary based upon the removal/realignment of the south bank

levee. As shown on map sheet 1 of 4 an area which was previously located in shaded Zone X will now be located in the 100-year floodplain. For the purpose of tying into the mapping submitted by FCDMC (considered the effective FIRM map for this CLOMR) the mapping submitted by FCDMC (FCDMC map sheet 35) was used as a base map. The south 100-year boundary delineated on map sheet 1 of 4 was referenced into the FCDMC mapping and is thus reflected on map sheets 2 and 3 of 4. The revised floodway boundaries have also been delineated on map sheets 2 and 3 of 4. Map sheet 2 of 4 reflects the effective, along with the revised, floodplain and floodway boundaries. Map sheet 3 of 4 is similar to map sheet 2 of 4 except that the effective floodplain and floodway boundaries to be removed have been deleted. In other words, map sheet 3 of 4 reflects the anticipated 100-year floodplain and floodway boundaries following the completion of the levee removal/realignment. The revisions to the 100-year floodplain on submitted map sheets 2 and 3 of 4 do not extend above cross section 221.50 because the change in the 100-year water surface elevations from cross sections 221.50 to 223.08 are only -0.11 to 0.07 foot and thus cannot be reflected on the mapping. In the reach affected by the upstream inflatable dam the difference in elevations is 0.03 to 0.04 foot which cannot be reflected on the 4 foot contour mapping and the difference in floodway width is too small to be reflected on the mapping as well. However, the location of BFE 1163 needs to be relocated closer to cross section 222.83 and the location of BFE 1162 needs to be located closer to cross section 222.55 than shown on the FCDMC mapping. Therefore, map sheet 4 of 4 is a copy of a section of FCMCD map sheets 36 and 37 which shows the relocation of BFEs 1162 and 1163.

Table 1 - City of Tempe, Arizona South Bank Levee Removal/Realignment
Conditional Letter of Map Revison Application

Effective		Revised Effective		100-Year CWSEL
Cross Section	100-Year CWSEL	Cross Section	100-Year CWSEL	Difference (Revised Effective - Effective)
220.250	1143.14	220.250	1143.14	0.00
220.350	1144.24	220.350	1144.24	0.00
220.450	1144.97	220.450	1144.97	0.00
220.540	1145.84	220.540	1145.84	0.00
220.630	1146.74	220.630	1146.74	0.00
220.730	1147.59	220.730	1147.59	0.00
220.820	1148.53	220.820	1148.53	0.00
220.920	1149.39	220.920	1149.39	0.00
221.020	1150.36	221.020	1150.36	0.00
221.050	1150.84	221.050	1150.84	0.00
221.055 BR D	1150.76	221.055 BR D	1150.76	0.00
221.055 BR U	1150.80	221.055 BR U	1150.80	0.00
221.060	1151.07	221.060	1151.07	0.00
221.190	1151.80	221.190	1151.80	0.00
221.195 BR D	1151.60	221.195 BR D	1151.67	0.07
221.195 BR U	1151.72	221.195 BR U	1151.78	0.06
221.200	1152.17	221.200	1152.10	-0.07
221.240	1152.39	221.240	1152.32	-0.07
221.25 BR D	1152.09	221.25 BR D	1152.15	0.06
221.25 BR U	1152.18	221.25 BR U	1152.26	0.08
221.260	1152.72	221.260	1152.66	-0.06
221.310	1152.32	221.310	1152.25	-0.07
221.400	1153.68	221.400	1153.64	-0.04
221.500	1154.59	221.500	1154.56	-0.03
221.610	1155.68	221.610	1155.65	-0.03
221.700	1156.71	221.700	1156.69	-0.02
221.800	1157.35	221.800	1157.34	-0.01
221.890	1158.07	221.890	1158.06	-0.01
221.990	1158.99	221.990	1158.98	-0.01
222.080	1159.93	222.080	1159.92	-0.01
222.085 BR D	1159.86	222.085 BR D	1159.85	-0.01
222.085 BR U	1159.97	222.085 BR U	1159.96	-0.01
222.090	1160.14	222.090	1160.13	-0.01
222.170	1160.20	222.170	1160.19	-0.01
222.270	1160.64	222.270	1160.63	-0.01
222.360	1161.29	222.360	1161.28	-0.01
222.450	1161.93	222.450	1161.92	-0.01
222.550	1162.10	222.550	1162.09	-0.01
222.650	1162.23	222.650	1162.22	-0.01
222.740	1162.59	222.740	1162.58	-0.01
222.830	1162.90	222.830	1162.89	-0.01
222.930	1163.05	222.930	1163.05	0.00
223.020	1163.55	223.020	1163.54	-0.01
223.080	1163.07	223.080	1163.07	0.00

Table 2 - City of Tempe, Arizona South Bank Levee Removal/Realignment
Conditional Letter of Map Revison Application

Effective		Revised Effective		100-Year CWSEL
Cross Section	Floodway CWSEL	Cross Section	Floodway CWSEL	Difference (Revised Effective - Effective)
220.250	1143.14	220.250	1143.14	0.00
220.350	1144.24	220.350	1144.24	0.00
220.450	1144.97	220.450	1144.97	0.00
220.540	1145.84	220.540	1145.84	0.00
220.630	1146.74	220.630	1146.74	0.00
220.730	1147.59	220.730	1147.59	0.00
220.820	1148.53	220.820	1148.53	0.00
220.920	1149.39	220.920	1149.39	0.00
221.020	1150.36	221.020	1150.36	0.00
221.050	1150.84	221.050	1150.84	0.00
221.055 BR D	1150.76	221.055 BR D	1150.76	0.00
221.055 BR U	1150.80	221.055 BR U	1150.80	0.00
221.060	1151.07	221.060	1151.07	0.00
221.190	1151.80	221.190	1151.80	0.00
221.195 BR D	1151.60	221.195 BR D	1151.67	0.07
221.195 BR U	1151.72	221.195 BR U	1151.77	0.05
221.200	1152.17	221.200	1152.10	-0.07
221.240	1152.39	221.240	1152.32	-0.07
221.25 BR D	1152.09	221.25 BR D	1152.15	0.06
221.25 BR U	1152.19	221.25 BR U	1152.26	0.07
221.260	1152.72	221.260	1152.65	-0.07
221.310	1152.32	221.310	1152.25	-0.07
221.400	1153.69	221.400	1153.64	-0.05
221.500	1154.59	221.500	1154.56	-0.03
221.610	1155.68	221.610	1155.65	-0.03
221.700	1156.71	221.700	1156.69	-0.02
221.800	1157.35	221.800	1157.34	-0.01
221.890	1158.07	221.890	1158.06	-0.01
221.990	1158.99	221.990	1158.98	-0.01
222.080	1159.93	222.080	1159.92	-0.01
222.085 BR D	1159.86	222.085 BR D	1159.85	-0.01
222.085 BR U	1159.97	222.085 BR U	1159.96	-0.01
222.090	1160.14	222.090	1160.13	-0.01
222.170	1160.20	222.170	1160.19	-0.01
222.270	1160.64	222.270	1160.63	-0.01
222.360	1161.29	222.360	1161.28	-0.01
222.450	1161.93	222.450	1161.92	-0.01
222.550	1162.10	222.550	1162.09	-0.01
222.650	1162.24	222.650	1162.23	-0.01
222.740	1162.60	222.740	1162.60	0.00
222.830	1162.91	222.830	1162.90	-0.01
222.930	1163.06	222.930	1163.06	0.00
223.020	1163.56	223.020	1163.55	-0.01
223.080	1163.07	223.080	1163.07	0.00

Table 3 - City of Tempe, Arizona South Bank Levee Removal/Realignment Conditional Letter of Map Revision Application

Effective		Revised Effective		Floodway Width
Cross Section	Floodway Width	Cross Section	Floodway Width	Difference (Revised Effective - Effective)
220.25	919.65	220.250	919.65	0.00
220.35	916.61	220.350	916.61	0.00
220.45	912.13	220.450	912.13	0.00
220.54	915.24	220.540	915.24	0.00
220.63	906.46	220.630	906.46	0.00
220.73	884.55	220.730	884.55	0.00
220.82	920.30	220.820	920.30	0.00
220.92	906.21	220.920	906.21	0.00
221.02	900.19	221.020	900.19	0.00
221.05	908.64	221.050	908.64	0.00
221.06	921.95	221.060	921.95	0.00
221.19	968.92	221.190	968.92	0.00
221.2	972.60	221.200	972.40	-0.20
221.24	954.93	221.240	954.69	-0.24
221.26	956.14	221.260	955.90	-0.24
221.31	910.15	221.310	909.14	-1.01
221.4	949.01	221.400	948.27	-0.74
221.5	928.67	221.500	928.44	-0.23
221.61	926.14	221.610	925.98	-0.16
221.7	939.68	221.700	939.54	-0.14
221.8	935.46	221.800	935.33	-0.13
221.89	986.39	221.890	986.31	-0.08
221.99	1012.33	221.990	1012.25	-0.08
222.08	1039.29	222.080	1039.21	-0.08
222.09	1041.24	222.090	1041.16	-0.08
222.17	1009.91	222.170	1009.84	-0.07
222.27	1077.23	222.270	1077.17	-0.06
222.36	1182.81	222.360	1182.76	-0.05
222.45	1388.01	222.450	1387.97	-0.04
222.55	1270.54	222.550	1270.53	-0.01
222.65	1079.50	222.650	1079.50	0.00
222.74	1038.09	222.740	1038.09	0.00
222.83	963.41	222.830	963.41	0.00
222.93	945.76	222.930	945.76	0.00
223.02	1092.69	223.020	1092.69	0.00
223.08	1023.07	223.080	1023.07	0.00

Table 4 - City of Tempe, Arizona South Bank Levee Removal/Realignment
Conditional Letter of Map Revison Application

Revised Effective		Revised Model for CLOMR		100-Year CWSEL
Cross Section	100-Year CWSEL	Cross Section	100-Year CWSEL	Difference (CLOMR Model - Revised Effective)
220.250	1143.14	220.250	1143.14	0.00
220.350	1144.24	220.350	1144.24	0.00
220.450	1144.97	220.450	1144.97	0.00
220.540	1145.84	220.540	1145.84	0.00
220.630	1146.74	220.630	1146.74	0.00
220.730	1147.59	220.730	1147.59	0.00
Cross Sections Not Included in Effective Model Which Have Been Added to Model the Downstream Dam		220.735	1148.38	Cross Sections Not Included in Effective Model Which Have Been Added to Model the Downstream Dam
		220.740	1148.42	
		220.750	1147.99	
		220.752 BR D	1147.52	
		220.752 BR U	1147.88	
		220.755	1148.62	
		220.756	1149.39	
220.820	1148.53	220.820	1149.14	0.61
220.920	1149.39	220.920	1149.88	0.49
221.020	1150.36	221.020	1150.78	0.42
221.050	1150.84	221.050	1151.12	0.28
221.055 BR D	1150.76	221.055 BR D	1151.02	0.26
221.055 BR U	1150.80	221.055 BR U	1151.10	0.30
221.060	1151.07	221.060	1151.37	0.30
221.190	1151.80	221.190	1151.99	0.19
221.195 BR D	1151.67	221.195 BR D	1151.86	0.19
221.195 BR U	1151.78	221.195 BR U	1151.96	0.18
221.200	1152.10	221.200	1152.27	0.17
221.240	1152.32	221.240	1152.41	0.09
221.25 BR D	1152.15	221.25 BR D	1152.25	0.10
221.25 BR U	1152.26	221.25 BR U	1152.33	0.07
221.260	1152.66	221.260	1152.69	0.03
221.310	1152.25	221.310	1152.48	0.23
221.400	1153.64	221.400	1153.69	0.05
221.500	1154.56	221.500	1154.62	0.06
221.610	1155.65	221.610	1155.71	0.06
221.700	1156.69	221.700	1156.76	0.07
221.800	1157.34	221.800	1157.41	0.07
221.890	1158.06	221.890	1158.07	0.01
221.990	1158.98	221.990	1158.97	-0.01
222.080	1159.92	222.080	1159.88	-0.04
222.085 BR D	1159.85	222.085 BR D	1159.81	-0.04
222.085 BR U	1159.96	222.085 BR U	1159.91	-0.05
222.090	1160.13	222.090	1160.09	-0.04
222.170	1160.19	222.170	1160.17	-0.02
222.270	1160.63	222.270	1160.62	-0.01
222.360	1161.28	222.360	1161.24	-0.04
222.450	1161.92	222.450	1161.83	-0.09
222.550	1162.09	222.550	1161.98	-0.11

Table 4 - City of Tempe, Arizona South Bank Levee Removal/Realignment Conditional Letter of Map Revison Application

222.650	1162.22	222.650	1162.11	-0.11
Cross Sections Not Included in Effective Model Which Have Been Added to Model the Upstream Dam		222.660	1162.14	Cross Sections Not Included in Effective Model Which Have Been Added to Model the Upstream Dam
		222.670	1161.99	
		222.68 BR D	1161.99	
		222.68 BR U	1161.99	
		222.690	1162.07	
		222.695	1162.07	
		222.700	1162.35	
222.740	1162.58	222.740	1162.62	0.04
222.830	1162.89	222.830	1162.93	0.04
222.930	1163.05	222.930	1163.08	0.03
223.020	1163.54	223.020	1163.58	0.04
223.080	1163.07	223.080	1163.07	0.00

Table 5 - City of Tempe, Arizona South Bank Levee Removal/Realignment
Conditional Letter of Map Revison Application

Revised Effective		Revised Model for CLOMR		Floodway CWSEL
Cross Section	Floodway CWSEL	Cross Section	Floodway CWSEL	Difference (CLOMR Model - Revised Effective)
220.250	1143.14	220.250	1143.14	0.00
220.350	1144.24	220.350	1144.24	0.00
220.450	1144.97	220.450	1144.97	0.00
220.540	1145.84	220.540	1145.84	0.00
220.630	1146.74	220.630	1146.74	0.00
220.730	1147.59	220.730	1147.59	0.00
Cross Sections Not Included in Effective Model Which Have Been Added to Model the Downstream Dam		220.735	1148.38	Cross Sections Not Included in Effective Model Which Have Been Added to Model the Downstream Dam
		220.740	1148.42	
		220.750	1147.99	
		220.752 BR D	1147.52	
		220.752 BR U	1147.88	
		220.755	1148.62	
		220.756	1149.39	
220.820	1148.53	220.820	1149.14	0.61
220.920	1149.39	220.920	1149.88	0.49
221.020	1150.36	221.020	1150.78	0.42
221.050	1150.84	221.050	1151.12	0.28
221.055 BR D	1150.76	221.055 BR D	1151.02	0.26
221.055 BR U	1150.80	221.055 BR U	1151.10	0.30
221.060	1151.07	221.060	1151.37	0.30
221.190	1151.80	221.190	1151.99	0.19
221.195 BR D	1151.67	221.195 BR D	1151.86	0.19
221.195 BR U	1151.77	221.195 BR U	1151.96	0.19
221.200	1152.10	221.200	1152.27	0.17
221.240	1152.32	221.240	1152.41	0.09
221.25 BR D	1152.15	221.25 BR D	1152.25	0.10
221.25 BR U	1152.26	221.25 BR U	1152.33	0.07
221.260	1152.65	221.260	1152.69	0.04
221.310	1152.25	221.310	1152.48	0.23
221.400	1153.64	221.400	1153.70	0.06
221.500	1154.56	221.500	1154.62	0.06
221.610	1155.65	221.610	1155.71	0.06
221.700	1156.69	221.700	1156.76	0.07
221.800	1157.34	221.800	1157.41	0.07
221.890	1158.06	221.890	1158.07	0.01
221.990	1158.98	221.990	1158.97	-0.01
222.080	1159.92	222.080	1159.88	-0.04
222.085 BR D	1159.85	222.085 BR D	1159.81	-0.04
222.085 BR U	1159.96	222.085 BR U	1159.91	-0.05
222.090	1160.13	222.090	1160.09	-0.04
222.170	1160.19	222.170	1160.17	-0.02
222.270	1160.63	222.270	1160.62	-0.01
222.360	1161.28	222.360	1161.24	-0.04
222.450	1161.92	222.450	1161.83	-0.09
222.550	1162.09	222.550	1161.98	-0.11

Table 5 - City of Tempe, Arizona South Bank Levee Removal/Realignment Conditional Letter of Map Revison Application

222.650	1162.23	222.650	1162.12	-0.11
Cross Sections Not Included in Effective Model Which Have Been Added to Model the Upstream Dam		222.660	1162.15	Cross Sections Not Included in Effective Model Which Have Been Added to Model the Upstream Dam
		222.670	1162.00	
		222.68 BR D	1162.00	
		222.68 BR U	1162.00	
		222.690	1162.08	
		222.695	1162.08	
		222.700	1162.36	
222.740	1162.60	222.740	1162.63	0.03
222.830	1162.90	222.830	1162.94	0.04
222.930	1163.06	222.930	1163.09	0.03
223.020	1163.55	223.020	1163.58	0.03
223.080	1163.07	223.080	1163.07	0.00

Table 6 - City of Tempe, Arizona South Bank Levee Removal/Realignment Conditional Letter of Map Revision Application

Revised Effective		Revised Model for CLOMR		Floodway Width
Cross Section	Floodway Width	Cross Section	Floodway Width	Difference (CLOMR Model - Revised Effective)
220.250	919.65	220.250	919.65	0.00
220.350	916.61	220.350	916.61	0.00
220.450	912.13	220.450	912.13	0.00
220.540	915.24	220.540	915.24	0.00
220.630	906.46	220.630	906.46	0.00
220.730	884.55	220.730	884.55	0.00
Cross Sections Not Included in Effective Model Which Have Been Added to Model the Downstream Dam		220.735	906.00	Cross Sections Not Included in Effective Model Which Have Been Added to Model the Downstream Dam
		220.740	906.00	
		220.750	906.00	
		220.755	906.00	
		220.756	906.00	
220.820	920.30	220.820	868.33	-51.97
220.920	906.21	220.920	863.27	-42.94
221.020	900.19	221.020	869.89	-30.30
221.050	908.64	221.050	814.05	-94.59
221.060	921.95	221.060	828.94	-93.01
221.190	968.92	221.190	873.37	-95.55
221.200	972.40	221.200	878.26	-94.14
221.240	954.69	221.240	898.86	-55.83
221.260	955.90	221.260	881.94	-73.96
221.310	909.14	221.310	933.69	24.55
221.400	948.27	221.400	949.21	0.94
221.500	928.44	221.500	928.87	0.43
221.610	925.98	221.610	926.34	0.36
221.700	939.54	221.700	940.02	0.48
221.800	935.33	221.800	935.84	0.51
221.890	986.31	221.890	986.37	0.06
221.990	1012.25	221.990	1012.24	-0.01
222.080	1039.21	222.080	1038.85	-0.36
222.090	1041.16	222.090	1040.76	-0.40
222.170	1009.84	222.170	1009.69	-0.15
222.270	1077.17	222.270	1077.08	-0.09
222.360	1182.76	222.360	1182.42	-0.34
222.450	1387.97	222.450	1387.38	-0.59
222.550	1270.53	222.550	1270.18	-0.35
222.650	1079.50	222.650	1079.34	-0.16
Cross Sections Not Included in Effective Model Which Have Been Added to Model the Upstream Dam		222.660	968.00	Cross Sections Not Included in Effective Model Which Have Been Added to Model the Upstream Dam
		222.670	968.00	
		222.690	968.00	
		222.695	968.00	
		222.700	968.00	
222.740	1038.09	222.740	1038.31	0.22
222.830	963.41	222.830	963.59	0.18
222.930	945.76	222.930	945.95	0.19
223.020	1092.69	223.020	1093.00	0.31
223.080	1023.07	223.080	1023.07	0.00

Revision Requestor and Community Official Form, Photographs and Documentation Relating to the Requirements Outlined in 65.12 of the NFIP Regulations

FEDERAL EMERGENCY MANAGEMENT AGENCY **REVISION REQUESTER AND COMMUNITY OFFICIAL FORM**	O.M.B No. 3067-0148 Expires April 30, 2001

Public reporting burden for this form is estimated to average 2.13 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

You are not required to respond to this collection of information unless a valid OMB Control Number is displayed in the upper right corner of this form.

1. REQUESTED RESPONSE FROM FEMA

This request is for a:

☒ CLOMR A letter from FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision, or proposed hydrology changes (See 44 CFR Ch. 1, Parts 60,65 & 72).

☐ LOMR A letter from FEMA officially revising the current NFIP map to show the changes to floodplains, floodway or flood elevations. LOMRs typically decrease flood hazards. (See 44 CFR Ch. 1 Parts 60 & 65.)

☐ Other Describe: _____

2. OVERVIEW

1. The basis for this revision request is (are): (check all that apply)

☒ Physical Change ☒ Improved Methodology/Data ☒ Floodway Revision

☐ Other Describe: _____

Note: A photograph is not required, but is very helpful during review.

2. Flooding Source: Salt River

3. Project Name/Identifier: South Bank Levee Removal/Realignment

4. FEMA zone designations affected: Zone AE
(example: A, AH, AO, A1-A30, A99, AE, V, V1-V30, VE, B, C, D, X)

5. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
Ex: 480301 480287	Katy, City Harris County	TX TX	480301 48201C	0005D 0220G	02/08/83 09/28/90
04013C	Maricopa County and Incorporated Areas	AZ	04013C	2165E* 2170F*	09/04/91* 09/30/95*
	*This CLOMR request is being submitted based on a LOMR request that has been submitted by the Flood Control District of Maricopa County so the map suffixes and dates are not accurate for the information which this CLOMR ties into. Please see Project Summary for more details.				

6. The area of revision encompasses the following types of flooding and structures. Check all that apply.

Types of Flooding	Structures
☒ Riverine	☐ Channelization
☐ Coastal	☒ Levee/Floodwall
☐ Alluvial fan	☒ Bridge/Culvert
☐ Shallow Flooding (e.g. Zones AO and AH)	☐ Dam
☐ Lakes	☐ Fill
☐ Other (describe)	☐ Other (describe)

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

4. ENCROACHMENT INFORMATION

1. Does the State have jurisdiction over the floodway or its adoption by communities participating in the NFIP?
   ☐ Yes ☒ No

'f Yes, attach a copy of a letter notifying the appropriate State agency of the floodway revision and documentation of the .pproval of the revised floodway by the appropriate State agency.

2. Does the development in the floodway cause the 1% annual chance (base) elevation to increase at any location by more than 0.000 feet? ☒ Yes ☐ No ☐ N/A

3. Does the cumulative effect of all development that has occurred since the effective SFHA was originally identified cause the base flood elevation to increase at any location by more than one foot (or other increase limit if community or state has adopted more stringent criteria - even if a floodway has not been delineated by FEMA)? ☐ Yes ☒ No

If the answer to either items is Yes, please attach documentation that all requirements of Section 65.12 of the NFIP regulations have been met, regarding evaluation of alternatives, notice to individual legal property owners, concurrence of CEO, and certification that no insurable structures are impacted.

5. MAINTENANCE RESPONSIBILITY

The community is willing to assume responsibility for ☒ performing ☐ overseeing compliance with the maintenance and operation plans of the South Bank Levee
(Name)
flood control structure. If not performed promptly by an owner other than the community, the community will provide the necessary services without cost to the Federal government.

Operation and maintenance plans are attached. ☐ **Yes** ☒ **No** ☐ **N/A**

6. REVIEW FEE

The review fee for the appropriate request category has been included. ☒ Yes Fee amount: $3,300

OR

This request is based on a federally sponsored flood-control project where 50 percent or more of the project's cost is federally sponsored, or the request is based on detailed hydrologic and hydraulic studies conducted by Federal, State, or local agencies to replace approximate studies conducted by FEMA and shown on the effective FIRM; thus the project is fee exempt. ☐ Yes

Please see Instructions for Fee Amounts

7. SIGNATURE

Note: **I understand that my signature indicates that all information submitted in support of this request is correct**

James E. Bond
Signature of Revision Requester

Mr. Jim Bond, P.E., Principal Civil Engineer
Printed Name and Title of Revision Requester

City of Tempe, Arizona
Company Name

Telephone No.: (602) 350-8200 Date: February 12, 1999

Note: **Signature indicates that the community understands, from the revision requester, the impacts of the revision on flooding conditions in the community.**

Howard C Hargis
Signature of Community Official

Mr. Howard Hargis, P.E., Floodplain Administrator
Printed Name and Title of Community Official

City of Tempe, Arizona
Community Name

Telephone No.: (602) 350-8200 Date: February 12, 1999

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

This certification is in accordance with 44 CFR Ch. 1, Sect 65.2

Robert L Davis
Signature

Mr. Robert L. Davies
Printed Name and Title of Revision Requester

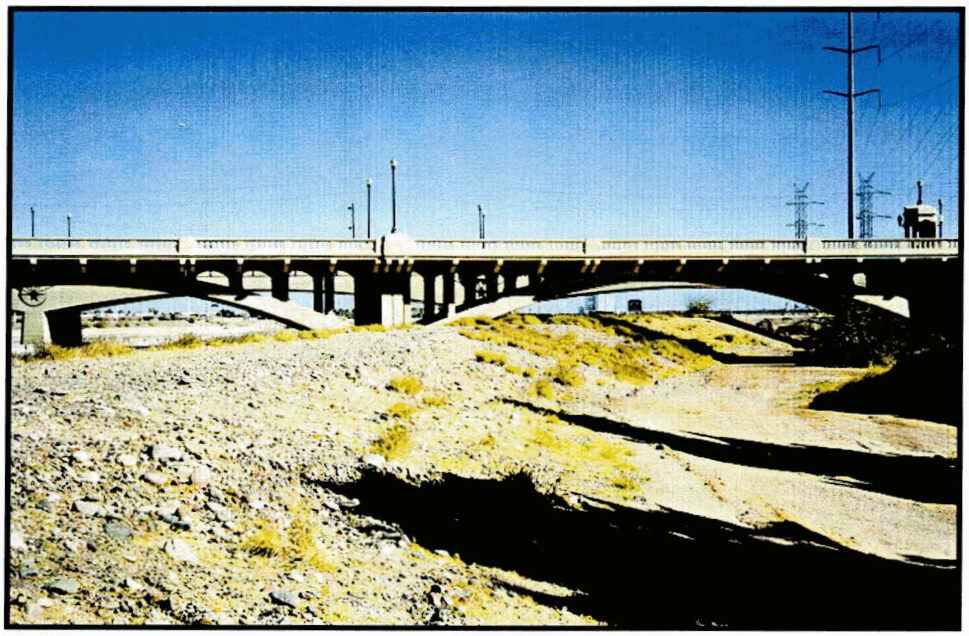
Registr No. 21674 Expires (Date) 09/30/99 State Arizona

Type of License/Expertise: P.E.

Check which forms have been included with this request

Form Name and (Number)	Required if .....
☐ **Hydrologic** (3)	new or revised discharges
☒ **Hydraulic** (4)	new or revised water-surface elevations
☒ **Mapping** (5)	floodplain/floodway changes
☐ **Channelization** (6)	channel is modified
☒ **Bridge/Culvert** (7)	addition/revision of bridge/culvert
☒ **Levee/Floodwall** (8)	addition/revision of levee/floodwall
☐ **Coastal** (9)	new or revised coastal elevations
☐ **Coastal Structures** (10)	addition/revision of coastal structure
☐ **Dam** (11)	addition/revision of dam
☐ **Alluvial Fan** (12)	structures proposed on alluvial fan

Looking west along top of levee
(Union Pacific Railroad in background)

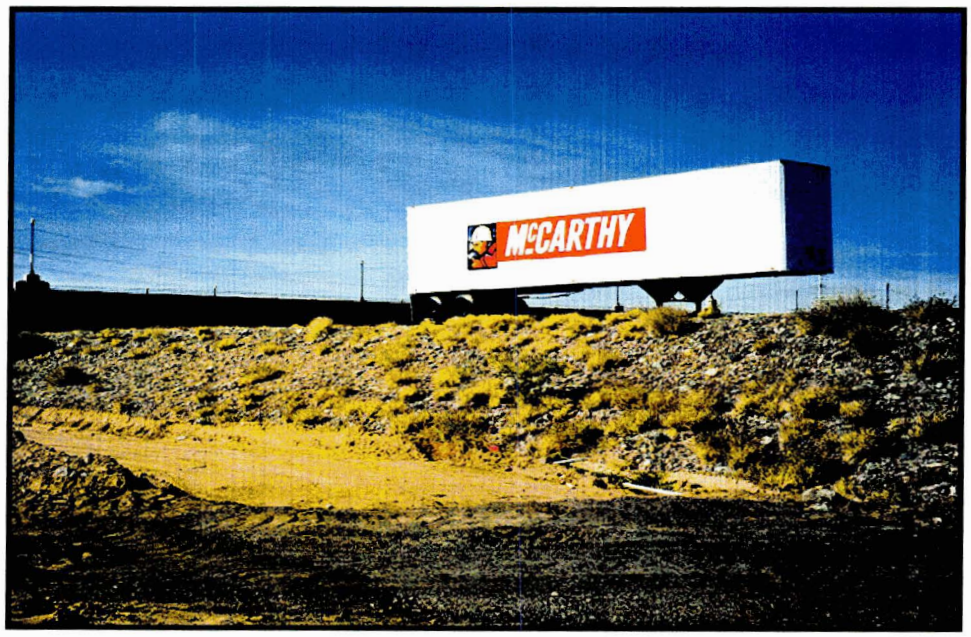


Looking east along backside of levee
(Mill Ave. southbound in background)

Looking east along backside of levee
(Mill Ave. southbound in background)

Front face of levee looking west
(Union Pacific Railroad in background)

Levee section to be realigned east of Mill Ave. (Northbound)
(trailer on top of levee)



Backside of levee section to be realigned east of Mill Ave.

The following information has been provided to fulfill the requirements of Section 65.12 of the NFIP and related Regulations:

65.12(a)(1)	A request for Conditional approval of map change and the appropriate initial fee as specified by paragraph 72.3 of the National Flood Insurance Program (NFIP) and related regulations.
Response:	Under a separate cover (copy enclosed) the City of the Tempe, Arizona, has requested a CLOMR and has forwarded the appropriate processing fee of $3,300 to the FEMA Revisions-Fee-Collection System Administrator.
65.12(a)(2)	An Evaluation of alternatives which would not result in a base flood elevation increase above that permitted under paragraph 60.3(d)(3) of the NFIP regulations.
Response:	Most of the increases in the base flood elevation are still contained within the channel. In areas where the flood elevations are not contained in the channel, between cross sections 220.82 through 221.26, there are no insurable structures, thus the cost benefit ratios for this project were not examined.
65.12(a)(3)	Documentation of individual legal notices to all impacted property owners within and outside of the community.
Response:	The limit of the projects and resultant revised floodplain and floodway boundaries are located within the limits of the City of Tempe. Therefore, the City of Tempe is the only jurisdiction affected by this revision request with the exception of a few areas between Rural Road and McClintock Drive within the channel which are owned by the Flood Control District of Maricopa County (FCDMC), the Bureau of Reclamation and the Arizona Board of Regents. A letter has been sent by the City of Tempe to each affected owner (copies enclosed) explaining to them that an increase in BFEs will affect their property based on the effects of this project between Rural Road and McClintock Drive.
65.12(a)(4)	Concurrence of the chief executive officer of any other communities by the propose actions.
Response:	No other communities except the City of Tempe is impacted by this increase.

65.12(a)(5)	Certification that no structures are located in areas which would be impacted by the increased base flood elevation.
Response:	Under separate cover (copy enclosed) the city has provided this certification.
65.12(a)(6)&(7)	The City of Tempe has requested a CLOMR for the South Bank Levee Removal/Relocation project in accordance with the requirements outlined in Sections 65.6 and 65.7 of the NFIP regulations. **Please note that upon receipt of the CLOMR for the subject project, the City of Tempe will provide FEMA with documentation that shows we have revised and adopted the floodplain ordinances that incorporate the revised BFEs and floodway and floodplain boundaries.**

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8200

Tempe

Public Works
Department

February 12, 1999

Mr. Michael Grimm, Project Officer
Federal Emergency Management Agency
Mitigation Directorate
Hazard Identification and Risk Assessment Division
500 C Street, SW
Washington, D.C. 20472

RE: South Bank Levee Removal/Realignment
Conditional Letter of Map Revision

Dear Mr. Grimm:

In accordance with Paragraph 65.12(a)(5) of the National Flood Insurance Program (NFIP), we certify that no insurable structures are located in areas which would be impacted by the increased base flood elevations associated with the above project. The information contained in our Conditional Letter of Map Revision application acknowledges that the City of Tempe has notified all affected property owners in accordance with Paragraphs 65.7(b)(1) and 65.12(a)(3) of the NFIP Regulations.

Please call me at (602) 350-8200 should you have any questions or require additional information regarding this matter.

Sincerely,

James E. Bond

James E. Bond, P.E.
Principal Civil Engineer

Notification Letters

The following notification letters to the Bureau of Land Management, the Flood Control District of Maricopa County and the Arizona Board of Regents were sent to these agencies on February 12, 1999. However, on February 15, 1999 some modifications to the hydraulic modeling were made which changed the value of the maximum increase in Base Flood Elevation (BFE) as reflected in these letters. The letters reflect an increase in BFEs of 0.34 foot, however, the actual value is 0.23 foot which is located at cross section 221.31. Since the revised value is lower than the value reflected in the letters which were sent out, new letters reflecting the revised elevations were not issued.

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8200

Tempe

Public Works
Department

February 12, 1999

Mr. Michael S. Ellegood, P.E.
Chief Engineer and General Manager
Flood Control District of Maricopa County
2801 W. Durango
Phoenix, AZ 85009

Dear Mr. Ellegood:

We are in the process of requesting a Conditional Letter of Map Revision (CLOMR) along the Salt River in the City of Tempe from the Federal Emergency Management Agency (FEMA). As a result of the project construction, we have identified a small increase in base flood elevations (BFEs) from Mill Avenue (Northbound) to McClintock Drive. Based on our analyses, the maximum increase in BFEs is 0.34 foot through this reach. This increase, however, will still be maintained within the channel and levee system along the Salt River. In addition, the project will require a modification to the floodway through this reach.

FEMA requires that the community fulfill the requirements of Sections 65.7 and 65.12 of the National Flood Insurance Program (NFIP) and Related Regulations when applying for this CLOMR. Paragraphs 65.7(b)(1) and 65.12(a)(3) of the NFIP and Related Regulations require that we provide documentation that we have notified all the impacted property owners within and outside of the community regarding the impact of the project on their property. Our review of the data indicates that the BFEs will increase on property that is owned by the Bureau of Reclamation along this reach. Therefore, we request that you provide us with any comments you may have regarding this floodway modification and increase in BFEs so that we can provide these comments to FEMA .

We look forward to hearing from you regarding this matter. If you have any questions or concerns please give me a call at (602) 350-8200.

Sincerely,

James E. Bond

James E. Bond, P.E.
Principal Civil Engineer

Printed on Recycled Paper

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8200

Tempe

Public Works
Department

February 12, 1999

Mr. Allan Price
Vice President of Institutional Advancement
Arizona Board of Regents
Arizona State University
P.O. Box 872503
Tempe, AZ 85287-2503

Dear Mr. Price:

We are in the process of requesting a Conditional Letter of Map Revision (CLOMR) along the Salt River in the City of Tempe from the Federal Emergency Management Agency (FEMA). As a result of the project construction, we have identified a small increase in base flood elevations (BFEs) from Mill Avenue (Northbound) to McClintock Drive. Based on our analyses, the maximum increase in BFEs is 0.34 foot through this reach. This increase, however, will still be maintained within the channel and levee system along the Salt River. In addition, the project will require a modification to the floodway through this reach.

FEMA requires that the community fulfill the requirements of Sections 65.7 and 65.12 of the National Flood Insurance Program (NFIP) and Related Regulations when applying for this CLOMR. Paragraphs 65.7(b)(1) and 65.12(a)(3) of the NFIP and Related Regulations require that we provide documentation that we have notified all the impacted property owners within and outside of the community regarding the impact of the project on their property. Our review of the data indicates that the BFEs will increase on property that is owned by the Arizona Board of Regents along this reach. Therefore, we request that you provide us with any comments you may have regarding this floodway modification and increase in BFEs so that we can provide these comments to FEMA.

We look forward to hearing from you regarding this matter. If you have any questions or concerns please give me a call at (602) 350-8200.

Sincerely,

James E. Bond

Mr. James E. Bond, P.E.
Principal Civil Engineer

cc: Mr. Steve Miller
Mr. Mernoy Harrison

Printed on Recycled Paper

City of Tempe
P.O. Box 5002
31 East Fifth Street
Tempe, AZ 85280
602-350-8200

Tempe

Public Works
Department

February 12, 1999

Ms. Carol Kershaw
United States Department of the Interior
Bureau of Land Management
Arizona State Office
222 North Central Avenue
Phoenix, AZ 85004-2203

Dear Ms. Kershaw:

We are in the process of requesting a Conditional Letter of Map Revision (CLOMR) along the Salt River in the City of Tempe from the Federal Emergency Management Agency (FEMA). As a result of the project construction, we have identified a small increase in base flood elevations (BFEs) between Mill Avenue (North Bound) and Rural Road. Based on our analyses, the maximum increase in BFEs in this vicinity is 0.34 foot. This increase, however, will still be maintained within the channel and levee system along the Salt River. In addition, the project will require a modification to the floodway through this reach.

FEMA requires that the community fulfill the requirements of Sections 65.7 and 65.12 of the National Flood Insurance Program (NFIP) and Related Regulations when applying for this CLOMR. Paragraphs 65.7(b)(1) and 65.12(a)(3) of the NFIP and Related Regulations require that we provide documentation that we have notified all the impacted property owners within and outside of the community regarding the impact of the project on their property. Our review of the data indicates that the BFEs in the vicinity of the property that is owned by the Bureau of Land Management along this reach will increase. Therefore, we request that you provide us with any comments you may have regarding this floodway modification and increase in BFEs so that we can provide these comments to FEMA.

We look forward to hearing from you regarding this matter. If you have any questions or concerns please give me a call at (602) 350-8200.

Sincerely,

James E. Bond

James E. Bond, P.E.
Principal Civil Engineer

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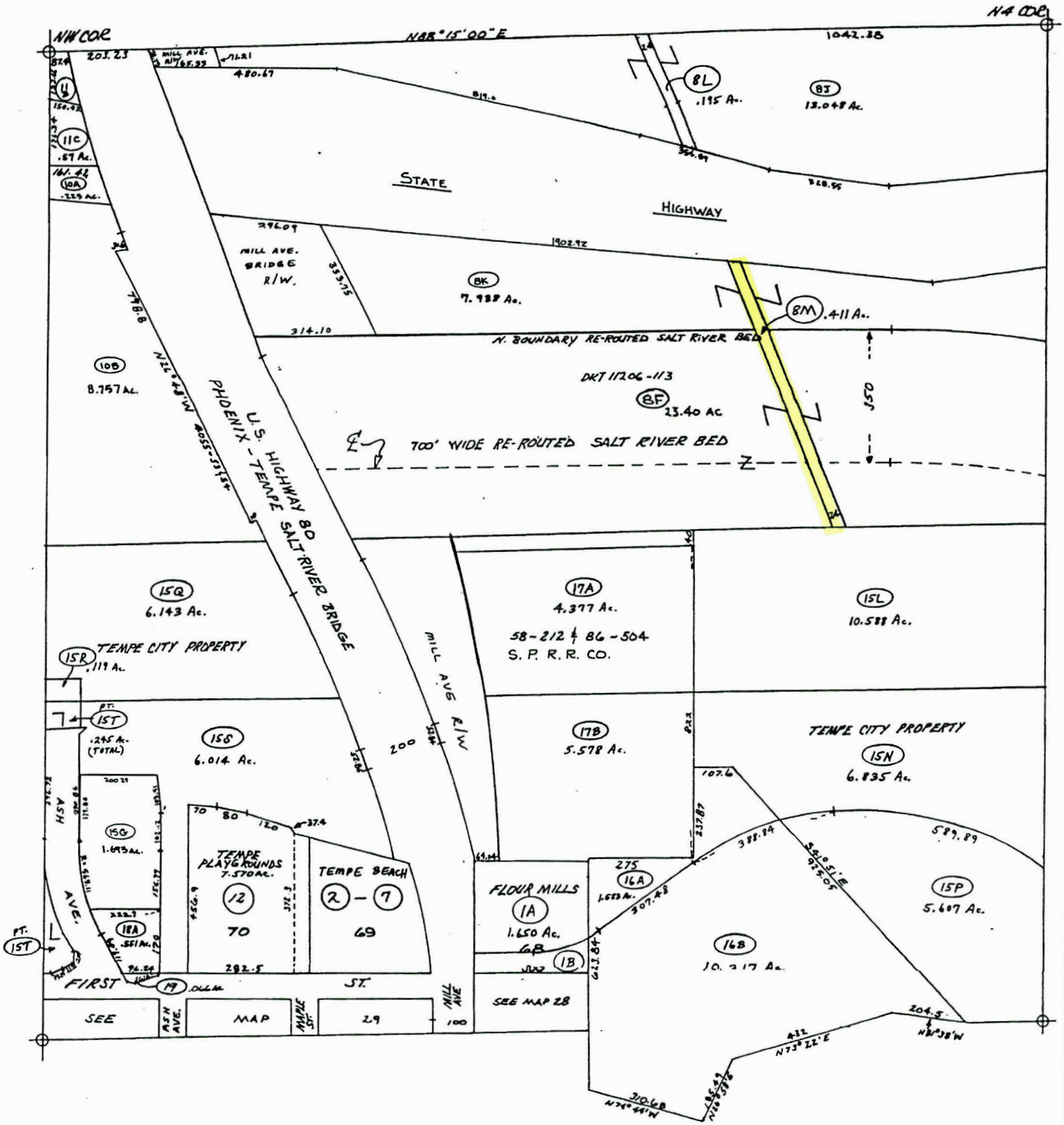
NW 4 SEC 15 T1N · R4E



Riverine Hydraulic and Analysis Form, Effective FIRM Copies and Revised/Proposed Flood Profile and Floodway Data Table

FEDERAL EMERGENCY MANAGEMENT AGENCY **RIVERINE HYDRAULIC ANALYSIS FORM**	O.M.B No. 3067-0148 Expires April 30, 2001

Public reporting burden for this form is estimated to average 2.25 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

You are not required to respond to this collection of information unless a valid OMB Control Number is displayed in the upper right corner of this form.

Note: Fill out one form for each flooding source studied

Community Name: City of Tempe, Maricopa County, Arizona

Flooding Source: Salt River

Project Name/Identifier: South Bank Levee Removal/Realignment

1. REACH TO BE REVISED

Describe the limits of the revision OR submit a copy of the FIRM with the revision area clearly highlighted.
Copy of FIRM(s) attached depicting area of the revision (highlighted, or circled)? ☒ Yes

Downstream Limit: Cross Section 220.73

Upstream Limit: Cross Section 223.08

2. MODELS SUBMITTED

Requirements: for areas which have detailed flooding:
Full input and output listings along with files on diskette for each of the models listed below (items 1-4) and a summary of the source of input parameters used in the models must be provided. The summary must include a description of any changes made from model to model (e.g., Duplicate Effective model to Corrected Effective model). At a minimum, the Duplicate Effective (item 1) and the Revised or Post-Project Conditions (item 4) models must be submitted. See instructions for directions on when other models may be required.

for areas which do not have detailed flooding:
Only the 100-year (Base) flood profile is required. A hydraulic model is not required for areas which do not have detailed flooding; however, BFEs may not be added to the revised FIRM. If a hydraulic model is developed for the area, items 3 and 4 described below must be submitted.

If hydraulic models are not developed, hydraulic analyses (including all calculations) for existing or pre-project conditions and revised or post-project conditions must be submitted.

1. Duplicate Effective Model ☒ **Natural** **File Name** Reach4.prj ☒ **Floodway** **File Name** Reach 4.prj
Copies of the hydraulic analysis used in the effective FIS, referred to as the effective models (10-, 50-, 100-, and 500-year multi-profile runs and the floodway run) must be obtained and then reproduced on the requester's equipment to produce the Duplicate Effective model. This is required to assure that the effective models input data has been transferred correctly to the requester's equipment and to assure that the revised data will be integrated into the effective data to provide a continuous FIS model upstream and downstream of the revised reach.

2. Corrected Effective Model ☒ **Natural** **File Name** Reach4b.prj ☒ **Floodway** **File Name** Reach4b.prj
The Corrected Effective model is the model that corrects any errors that occur in the Duplicate Effective model, adds any additional cross sections to the Duplicate Effective model, or incorporates more detailed topographic information than that used in the currently effective model. The Correctly Effective model must not reflect any man-made physical changes since the date of the effective model. An error could be a technical error in the modeling procedures, or any construction in the floodplain that occurred prior to the date of the effective model but was not incorporated into the effective model.

3. Existing or Pre-Project Conditions Model ☐ **Natural** **File Name** ____ ☐ **Floodway** **File Name** ____
The Duplicate Effective model or Corrective Effective model is modified to produce the Existing or Pre-Project Conditions model to reflect any modifications that have occurred within the floodplain since the date of the Effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the Corrected Effective model or Duplicate Effective model.

4. Revised or Post-Project Conditions Model ☒ **Natural** **File Name** South.prj ☒ **Floodway** **File Name** South.prj
The Existing or Pre-Project Conditions model (or Duplicate Effective model or Corrected Effective model, as appropriate) is revised to reflect revised or post-project conditions. This model must incorporate any physical changes to the floodplain since the effective model was produced as well as the effects of the project. When the request is for the proposed project this model must reflect proposed conditions.

5. Other – Please attach a sheet describing all other models submitted along with the file names. ☐ **Natural** ☐ **Floodway**

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

3. STARTING WATER-SURFACE ELEVATIONS

Explain how they were determined. Explanation Attached? ☒ Yes ☐ No

NOTE: If the effective study is an approximate study, the slope/area method is recommended.
For detailed analysis studies, using a known water-surface elevation is recommended.

4. RESULTS (from the model used to revise the 100-year water surface elevations)

If the results indicate any of the following, attach an explanation - to this form, or to the hydraulic model printout- as to the reasonableness of the situation.

☐ Supercritial depth ☐ Critical Depth ☒ Drawdowns ☐ Negative Floodway Surcharges

☐ Floodway Surcharges Greater Than Maximum Allowed by Community/State

☐ Water surface elevations higher than the end points of cross sections.

☐ Floodway discharge is different than the Natural 100-year (base) flood discharge.

☒ Project causes 100-year floodplain or floodway elevations to increase (state if increases are located off the requester's property)

Explanation attached with Form ☒ **Explanation provided on attached printout** ☐

If Hydraulic model used is HEC-2, has it been checked with FEMA'S CHECK-2 computer program ☐ **Yes** ☐ **No**
(see instructions for information on how to obtain CHECK-2)

5. REVISED FIRM/FBFM AND FLOOD PROFILES

1. Profile Transition

a. 100-Year Water-Surface Elevations - indicate the difference in water surface elevations where the project 100-year elevations tie into the existing 100-year water surface elevations at each end of the project.

Downstream End 220.73 within 0.0 (feet) *Cross-Section #* Upstream End 223.08 within 0.00 (feet) *Cross-Section #*

b. Floodway Elevations - indicate the difference in water surface elevations where the project floodway elevations tie into the existing floodway water surface elevations at each end of the project.

Downstream End 220.73 within 0.0 (feet) *Cross-Section #* Upstream End 223.08 within 0.00 (feet) *Cross-Section #*

c. Floodway widths - indicate the difference in floodway widths where the project floodway widths tie into the existing floodway width at each end of the project.

Downstream End 220.73 within 0.0 (feet) *Cross-Section #* Upstream End 222.74 within 0.0 (feet) *Cross-Section #*

2. Profile Checklist (check box if information has been provided on profile)

The following information (unless in parentheses) must be included at the same scale as the existing profiles for this project:

☒ Stream Name ☒ Community Name ☐ Corporate Limits labeled ☒ Study limits labeled

☐ Confluences labeled ☒ Channel Stationing ☒ Streambed profiled ☒ Cross Sections labeled

☒ Horizontal/Vertical Scales indicated ☒ 100-year elevs profiled*

☒ Road Crossings ☒ Labeled ☒ Low Chord Elevations ☒ Top of Road Elevations

*All recurrence intervals in the effective study must also be profiled.

Floodway Data Table

Attach a Floodway Data Table for each cross section listed in the published Floodway Data table in the FIS report.

Floodway Data Table Attached ☒ **Yes** ☐ **Not Required**

Community Name: City of Tempe, Maricopa County, Arizona

Flooding Source: Salt River

Project Name/Identifier: South Bank Levee Removal/Realignment

3. STARTING WATER-SURFACE ELEVATIONS

The Starting Water Surface Elevations utilized for this CLOMR are identical to those used for the effective study. Since no changes in elevations occur until cross section 220.82 (approximately 6.6 miles upstream of the downstream end of the FCDMC model) these elevations are reasonable for this study.

The revision causes the floodplain and floodway elevations to rise 0.01 to 0.61 foot between cross sections 221.31 and 223.02. The floodplain and floodway is still confined to the channel through areas not owned by the City of Tempe (upstream of Mill Avenue (North Bound)).

4. RESULTS (from the model used to revise the 100-year water surface elevations)

Drawdowns: Drawdowns occur at approximately 10 cross sections along the revised portion of the model. In most cases, these drawdowns occur immediately downstream or in the vicinity of bridges and in the same locations as shown in the effective model.

APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 2165 OF 4350

CONTAINS:

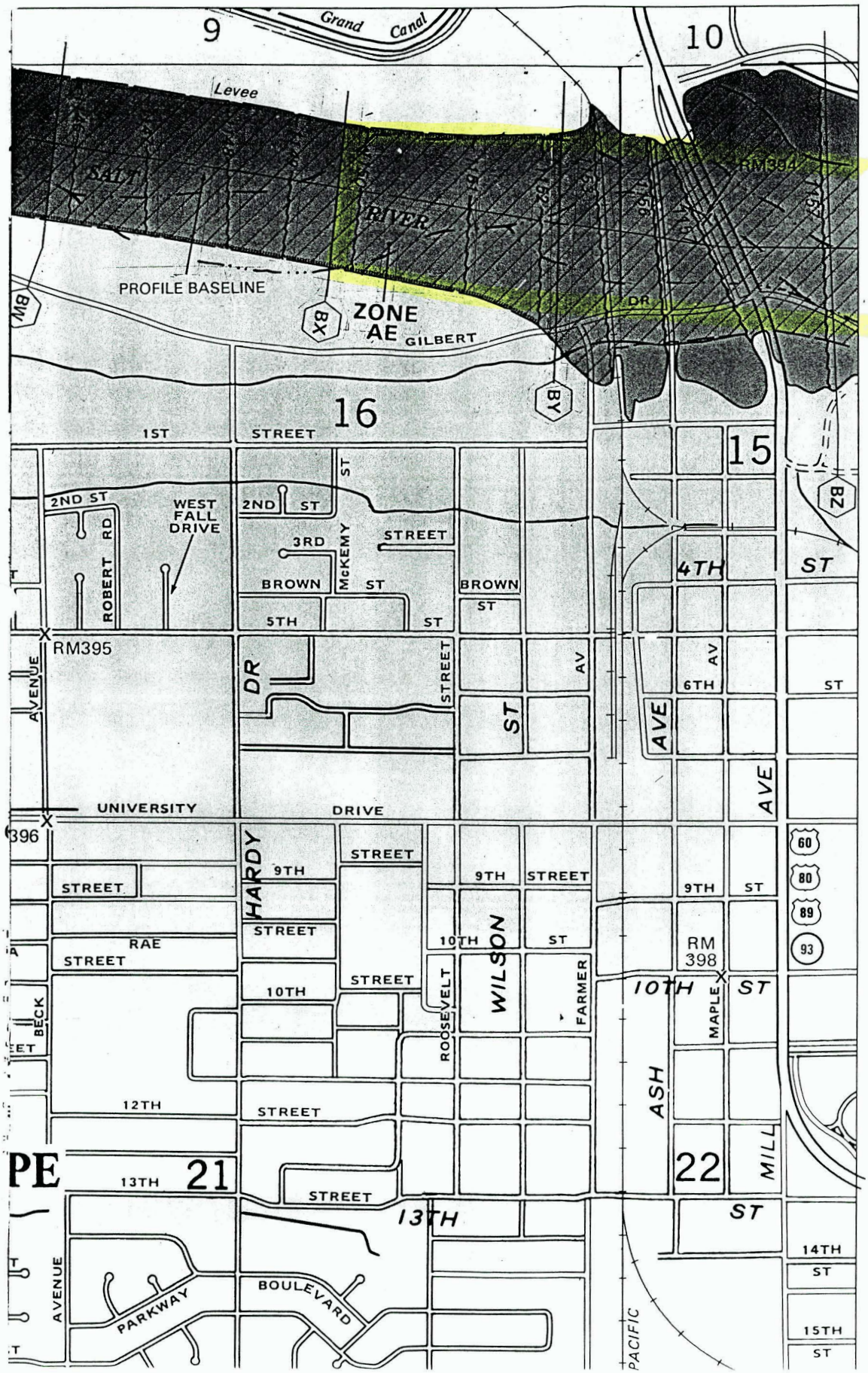
COMMUNITY	NUMBER	PANEL	SUFFIX
GUADALUPE, TOWN OF	040111	2165	F
MARICOPA COUNTY, UNINCORPORATED AREAS	040037	2165	F
PHOENIX, CITY OF	040051	2165	F
TEMPE, CITY OF	040054	2165	F

MAP NUMBER
04013C2165 F

MAP REVISED:
SEPTEMBER 30, 1995

Federal Emergency Management Agency

Approximate Limit of Revision -



etermine if flood insurance is available, contact an insurance
or call the National Flood Insurance Program at (800)
620.

APPROXIMATE SCALE IN FEET

1000 0 1000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS

PANEL 2170 OF 4350

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MARICOPA COUNTY, UNINCORPORATED AREAS	040037	2170	E
MESA, CITY OF	040048	2170	E
TEMPE, CITY OF	040054	2170	E

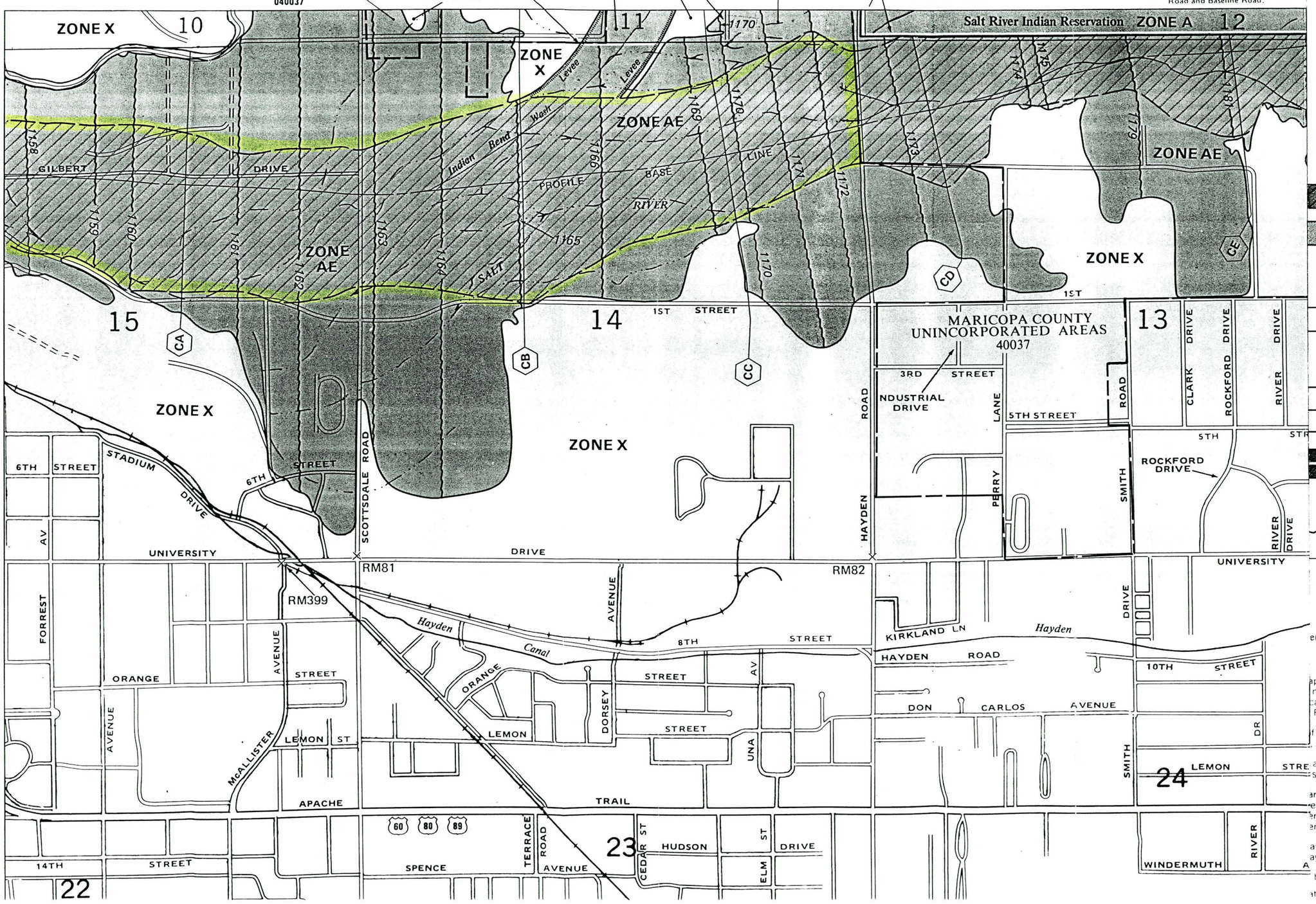
MAP NUMBER
04013C2170E

MAP REVISED:
SEPTEMBER 4, 1991

Federal Emergency Management Agency

Approximate Limit of Revision –

REFERENCE MARK	ELEVATION (FT. NGVD)	DESCRIPTION O
RM81	1066.08	Top of curb at center of curb retu University Drive and Scottsdale Roa
RM82	1074.58	Top of pavement at south end of bi sity Drive and on centerline of Hayd
RM205	1200.50	Chiseled square top of curb north Road and Baseline Road.



LEGEN

SPECIAL FLOOD HAZ BY 100-YEAR FLOOD

ZONE A — No base fl

ZONE AE — Base flood

ZONE AH — Flood dep ponding);

ZONE A0 — Flood dep flow on determinec ing, velocit

ZONE A99 — To be pr Federal fl constructic

ZONE V — Coastal fl action); r mined.

ZONE VE — Coastal fl action); b

FLOODWAY AREAS I

OTHER FLOOD AREA

ZONE X — Areas o 100-year of less t areas les areas pro year floo

OTHER AREAS

ZONE X — Areas de year floo

ZONE D — Areas in undeterm

Flood

Flood

Zone

Bounc Hazar Dividi Coasta Withir Zones

Base vation

Cross

Base Where

Elevat

enced to the National Geodetic V

NOTES

ap is for use in administering the Na not necessarily identify all areas s cal drainage sources of small size, o Flood Hazard Areas.

f special flood hazard (100-year fl A99, V, V1-30 AND VE.

areas not in Special Flood Hazard structures.

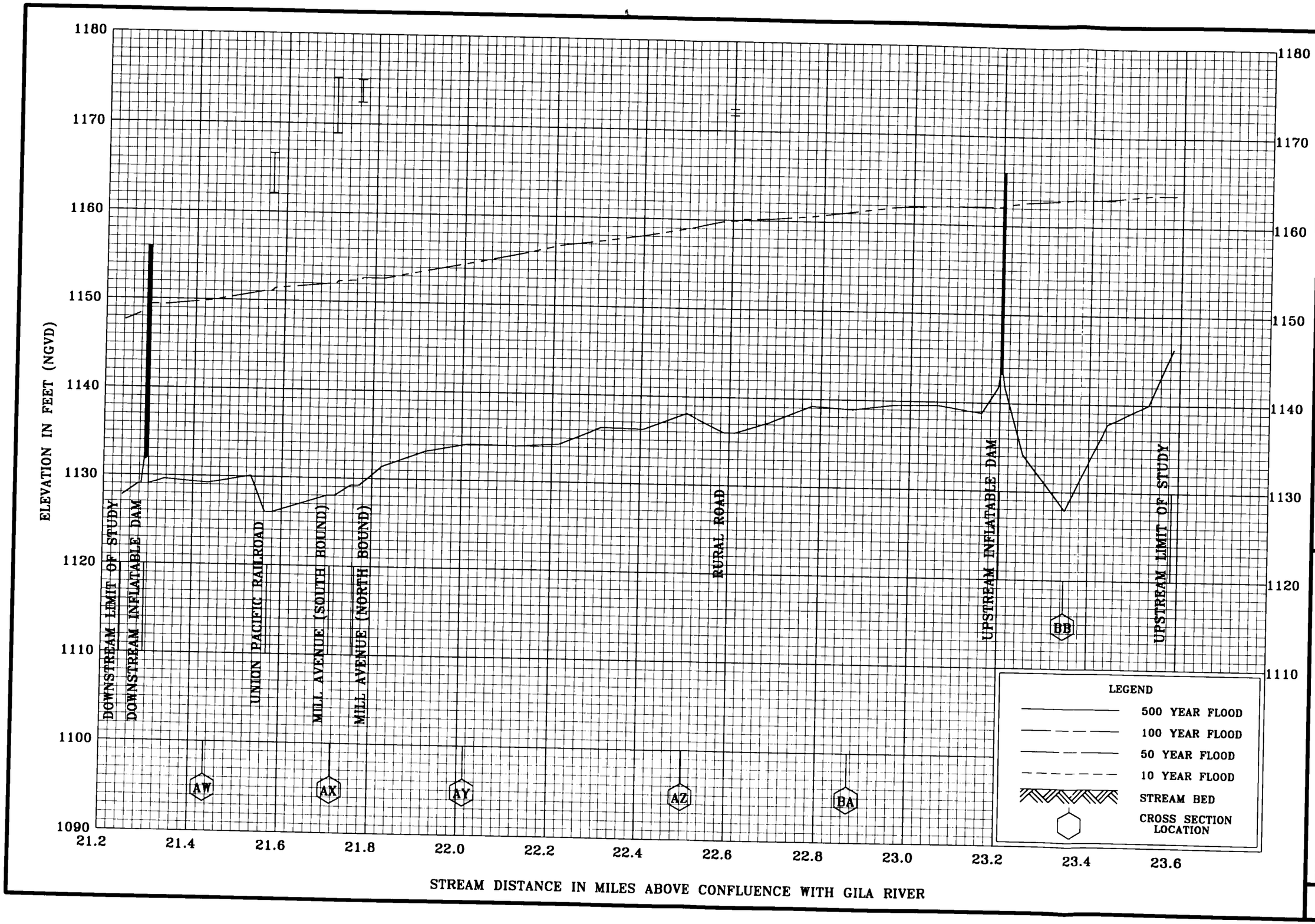
aries of the floodways were compute etween cross sections. The flood erations with regard to requireme ement Agency.

ay widths in some areas may be ay widths are provided in the Flood

base flood elevations apply only a

ate limits shown are current as of

Revised/Proposed Flood Profile and Floodway Data Table



FLOOD PROFILES

SALT RIVER

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ

(AND INCORPORATED AREAS)

01P

Flooding Source	Floodway				Base Flood Elevations (ft NGVD29)			
Cross Section	Distance[1]	Width (ft)	Section Area (ft^2)	Mean Velocity (ft/sec)	Regulatory	Without Floodway	With Floodway	Increase
SALT RIVER								
220.730	21.243	885	14782	11.4	1147.6	1147.6	1147.6	0.0
220.735	21.277	906	16994	9.9	1148.4	1148.4	1148.4	0.0
220.740	21.283	906	17028	9.9	1148.4	1148.4	1148.4	0.0
220.750	21.289	906	14304	11.8	1148.0	1148.0	1148.0	0.0
220.755	21.299	906	14586	11.6	1148.6	1148.6	1148.6	0.0
220.756	21.300	906	17910	9.4	1149.4	1149.4	1149.4	0.0
220.820	21.337	868	15498	10.9	1149.1	1149.1	1149.1	0.0
220.920 (AW)	21.435	863	15374	11.0	1149.9	1149.9	1149.9	0.0
221.020	21.530	870	16303	10.4	1150.8	1150.8	1150.8	0.0
221.050	21.562	814	17000	9.9	1151.1	1151.1	1151.1	0.0
221.060	21.578	829	17359	9.7	1151.4	1151.4	1151.4	0.0
221.190	21.701	873	17327	9.8	1152.0	1152.0	1152.0	0.0
221.200 (AX)	21.719	878	17587	9.6	1152.3	1152.3	1152.3	0.0
221.240	21.754	899	17226	9.8	1152.4	1152.4	1152.4	0.0
221.260	21.773	882	17252	9.8	1152.7	1152.7	1152.7	0.0
221.310	21.823	934	14010	12.3	1152.5	1152.5	1152.5	0.0
221.400	21.918	949	14175	12.1	1153.7	1153.7	1153.7	0.0
221.500 (AY)	22.014	929	13850	12.4	1154.6	1154.6	1154.6	0.0
221.610	22.123	926	14215	12.1	1155.7	1155.7	1155.7	0.0
221.700	22.216	940	15329	11.2	1156.8	1156.8	1156.8	0.0
221.800	22.313	936	15325	11.2	1157.4	1157.4	1157.4	0.0
221.890	22.406	986	15436	11.1	1158.1	1158.1	1158.1	0.0
221.990 (AZ)	22.502	1012	16674	10.3	1159.0	1159.0	1159.0	0.0
222.080	22.586	1039	20089	8.6	1159.9	1159.9	1159.9	0.0
222.090	22.615	1041	20247	8.5	1160.1	1160.1	1160.1	0.0
222.170	22.687	1010	18319	9.4	1160.2	1160.2	1160.2	0.0
222.270	22.781	1077	18776	9.2	1160.6	1160.6	1160.6	0.0

Flooding Source	Floodway				Base Flood Elevations (ft NGVD29)			
Cross Section	Distance[1]	Width (ft)	Section Area (ft^2)	Mean Velocity (ft/sec)	Regulatory	Without Floodway	With Floodway	Increase
222.360 (BA)	22.873	1182	20954	8.2	1161.2	1161.2	1161.2	0.0
222.450	22.964	1387	25277	6.8	1161.8	1161.8	1161.8	0.0
222.550	23.061	1270	23560	7.3	1162.0	1162.0	1162.0	0.0
222.650	23.160	1079	20888	8.2	1162.1	1162.1	1162.1	0.0
222.660	23.196	968	19424	8.9	1162.1	1162.1	1162.2	0.0
222.670	23.200	968	17773	9.7	1162.0	1162.0	1162.0	0.0
222.690	23.205	968	17856	9.6	1162.1	1162.1	1162.1	0.0
222.695	23.206	968	17857	9.6	1162.1	1162.1	1162.1	0.0
222.700	23.211	968	19623	8.8	1162.4	1162.4	1162.4	0.0
222.740	23.252	1038	21462	8.0	1162.6	1162.6	1162.6	0.0
222.830 (BB)	23.346	964	21515	8.0	1162.9	1162.9	1162.9	0.0
222.930	23.441	946	19075	9.0	1163.1	1163.1	1163.1	0.0
223.020	23.535	1093	19460	8.8	1163.6	1163.6	1163.6	0.0
223.080	23.586	1023	9748	17.6	1163.1	1163.1	1163.1	0.0

[1] Miles above confluence with Gila River

Riverine/Coastal Mapping Form

FEDERAL EMERGENCY MANAGEMENT AGENCY **RIVERINE / COASTAL MAPPING FORM**	O.M.B No. 3067-0148 Expires April 30, 2001

Public reporting burden for this form is estimated to average 1.5 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

You are not required to respond to this collection of information unless a valid OMB Control Number is displayed in the upper right corner of this form.

Note: Fill out one form for each flooding source studied

Community Name: City of Tempe, Maricopa County, Arizona

Flooding Source: Salt River

Project Name/Identifier: South Levee Removal/Realignment

This is a ☒ Manual ☐ Digital submission. *Digital map submissions may be used to update digital FIRMs (DFIRMs). For updating DFIRMs, these submissions must be coordinated with FEMA Headquarters as far in advance as possible.*

1. MAPPING CHANGES

1. A topographic workmap must be submitted showing the following information (check N/A when not applicable):

a. Revised approximate 100-year floodplain boundaries (Zone A)	☐ Yes	☐ No	☒ N/A
b. Revised detailed 100- and 500-year floodplain boundaries.	☒ Yes	☐ No	☐ N/A
c. Revised floodway boundaries	☒ Yes	☐ No	☐ N/A
d. Location and alignment of all cross sections with stationing control indicated.	☒ Yes	☐ No	☐ N/A
e. Stream alignments, road alignments and dam alignments.	☒ Yes	☐ No	☐ N/A
f. Current community boundaries.	☐ Yes	☐ No	☒ N/A
g. Effective 100- year floodplain and floodway boundaries from FIRM/FBFM reduced or enlarged to the scale of the topographic workmap	☒ Yes	☐ No	☐ N/A
h. Tie-ins between the effective and revised 100-, 500-year and floodway boundaries	☒ Yes	☐ No	☐ N/A
i. The requester's property boundaries and community easements	☐ Yes	☐ No	☒ N/A
j. The signed certification of a registered professional engineer	☒ Yes	☐ No	☐ N/A
k. Location and description of reference marks	☒ Yes	☐ No	☐ N/A
l. Vertical datum (example: NGVD, NAVD)	☒ Yes	☐ No	☐ N/A
m. Coastal zone designations tie into adjacent areas not being revised	☐ Yes	☐ No	☒ N/A
n. Location and alignment of all coastal transects used to revise the coastal analyze	☐ Yes	☐ No	☒ N/A
o. V-zone has been delineated to extend landward to the heel of the primary frontal dune	☐ Yes	☐ No	☒ N/A

If any items are marked No or N/A please attach an explanation.

2. What is the source and date of the updated topographic information (example: orthophoto maps, July 1985; filed survey, May 1979, beach profile, June 1987 etc.)? Effective mapping: aerial photogrammetry/dtm: Dec. 13, 1991; Jan. 13, 1992; Jan. 23, 1992, Feb. 1997. New topographic mapping: (aerial photogrammetry) dated February 2, 1994 (prepared by CH2M-Hill) and July 1996 (prepared by Greiner Engineering) was used to delineate the south overbank area; field suvey performed December 29, 1998 along the north bank including the seat wall location (performed by City of Tempe, Arizona).

3. What is the scale and contour interval of the following workmaps?

Effective FIS Scale 1 inch = 400 feet Contour Interval 4 foot

Revision Request Scale 1 inch = 400 feet; 1 inch = 200 feet Contour Interval 4 foot; 1 foot

NOTE: Revised topographic information must be of equal or greater detail than effective.

4. Attach an annotated FIRM/FBFM at the scale of the effective FIRM/FBFM showing the revised 100- and 500-year floodplain and the floodway boundaries and how they tie into those shown on the effective FIRM/FBFM downstream and upstream of the revisions or adjacent to the area of revision for coastal studies. **FIRM/FBFM attached?** ☒ **Yes** ☐ **No**

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

2. EARTH FILL PLACEMENT

1. The fill is: ☐ Existing ☐ Proposed

2. Has fill been/will be placed in the regulatory floodway? ☐ Yes ☐ No
If Yes, please attach completed Riverine Hydraulic Analysis Form (Form 4).

3. Has fill been/will be placed in floodway fringe (*area between the floodway and 100-year floodplain boundaries*)? ☐ Yes ☐ No

If Yes, then complete A, B, C, and D below.

a. Are fill slopes for granular materials steeper than one vertical on one-and-one-half horizontal? ☐ Yes ☐ No

If Yes, justify steeper slopes _____

b. Is adequate erosion protection provided for fill slopes exposed to moving flood waters? (*Slopes exposed to flows with velocities of up to 5 feet per second (fps) during the 100-year flood must, at a minimum, be protected by a cover of grass, vines, weeds, or similar vegetation; slopes exposed to flows with velocities greater than 5 fps during the 100-year flood must, at a minimum, be protected by stone or rock riprap.*)

☐ Yes ☐ No

If No, describe erosion protection provided _____

c. Has all fill placed in revised 100-year floodplain been compacted to 95 percent of the maximum density obtainable with the Standard Proctor Test Method or acceptable equivalent method? ☐ Yes ☐ No

d. Can structures conceivably be constructed on the fill at any time in the future? ☐ Yes ☐ No

If Yes, attach certification of fill compaction (item 3c. above) by the community's NFIP permit official, a registered professional engineer, or an accredited soils engineer in accordance with Subparagraph 65.5(a)(6) of the NFIP regulations.

Fill certification attached ☐ **Yes** ☒ **No**

4. Has fill been/will be placed in a V zone? ☐ Yes ☒ No

If Yes, is the fill protected from erosion by a flood control structure such as a revetment or seawall?

☐ Yes ☐ No

If Yes, attach the Coastal Structures Form (Form 10).

Attachment Sheet for *Riverine/Coastal Mapping Form*

Community Name: City of Tempe, Maricopa County, Arizona

Flooding Source: Salt River

Project Name/Identifier: South Bank Levee Removal/Realignment

1. MAPPING CHANGES

1. A topographic workmap must be submitted showing the following information (check N/A when not applicable):

i. The requester's property boundaries and community easements ..... ☐ Yes ☐ No ☒ N/A
The submitted study is within the legal boundaries of the City of Tempe, Arizona.

m. Coastal zone designations tie into adjacent areas not being revised..... ☐ Yes ☐ No ☒ N/A
There is no coastal flooding in the submitted study area.

n. Location and alignment of all coastal transects used to revise the coastal analyze ..... ☐ Yes ☐ No ☒ N/A
There is no coastal flooding in the submitted study area.

o. V-zone has been delineated to extend landward to the heel of the primary frontal dune..... ☐ Yes ☐ No ☒ N/A
There is no coastal flooding in the submitted study area.

If any items are marked No or N/A please attach an explanation.

Levee/Floodwall System Analyses Form

FEDERAL EMERGENCY MANAGEMENT AGENCY **LEVEE/FLOODWALL SYSTEM ANALYSES FORM**	O.M.B. Burden No. 3067-0148 Expires April 30, 2001

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 3.0 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

You are not required to respond to this collection of information unless a valid OMB Control Number is displayed in the upper right corner of this form.

Community Name: City of Tempe, Maricopa County, Arizon

Flooding Source: Salt River

Project Name/Identifier: South Bank Levee Removal/Realignment NOTE: Please see Project Summary for all sections that have not been completed on this form. These items will be submitted once a final LOMR application is pursued.

1. REACH TO BE REVISED

Describe the limits of the revision **OR** submit a copy of the FIRM with the revision area clearly highlighted.
Copy of FIRM(s) attached depicting area of the revision (highlighted, or circled)? ☐ Yes

Downstream Limit: Approximately 250 feet upstream of cross section 221.06 (downstream limit of levee)

Upstream Limit: Approximately 75 feet upstream of cross section 221.31 (upstream limit of levee)

2. LEVEE/FLOODWALL SYSTEM ELEMENTS

1. This Levee/Floodwall analysis is based on:

   ☐ upgrading of an existing levee/floodwall system
   ☒ a newly constructed levee/floodwall system
   ☒ reanalysis of an existing levee/floodwall system

2. Levee elements and locations are:

   ☐ earthen embankment, dike, berm, etc. Station _____ to _____
   ☐ structural floodwall Station _____ to _____
   ☒ other (describe): compacted river alluvium screened with larger rock (face is covered with gabion mattresses) Station downstream side of Mill Avenue (Northbound) to approximately 75 feet usptream of cross section 221.31

3. Structural Type:

   ☐ monolithic cast-in place reinforced concrete
   ☐ reinforced concrete masonry block
   ☐ sheet piling
   ☒ other (describe): cement stabilized alluvium (csa)

4. Has this levee/floodwall system been certified by a Federal agency to provide protection against the 1% annual chance (100-year) flood event? ☐ Yes ☒ No

   If Yes, by which agency? _____

   If Yes, complete only the interior drainage section on pages 7 and 8 of this form and the operation and maintenance section of Revision Requestor and Community Official Form.

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

2. LEVEE/FLOODWALL SYSTEM ELEMENTS (Cont'd)

5. Attach certified drawings containing the following information (indicate drawing sheet numbers):

   a. Plan of the levee embankment and floodwall structures. — Sheet Numbers See Project Summary

   b. A profile of the levee/floodwall system showing the 100-year water-surface (base flood) elevation, levee and/or wall crest and foundation, and closure locations for the total levee system. — Sheet Numbers See Project Summary

   c. A profile of the base flood elevation, closure opening outlet and inlet invert elevations, type and size of opening, and kind of closure device. — Sheet Numbers See Project Summary

   d. A layout detail for the embankment protection measures. — Sheet Numbers See Project Summary

   e. Location, layout, and size and shape of the levee embankment features, foundation treatment, floodwall structure, closure structures, and pump stations. — Sheet Numbers See Project Summary

3. FREEBOARD

1. The minimum freeboard provided above the base flood elevation is:

   Riverine

   3.0 feet or more at the downstream end and throughout — ☒ Yes ☐ No
   3.5 feet or more at the upstream end — ☒ Yes ☐ No
   4.0 feet immediately upstream of all structures and constrictions — ☒ Yes ☐ No

   Coastal

   1.0 foot above the height of the one percent wave for the 100-year stillwater surge elevation or maximum wave runup (whichever is greater). — ☐ Yes ☐ No

   2.0 feet above 100-year stillwater surge elevation — ☐ Yes ☐ No

Please note, occasionally exceptions are made to the minimum freeboard requirement. If an exception is requested, attach documentation addressing Part 65.10(b)(1)(ii) of the National Flood Insurance Program regulations.

If No is answered to any of the above, please attach an explanation.

2. Is there an indication from historical records that ice-jamming can effect the base flood elevation? ☐ Yes ☒ No
   If Yes, provide ice-jam analysis profile and evidence that the minimum freeboard discussed above still exists.

3. Tabulate the elevations at critical locations (tabulate values at each levee crest grade change, and where sediment may accumulate such as along bends in the channel.)

Station	Location	100-year Water Surface Elevation	Levee Crest	Freeboard (ft.)
221.31	Upper end	1152.48	1160.00	7.52
221.26		1152.69	1160.00	7.31
221.24	Lower end	1152.41	1160.00	7.59

(Extend table on an added sheet as needed and reference)

4. SEDIMENT TRANSPORT CONSIDERATIONS

If there is any indication from historical records that sediment transport (including scour and deposition) can affect the 100-year water-surface (base flood) elevations; and/or based on the stream geomorphology, vegetative cover, development of the watershed and bank conditions, there is a potential for debris and sediment transport (including sewer and deposition) to affect the base flood elevations, then provide the following information:

- ☐ Estimated sediment load
- ☐ Method used to estimate sediment transport
- ☐ Method used to estimate scour and/or deposition
- ☐ Method used to revise hydraulic or hydrologic analysis (model) to account for sediment transport

5. CLOSURES

1. Openings through the levee system:

☐ exist ☐ do not exist

If openings exist, list all closures:

Channel Station	Left or Right Bank	Opening Type	Highest Elevation for Opening Invert	Type of Closure Device
Just downstream of cross section 221.31	left	24" RGRCP	1142 feet	Flap gate

(Extend table on an added sheet as needed and reference)

Note:
Geotechnical and geologic data

In addition to the required detail analysis reports, data obtained during field and laboratory investigations and used in the design analysis for the following levee system features should be submitted in a tabulated summary form. (Reference U.S. Army Corps of Engineers EM-1110-2-1906 Form 2086).

6. EMBANKMENT PROTECTION

1. The maximum levee slope landside is: 3:1
2. The maximum levee slope floodside is: 3:1
3. The range of 100-year (base) riverine flood velocities along the levee? 4.78 (min.) to 5.66 (max.)
4. Embankment material is protected by (describe the kind): gabion mattresses on front face
5. Riprap Design Parameters: (Include references) ☐ Velocity ☐ Tractive stress

Reach	Sideslope	Flow Depth	Velocity	Curve or Straight	Stone Riprap			Depth of Toedown
					D_{100}	D_{50}	Thickness	
Sta to								
Sta to								
Sta to								
Sta to								
Sta to								
Sta to								

(Extend table on an added sheet as needed and reference)

6. Is a bedding/filter analysis and design attached? ☐ Yes ☐ No

7. Describe the analysis used for other kinds of protection used (include copies of the design analysis):

For above sections that have been left blank please see Project Summary.

Note: Attach engineering analysis to support construction plans.

7. EMBANKMENT AND FOUNDATION STABILITY

1. Identify locations and describe the basis for selection of critical location for analysis: see Project Summary

   ☐ Overall height: Sta _____, height _____ ft.

   ☐ Limiting foundation soil strength:

   Sta _____, depth _____ to _____

   strength Ø = _____ degrees, c = _____ psf

   slope: SS = _____ (h) to _____ (v)

   (Repeat as needed on an added sheet for additional locations)

2. Specify the embankment stability analysis methodology used (e.g., circular arc, sliding block, infinite slope, etc.): _____

3. Summary of stability analysis results:

Case	Loading Conditions	Critical Safety Factor	Criteria (Min.)
I	End of construction		1.3
II	Sudden drawdown		1.0
III	Critical flood stage		1.4
IV	Steady seepage at flood stage		1.4
VI	Earthquake (Case I)		1.0

(Reference: U.S. Army Corps of Engineers (USACE) EM-1110-2-1913 Table 6-1)

4. Was a seepage analysis for the embankment performed? ☐ Yes ☐ No

   If Yes, describe methodology used: _____

5. Was a seepage analysis for the foundation performed: ☐ Yes ☐ No

6. Were uplift pressures at the embankment landside toe checked? ☐ Yes ☐ No

7. Were seepage exit gradients checked for piping potential? ☐ Yes ☐ No

8. The duration of 100-year (base) flood hydrograph against the embankment is _____ Hrs.

Note: Attach engineering analysis to support construction plans.

8. FLOODWALL AND FOUNDATION STABILITY

1. Describe analysis submittal based on Code:

   ☐ UBC (1988) or ☐ Other (specify):

2. Stability analysis submitted provides for:

   ☐ Overturning ☐ Sliding; If not, explain: _____

3. Loading included in the analyses were:

   ☐ Lateral earth @ P_A = _____ psf; P_p = _____ psf

   ☐ Surcharge-Slope @ _____, ☐ surface _____ psf

   ☐ Wind @ P_w = _____ psf

   ☐ Seepage (Uplift); _____ ☐ Earthquake @ P_{eq} = _____ %g

   ☐ 100-year significant wave height _____ ft.

   ☐ 100-year significant wave period _____ sec.

4. Summary of Stability Analysis Results: Factors of Safety. Itemize for each range in site layout dimension and loading condition limitation for each respective reach.

Loading Condition	Criteria (Min)		Sta	To	Sta	To
	Overturn	Sliding	Overturn	Sliding	Overturn	Sliding
Dead & Wind	1.5	1.5				
	1.5	1.5				
	1.5	1.5				
	1.3	1.3				

(Ref: FEMA 114 Sept 1986; USACE EM 1110-2-2502)

(Note: Extend table on an added sheet as needed and reference)

5. Foundation bearing strength for each soil type:

Bearing Pressure	Sustained Load (psf)	Short Term Load (psf)
Computed design maximum		
Maximum allowable		

6. Foundation scour protection ☐ is, ☐ is not provided. Describe if provided:

   _____

Note: Attach engineering analysis to support construction plans.

9. SETTLEMENT

1. Has anticipated potential settlement been determined and incorporated into the specified construction elevations to maintain the established freeboard margin? ☐ Yes ☐ No

2. The computed range of settlement is _____ ft. to _____ ft.

3. Settlement of the levee crest is determined to be primarily from:

   ☐ Foundation consolidation
   ☐ Embankment compression
   ☐ Other (describe):

4. Differential settlement of floodwalls

   ☐ has ☐ has not been accommodated in the structural design and construction.

Note: Attach engineering analysis to support construction plans.

10. INTERIOR DRAINAGE

1. Specify size of each interior watershed

   Draining to pressure conduit: see Project Summary

   Draining to ponding area: _____

2. Relationships Established

   Ponding elevation vs. storage ☐ Yes ☐ No
   Ponding elevation vs. gravity flow ☐ Yes ☐ No
   Differential head vs. gravity flow ☐ Yes ☐ No

3. The river flow duration curve is enclosed ☐ Yes ☐ No

4. Specify the discharge capacity of the head pressure conduit: _____

5. Which Flooding Conditions Were Analyzed?

   - Gravity flow (Interior Watershed) ☐ Yes ☐ No
   - Common storm (River Watershed) ☐ Yes ☐ No
   - Historical ponding probability ☐ Yes ☐ No
   - Coastal wave overtopping ☐ Yes ☐ No

   If No, explain why not: _____

6. Interior drainage has been analyzed based on joint probability of interior and exterior flooding and the capacities of pumping and outlet facilities to provide the established level of flood protection. ☐ Yes ☐ No

   If No, explain why not: _____

7. The rate of seepage through the levee system for the 100-year (base) flood is _____ cfs

10. INTERIOR DRAINAGE (Cont'd)

8. The length of levee system used to drive this seepage rate in item 7: _____ ft.

9. Will a pumping plant(s) be used for interior drainage? ☐ Yes ☐ No

If Yes, include the number of pumping plants: _____
For each pumping plant, list:

	Plant #1	Plant #2
The number of pumps		
The ponding storage capacity		
The maximum pumping rate		
The maximum pumping head		
The pumping starting elevation		
The pumping stopping elevation		
Is the discharge facility protected?		
Is there a flood warning plan?		
How much time is available between warning and flooding?		

Will the operations be automatic? ☐ Yes ☐ No

If the pumps are electric, are there backup power sources? ☐ Yes ☐ No

(Reference: U.S. Army Corps of Engineers EM-1110-2-3101, 3102, 3103, 3104, and 3105)

Note: Include a copy of supporting documentation of data and analysis. Provide a map showing the flooded area and maximum ponding elevations for all interior watersheds that result in flooding.

11. OTHER DESIGN CRITERIA

1. The following items have been addressed as stated:

   Liquefaction ☐ is ☐ is not a problem
   Hydrocompaction ☐ is ☐ is not a problem
   Heave differential movement due to soils of high shrink/swell ☐ is ☐ is not a problem

2. For each of these problems, state the basic facts and corrective action taken:

   _____

3. If the levee/floodwall is new or enlarged, will the structure adversely impact flood levels and/or flow velocities floodside of the structure? ☐ Yes ☐ No

Note: Attach supporting documentation

12. OPERATIONAL PLAN AND CRITERIA

1. Are the planned/installed works in full compliance with NFIP regulations, Section 44 CFR Ch. 1 1.65.10

   ☐ Yes ☐ No

2. Does the operation plan incorporate all the provisions for closure devices as required in Section 65.10(c)(1), of the NFIP regulations?

   ☐ Yes ☐ No

3. Does the operation plan incorporate all the provisions for interior drainage as required in Section 65.10(c)(2), of the NFIP regulations?

   ☐ Yes ☐ No

   If the answer is No to any of the above, please explain below.

Bridge/Culvert Form, Preliminary Plans for Upstream and Downstream Inflatable Dams and Survey Notes for Mill Avenue (South Bound)

FEDERAL EMERGENCY MANAGEMENT AGENCY **BRIDGE/CULVERT FORM**	O.M.B. Burden No. 3067-0148 Expires July 31, 1997

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 2 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

You are not required to respond to this collection of information unless a valid OMB Control Number is displayed in the upper right corner of this form.

Community Name: City of Tempe, Maricopa County, Arizona

Flooding Source: Salt River

Project Name/Identifier: South Bank Levee Removal/Relocation

1. IDENTIFIER

1. Name of structure (roadway, railroad, etc.): Downstream Inflatable Dam

2. Location of bridge/culvert along flooding source (in terms of stream distance or cross-section identifier):

   Between Cross Sections 220.75 and 220.755

3. This revision reflects (check one of the following):

   ☒ New bridge/culvert not modeled in the FIS

   ☐ Modified bridge/culvert previously modeled in the FIS

   ☐ New analysis of bridge/culvert previously modeled in the FIS

4. Hydraulic model used to analyze the structure *(e.g., HEC-2 with special bridge routine, WSPRO, HY8)*

   HEC-Ras, Version 2.2

   If different than hydraulic analysis for the flooding source, justify why the hydraulic analysis used for the flooding source could not analyze the structure(s). *(Attach justification)*

   Justification attached ☐ **Yes** ☐ **No** ☐ **N/A**

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

2. DRAWING CHECKLIST

Attach plans of the structure(s) certified by a registered professional engineer. The plan detail and information should include the following (check the boxes if the information has been provided):

Preliminary plans (photocopy) are attached. A final plan set will be submitted when the follow-up LOMR is applied for.

- ☐ Dimensions (height, width, span, radius, length)
- ☐ Shape (culverts only)
- ☐ Material
- ☐ Beveling or Rounding (culverts only)
- ☐ Wing Wall Angle
- ☐ Low Chord Elevations - Upstream and Downstream
- ☐ Top of Road Elevations - Upstream and Downstream
- ☐ Structure Invert Elevations - Upstream and Downstream
- ☐ Stream Invert Elevations - Upstream and Downstream
- ☐ Skew Angle
- ☐ Cross-Section Locations
- ☐ Distances Between Cross Sections
- ☐ Erosion Protection

3. SEDIMENT TRANSPORT CONSIDERATIONS

If there is any indication from historical records that sediment transport (including scour and deposition) can affect the 100-year (base flood) water-surface elevations; and/or based on the stream geomorphology, vegetative cover, development of the watershed and bank conditions, there is a potential for debris and sediment transport (including sewer and deposition) to affect the base flood elevations, then provide the following information:

- ☐ Estimated sediment load
- ☐ Method used to estimate sediment transport
- ☐ Method used to estimate scour and/or deposition
- ☐ Method used to revise hydraulic or hydrologic analysis (model) to account for sediment transport

FEDERAL EMERGENCY MANAGEMENT AGENCY **BRIDGE/CULVERT FORM**	O.M.B. Burden No. 3067-0148 Expires July 31, 1997

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You are not required to respond to this collection of information unless a valid OMB Control Number is displayed in the upper right corner of this form.

Community Name: City of Tempe, Maricopa County, Arizona

Flooding Source: Salt River

Project Name/Identifier: South Bank Levee Removal/Relocation

1. IDENTIFIER

1. Name of structure (roadway, railroad, etc.): Upstream Inflatable Dam

2. Location of bridge/culvert along flooding source (in terms of stream distance or cross-section identifier):

   Between Cross Sections 222.67 and 222.69

3. This revision reflects (check one of the following):

   ☒ New bridge/culvert not modeled in the FIS

   ☐ Modified bridge/culvert previously modeled in the FIS

   ☐ New analysis of bridge/culvert previously modeled in the FIS

4. Hydraulic model used to analyze the structure *(e.g., HEC-2 with special bridge routine, WSPRO, HY8)*

   HEC-Ras, Version 2.2

   If different than hydraulic analysis for the flooding source, justify why the hydraulic analysis used for the flooding source could not analyze the structure(s). *(Attach justification)*

   Justification attached ☐ **Yes** ☐ **No** ☐ **N/A**

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

2. DRAWING CHECKLIST

Attach plans of the structure(s) certified by a registered professional engineer. The plan detail and information should include the following (check the boxes if the information has been provided):

Preliminary plans (photocopy) are attached. *A final plan set will be submitted when the follow-up LOMR is applied for.*

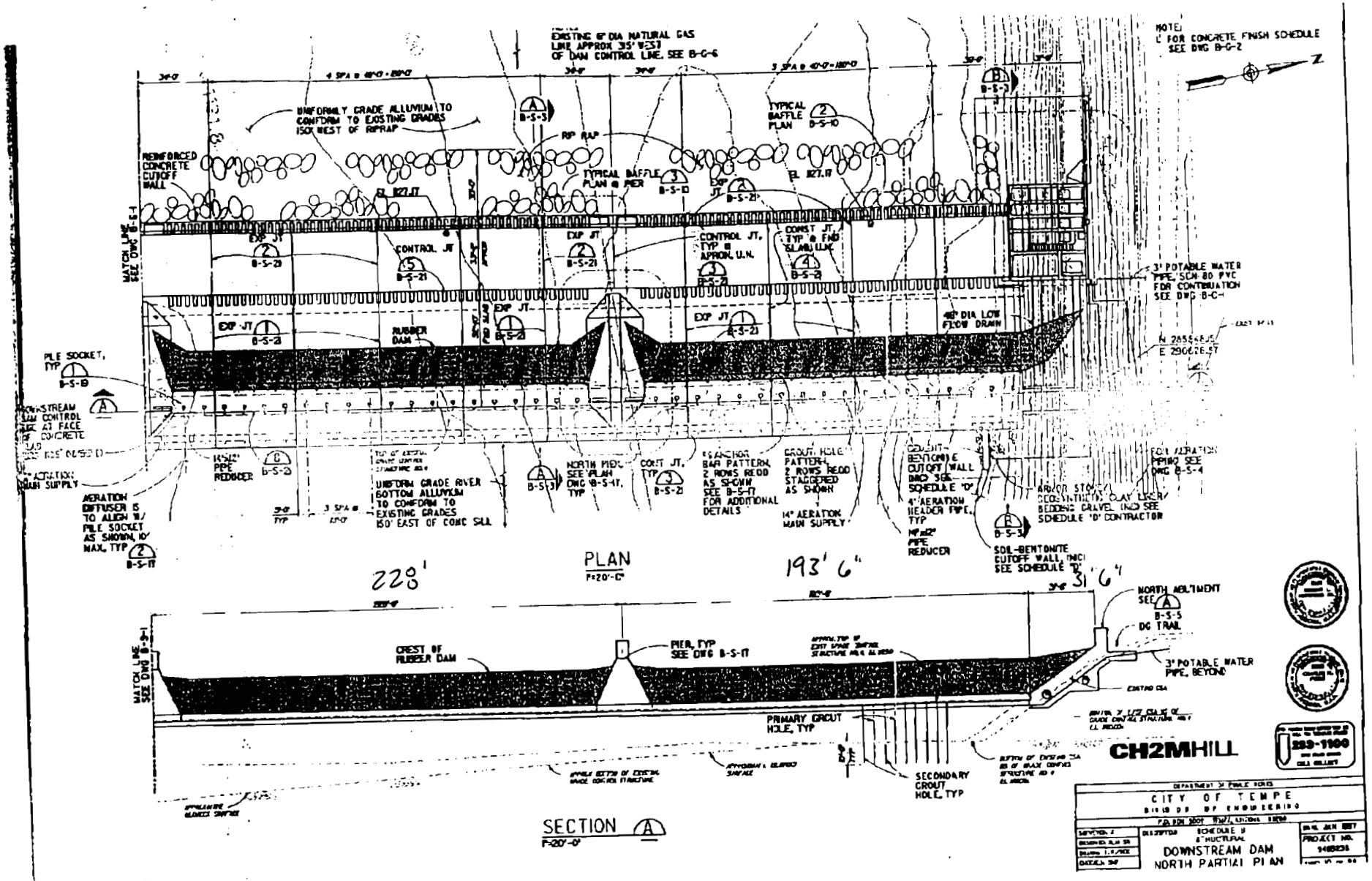
- ☐ Dimensions (height, width, span, radius, length)
- ☐ Shape (culverts only)
- ☐ Material
- ☐ Beveling or Rounding (culverts only)
- ☐ Wing Wall Angle
- ☐ Low Chord Elevations - Upstream and Downstream
- ☐ Top of Road Elevations - Upstream and Downstream
- ☐ Structure Invert Elevations - Upstream and Downstream
- ☐ Stream Invert Elevations - Upstream and Downstream
- ☐ Skew Angle
- ☐ Cross-Section Locations
- ☐ Distances Between Cross Sections
- ☐ Erosion Protection

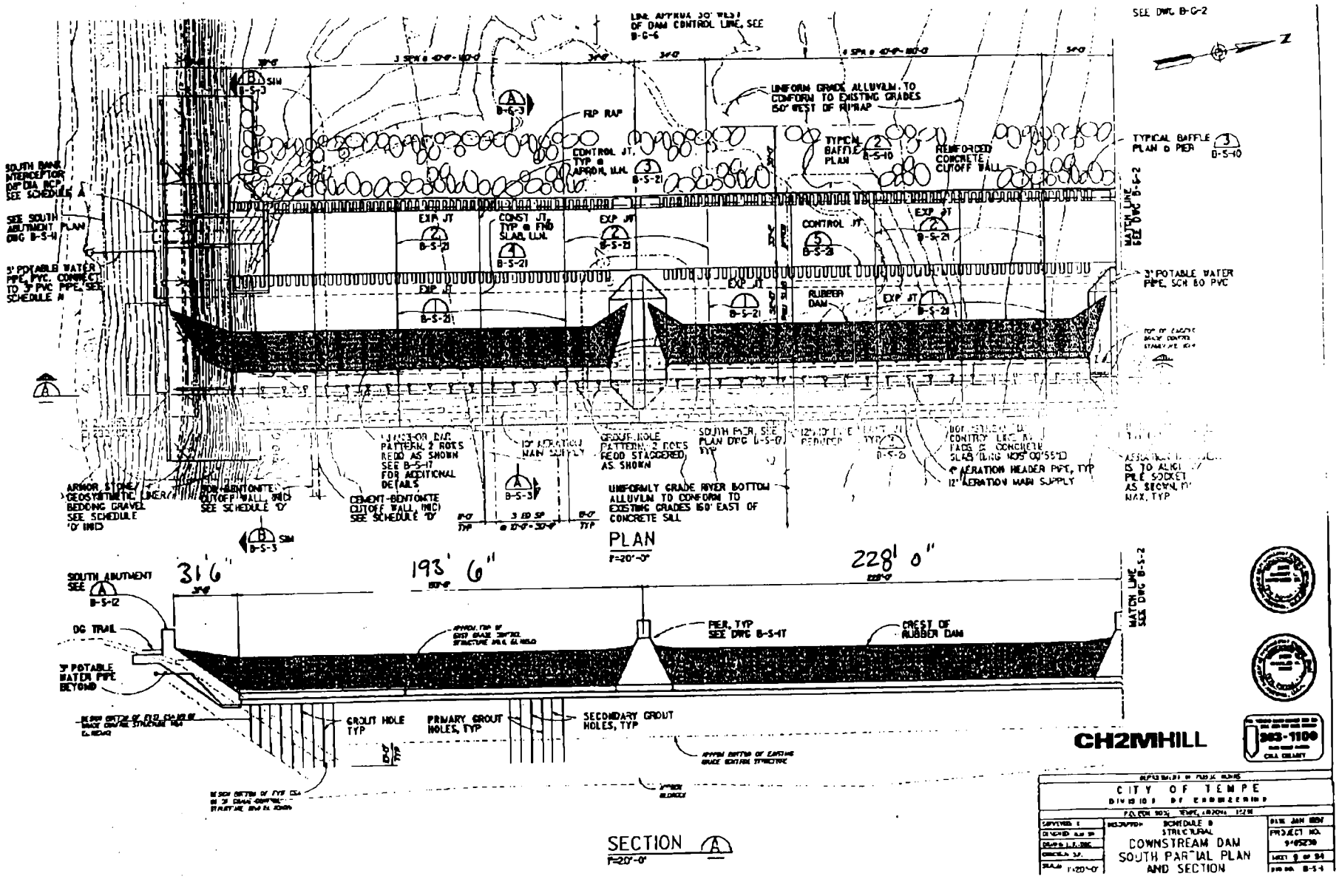
3. SEDIMENT TRANSPORT CONSIDERATIONS

If there is any indication from historical records that sediment transport (including scour and deposition) can affect the 100-year (base flood) water-surface elevations; and/or based on the stream geomorphology, vegetative cover, development of the watershed and bank conditions, there is a potential for debris and sediment transport (including sewer and deposition) to affect the base flood elevations, then provide the following information:

- ☐ *Estimated sediment load*
- ☐ Method used to estimate sediment transport
- ☐ Method used to estimate scour and/or deposition
- ☐ Method used to revise hydraulic or hydrologic analysis (model) to account for sediment transport

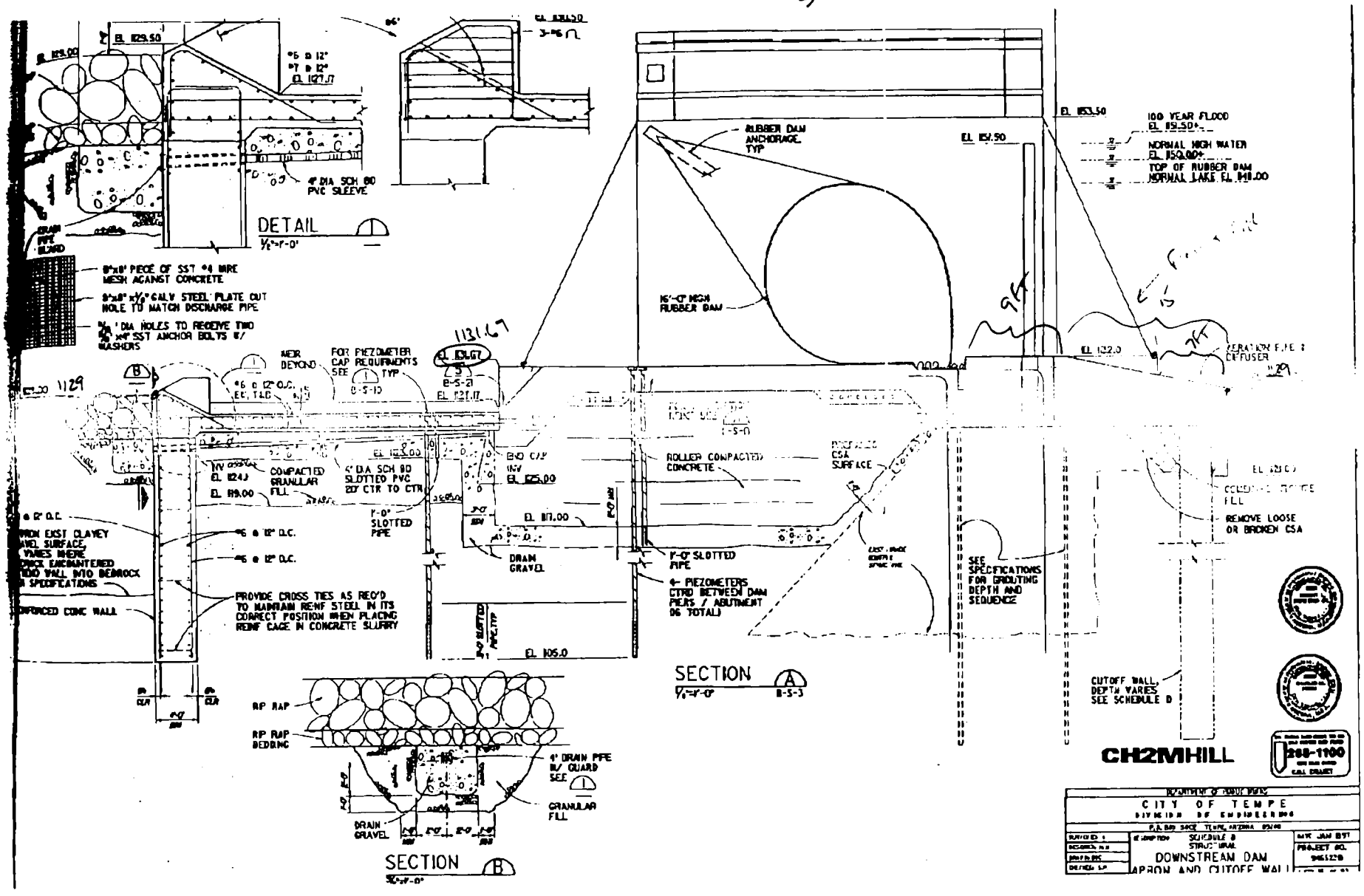
Preliminary Plans for Upstream and Downstream Inflatable Dams

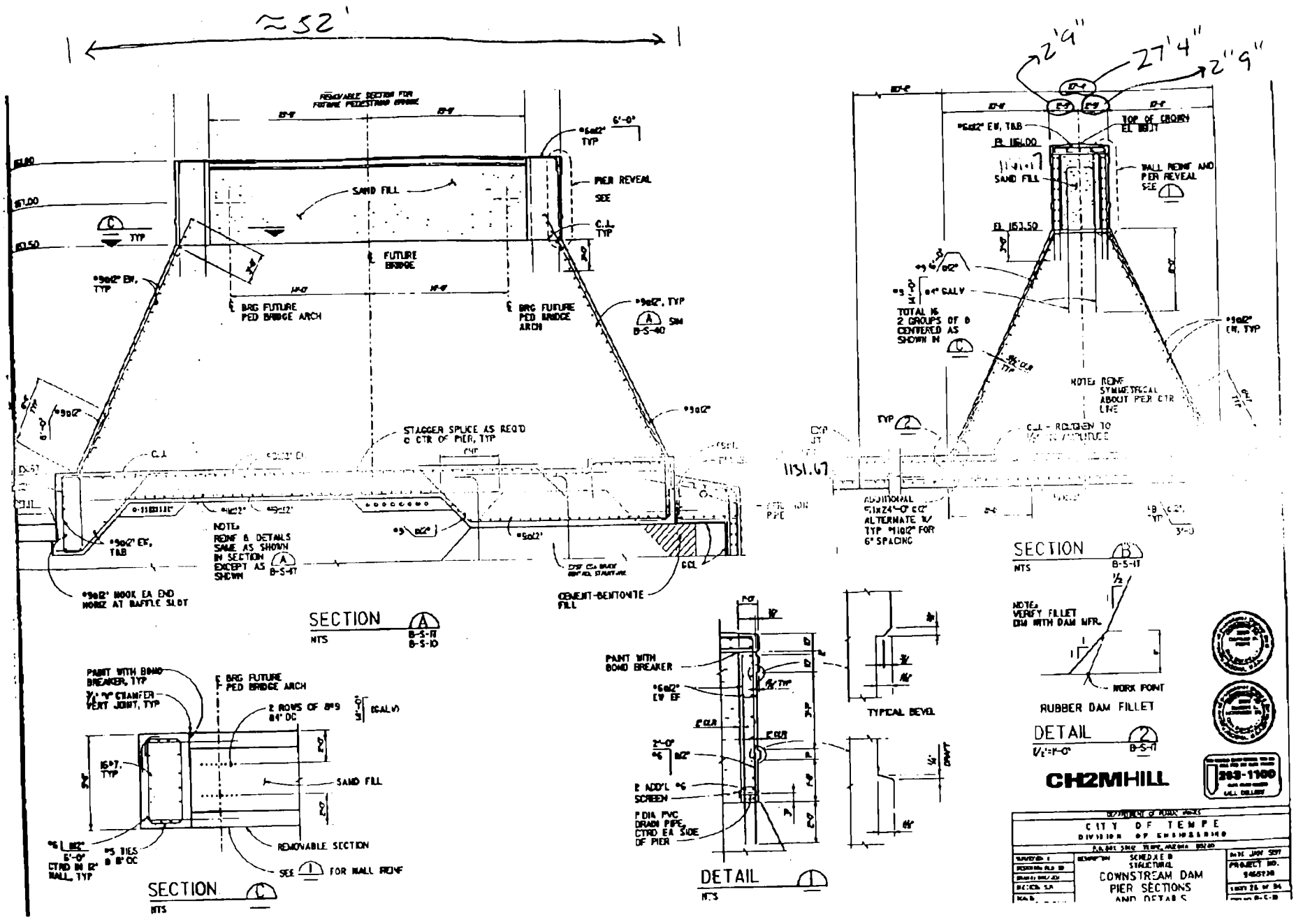

EXISTING 6" DIA NATURAL GAS LINE APPROX 35' WEST OF DAM CONTROL LINE, SEE B-G-6
NOTE: 1. FOR CONCRETE FINISH SCHEDULE SEE DWG B-G-2
UNIFORMLY GRADE ALLUVIUM TO CONFORM TO EXISTING GRADES 150' WEST OF RIPRAP
RIP RAP
TYPICAL BAFFLE PLAN
TYPICAL BAFFLE PLAN @ PIER
REINFORCED CONCRETE CUTOFF WALL
EL 827.17
EXP JT
CONTROL JT
CONTROL JT, TYP @ APRON, U.N.
CONST JT, TYP @ END SLAB, U.N.
3" POTABLE WATER PIPE, SCH 80 PVC FOR CONTINUATION SEE DWG B-C-1
48" DIA LOW FLOW DRAIN
RUBBER DAM
PILE SOCKET, TYP
DOWNSTREAM DAM CONTROL SEE A3 FACE OF CONCRETE
AERATION MAIN SUPPLY
AERATION DIFFUSER IS TO ALIGN W/ PILE SOCKET AS SHOWN, 10' MAX. TYP
14"x12" PIPE REDUCER
UNIFORM GRADE RIVER BOTTOM ALLUVIUM TO CONFORM TO EXISTING GRADES 150' EAST OF CONC SILL
NORTH PIER SEE PLAN DWG B-S-17, TYP
CONT JT, TYP
ANCHOR BAR PATTERN, 2 ROWS REQD AS SHOWN SEE B-S-17 FOR ADDITIONAL DETAILS
GROUT HOLE PATTERN, 2 ROWS REQD STAGGERED AS SHOWN
14" AERATION MAIN SUPPLY
CONCRETE BENTONITE CUTOFF WALL DWG SEE SCHEDULE "D"
4" AERATION HEADER PIPE, TYP
PIPE REDUCER
ARMOR STONE, GEOSYNTHETIC, CLAY LINER, BEDDING GRAVEL, IND SEE SCHEDULE "D" CONTRACTOR
SOIL-BENTONITE CUTOFF WALL, IND SEE SCHEDULE "D"
FOR AERATION PIPING SEE DWG B-S-4
228'
PLAN
193' 6"
31' 6"
NORTH ABUTMENT SEE B-S-5
DG TRAIL
3" POTABLE WATER PIPE, BEYOND
CREST OF RUBBER DAM
PIER, TYP SEE DWG B-S-17
PRIMARY GROUT HOLE, TYP
SECONDARY GROUT HOLE, TYP
MATCH LINE SEE DWG B-S-1
SECTION A
CH2MHILL
CITY OF TEMPE
DOWNSTREAM DAM
NORTH PARTIAL PLAN

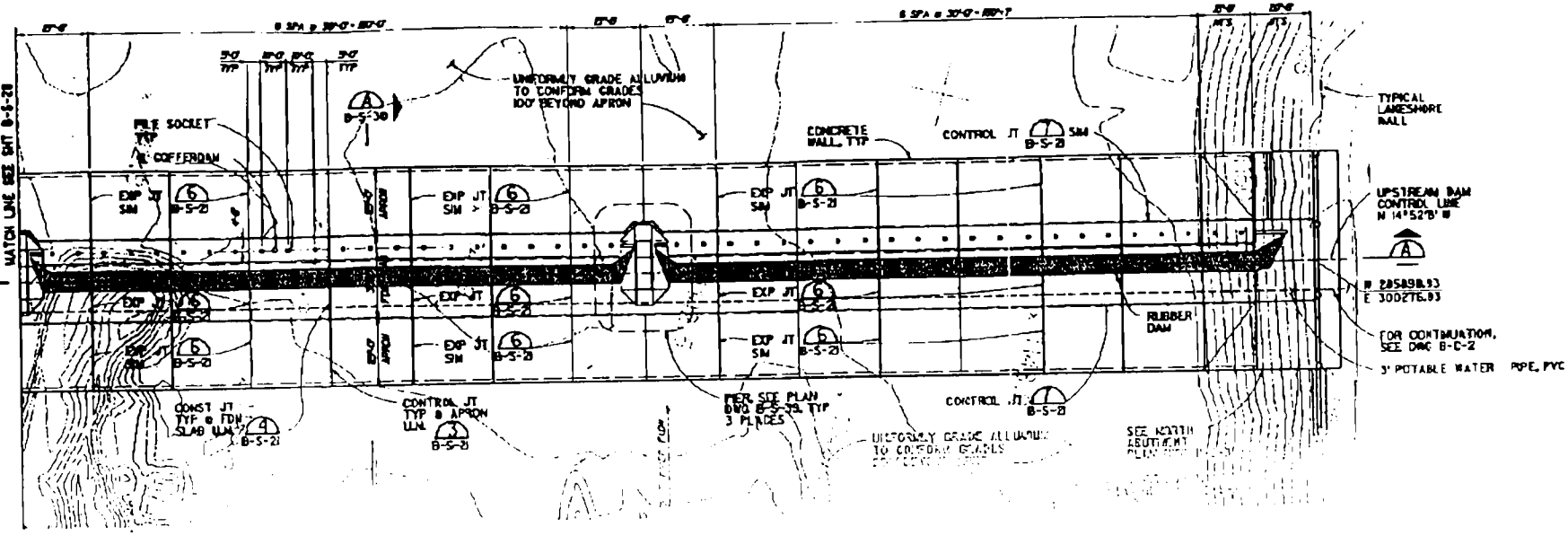

SEE DWG B-G-2
LINE APPROX 30' WEST OF DAM CONTROL LINE, SEE B-G-6
UNIFORM GRADE ALLUVIUM TO CONFORM TO EXISTING GRADES 150' WEST OF RIPRAP
RIP RAP
CONTROL JT, TYP @ APRON, ILM.
TYPICAL BAFFLE PLAN
REINFORCED CONCRETE CUTOFF WALL
TYPICAL BAFFLE PLAN @ PIER
SOUTH BANK INTERCEPTOR 24" DIA RCP SEE SCHEDULE A
SEE SOUTH ABUTMENT PLAN DWG B-S-11
3" POTABLE WATER PIPE, PVC, CONNECT TO 3" PVC PIPE, SEE SCHEDULE N
EXP JT
CONST JT, TYP @ END SLAB, ILM.
CONTROL JT
RUBBER DAM
MATCH LINE SEE DWG B-S-2
3" POTABLE WATER PIPE, SCH 80 PVC
ARMOR STONE/ GEOSYNTHETIC LINER/ BEDDING GRAVEL SEE SCHEDULE 'D' (MIC)
NON-BENTONITE CUTOFF WALL, (MIC) SEE SCHEDULE 'D'
CEMENT-BENTONITE CUTOFF WALL, (MIC) SEE SCHEDULE 'D'
GROUT HOLE PATTERN, 2 ROWS REDD AS SHOWN SEE B-S-17 FOR ADDITIONAL DETAILS
10" AERATION MAIN SUPPLY
GROUT HOLE PATTERN, 2 ROWS REDD STAGGERED, AS SHOWN
SOUTH PIER, SEE PLAN DWG B-S-17 TYP
UNIFORMLY GRADE RIVER BOTTOM ALLUVIUM TO CONFORM TO EXISTING GRADES 150' EAST OF CONCRETE SILL
AERATION HEADER PIPE, TYP
12" AERATION MAIN SUPPLY
IS TO ALIGN PILE SOCKET AS SHOWN MAX, TYP
PLAN
1"=20'-0"
31' 6"
193' 6"
228' 0"
SOUTH ABUTMENT SEE
DG TRAIL
3" POTABLE WATER PIPE BEYOND
PIER, TYP SEE DWG B-S-17
CREST OF RUBBER DAM
GROUT HOLE TYP
PRIMARY GROUT HOLES, TYP
SECONDARY GROUT HOLES, TYP
SECTION A
1"=20'-0"
CH2MHILL
CITY OF TEMPE
DOWNSTREAM DAM
SOUTH PARTIAL PLAN AND SECTION

NROW 32 FT
30FT RIPRAP - 1129

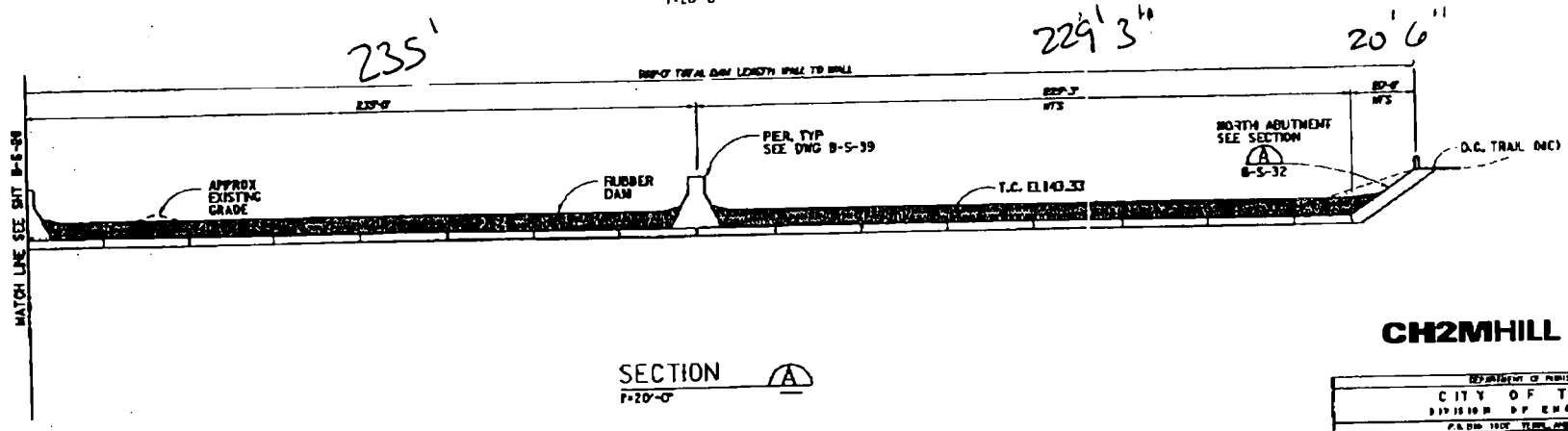
52FEET




≈52'
REMOVABLE SECTION FOR FUTURE PEDESTRIAN BRIDGE
SAND FILL
PIER REVEAL SEE
C.L. TYP
FUTURE BRIDGE
BRG FUTURE PED BRIDGE ARCH
STAGGER SPLICE AS REQ'D ℄ CTR OF PIER, TYP
NOTE: REINF & DETAILS SAME AS SHOWN IN SECTION A EXCEPT AS SHOWN
CEMENT-BENTONITE FILL
SECTION A
NTS
PAINT WITH BOND BREAKER, TYP
BRG FUTURE PED BRIDGE ARCH
2 ROWS OF #9 @4" OC
SAND FILL
REMOVABLE SECTION
SEE 1 FOR WALL REINF
SECTION C
NTS
PAINT WITH BOND BREAKER
TYPICAL BEVEL
DETAIL 1
NTS
2'9"
27'4"
2'9"
TOP OF CROWN EL 161.7
EL 161.00
SAND FILL
WALL REINF AND PIER REVEAL SEE
EL 153.50
TOTAL 16 2 GROUPS OF 8 CENTERED AS SHOWN IN C
NOTE: REINF SYMMETRICAL ABOUT PIER CTR LINE
SECTION B
NTS
NOTE: VERIFY FILLET DIM WITH DAM MFR.
WORK POINT
RUBBER DAM FILLET
DETAIL 2
1/2"=1'-0"
CH2MHILL
CITY OF TEMPE
DIVISION OF ENGINEERING
COWNSTREAM DAM
PIER SECTIONS
AND DETAILS



PLAN
F=20'-0"



SECTION A
F=20'-0"

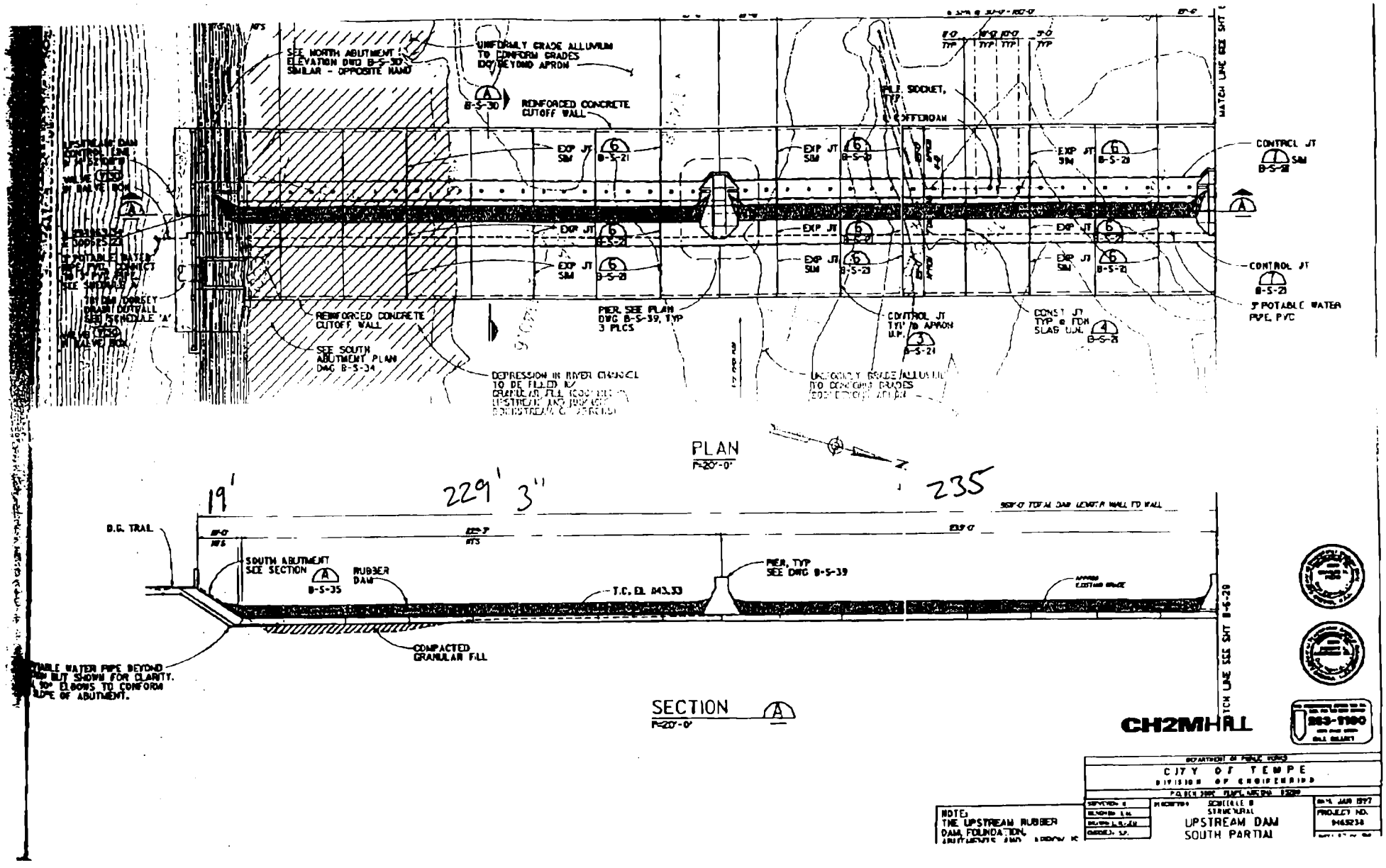
NOTE:
THE UPSTREAM RUBBER DAM FOUNDATION.

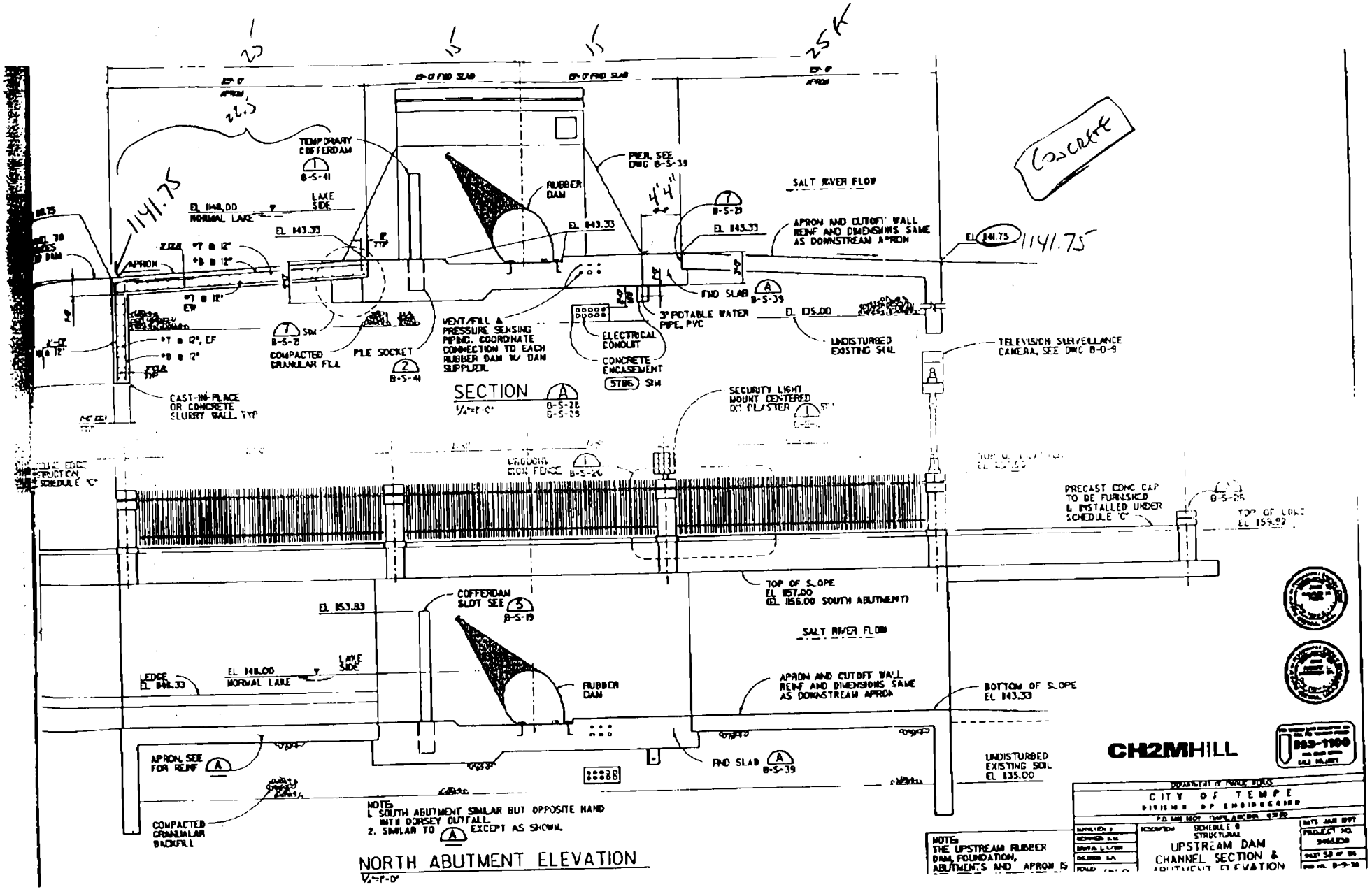
CH2MHILL

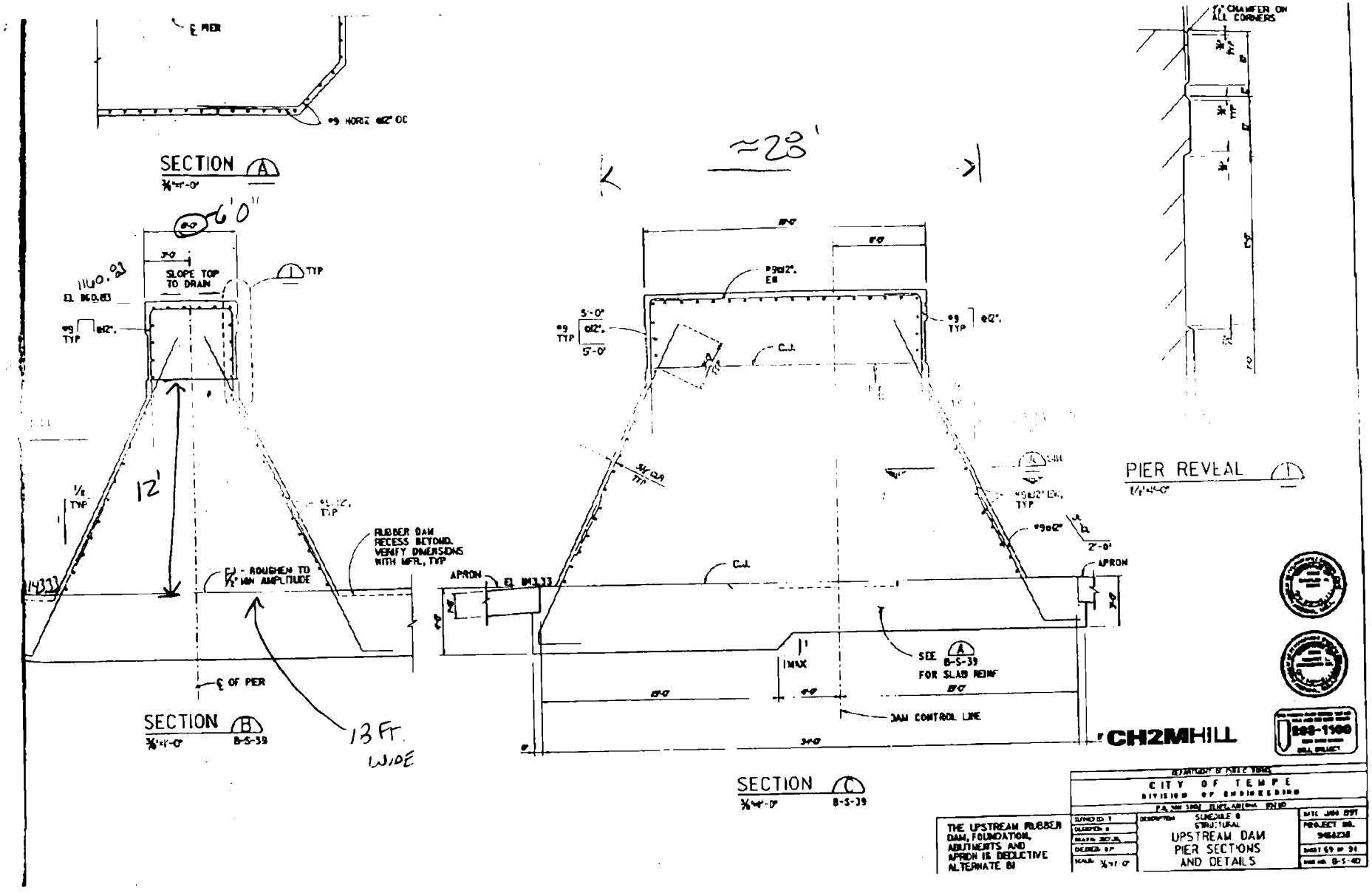
CITY OF TEMPE
DIVISION OF ENGINEERING

SCHEDULE B
STRUCTURAL
UPSTREAM DAM
NORTH PORTION

DATE: JAN 1981
PROJECT NO. 2466738


PLAN
1"=20'-0"
SECTION A
1"=20'-0"
19'
229' 3"
235
SEE NORTH ABUTMENT ELEVATION DWG B-S-30 SIMILAR - OPPOSITE HAND
UNIFORMLY GRADE ALLUVIUM TO CONFORM GRADES BEYOND APRON
REINFORCED CONCRETE CUTOFF WALL
PILE SOCKET, TYP
COFFERDAM
EXP JT SIM
CONTROL JT
3" POTABLE WATER PIPE, PVC
REINFORCED CONCRETE CUTOFF WALL
SEE SOUTH ABUTMENT PLAN DWG B-S-34
PIER, SEE PLAN DWG B-S-39, TYP 3 PLCS
CONTROL JT TYP @ APRON
CONST JT TYP @ FDN SLAB U.N.
DEPRESSION IN RIVER CHANNEL TO BE FILLED W/ GRANULAR FILL
B.C. TRAIL
SOUTH ABUTMENT SEE SECTION
RUBBER DAM
T.C. EL 843.33
PIER, TYP SEE DWG B-S-39
COMPACTED GRANULAR FILL
MATCH LINE SEE SHT B-S-29
CH2MHILL
263-1100
CITY OF TEMPE
DIVISION OF ENGINEERING
UPSTREAM DAM
SOUTH PARTIAL
STRUCTURAL
PROJECT NO.
NOTE: THE UPSTREAM RUBBER DAM, FOUNDATION, ABUTMENTS AND APRON


TEMPORARY COFFERDAM
LAKE SIDE
NORMAL LAKE
RUBBER DAM
PIER, SEE DWG B-S-39
SALT RIVER FLOW
APRON AND CUTOFF WALL REINF AND DIMENSIONS SAME AS DOWNSTREAM APRON
END SLAB
3" POTABLE WATER PIPE, PVC
UNDISTURBED EXISTING SOIL
TELEVISION SURVEILLANCE CAMERA, SEE DWG B-0-9
VENT/FILL & PRESSURE SENSING PIPING. COORDINATE CONNECTION TO EACH RUBBER DAM W/ DAM SUPPLIER.
ELECTRICAL CONDUIT
CONCRETE ENCASEMENT
COMPACTED GRANULAR FILL
PILE SOCKET
CAST-IN-PLACE OR CONCRETE SLURRY WALL, TYP
SECTION
SECURITY LIGHT MOUNT CENTERED ON PILASTER
PRECAST CONC CAP TO BE FURNISHED & INSTALLED UNDER SCHEDULE 'C'
TOP OF SLOPE
COFFERDAM SLOT SEE
LEDGE
APRON, SEE FOR REINF
COMPACTED GRANULAR BACKFILL
BOTTOM OF SLOPE
NOTES:
1. SOUTH ABUTMENT SIMILAR BUT OPPOSITE HAND WITH DORSEY OUTFALL.
2. SIMILAR TO A EXCEPT AS SHOWN.
NORTH ABUTMENT ELEVATION
NOTE: THE UPSTREAM RUBBER DAM, FOUNDATION, ABUTMENTS AND APRON IS
CH2MHILL
CITY OF TEMPE
DIVISION OF ENGINEERING
SCHEDULE B
STRUCTURAL
UPSTREAM DAM
CHANNEL SECTION & ABUTMENT ELEVATION


SECTION A
SLOPE TOP TO DRAIN
TYP
12'
RUBBER DAM RECESS BEYOND. VERIFY DIMENSIONS WITH MFR., TYP
FJ - ROUGHEN TO ½" MIN AMPLITUDE
APRON
℄ OF PIER
SECTION B
13 FT. WIDE
≈20'
C.L.
SEE A B-5-39 FOR SLAB REINF
DAM CONTROL LINE
SECTION C
PIER REVEAL
CH2MHILL
CITY OF TEMPE
DIVISION OF ENGINEERING
UPSTREAM DAM PIER SECTIONS AND DETAILS
THE UPSTREAM RUBBER DAM, FOUNDATION, ABUTMENTS AND APRON IS DEDUCTIVE ALTERNATE B1

FEDERAL EMERGENCY MANAGEMENT AGENCY **BRIDGE/CULVERT FORM**	O.M.B. Burden No. 3067-0148 Expires July 31, 1997

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 2 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

You are not required to respond to this collection of information unless a valid OMB Control Number is displayed in the upper right corner of this form.

Community Name: City of Tempe, Maricopa County, Arizona

Flooding Source: Salt River

Project Name/Identifier: South Bank Levee Removal/Realignment

1. IDENTIFIER

1. Name of structure (roadway, railroad, etc.): Mill Avenue (South Bound) Bridge

2. Location of bridge/culvert along flooding source (in terms of stream distance or cross-section identifier):

   Cross Sections 221.19 - 221.20

3. This revision reflects (check one of the following):

   ☐ New bridge/culvert not modeled in the FIS

   ☒ Modified bridge/culvert previously modeled in the FIS

   ☒ New analysis of bridge/culvert previously modeled in the FIS

4. Hydraulic model used to analyze the structure *(e.g., HEC-2 with special bridge routine, WSPRO, HY8)*

   HEC-RAS Version 2.2

   If different than hydraulic analysis for the flooding source, justify why the hydraulic analysis used for the flooding source could not analyze the structure(s). *(Attach justification)*

   Justification attached ☐ **Yes** ☐ **No** ☐ **N/A**

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

2. DRAWING CHECKLIST

Attach plans of the structure(s) certified by a registered professional engineer. The plan detail and information should include the following (check the boxes if the information has been provided):

- ☐ Dimensions (height, width, span, radius, length) – **included in MCFCD submission (also see survey notes)**
- ☐ Shape (culverts only)
- ☐ Material - **included in MCFCD submission**
- ☐ Beveling or Rounding (culverts only)
- ☐ Wing Wall Angle – **included in MCFCD submission**
- ☒ Low Chord Elevations - Upstream and Downstream **(see survey notes)**
- ☒ Top of Road Elevations - Upstream and Downstream **(see survey notes)**
- ☐ Structure Invert Elevations - Upstream and Downstream – **included in MCFCD submission**
- ☐ Stream Invert Elevations - Upstream and Downstream **(See survey Notes)**
- ☐ Skew Angle **(See Work Map)**
- ☐ Cross-Section Locations **(See Work Map)**
- ☐ Distances Between Cross Sections **(See Work Map)**
- ☐ Erosion Protection

3. SEDIMENT TRANSPORT CONSIDERATIONS

If there is any indication from historical records that sediment transport (including scour and deposition) can affect the 100-year (base flood) water-surface elevations; and/or based on the stream geomorphology, vegetative cover, development of the watershed and bank conditions, there is a potential for debris and sediment transport (including sewer and deposition) to affect the base flood elevations, then provide the following information:

- ☐ Estimated sediment load
- ☐ Method used to estimate sediment transport
- ☐ Method used to estimate scour and/or deposition
- ☐ Method used to revise hydraulic or hydrologic analysis (model) to account for sediment transport

Survey Notes for Mill Avenue (South Bound)

...LL AVE & RAILROAD BRIDGE / SALT RIVER

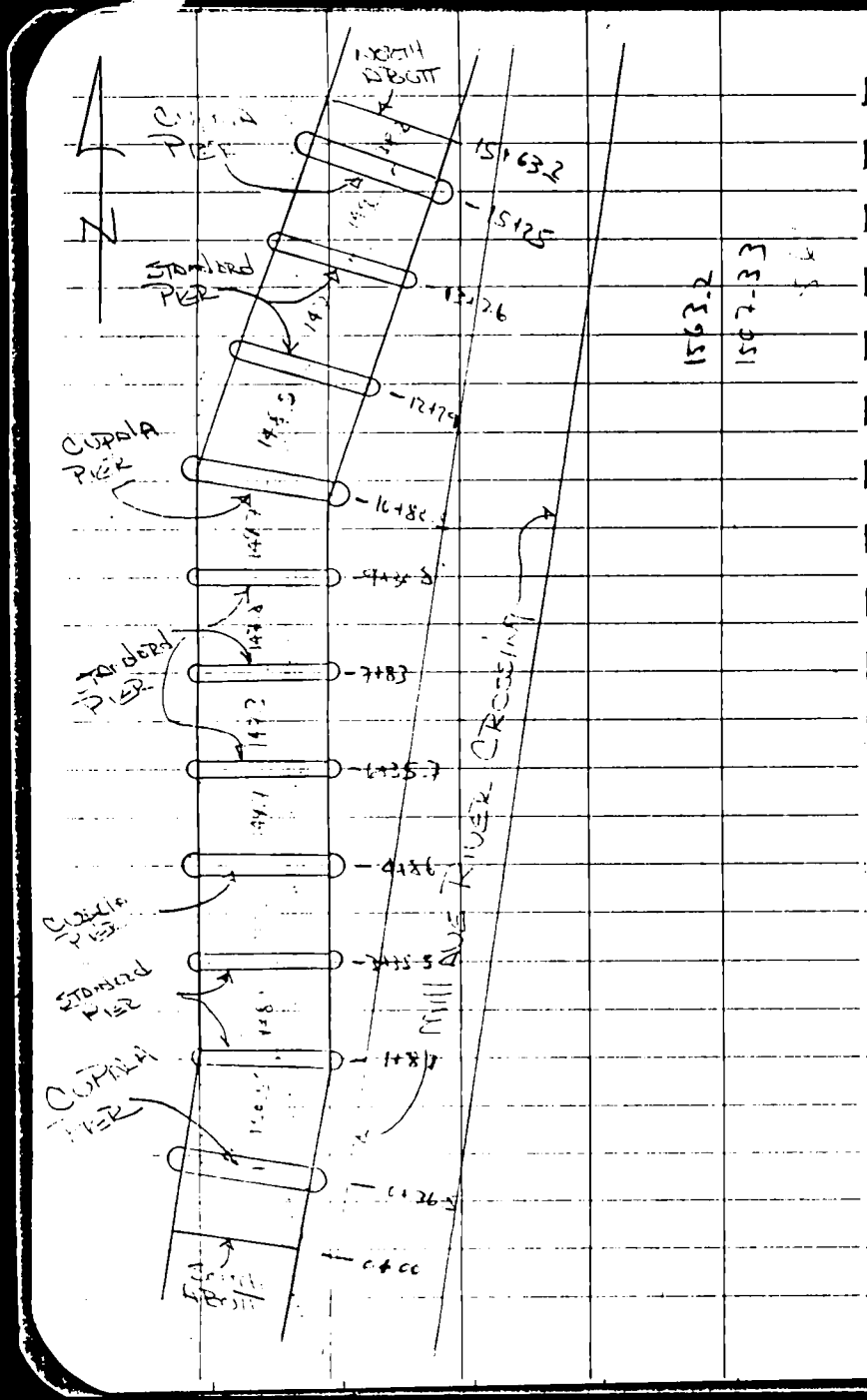
					DESCRIPTION
3...	E...	—	F...	ELEV	
BM-84	4.74				ERM-84 RC IN ... @ ... OF UNIVERSITY DR & S. FARMER
	4.51		6.17		TP
	5.63		6.29		TP
	6.07		3.96		TP
	8.18		6.43		TP
	1.26		3.0...		TP
TBM	---		14.80		CHS "X" ON N. END TOP OF PIER @ THE SW COR OF ASH ST & 3RD SALADO FLY FOR THE RAILROAD. SURVEY

1385

(12)

BENCH LOOP TO TOP BRIDGE MILL AVE

	+	HI	−	ELEV.	
T.B.M.				1152.61	(SET by Jokim) T.B.C. @ N.W. CURB RET. MILL AV. & RIO SALADO PKY (PAINT SPOT)
	5.82	57.43			
T.P.			4.89	1152.54	T.B.C.
	23.21	75.75			
T.B.M.			0.25	1175.50	2" I.P. IN CONC. S/W @ S.E. ABUT MILL AVE BRIDGE
	0.10	75.60			
T.P.			23.12	1152.48	T.B.C.
	4.92	57.40			
T.B.M.			5.82	1151.58	✓- IN P.D.B.



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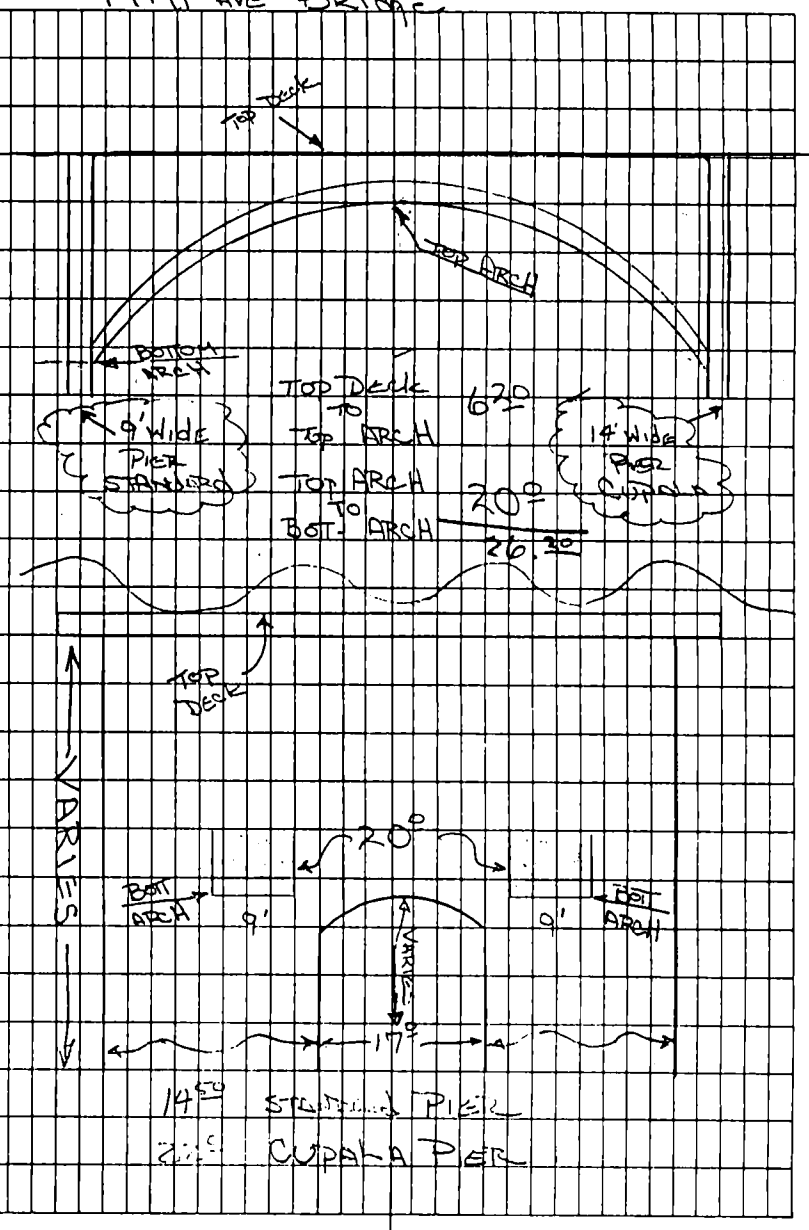
Mill Ave Bridge

(3)



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(14)

MILL AVE BRIDGE PROFILE

STA	H.I.	-Rod	TOP DECK	BOTT ARCH	BOTT ARCH @ PIER	-Rod (FROM TOP DECK)	N.G.	N.G. (WESTSIDE)	
	1122.59							(64.95)	
0+00 (SOUTH SPLIT)	↑	-1.06	1175.53	—	—	-10.32	1165.2	-10.86	1164.7
0+26 (PIER (SOUTH) & TOE)		6.40	1175.69	—	1149.49	-21.12	1154.6	-23.56	1152.10
1+11.5 (CHN)		6.72	1175.87	1169.61	—	-25.42	1150.8	-17.16	1158.7
1+87		6.44	1176.15	—	1149.97	-25.22	1150.9	-22.96	1152.2
2+[illegible] (TOP-PIER SOUTH)		6.[illegible]	1176.24	—	—	-24.82	1151.4	-25.56	1150.7
+62 (CHN)		6.[illegible]	1176.44	—	—	-24.92	1151.5	-25.66	1150.7
3+35		5.95	1176.69	—	1150.49	-25.02	1151.7	-26.26	1150.4
*3+72.5 (WEST TOE TOP)		5.80	1176.79	—	—	—	—	-26.66	1150.10
*4+10 (SPLIT & TOE (WEST))		5.72	1176.87	1170.69	—	-30.62	1146.27	-39.26	1137.6
4+86 (PIER SOUTH)		5.40	1177.19	—	1150.99	-34.82	1142.4	-40.46	1136.7
5+61 (SPLIT)		5.[illegible]	1177.25	1171.05	—	-39.82	1137.4	-42.16	1135.10
6+2[illegible]	1182.59	5.23	1177.31	—	1151.11	-41.82	1135.5	-42.96	1134.4

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Mill Ave Bridge Profile

STA	H.I.	-Rod	Top Deck	Bott Arch	Bott Arch @ Pier	-Rod (from Top Deck)	N.G.	N.G. (Water Line)	
	1132.51								
7+00 (Split)		5.24	1177.35	1171.15	—	-45.12	1132.2	31.06 -46.66	1130.7
7+82 (E Pier)		5.19	1177.40	—	1151.20	-45.92	1131.5	30.06 -48	1129.7
8+57 (Split)		5.22	1177.37	1171.17	—	-47.52	1129.8	30.45 -48.26	1129.10
9+30 (E Pier)		5.24	1177.35	—	1151.15	-46.82	1130.5	30.10 -47.66	1129.12
10+05 (Split)		5.32	1177.24	1171.01	—	-45.92	1131.3	31.95 -44.66	1132.6
10+80 (E Pier Supp.)	1132.52	5.41	1177.18	—	1150.98	-40.52	1136.6	32.03 -41.76	1135.4
11+54 (Split)	1132.46	5.47	1176.89	1170.69	—	-40.12	1136.8	36.30 -41.06	1135.8
12+29 (E Pier)		5.91	1176.72	—	1150.52	-36.22	1140.5	39.06 -39.16	1137.6
13+48 (G.B.)		6.32	1176.24	—	—	-28.72	1148.9	(44.[illegible]) -36.26	1140.[illegible]
13+62 (G.B.)		6.46	1176.20	—	—	-18.72	1157.3	[illegible] -29.26	1146.4
13+76 (E Pier)		6.48	1176.18	—	1149.[illegible]	-18.12	1158.10	-25.16	1151.[illegible] 59.55
13+94 (G.B.)	1132.46	6.44	1176.02	—	—	-17.22	1[illegible]	-22.66	1[illegible] 51.[illegible]

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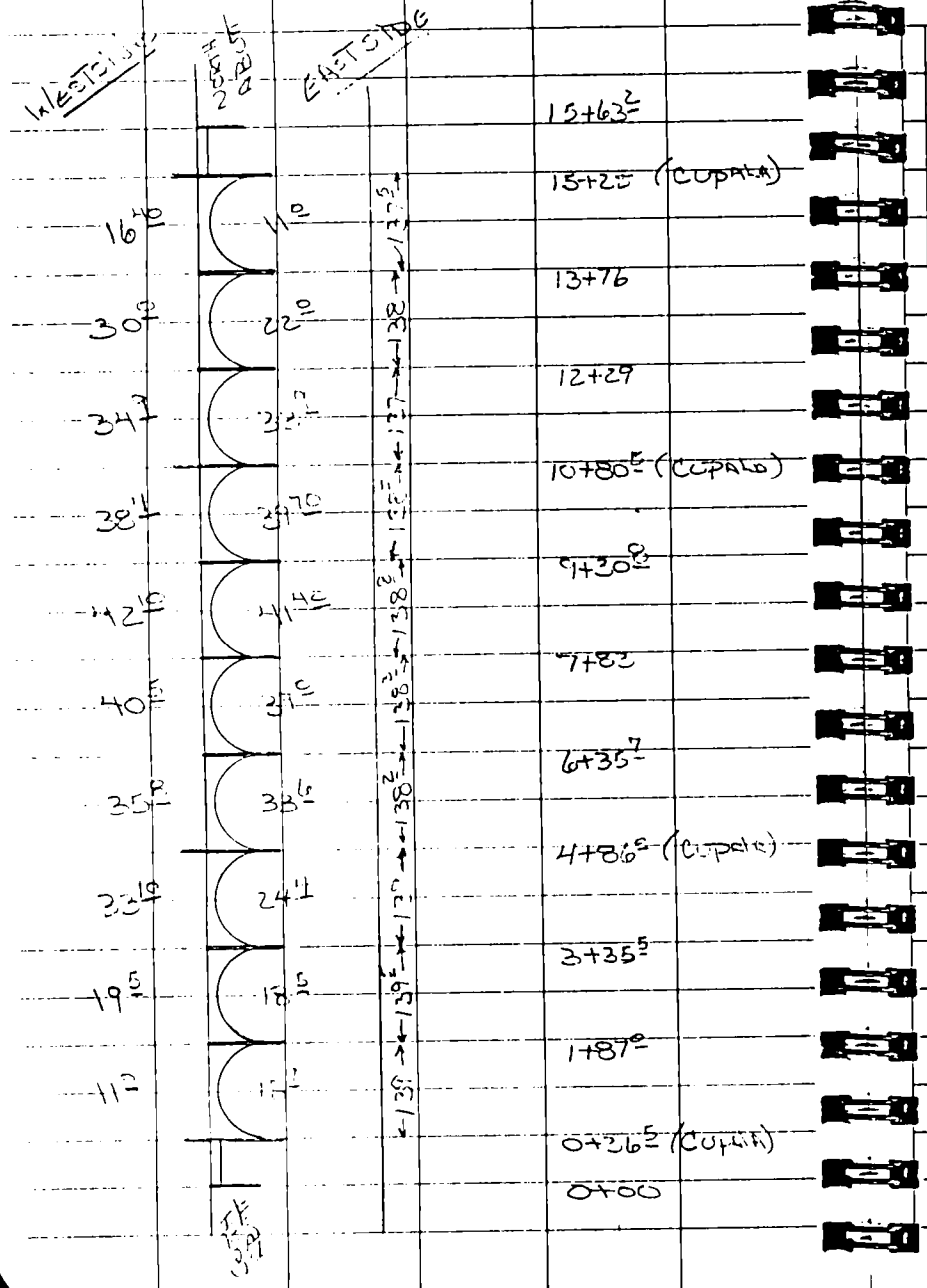
Mill AVE Bridge PROFILE

STA	H.I.	-Rod	TOP DECK	BOTT ARCH	BOTT ARCH @ PIER	-Rod (FROM TOP DECK)	N.G	N.G. (WESTSIDE)
	1182.16							
14+10 (G.B.)		6.73	1175.94	—	—	-22.32	1152.6	53.4? -21.76 1154.2
15+25 ℄ PIER (CUPOLA) & TOC		7.00	1175.66		1149.46	-21.32	1154.3	56.5? -18.96 1156.7
15+62.2 (NORTH GBUT.)	1182.22	7.12	1175.54	—	—	-9.92	1165.6	65.3? -10.56 1165.9

1385

Mill Ave Bridge Profile



Print-Out for HEC-RAS Model Reach4.prj (Effective Model)

HEC-RAS September 1998 Version 2.2
U.S. Army Corp of Engineers
Hydrologic Engineering Center
609 Second Street, Suite D
Davis, California 95616-4687
(916) 756-1104

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX XXXX     XXXXXX    XXXX
X     X  X        X            X  X    X    X        X
X     X  X        X    X       X   X   X    X        X
X     X  XXXXXX    XXXX        X    X  X    X   XXXXX
```

PROJECT DATA
Project Title: Salt Gila Reach 4 - MARCH 16 (2)
Project File : reach4.prj
Run Date and Time: 3/25/98 9:56:48 AM

Project in English units

PLAN DATA

Plan Title: Method 1 FW
Plan File : c:\TEMPE\soclomr\final\reach4.p05

Geometry Title: Reach 4
Geometry File : c:\TEMPE\soclomr\final\reach4.g01

Flow Title : Imported Flow 02
Flow File : c:\TEMPE\soclomr\final\reach4.f02

Plan Summary Information:
Number of: Cross Sections = 134 Mulitple Openings = 0
Culverts = 0 Inline Weirs = 0
Bridges = 14

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculaton tolerance = 0.01
Maximum number of interations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

Encroachment Data
Equal Conveyance = True
Left Offset = 0
Right Offset = 0

River = Salt River Reach = Reach 4

RS	Profile	Method	Value1	Value2
225.30	PF#2		119248.24	20840
225.19	PF#2		119368.09	20920
225.11	PF#2		119340.48	21225
225	PF#2		1 19352	21445
224.90	PF#2		119460.09	21370
224.82	PF#2		119457.04	21491.9

224.71	PF#2	119459.68	21720
224.62	PF#2	119460.58	21600
224.52	PF#2	119463.66	21370
224.42	PF#2	119475.02	21065
224.31	PF#2	119483.4720653.09	
224.22	PF#2	1 19347.220550.93	
224.20	PF#2	119457.0220544.66	
224.19	PF#2	119466.3620527.98	
224.16	PF#2	119479.9520537.08	
224.14	PF#2	119476.5120540.34	
224.12	PF#2	119386.2320538.41	
224.06	PF#2	1 19506.120383.98	
223.96	PF#2	119511.4620406.09	
223.86	PF#2	1 19552.420396.33	
223.77	PF#2	119592.8820311.51	
223.67	PF#2	119562.2720245.13	
223.58	PF#2	119527.5820181.59	
223.48	PF#2	1 19492.120178.39	
223.38	PF#2	1 19481.120241.02	
223.29	PF#2	119501.2920338.45	
223.19	PF#2	119360.21 20415.2	
223.09	PF#2	119292.3820380.68	
223.085	PF#2	1 19332.620355.67	
223.08	PF#2	1 19332.620355.67	
223.02	PF#2	119353.6420446.33	
222.93	PF#2	119406.4520352.21	
222.83	PF#2	119479.7420443.15	
222.74	PF#2	1 19531.420569.49	
222.65	PF#2	119561.2520640.75	
222.55	PF#2	119524.46	20795
222.45	PF#2	119472.8520860.86	
222.36	PF#2	119466.8820649.69	
222.27	PF#2	119515.3620592.59	
222.17	PF#2	119489.0420498.95	
222.09	PF#2	119483.2820524.52	
222.08	PF#2	119484.5320523.82	
221.99	PF#2	119415.5620427.89	
221.89	PF#2	119381.2820367.67	
221.80	PF#2	119421.7120357.17	
221.70	PF#2	119451.4920391.17	
221.61	PF#2	119473.0320399.17	
221.50	PF#2	119527.6120456.28	
221.40	PF#2	119511.7320460.74	
221.31	PF#2	119574.9820485.13	
221.26	PF#2	119495.66 20451.8	
221.25	PF#2	119495.6620450.59	
221.24	PF#2	119495.6620450.59	
221.2	PF#2	119419.2620391.86	
221.195	PF#2	119421.9220390.84	
221.19	PF#2	119421.9220390.84	
221.06	PF#2	119517.35 20439.3	
221.055	PF#2	119529.5620438.24	
221.05	PF#2	119529.5620438.24	
221.02	PF#2	1 19520.720420.89	
220.92	PF#2	119547.9120454.12	
220.82	PF#2	1 19510 20430.3	
220.73	PF#2	1 19535.620420.15	
220.63	PF#2	119531.1820437.64	
220.54	PF#2	119531.3720446.62	
220.45	PF#2	119539.67 20451.8	
220.35	PF#2	119544.1320460.75	
220.25	PF#2	119549.1220468.77	
220.16	PF#2	119561.2420473.91	
220.06	**PF#2**	**119565.9120475.44**	
220.05	**PF#2**	**119567.2120473.83**	
220.03	PF#2	119567.2120473.83	
219.88	PF#2	119562.9620481.47	
219.79	PF#2	119514.2320446.13	
219.70	PF#2	119566.9120512.06	
219.61	PF#2	119564.3220553.08	
219.51	PF#2	119541.3920547.55	

219.42	PF#2	119488.9720499.14
219.33	PF#2	119430.3720455.23
219.24	PF#2	119468.0920500.54
219.14	PF#2	119481.8420505.11
219.03	PF#2	119340.4520367.12
219.02	PF#2	119342.4120364.57
219.01	PF#2	119342.4120364.57
218.97	PF#2	119490.0620499.86
218.96	PF#2	119477.8720498.31
218.80	PF#2	119492.0120503.75
218.71	PF#2	119509.9120496.68
218.61	PF#2	119503.38 20500.7
218.52	PF#2	119500.4720508.59
218.42	PF#2	119506.7820514.58
218.33	PF#2	119490.0520541.51
218.24	PF#2	119418.1720453.03
218.14	PF#2	119389.5120421.91
218.04	PF#2	119390.1220428.81
217.95	PF#2	119437.7320479.87
217.86	PF#2	119497.4120541.23
217.76	PF#2	1 19555.720379.38
217.66	PF#2	119569.8920590.58
217.57	PF#2	119521.5120562.51
217.48	PF#2	119436.4220482.19
217.38	PF#2	119463.0120497.48
217.29	PF#2	119510.7820509.77
217.19	PF#2	119562.0520511.37
217.10	PF#2	119607.3520517.16
217.00	PF#2	119612.3420517.43
216.91	PF#2	119604.8920509.34
216.81	PF#2	1 19606.320501.51
216.72	PF#2	119596.8720494.78
216.62	PF#2	1 19591.620542.92
216.52	PF#2	1 19519.920519.62
216.49	PF#2	119567.4420516.46
216.42	PF#2	1 19535.320482.14
216.33	PF#2	119399.9120426.24
216.23	PF#2	1 19329.520413.21
216.13	PF#2	1 19324.320437.98
216.04	PF#2	119397.8520467.69
215.94	PF#2	119572.3520479.02
215.84	PF#2	119571.9820442.79
215.82	PF#2	119550.04 20410.9
215.81	PF#2	119550.06 20410.9
215.75	PF#2	1 19576.720431.51
215.65	PF#2	119594.8420484.84
215.56	PF#2	119587.3720495.25
215.46	PF#2	119599.3720516.22
215.36	PF#2	1 19618 20537
215.27	PF#2	1 19610.6 20553.9
215.18	PF#2	119683.2220277.12
215.09	PF#2	1 19674.220293.22
214.99	PF#2	119601.52 20329.1
214.9	PF#2	119563.8820374.38
214.79	PF#2	119461.7320518.14
214.785	PF#2	119462.6420517.08
214.78	PF#2	119462.6420517.08
214.71	PF#2	119640.2920541.86
214.61	PF#2	119685.1720477.61
214.52	PF#2	119525.2620453.48
214.42	PF#2	119382.0820423.77
214.33	PF#2	119492.0720391.61
214.23	PF#2	119614.3420352.34
214.14	PF#2	119654.9820381.82

FLOW DATA

Flow Title: Imported Flow 02

Flow File : c:\TEMPE\soclomr\final\reach4.f02

Flow Data (cfs)

River	Reach	RS	PF#1	PF#2
Salt River	Reach 4	225.30	172000	172000
Salt River	Reach 4	221.26	169000	169000

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Salt River	Reach 4	PF#1		Known WS = 1075.49
Salt River	Reach 4	PF#2		Known WS = 1075.5

GEOMETRY DATA

Geometry Title: Reach 4
Geometry File : c:\TEMPE\soclomr\final\reach4.g01

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 225.30

INPUT
Description:
Station Elevation Data num= 286

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18656.12	1195.618	663.42	1195.57	18672.03	1195.75	18676.3	1196.17	18683.27	1196.01
18703.39	1195.818	757.43	1195.03	18781.67	1194.21	8804.38	1200.98	18820.95	1205.67
18832.59	1208.6	18836.9	1209.82	18845.27	1213.17	18852.34	1213.51	8861.86	1213.63
18880.16	1220.71	8940.43	1219.13	18945.82	1219.11	18953.79	1220.13	18964.6	1220.04
18974.55	1219.8	18986.3	1219.72	19011.65	1218.59	19023.79	1216.95	19031.91	1216.37
19038.97	1215.41	9052.96	1213.78	19073.75	1212.15	19079.08	1211.74	19095.13	1207.11
19101.83	1204.91	9113.81	1201.55	19130.8	1195.65	19149.88	1194.42	19164.8	1193.8
19180.48	1193	19189.69	1191.75	19193.44	1190.85	19201.73	1187.57	19204.43	1186.87
19210.6	1186.9	19237.8	1187.09	19245.05	1180.17	19248.36	1177.16	19255.33	1177.24
19274.04	1165	19279.59	1161.46	19325.01	1159.79	19329.35	1159.45	19370.45	1159.38
19424.2	1159.11	9472.89	1158.03	19485.66	1157.71	19494.61	1157.69	19544.03	1157.68
19574.55	1157.31	9593.81	1157.48	19650.86	1158.04	19672.56	1158.49	19699.7	1177.65
19706.03	1182.31	9712.21	1178.63	19738.43	1162.86	19795.66	1162.96	19809.55	1162.76
19860.74	1160.51	9895.95	1160.01	19902.26	1160.67	19924.07	1158.61	9952.52	1157.12
19967.07	1146.52	0280.33	1146.46	20304.77	1158.51	20314.28	1157.82	20354.8	1157.69
20361.02	1157.32	0378.28	1155.82	20401.38	1156.28	20413.17	1156.51	20434.63	1161.41
20442.52	1158.52	0445.72	1158.59	20462.04	1155.42	0466.16	1155.11	20495.23	1154.1
20502.96	1154	20516.41	1153.27	20519.75	1152.58	20524.44	1153.89	20528.82	1154.65
20539.9	1154.3	20552.4	1155.24	20576.11	1155.55	20594.84	1156.05	20604.66	1156.18
20616.02	1156.12	0631.39	1156.05	20635.68	1157.08	20645.34	1158.92	0654.37	1159.78
20658.06	1160.72	0662.61	1160.61	20669.63	1158.89	20689.76	1156.67	20699.77	1155.67
20717.59	1154.62	0728.65	1153.22	20739.25	1153.08	20764.86	1153.02	20778.44	1154.51
20792.48	1154.92	0806.81	1155.03	20828.9	1161.56	20831.68	1162.79	208401	1162.126
20846.84	1161.58	20862.03	1160.3	20866.7	1160.37	20870.25	1161.42	20876.73	1160.97
20885.4	1163.48	20897.39	1168.32	0908.29	1172.42	0914.68	1174.65	20917.54	1173.59
20948.42	1170.04	20972.63	1170.42	0983.66	1177.91	20989.99	1175.25	20997.16	1174.12
21009.01	1180.87	21029.49	1181.12	1033.59	1181.07	21041.93	1176.47	21064.39	1164.26
21082.16	1156.12	21115.7	1154.62	1126.06	1154.91	21141.81	1155.61	21186.91	1177.61
21205.92	1186.79	21212.02	1186.32	1228.18	1185.31	21253.71	1186.42	1258.31	1186.58
21267.89	1189.15	21289.81	1194.52	1321.59	1194.56	21339.29	1194.53	21395.96	1196.36
21410.26	1196.72	21443.36	1197.72	1502.43	1198.85	21521.47	1199.05	21555.25	1199.02
21577.28	1199.09	21614.18	1198.62	1628.13	1197.75	21700.79	1196.45	21701.74	1196.33
21718.64	**1190.87**	**21736.75**	**1190.42**	**1749.65**	**1190.37**	**21757.86**	**1190.01**	**21762.05**	**1189.99**
21797.57	**1190.12**	**21810.83**	**1189.72**	**1824.03**	**1190.25**	**21871.37**	**1190.24**	**21891.33**	**1189.18**
21909.17	1189.22	21934.95	1190.42	1967.16	1190.26	21983.23	1190.57	22000.65	1190.51
22040.28	1190.14	22062.85	1189.92	2082.04	1189.24	22095.5	1188.94	22115.61	1189.3
22145.03	1189.32	22185.08	1189.62	2204.03	1190.15	22240.58	1191.59	22246.9	1194.35
22267.82	1197.97	22276.1	1199.52	2286.17	1200.92	22299.43	1203.27	22312.12	1204.72
22319.43	1203.61	22328.42	1204.82	2333.19	1202.32	22343.7	1199.79	22348.26	1199.38
22356.95	1200.85	22357.94	1201.8	22364.1	1203.92	2386.38	1212.02	22405.28	1217.74

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22407.11 1218.4122414.32    121622421.41 1214.8822430.67 1215.25 22456.4 1215.32
22458.64 1213.8222465.73  1210.122486.14 1198.9622488.98 1196.8822500.28 1192.16
22514.32 1192.2322545.53  1192.722560.08 1192.8322584.16 1193.0822623.77  1193.8
22624.67 1194.3222642.46  1202.622656.57 1201.39 22658.5 1201.3722672.15 1193.49
 22704.1 1194.3322730.35  1194.922751.26 1206.4122755.18  1205.422771.59 1195.26
22773.39 1195.2922789.85  1193.722796.54 1193.4822814.94 1193.9322819.08 1193.64
22822.55 1193.7422833.06  1193.722852.72 1194.0322869.59 1193.2722883.86 1193.35
22931.52 1194.5422960.85    1196 22963.9 1196.2222975.78 1201.0722992.33  1206.9
23024.19 1195.6323050.62  1194.923057.82 1195.17 23086.4 1207.5923094.25 1207.71
23111.05 1206.6423117.04  1206.323126.71 1206.2223135.89 1205.9823147.99 1197.76
23157.12 1193.5923173.13  1193.723192.65 1193.9923202.96 1194.2923218.55  1194.5
23262.18 1196.2623303.13  1196.723311.83 1196.7923339.95 1196.7423371.64 1196.53
23386.39 1196.31 23417.8    119523492.52 1194.2723506.95 1194.19 23525.6 1194.43
23546.65 1194.5923559.22  1194.423580.28 1194.3623612.97  1194.323651.29 1194.09
23696.03 1194.9123736.97  1195.523764.24  1195.823852.99    119423865.83 1198.13
 23868.9 1196.7323881.39  1191.6 23899.9 1190.83 23904.7 1190.8323926.75 1192.16
23936.82 1192.8223976.91  1193.823990.23 1193.9824108.29 1193.5424187.78 1195.11
24261.38 1194.56

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18656.12    .02519193.44     .03   20840     .03

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19193.44   20840           567.06  567.06  567.06             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18656.1219193.44 1190.85   2084024261.38 1194.56

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 225.19

INPUT
Description:
Station Elevation Data    num=     320
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18442.16  1193.1 18498.4 1193.3418541.82 1193.2818593.41 1192.6118633.34 1193.21
18682.07  1193.518732.94 1193.4118766.02 1193.2418812.02 1193.52 18862.1 1193.49
 18913.6  1193.818919.53 1193.6818937.82 1193.6419000.95 1193.0219030.03 1193.07
19047.98  1193.419062.78    1211 19071.2 1212.8719078.47    121319126.95 1214.33
19152.97  1214.519170.54  1214.6 19210.7  1214.219230.39 1213.9219236.89 1212.41
19248.28  1212.119271.42 1211.7519300.35  1199.819307.22 1197.0119336.41 1187.57
19348.16  1187.719351.63 1184.8119359.98 1177.4619366.78  1177.619369.84  1175.2
19388.38  1160.219409.76 1160.2519432.23 1160.3219440.84 1157.6619451.48 1157.43
19490.75  1156.319539.88 1156.0219544.73 1159.5519567.81 1176.56   19572 1176.45
19574.19  1176.8 19576.8 1176.4219604.76 1169.5119640.33  1162.619653.42 1161.28
19670.18  1159.819688.19 1159.9219722.91 1158.4219732.24 1158.6819753.88 1158.75
19767.98  1158.319782.57 1157.1419818.26 1154.7419847.79 1154.1619857.32 1153.75
19894.01  1152.919906.04 1152.5719931.57 1152.5319949.53 1151.8319971.94 1150.45
19978.44  1150.619994.64 1151.7620056.04 1155.6820058.62 1155.8220091.06 1157.01
20110.36  1157.820120.23 1157.8120131.12 1157.5220167.82 1157.6220173.33  1156.9
20187.29  1155.520191.52 1156.3620198.85 1156.43 20204.7  1157.220217.42 1156.39
 20228.2  1156.420268.85 1155.9420287.24 1156.1320319.77 1156.2220334.81 1156.18
20343.19  1156.320365.74 1156.1720384.95 1155.7620395.91 1155.6120405.47 1155.64
20415.03  1157.420419.39  1158.120429.97 1158.6620441.31 1161.2420447.23 1161.65
20458.39  1163.120487.85 1180.4720501.77 1188.7220506.99 1188.9120518.99 1187.72
20528.65  1184.320541.21 1178.1620555.22 1175.0220560.69 1172.6620568.11 1170.18
20571.63  1169.520592.04 1166.3920597.94 1164.7820618.37 1161.2920621.15 1161.09
20635.16  1161.320639.94 1162.5820652.72 1169.4320670.54 1179.58 20672.1 1179.83
20680.15  1179.720690.59 1181.5220694.27 1181.5720703.71 1182.5620710.84 1184.74
20718.69  1186.220721.86 1186.1520723.94 1185.2920743.27 1176.8520746.33 1175.77
20754.28  1171.320760.15 1168.5620763.22 1166.5220796.67 1163.4720808.47 1159.56
20820.55  1155.320834.33 1153.3720848.12 1151.6820867.09 1155.5720877.86  1155.7
20901.05  1166.1   209201175.31720937.48 1183.82 20940.5 1182.8320956.27 1178.27
20961.24 1178.5120968.38  1178.120994.31    117921002.92  1178.821004.89  1178.8
 21045.4 1180.6921061.72    1183 21096.3 1187.0221140.91 1192.9321152.05 1192.58
21163.18 1192.6721214.67  1192.621225.58 1192.7921257.72 1192.7821270.45 1192.45
21302.02 1192.5121332.98  1191.7 21373.6 1191.6621394.01 1191.9421419.47 1191.83
 21437.6 1191.8421441.86  1191.721490.15  1195.2   21497 1195.8121515.26 1198.02
21551.31 1202.89 21556.3  1203.521598.95 1206.3121633.84 1211.78 21643.4 1212.66
21691.29 1215.47 21713.7  1217.321739.76 1218.5921772.51  1220.421783.25 1221.45
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21799.95 1223.6321832.52  1225.621909.45 1232.8221919.57 1233.2121962.14 1233.35
21964.67 1233.2822002.04  1232.922019.05 1232.9322029.56 1231.7822032.08  1231.6
22037.48 1230.5122066.02  1225.222094.83 1218.2422100.98 1217.4122115.51 1216.17
22137.41 1209.78 22154.4  1201.422157.95  1199.422162.53  1197.522166.03 1196.74
22212.25 1189.83 22239.2  1188.822244.23 1188.8222288.95 1189.9922297.41  1189.2
22313.32 1189.1822327.49  1189.822350.23 1189.3322361.77 1189.2622379.42 1192.91
22391.57 1193.5122396.73  1194.822410.62 1197.2122425.43 1197.9122429.29 1198.53
22432.93 1197.5322443.58  1199.522451.57 1199.0322455.42 1199.0622473.22 1212.52
22476.55 1212.5322496.88    119822501.53 1199.2522503.85 1199.5222523.22 1213.68
22525.59 1213.5822537.58  1206.322543.57 1204.0522557.47 1199.65 22568.8 1198.85
22572.84 1198.4222579.69    119822583.32 1197.4922588.65 1197.5122592.94 1198.21
22602.49 1198.7822607.87  1198.722614.04 1200.2422621.61 1200.9522630.78 1203.22
22634.06 1203.5422640.68  1202.322642.35 1202.3822649.48 1198.9422650.73 1199.12
22658.65 1196.6822664.71  1196.622685.84 1195.43 22695.5 1195.9622708.86 1195.13
22726.92 1194.9522736.01  1194.222754.98 1193.7122772.69 1192.9722780.46 1193.49
22787.83 1192.2722799.58  1193.122810.46 1193.5222815.04 1193.5622832.72 1194.56
22850.42 1194.0822870.97  1194.322881.72 1194.6322900.43 1194.8822903.16 1195.48
22910.63 1194.8822913.85  1194.922931.05 1194.4122932.54 1194.5322972.62 1194.76
22982.58 1195.3923006.58  1207.923011.56 1205.81 23023.3 1201.3523050.51 1210.44
23052.44 1211.0323052.64  1210.423074.75 1200.3923080.77 1203.2323089.55  1208.5
 23102.9 1202.1523107.01    1200 23114.2 1202.7423129.23 1208.8123133.57 1197.43
23135.24 1194.3523137.17  1193.3 23217.7 1193.1523229.48 1193.3423258.23 1193.56
23291.63    119423315.02  1194.723354.88 1196.5723399.57 1196.8223416.78 1196.87
23471.44 1196.99 23495.1  1195.823512.11 1195.0623573.46 1193.9923584.62 1193.85
23590.05 1193.9123670.77  1194.323736.38 1194.4523758.52 1194.1923826.46 1194.13
23843.66 1194.0723903.52  1194.923930.99 1195.3923967.22 1195.46 23977.7 1195.25
24039.18 1194.4924042.47  1194.424055.94 1199.3424066.38 1194.6124069.67 1193.39
24096.83  1194.224141.95    1195 24186.3 1194.38 24221.5 1193.7124228.12 1193.69
24287.42 1194.3124295.61  1194.224359.71 1193.2124405.43 1188.3224409.15 1187.88

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18442.16    .02519248.28     .03   20920    .031

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19248.28   20920           439.53  439.53  439.53             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18442.1619248.28  1212.1   2092024409.15 1187.88
Blocked Obstructions     num=       1
   Sta L   Sta R    Elev
   20450   20790    1185

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 225.11

INPUT
Description:
Station Elevation Data    num=     300
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18566.59  1191.6 18610.7 1191.4818663.82 1191.6718705.41 1191.4218756.46 1191.98
18812.22  1191.418847.46 1191.6618885.07 1191.4518927.13 1191.9218995.17 1191.84
19011.45  1191.919041.77  1191.6 19068.3 1191.4419085.11  1190.919125.76 1190.25
19150.49  1209.819151.87 1209.4819169.96    118819185.85 1195.9819225.48    1210
19255.55  1209.8 19282.7 1209.3619312.95 1208.79 19326.6 1192.6719341.19  1175.8
19361.19  1161.119363.98 1159.1519386.89 1158.1519396.05 1157.8219407.66 1157.76
19412.57  1157.619429.78 1157.9419434.41 1157.2319447.76  1157.319491.85 1157.45
19544.26  1157.419553.18 1157.2619558.33 1159.0319566.29 1162.3619573.05 1161.92
19606.03    116019636.59 1159.0119659.23 1158.1719711.01 1156.8319773.99  1155.7
19796.71  1155.519848.14 1155.4119873.97 1155.17 19901.1  1155.219943.04 1155.52
19990.89  1155.620030.16 1155.1520056.95 1155.0720081.06 1154.8220121.14 1152.39
20134.84  1152.120161.68 1151.6620179.08 1151.66 20192.6 1151.92 20240.3 1155.06
20257.89  1156.920274.94 1158.3520288.46 1159.2120311.52 1159.6720320.12 1159.54
20332.63  1159.820339.32 1159.7220343.45 1159.9720352.45 1158.5420360.92 1157.73
20363.87  1157.620377.37  1163.620387.57 1166.2620407.04 1172.7620411.11 1173.57
20418.12    117620432.63 1173.3920441.71  1172.120451.35 1171.7320462.41 1168.27
20474.44    116520479.99 1163.3420494.67 1165.5120507.42  1163.820509.04 1163.68
20519.46    116120521.11 1160.4420531.81 1160.1920539.85  1159.920553.16 1160.21
20562.91  1160.120574.45 1159.2620594.42 1159.4920614.89    1160 20635.8 1160.22
20638.89  1160.120645.11 1159.2220657.74 1158.0220665.54 1158.8120671.67 1159.13
20693.52  1158.5 20701.1 1159.8120704.46 1159.9420714.65  1159.920727.36  1159.6
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20737.73  1159.920763.09 1159.55 20771.7 1159.5320793.76 1159.2720805.35  1159.2
20818.43  1164.320838.58 1169.6220843.06 1169.2320851.47 1169.1220858.31 1168.19
20865.09  1167.520875.47 1165.7920897.66 1165.7120900.84 1165.5720909.81 1165.82
20923.73  1168.120934.37 1165.8620956.06 1158.2420966.77 1154.2620971.44 1154.93
20987.27  1154.321007.09 1157.6121010.23 1156.6121015.65 1156.3721036.65 1154.34
21061.12  1148.7 21111.4 1148.1621125.78 1148.2221169.04  1148.521174.92 1148.47
21182.17  1149.7   212251155.73521226.38 1155.9321242.76 1155.8621247.47 1156.29
21265.38 1158.25 21313.2  1163.321338.33 1162.26 21383.6 1159.63 21386.8 1159.55
21423.84 1163.0921470.82  1167.121491.45 1177.3421500.71 1181.0521509.79 1181.23
 21519.8 1181.3221544.02  1185.121551.05 1185.56 21554.7 1185.2621565.01 1190.89
21579.11 1195.6621583.64  1196.221610.22 1196.1921617.79 1196.0621631.36 1198.49
21635.85 1199.7521662.22    120221669.32 1202.9721683.01 1205.4621705.64 1205.84
21712.98 1206.8121745.97  1213.121766.31 1215.6621791.82 1217.9621811.88 1220.46
21842.68 1222.8321887.14  1226.121894.02 1226.7621898.88 1226.8221936.68 1228.87
21963.47 1228.77 21991.7    122722035.02 1225.0122048.39 1224.7722073.49 1225.05
22082.06 1224.6622102.81  1224.1 22113.4 1224.1822116.41 1224.06 22158.6 1226.68
22164.27 1225.6822171.63  1223.722199.91 1215.7322213.41 1212.08 22219.1 1210.13
22235.35 1203.7522253.06  1196.322278.83 1188.7122298.21 1186.3122305.48 1187.95
22308.26 1187.8922330.46    118822344.24 1188.3722370.46 1188.5522385.97 1188.57
22397.19 1188.3322423.47  1188.722437.38 1187.8322451.51 1188.8922458.48 1188.92
22468.23 1189.9422476.75  1190.122500.63 1190.9722529.14 1199.0222535.59 1204.66
22545.31 1206.9922550.35  1207.922559.76 1208.5322565.58 1209.36 22571.9 1209.32
22584.45 1210.1822590.38  1210.322601.06 1210.7322614.33 1209.5222624.86 1210.12
22641.34 1210.2122656.42  1210.422681.78 1209.49 22703.6 1209.0922731.09 1210.01
22752.38 1208.9122760.47  1205.8 22784.4 1193.7922809.53    119322842.14 1193.71
22870.66 1193.8922882.01  1194.422888.52 1194.3622904.97 1193.8922941.74 1191.96
22953.19  1192.122970.29  1192.823010.31 1193.3323021.04 1200.8523021.85 1201.07
23028.28 1200.4323057.24  1202.623058.44 1202.4623069.08 1195.3123072.98 1194.19
23084.92 1194.0823106.84    119423116.68 1194.2223147.56 1195.31 23149.6 1195.32
23166.82 1194.2223169.32  1194.2 23185.3 1200.2623204.48 1202.2523216.81 1203.46
 23261.4 1192.5623263.63  1192.223269.39 1193.6323276.68 1193.6823291.16 1191.81
23337.59  1192.523345.45  1192.623414.25 1193.84 23473.3 1195.6323496.23 1195.56
23537.98 1195.7223577.48  1195.923628.11 1195.9423640.05 1195.2123668.97 1194.57
23695.73 1193.7223700.18  1193.323714.09  1193.423744.88 1194.0423768.39 1194.32
23787.71 1193.89 23845.7  1193.923879.88 1193.52   23904 1193.5123942.37 1194.03
23981.49 1194.7224004.83  1194.724118.32 1195.6524131.75 1195.7124207.49 1195.35
24220.89 1200.8724231.41  1195.224232.55 1194.7324253.47 1195.3824284.12 1194.52
24310.64 1193.9724341.07  1192.924360.28 1192.3824424.93 1192.8424429.37 1192.85
24461.19 1187.5724507.41  1189.324537.98 1190.3524540.69 1190.37 24582.5 1190.31

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18566.59    .02519312.95     .03   21225     .03

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19312.95   21225           577.62  577.62  577.62             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18566.5919312.95 1208.79   21225 24582.5 1190.31
Blocked Obstructions     num=       1
   Sta L   Sta R    Elev
   20400   20940    1185

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 225

INPUT
Description:
Station Elevation Data    num=     313
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18356.23  1189.718380.05 1189.63 18440.6 1189.7318496.62    119018533.26 1190.13
 18564.2  1189.818590.47 1189.7418615.79 1189.5518668.43 1188.85 18690.7 1189.07
18699.78    118918734.99 1188.7818775.01 1188.9518817.49 1188.4418844.13 1188.34
18891.82  1190.718900.16 1190.8118957.36 1189.7718989.18 1184.0919022.88 1182.95
19031.34  1182.5 19038.2 1181.6619093.98 1180.1819102.04 1179.94 19132.3 1179.63
19144.24  1179.4 19156.8 1179.3419207.28 1178.5619219.87 1174.9219234.34 1174.63
19264.79  1176.4 19277.4 1182.04 19288.4  1186.819292.62 1189.5219307.43 1201.28
19315.42  1193.419322.87 1191.6319326.03 1190.4319331.32 1189.33 19341.3  1186.9
 19346.8  1181.519355.62 1173.4819361.34 1173.6219381.51 1160.4419386.18 1157.53
19435.57  1156.119453.94 1156.0119490.23 1155.6119521.27 1155.0419580.28 1155.15
19604.19  1155.319617.29 1155.4819646.16 1155.4119664.82 1155.4219670.93 1161.99
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19687.16  1178.219707.23  1177.819718.56 1177.7219727.45 1179.1319736.33  1174.3
19751.05  1167.419756.93 1164.7819772.33 1158.9619777.71 1156.95 19808.1 1153.94
19847.62  1153.919877.27 1153.7519923.98  1154.119975.06 1154.6119997.52 1154.68
20045.61  1154.620111.83 1154.22 20142.2 1153.75 20170.9 1153.1220174.02 1153.07
20208.08  1153.420231.34 1153.9120287.82 1155.5720295.41 1156.0920331.24  1158.8
20351.53  1159.820364.37 1160.5320391.97 1161.2620405.19 1161.2620433.18 1165.26
20440.45  1166.620447.99 1167.5420457.93 1168.45 20476.7  1165.720498.03 1161.63
20514.21  1159.520559.92 1159.1820577.41 1159.2720584.03 1159.2420618.76 1158.93
20647.33  1159.220670.99 1160.0120681.72 1161.2920689.19 1159.3920718.71  1152.1
20734.76  1148.120742.26 1147.8820764.81 1147.96 20769.3 1147.6220778.24 1146.44
20799.41  1146.720802.57 1146.2620816.11  1144.120821.96  1144.620830.89 1144.38
20835.87  1144.720848.81 1145.3120854.11 1144.8220859.41 1144.6520880.42 1145.38
20894.87  1145.420899.18 1145.4820913.05 1145.2820923.72 1144.9620926.64 1143.92
20951.59  1143.520977.07 1143.7121029.14 1138.3621030.89 1138.3721052.36 1139.74
21059.95    114021081.03 1141.6621100.29 1143.0721108.48 1146.2221118.12 1148.24
 21152.5  1158.8 21156.6  1158.721190.57 1161.9221199.27 1162.3721209.82  1162.4
21212.65  1162.621229.92  1163.521248.31 1163.7121271.06 1163.6521282.39 1163.12
 21323.7  1160.9 21353.8  1160.521393.04 1159.9821429.57 1157.83   214451157.067
 21461.1 1156.2721475.93  1155.821487.94 1154.5121506.43  1154.4 21525.1 1154.62
21536.46 1155.68 21567.4  1158.921609.68  1158.221613.21  1156.321625.39 1156.36
21638.91 1154.8221646.74  1151.921656.38  1151.921670.45 1157.9421671.45 1158.19
21687.54 1157.7121696.76  1157.621703.26 1157.4421716.51 1156.2221737.59 1153.02
21744.12 1153.1421752.96  1152.721760.16 1152.5921765.83 1152.7121792.82 1165.65
21796.37 1167.3721814.48  1182.221823.07 1187.5821831.15  1184.821851.67 1184.44
21893.28 1184.2321898.67  1184.321942.25 1184.9221949.93 1184.9821982.18  1184.8
21988.24 1184.8622009.66  1184.8 22026.5    118522057.16 1185.1122075.49 1185.44
22082.12 1185.4622099.18  1185.222105.65 1185.2722112.49 1185.4622145.51 1185.33
22152.62 1185.3522190.06    118522197.76 1184.7622203.71 1184.7222238.37 1185.09
22245.83 1184.78 22274.9  1184.522298.83  1184.322315.81 1183.8922343.74 1184.83
22347.97 1184.8122349.51  1184.522355.15 1185.0922363.84 1187.5322382.53 1191.29
22384.23  1190.322401.19  1188.422402.52 1188.3422425.16 1184.9522456.19 1184.22
 22458.9 1184.21 22483.2  1184.722515.92 1185.7822521.45 1185.8322531.16 1184.83
22546.02 1184.6322555.83  1186.222566.97  1186.522584.43 1186.5422590.63 1187.67
22613.68 1192.8222635.85  1196.922642.53 1194.7222645.07 1193.1222660.85 1191.09
22686.43 1189.9922708.15  1190.122720.08 1189.9622751.01 1188.0222781.73 1189.42
22809.61 1205.2622817.29  1209.122825.25 1211.0222830.25  1211.422842.72 1208.34
22873.47 1192.6622915.25  1191.122952.41    119322972.41 1192.7823001.19  1192.6
23033.19 1192.6823055.72  1192.123081.23 1190.1623090.51 1190.4223112.45 1190.14
23123.94 1189.8523127.71  1190.223131.15 1191.0923137.61 1190.19 23152.5 1184.71
23165.82 1183.2423173.11  1182.3 23183.4 1182.0523195.65 1180.5223206.72 1180.68
23208.84 1181.3223214.24  1183.823222.83 1185.7423228.16 1187.68 23236.4 1188.31
23252.81 1191.5623277.08    1191 23281.4 1193.4423296.12 1184.4423483.38 1184.17
23492.79 1188.3323503.64  1193.523514.95 1193.8423585.18 1193.3623633.83  1193.2
23657.62 1193.1523700.62  1192.723729.82 1192.3823762.84 1193.5123773.65 1193.71
23788.38 1193.3623860.15    1192 23878.2 1195.5523902.62 1196.4223908.57 1196.39
23909.48 1196.0723912.15  1196.423942.78 1191.4423959.88 1185.66 23980.5 1185.72
23997.14 1185.3724015.84  1185.224041.64 1185.0624059.56 1184.7324065.49 1184.88
24073.75 1184.8624082.02  1187.224089.11 1190.2824123.86 1190.6124126.79 1191.26
24137.01 1194.4424143.44  1193.324156.07 1191.53 24161.8 1191.8624176.05 1191.94
24219.35 1192.8624247.96    119324285.64 1192.5924311.13 1192.2224344.86 1191.47
24379.43 1187.5724508.93  1187.624528.06 1193.2424555.74 1192.9424560.02 1192.98
24573.38 1191.3124575.01    119124585.85 1191.01

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18356.23    .02519307.43     .03   21445    .031

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19307.43   21445           526.43  526.43  526.43             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18356.2319307.43 1201.28   2144524585.85 1191.01

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.90

INPUT
Description:
Station Elevation Data    num=     347
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18410.26  1189.1 18450.7 1188.72   18476  1188.818566.98 1189.4618596.38 1189.16
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18638.16	1188.618655.45	1188.5918727.64	1188.8718771.75	1189.0818831.93	1188.92
18844.92	1188.618857.05	1188.8518881.45	1189.0418891.88	1183.7518908.88	1175.44
18935.91	1173.818950.26	1173.6218985.81	1174.1619002.16	1174.5319020.29	1174.84
19045.32	1185.719048.13	1186.8419071.41	1186.2719073.86	1185.119098.72	1172.53
19121.51	1171.819151.86	1171.0219200.76	1170.5719217.37	1169.9719274.07	1170.02
19335.21	1169.519338.74	1171.4619343.84	1172.7119376.18	1176.13 19388.5	1169.42
19397.84	1172.119428.13	1185.9419433.27	1186.4119445.78	1186.7219480.99	1161.58
19488.73	115619493.24	1155.71 19499.7	1155.8819507.92	1155.8419536.65	1155.34
19586.93	1154.2 19602.4	1158.919605.56	1159.9819624.77	1165.3319638.72	1169.29
19648.46	1172.219651.96	1172.419661.01	1172.6119670.28	1171.9619713.55	1161.57
19730.86	1160.119741.25	1160.7319765.99	1161.47 19782.1	1163.5119786.66	1162.55
19803.69	1158.219823.27	1161.9319829.18	1163.3819835.55	1162.6719845.22	1162.39
19859.81	1163.719866.06	1164.62 19888	1163.91 19901.4	1163.8119927.82	1167.62
19943.13	1169.819969.08	1162.8419988.88	1156.74 20000.3	1154.4420013.69	1154.37
20038.97	1154.720091.24	1153.7220122.42	1154.0320141.05	1153.97 20201.3	1152.9
20246.27	1152.220294.42	1152.1620344.47	1152.75 20346.9	1152.820402.98	1153.61
20410.52	115420415.95	1154.1620428.84	1156.2420455.09	1156.9720469.43	1157.33
20521.43	115820539.02	115820563.19	1157.2520572.23	1157.1820581.09	1158.4
20584.28	1157.420586.55	1157.4620588.64	1158.21 20603.1	1163.1620610.74	1165.6
20632.42	1170.220640.24	1171.5120650.49	1175.0220660.64	1175.1920680.34	1172.24
20693.35	1172.120706.39	1172.4420721.88	1172.52 20752.5	1175.1520756.16	1174.14
20767.97	1169.1 20794.4	1154.920815.76	1151.7120826.88	1150.4320843.01	1147.76
20867.14	1148.1 20870.4	1148.2120892.03	115320901.23	1155.6420911.04	1155.11
20917.89	1154.220930.94	1153.1820932.63	1153.3120951.26	1157.220952.39	1157.37
20962.07	1156.620994.47	1156.68 21013.9	1157.0621020.04	1157.5521036.84	1157.05
21062.9	1157.421078.63	1157.0521090.43	1156.3921101.82	1156.0921125.98	1156.98
21136.08	1157.9 21147.6	1158.3321172.86	1159.7721188.14	1159.4921219.11	1161.7
21225.82	1161.821237.22	1161.321269.36	1160.6421300.77	1160.221317.67	1159.17
21339.13	1158.121352.42	1158.0621362.07	1157.76 213701	157.46121390.68	1156.68
21399.24	1156.2321404.48	1156.221413.85	1156.35 21444	1157.3521454.85	1157.17
21480.39	1156.1421484.09	1156.221487.57	1155.8821533.73	1157.7621546.15	1158.29
21548.85	1157.9521556.43	115921566.22	1155.8821582.14	1158.2421585.51	1158.2
21591.12	1157.5221612.63	1157.321622.96	1156.221627.15	1159.6621647.72	1158.89
21666.74	1160.6321689.29	1160.721701.78	1160.92 21728.6	1160.4621757.65	1159.28
21770.09	1158.5621781.82	1159.121796.81	1159.9821808.21	1160.1521818.87	1159.95
21827.31	1159.9321834.28	1159.721855.98	1157.8421864.87	1157.5121875.21	1157.9
21888.72	1157.7221900.97	1157.321912.66	1157.3221921.11	1156.8821935.73	1157.21
21957.89	1157.1321961.71	1156.921995.06	1157.0921998.87	1158.9122008.66	1163.21
22017.1	1167.3722028.39	1174.9 22045.8	1186.95 22051.1	1186.1622070.51	1185.93
22074.63	1184.1422087.66	1183.922097.25	1183.9922107.25	1184.4622111.68	1185.92
22118.25	1186.5622122.86	1186.722133.74	1188.4122152.74	1182.9222153.97	1182.73
22190.8	1182.9322204.61	1190.122230.84	1204.7222238.15	1208.5822253.26	1216.09
22258.66	1216.3322277.66	1215.4 22279.5	1216.0322289.47	1216.0822306.73	1216.46
22318.61	1216.422325.45	1216.122333.02	1213.33 22340.1	1211.3522347.31	1208.16
22355.6	1207.0122381.25	1206.722382.17	1207.3822397.32	1207.6322422.69	1207.72
22431.12	1211.122447.56	1218.322470.07	1206.7422487.33	1199.5922524.46	1184.09
22532.57	1183.7622551.72	118422561.13	1183.5422578.28	1184.8922588.52	1189.76
22613.19	1202.5622625.63	1207.822635.06	1207.8522695.74	1209.4322704.02	1209.93
22708.2	1208.93 22720.4	1206.622740.23	1209.4322748.21	1210.4122776.78	1207.24
22785.8	1205.5622795.42	1204.122807.76	1202.7522814.53	1203.722824.09	1203.97
22836.08	1202.5622840.38	1202.322858.07	1203.3822862.39	1203.3822865.03	1201.99
22870.64	1203.0122878.82	1204.1 22892.4	1205.1222915.88	1206.2222919.02	1206.12
22922.93	1204.3722932.53	1199.222944.71	1192.3122989.69	1191.1 23018.3	1190.03
23022.55	1190.1223036.36	1191.423059.85	1193.2623069.22	1193.8523071.24	1193.39
23091.35	1183.8323096.33	118223100.94	1181.6823121.36	1179.5423127.57	1183.34
23143.41	1193.3623148.07	1190.323154.03	1191.2123156.99	1190.523177.01	1189.7
23204.22	1190.3823216.04	1190.923226.37	1190.7123244.24	1190.6123262.32	1190.08
23268.38	1190.0723293.33	1190.7 23301.9	1191.4523323.68	1192.1723337.82	1191.69
23349.97	1186.7423355.94	1184.223370.93	1184.1723384.69	1189.7923388.48	1191.5
23426.01	1191.823439.52	1191.623450.57	1191.1923477.06	1190.3723491.59	1194.07
23497.14	1191.0523537.29	1190.923573.51	1191.0323624.93	1191.423634.96	1191.52
23677.87	1191.7223709.43	1191.223720.78	1191.2623738.99	1191.5623763.39	1191.56
23776.33	1191.9723785.02	1191.723792.58	1186.8823793.85	1186.4323802.23	1186.51
23816.26	**1187.09 23843.4**	**1186.723851.62**	**1186.7123892.07**	**1187.8823959.21**	**1190.97**
23979.45	**1192.2324039.11**	**1192.224111.93**	**1191.25 24158.7**	**1191.5424187.18**	**1188.12**
24191.35	1187.57 24272.5	1187.624312.92	1187.5724330.77	1191.6124356.03	1191.63
24360.09	1191.3924371.38	1190.524405.95	1190.2724412.33	1190.1424420.03	1190.22
24436.56	1190.8424455.72	1191.524492.81	1192.5724511.07	1192.0924527.54	1191.22
24541.43	1191.6924595.14	1191.3			

Manning's n Values num= 3

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     Sta    n Val      Sta    n Val      Sta    n Val
18410.26     .02519445.78      .03    21370     .031

Bank Sta: Left    Right     Lengths: Left Channel    Right      Coeff Contr.    Expan.
      19445.78    21370            433.65  433.65  433.65               .1        .3
Ineffective Flow      num=        2
   Sta L    Sta R     Elev    Sta L    Sta R     Elev
18410.2619445.78 1186.72    2137024595.14  1191.3

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 224.82

INPUT
Description:
Station Elevation Data     num=      329
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
18468.66  1190.518491.23  1191.118548.52 1191.0718668.84 1191.1718703.73 1191.07
18762.31  1190.4   18770 1190.3318775.31 1187.6718799.29 1175.0718808.95 1174.43
 18824.7  1174.618870.09 1174.1518897.86 1173.4118919.25 1173.9118936.05 1174.36
18965.24  1186.718984.82 1186.1419012.61 1173.4819017.57 1171.0319032.33 1170.82
19113.32  1169.519227.06 1169.2819314.52 1168.8919327.02 1168.8619345.61 1169.21
19370.77  1170.219376.92  1170.519384.11 1171.8319403.07 1175.0219413.34 1179.97
19424.25  1185.4   19442 1185.8319450.84 1180.1919456.61 1176.7319467.12 1170.13
19473.77  1165.219475.71  1163.419487.79 1154.6919510.76 1154.7719554.15 1154.06
19568.85  1157.919575.87 1159.8819585.54 1163.4119608.64 1170.9819614.23 1172.83
19629.85  1173.219630.93 1172.6519644.57 1164.5719652.46 1158.6919662.28 1159.02
19670.63  1160.319679.74 1161.4619692.52 1162.6719702.64 1164.1319706.24 1165.04
19709.94  1165.419726.98 1158.4219731.84 1157.6319744.98 1157.0719756.63 1157.02
19780.81  1157.719788.53 1157.2919796.49 1157.0319813.07 1158.2319813.98 1158.42
19823.68  1157.6   19838 1156.7619844.79 1155.8119854.83 1154.6819874.16  1155.1
19880.65  1155.1 19889.7 1158.6919908.35 1165.3419918.34 1165.7219924.34 1165.78
19932.83  1164.819968.19 1162.0619989.45 1160.2519996.08 1160.0920010.62 1158.94
20046.56  1161.620073.77 1161.6520088.63 1161.8320107.79  1161.620127.03 1161.12
20159.96  1161.420174.57 1159.6720221.72  1153.820310.74  1151.520322.31  1151.1
20369.16  1151.120393.13 1150.9820398.26 1151.0520449.39 1151.3820476.38  1151.6
20489.96    115220558.18  1154.820573.83 1155.1620594.32 1155.2320617.49 1155.28
20630.53  1155.420663.46 1155.4120686.53 1155.0420699.38 1154.7520708.94 1154.89
20713.14  1154.720741.09    115420779.61 1154.1620788.02 1154.3820811.75 1154.48
20824.48  1154.120840.64  1153.520853.16 1152.9220865.48 1152.0420891.25 1151.36
20898.25  1153.220901.46 1153.8120918.45 1157.8520932.61 1162.1220953.61 1158.64
 20959.8  1157.220968.36 1154.8820972.57 1154.8721001.34 1154.3221007.32 1154.64
21013.58  1152.221023.96  1150.421029.02 1149.6321044.34 1149.61 21052.6 1149.27
21060.13  1152.8   21075 1158.3621081.91 1160.0421093.14 1161.6121107.82 1159.62
21115.54  1156.821124.62 1153.3421149.99  1153.421159.91 1153.3421179.99 1156.52
21208.17  1158.421211.61 1157.8521220.38 1155.5321224.45  1155.121234.12 1157.54
21236.06  1157.621246.71 1158.5721249.75 1158.5221258.88 1160.1721264.32 1161.33
21285.45  1163.8 21288.4 1163.97 21299.1 1165.89 21303.2 1167.2521311.55 1165.01
21319.32  1163.121332.47 1161.5521339.36 1161.5821347.31 1162.1121355.61 1162.01
21363.33  1162.421381.26 1164.1121401.23 1166.36 21407.1 1166.8321433.73 1169.83
21435.24  1170.421441.75 1170.8421463.58 1173.5221475.79 1174.6521496.43 1176.97
   215201180.888 21529.7  1182.521533.41 1183.2421552.03 1181.1821556.88 1180.08
21562.32 1180.1321608.18  1179.121641.44 1178.5921655.19 1178.3421671.39 1180.68
 21673.3  1180.221700.72  1172.221710.51 1170.2921719.97 1169.58 21733.3 1165.63
21743.08 1163.7321758.09  1159.921766.89 1158.18 21773.6 1158.6121775.39  1158.4
21785.53 1161.0121800.07  1160.721812.34 1160.55 21824.9 1159.9721830.63 1161.34
21861.22 1172.3421875.18  1178.521881.04 1180.6321891.61 1179.0121900.35 1177.84
21908.25 1177.4321918.64  1177.121934.84  1177.121939.41 1177.3521946.81 1177.28
21962.12 1177.4921972.75    117721976.82 1178.7121992.77 1184.6121996.24 1185.96
22007.37 1189.3122015.71  1191.122024.98 1192.53 22030.2 1183.5722031.57 1184.28
22050.48 1195.8122055.69  1196.922072.22  1198.222086.62 1196.7822091.69 1196.81
 22107.1 1195.3622111.15  1194.722133.91 1191.9522135.36 1191.5722157.28 1188.97
22163.45 1187.9822178.17  1185.422193.04 1181.9722201.48 1181.8922206.38  1181.7
22238.74 1181.1722250.19  1180.522263.12 1180.4122270.24 1180.6722288.24    1181
22296.07 1178.1522305.22  1177.822311.58 1177.85 22325.9 1180.6422340.07 1181.18
22360.49 1181.6622389.89  1182.422397.51 1182.8122435.83 1184.1722448.82 1184.22
22463.16 1184.1922475.18  1183.822484.78  1183.822504.01 1183.5222533.83 1184.08
22557.61 1184.9822589.24  1186.422593.65 1186.4722648.82 1184.5722652.46 1184.48
22699.66 1185.0622704.02  1185.122761.06 1184.9622791.67 1185.5222793.04  1184.9
22815.24 1188.5522824.17  1190.822839.18 1186.1522865.68 1178.4222869.29 1178.58
 22883.4 1177.5522901.09  1178.222913.47 1184.8122949.46 1184.5522952.52 1182.79
 22960.9 1177.6222980.99  1176.822986.44 1179.4423009.71 1189.9523017.58 1189.77
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23042.15 1188.86 23058.2  1188.923076.43 1189.0923112.59 1189.9123119.69 1189.91
23151.39 1189.2223166.65  1190.123192.67 1189.4423200.75 1189.25 23216.8 1189.28
23223.58 1189.6223239.13  1190.923241.12 1190.9223256.72 1185.6723266.95 1181.75
23282.03 1177.2723296.47  1176.323304.63 1175.9423313.34 1174.6123322.49 1171.72
 23328.7 1172.9123344.04  1175.623349.46 1178.5123374.58 1184.5823376.26 1185.76
 23381.3 1187.5923399.56  1194.723421.49 1193.5523442.79 1192.6523460.71 1190.31
23487.98 1190.5323533.74  1190.923539.16 1190.6223575.12 1189.8123592.67 1189.83
23615.36 1189.9723655.28  1189.423683.97 1189.4923706.74 1189.5723751.48 1190.43
23776.73 1191.2423779.71  1191.223784.82  1190.523801.81 1192.3623805.89  1192.5
23819.96  1192.723861.06    119223875.71 1191.8423900.03 1191.7223930.47 1187.57
24082.99 1187.5724094.49  1189.524101.67 1191.3924110.66 1191.46

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18468.66     .05   19442    .035   21520     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          19442   21520           599.67  599.67  599.67             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18468.66   19442 1185.83   2152024110.66 1191.46

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.71

INPUT
Description:
Station Elevation Data    num=     277
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18464  1174.918560.25 1174.9318564.92 1174.8418576.94 1180.6118583.28 1183.49
18595.74  1189.318610.56 1189.4218616.36 1188.2818628.59  1185.618636.54 1185.54
 18647.7  1185.6   18748 1186.0718757.28 1186.52 18797.1 1188.6318851.54    1188
18883.82  1188.118888.02 1187.54 18907.5  1186.218924.77 1175.3318937.32 1169.24
18957.69  1167.518972.07 1166.8419014.03 1165.2619037.23 1166.0719079.19 1166.87
19124.33    1166 19133.5    116619179.79  1171.519180.79 1171.6419196.04 1170.48
19244.39    117219264.65 1172.3919294.94 1173.74 19314.2 1173.8719340.55    1173
19361.41  1172.319391.52 1173.1119409.22 1175.0219421.18 1180.74 19431.2 1185.44
19446.49  1185.419455.44 1179.2919491.82 1154.9619542.07 1153.9519546.61 1154.64
19563.52  1159.919609.02 1170.0319615.88 1171.25 19640.4 1176.2219656.48 1176.53
 19669.1  1175.419674.56 1178.1719689.02 1185.9319697.87 1181.96 19713.6 1175.09
19728.79    116519731.37 1163.5219755.99 1148.7219999.55 1148.7220006.21 1149.47
20013.74  1150.120021.53 1150.24 20029.8 1149.3220041.52 1148.53 20053.2 1147.98
20084.72  1145.320105.72 1143.3120120.92 1142.3220131.89 1141.81 20154.6 1141.77
 20168.4    114220184.68 1143.4720193.33 1144.0520207.65 1145.1720215.48 1146.19
20219.08  1146.820253.11 1153.6720262.44 1154.0820277.52 1154.4420281.83 1154.35
20307.84  1156.920320.31 1158.1820332.28 1158.6620349.98 1160.9120358.71 1161.76
20370.25  1161.920383.63 1161.5620395.83 1159.08 20422.8 1155.6120444.66 1152.88
20456.99  1153.120466.15 1153.3620474.01 1153.0820495.23 1154.6620496.87 1154.37
20509.17  1153.520524.58 1152.5520533.32 1152.3320549.23 1152.3120578.73 1151.68
20587.03  1151.620605.18 1151.7520609.45 1151.6720631.35 1151.3220638.11 1151.58
20655.54  1152.720674.02  1153.420682.97 1153.4820696.32 1154.1620736.97 1153.58
20743.09  1153.820750.84 1154.39 20781.4  1156.120784.55 1158.1320786.73 1158.55
20796.85    115820803.01 1157.3820818.77 1156.7920835.84 1158.2120861.54 1158.88
20884.65    115820916.47 1157.9920925.95 1157.6220942.29 1157.4620954.43 1157.11
20956.33  1157.420964.42 1157.7320972.92 1156.9620990.42 1157.2921004.19 1157.24
21018.32  1159.421025.19 1155.74 21033.6 1152.5821061.57 1151.24 21149.5 1151.31
21251.46  1151.621273.01 1151.4121302.97 1152.2121344.07 1153.2221414.83 1153.56
 21452.9  1154.221489.37 1154.4921509.45 1154.8921553.77 1154.9821606.68 1157.47
21615.63  1161.321626.07 1165.0521634.05 1168.25 21642.7 1165.9221652.32 1163.75
21655.11  1163.321670.14 1163.19   21690 1163.0821709.36 1162.48   217201162.246
21744.81  1161.7 21771.2  1163.521787.65 1164.9721868.56 1163.56 21934.9 1167.82
21971.79 1171.7622003.59  1173.322007.38 1173.7822013.25 1173.9322022.36 1174.47
22039.78 1174.2922066.19  1173.922067.64    117422078.56 1175.6922088.67 1175.56
22095.23  1175.322101.34  1175.522125.41 1176.82 22142.7 1177.5622154.25 1180.14
22160.92 1180.3822169.46    118022175.19 1179.83 22186.8 1178.7222192.54  1177.9
   22203 1179.4122214.87  1178.722220.75  1179.4 22227.3 1179.2822236.47  1180.6
22242.02 1180.9422254.98  1179.522262.54 1177.5122273.47 1177.41 22282.5 1177.56
22295.05 1176.6722297.34  1176.322310.55 1176.87 22319.4 1176.4322329.08 1177.75
22345.94 1178.7622361.58  1178.922375.38 1179.1922382.04 1179.4522390.52 1179.31
22394.13 1180.8322402.68  1181.122421.42  1183.122425.47 1186.6322428.87  1188.5
   22435 1190.7622441.19  1193.522444.95 1195.4222456.01 1199.0422473.79 1186.49
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22479.65 1181.6622496.99  1181.722518.17 1181.9122539.38 1182.3622547.85 1182.34
 22567.6 1182.6322573.95  1183.122607.44 1184.25 22619.7 1184.4122645.64 1184.84
22665.53 1184.49 22666.2  1184.522686.76  1200.522689.47 1201.0822696.99 1204.24
22698.31 1203.4422706.42  1203.122708.32 1203.3422719.85 1197.81 22728.3 1192.49
22739.29 1184.4422785.66  1182.522788.75 1182.8322806.26 1183.8922815.79  1183.2
22832.27 1183.4422836.45  1183.422846.73 1182.9722863.76 1182.8422882.04 1181.99
22907.43 1182.2422924.35  1179.922934.16 1179.0122939.22 1178.46 22968.3 1173.95
22992.13 1173.3223022.21  1174.823036.83 1173.4823058.26 1171.8423073.67 1170.38
23087.08 1170.3923108.86  1169.7   23111 1169.3523140.54  1167.123173.66 1164.49
23176.37 1164.4623183.59  1163.723205.02 1161.5923213.59 1161.5823218.55 1168.13
23268.77 1188.64 23277.4  1188.4   23394 1184.9123450.93 1183.3323458.46 1185.46
23478.08 1193.2223492.53  1190.523503.09 1188.1823504.75 1187.6923528.38 1187.52
23562.27 1185.5323630.27  1188.623637.25 1188.75 23661.7 1189.54 23680.4 1189.83
23701.25 1189.7123747.57  1188.9

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18464     .05 19431.2    .035   21720     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19431.2   21720            483.86  483.86  483.86             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18464 19431.2 1185.93   2172023747.57  1188.9

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.62

INPUT
Description:
Station Elevation Data    num=     219
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18378.52  1185.818404.35 1185.4818468.51 1184.5418519.25 1184.0518597.14 1183.85
18625.03  1183.818645.15 1183.9918674.94 1184.3818726.36 1183.7518735.04 1183.41
18810.85  1180.718818.74 1180.4818822.11 1180.0618841.76  1174.218866.52 1183.49
18879.93  1186.918886.19 1187.1318896.94  1187.718903.79  1186.818935.34  1174.9
18952.59  1168.118970.84 1166.5519016.04  1167.219041.59 1168.54 19076.7  1168.5
19100.78  1168.419112.49 1168.3819170.92 1168.8219208.13 1171.0719217.46 1171.58
19228.76  1177.519245.51 1186.2919247.74 1186.3419262.74 1186.1119281.57  1185.9
19291.06  1180.319293.54 1178.5519296.84 1179.07 19306.6 1180.03 19309.4 1180.04
19324.17    118119355.66 1173.4419361.36 1171.5819380.53 1167.8119383.47 1167.14
19404.93  1173.319415.91 1178.1719430.33 1185.4719437.83  1185.319447.76 1185.23
19462.55    117519482.14 1162.3519495.08 1153.3719501.85 1153.2419530.15 1153.57
19553.32  1153.819569.11 1157.4119586.18  1159.219600.46 1161.0719616.22 1161.18
19672.91  1161.819686.04 1161.8219702.52 1161.6719764.44 1160.7819818.05 1160.08
19833.36    116019864.29 1160.4419900.89 1160.8219939.15 1163.1819943.11 1163.31
19946.81  1162.819964.63 1166.1619974.75  1165.519982.08 1165.7819989.55 1163.93
 20004.4  1163.120011.63 1162.7620038.32 1161.3620068.86 1145.2720074.04 1144.37
20083.55  1143.320086.09 1143.1720100.72 1143.1720109.54  1144.320114.57    1144
20132.41  1143.420142.12 1143.5720180.96 1143.0120196.71 1144.2120215.45 1146.02
20244.38  1149.820254.84 1149.8120274.37 1151.0620303.52 1151.0220372.27 1148.56
 20373.8  1148.6 20407.9 1152.7920414.72 1153.3920426.65  1154.220441.24 1155.53
20445.35  1155.320455.62 1154.1720467.54 1153.5220504.49 1158.4220518.03 1160.41
20536.22  1159.9 20559.2 1159.3920573.96 1159.8620587.92 1159.2220613.78  1156.6
20623.68  1155.520628.88 1155.0420639.74 1154.4820648.95 1154.5220676.03 1151.35
20681.05  1150.320685.65 1149.9420716.53 1148.3120718.26 1148.2820761.57 1149.03
20778.13  1148.720789.51 1148.7420845.64 1148.8320863.07 1149.2320874.13 1149.79
20877.77  1152.520879.74 1153.4820901.45 1158.1220917.91 1161.1920923.26 1160.04
20931.08  1158.620971.99 1155.9221004.14  1155.921029.13 1157.1321094.11 1158.09
21105.12  1157.7 21114.2 1158.23 21125.7  1158.121138.44 1158.5721146.08  1160.9
21153.05  1161.621156.33 1161.3921175.88 1160.3321194.36 1158.1921296.44 1155.95
21306.29  1155.921368.24 1156.6221374.31 1156.2221388.29 1154.2521393.32 1154.01
21405.64  1153.621421.92 1153.3621457.66 1151.3621469.29 1150.3321510.01 1149.18
21514.93  1149.221522.43 1149.7721531.86 1150.7721542.55 1151.18 21561.6 1151.78
 21585.4  1151.321598.53 1151.05   21600 1151.0821643.62 1151.98 21681.1 1152.23
 21691.8 1152.5521736.93  1152.921758.33 1153.14 21767.5 1153.3921783.92 1154.29
21795.39 1158.22   21819  1158.921863.06 1174.9221879.57  1174.721927.14 1173.19
21962.31 1173.2621966.92  1173.221973.81 1174.6621995.83 1176.4422012.64  1175.4
   22018 1175.4322032.54  1177.922048.17 1180.1522055.24 1180.7922065.01 1178.99
22070.42 1177.6222073.56  1176.422082.18 1174.9622092.26 1175.13 22123.7 1175.99
22133.35 1174.0122138.59  1172.622151.32 1172.1622163.66 1171.6522173.36 1171.51
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22188.26  1171.722201.63  1171.322228.57 1170.2322244.33 1178.9822264.95 1189.61
22279.95  1188.722291.92    118922311.27 1189.11 22345.6 1187.7122356.31 1187.48
22408.94  1188.422415.73  1188.622445.76 1188.3722488.37 1188.4622496.99 1188.98
22500.11 1188.9722527.12  1189.522639.53 1189.4822671.17 1189.5522682.21 1189.38
22714.79 1189.6422773.11  1189.922780.07 1189.9722793.79 1189.95

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18378.52     .0519430.33    .035   21600     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19430.33   21600            529.95  529.95  529.95             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18378.5219430.33 1185.47   2160022793.79 1189.95

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.52

INPUT
Description:
Station Elevation Data    num=     201
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 18088.7  1184.518094.05 1184.5418136.07 1185.2418204.45 1185.89   18218 1185.89
18231.78  1183.718250.76 1183.5318339.83 1183.2618379.79 1184.8818401.55 1186.16
18428.54  1191.718433.64 1192.7918445.55 1192.9718476.05 1192.6718484.38 1192.51
18485.77  1190.7 18501.8 1190.0418512.61 1192.5518527.36 1192.6918530.87 1192.36
18557.82  1191.718586.99 1190.9818641.01 1173.5518651.39 1170.0818670.01 1162.45
18673.96  1160.918683.35  1161.418814.59 1161.3518971.41 1161.6118995.12 1161.38
19042.34  1161.419046.67 1161.6519049.29 1160.7719053.55 1161.2219056.67 1161.97
   19101  1183.119108.59 1186.8419123.87 1186.1619131.81 1185.2819169.23 1168.35
19186.57  1160.219189.46  1160.519198.48 1163.9819244.71 1158.7419246.73  1158.8
19249.58  1163.119263.12 1171.4719281.03  1183.619292.86 1184.6619321.49 1188.18
19356.17  1171.919369.03 1165.5819370.86 1164.0519394.33 1171.5419434.58 1184.43
19451.27  1184.619482.81 1163.4619497.43 1153.8119507.25 1153.6219579.45  1153.4
19583.14  1153.419602.45 1153.8119641.76 1154.2119653.22 1153.99 19672.4  1154.1
19713.81  1154.819723.27 1155.22   19748 1156.4819764.85 1156.5919809.25 1155.66
19862.99  1154.619865.78 1154.6119891.59 1154.1819963.95 1153.7619969.89 1153.68
20030.43  1152.720075.47 1151.9220086.28 1151.7220111.83  1151.720116.37 1151.85
20150.09  1151.420152.59 1151.3620162.27 1151.5820191.66 1152.3720213.73  1152.8
20220.38  1153.120233.22 1151.3520239.83 1151.1520317.34 1150.0920360.79 1149.26
20364.78  1149.120402.94 1149.28 20441.4 1149.4920464.67 1149.8520484.68 1149.59
20498.13  1149.320502.32 1149.34 20513.4 1148.9520536.24 1149.9920538.83 1150.27
 20542.7  1151.3 20547.2 1151.5520556.42  1150.320562.09 1148.9420571.53  1148.8
20598.82  1147.920617.41 1147.8420624.67 1147.8220636.08 1147.5320688.72 1147.67
20691.86  1147.820736.77 1148.0220809.46 1149.6320855.42 1149.27 20898.4  1149.5
20935.16  1149.520953.85 1148.7920989.41 1148.1521018.71  1147.521022.84 1147.48
21026.09  1149.4 21031.9 1152.5221036.04 1154.4921046.57 1154.9221053.64 1155.58
 21076.1  1155.421084.82 1155.8321088.81 1155.6821112.35  1156.121123.26  1156.8
21126.83  1157.321147.62 1164.5521156.03 1167.5521161.19 1167.4321179.54 1166.62
21181.54  1164.721190.54 1163.2421204.66 1159.6421209.11 1160.3621237.67 1152.56
21253.62  1153.4 21274.1 1151.7221288.71 1150.45 21295.3 1150.5521298.09 1151.25
21308.67  1153.421319.78 1155.4121321.51 1155.3821324.95 1156.2821339.65 1158.84
21340.72  1158.821346.72  1157.221352.78 1157.01 21368.5    1156   21370 1155.91
21411.43 1153.4221419.91  1153.721426.88 1153.8321463.75 1154.0221479.12 1160.61
21493.32 1156.9821503.83  1156.721511.16  1156.8 21526.1 1158.0421530.36 1158.17
21558.04 1158.7121568.37    115921572.86 1161.0821590.45 1167.9421620.14 1167.95
21623.43 1167.9321625.68    116721648.07    1159 21668.6 1159.4521682.24 1160.41
21690.39 1160.7821711.67  1162.221724.12 1162.65   21755 1164.3521758.82  1164.6
21777.24 1166.5821796.76  1168.521813.46 1169.16   21849  1168.721858.44 1168.58
21917.45 1169.44 21939.5  1170.121958.25  1170.521971.26 1176.0121991.56 1182.37
22002.74 1186.1122025.09  1186.222038.67 1186.3822046.77 1186.3922067.33 1186.74
 22098.6 1186.9822158.37  1187.722216.75 1187.8522254.97 1187.9522329.24 1188.32
22366.41 1188.54

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 18088.7     .0519451.27    .035   21370     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19451.27   21370            503.1   503.1   503.1             .1       .3
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Ineffective Flow      num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 18088.719451.27  1184.6   2137022366.41 1188.54

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.42

INPUT
Description:
Station Elevation Data    num=     162
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18043.55  1183.518058.12 1183.6118117.53 1183.1618160.31 1184.4418190.45 1185.61
18204.03  1185.618224.37 1182.1618271.71 1180.91 18282.6 1183.8418294.74 1189.44
18309.53  1193.918322.31 1192.8218342.86 1191.7618358.99  1191.218360.57 1189.59
18370.45    118918377.65 1188.7618385.95 1191.8118395.35 1192.4918401.65 1192.77
18411.71  1192.218435.01 1191.0318460.48 1189.7118514.06 1170.0818543.55 1161.58
18545.99  1160.7 18551.8 1161.0418643.34 1161.0519222.97 1161.04 19226.6 1160.62
19240.66  1161.319247.55 1161.4719261.31 1162.3919264.15 1162.3719272.42  1163.6
19276.33  1164.819291.06 1170.0619293.26 1171.2219301.82 1176.2419320.57 1186.49
19327.53    118719334.78 1187.3619336.36 1186.9619358.72 1179.9819377.48 1174.07
19383.76    1172 19397.8 1172.1219411.52 1173.0219443.09 1184.6819462.26 1184.81
19471.43  1178.619507.11  1154.219527.34 1153.9919566.11 1154.1919585.43 1154.32
 19628.3    115419650.21 1153.7519701.38 1153.6819712.02 1153.63 19775.8 1153.52
19814.95  1153.419817.34 1153.2119869.39 1153.05 19909.7 1152.3219952.33 1151.82
19991.79  1152.1 20021.5 1151.9320042.41 1151.6120056.38 1151.5120092.53 1151.36
20104.41  1151.220150.93 1150.9920191.15 1151.1920196.14 1151.1920216.46 1149.36
20226.63  1148.720233.55 1148.6520277.89  1148.520309.76 1148.7820321.25 1147.98
20333.22  1147.520346.56 1147.1220398.46  1152.920476.81 1146.8820487.22 1146.82
20535.02  1147.220546.05 1146.9720566.01    114820597.82 1148.5320634.33    1149
20646.91  1149.220659.41 1149.5720715.31 1150.0920725.27 1150.0720752.76 1150.28
20771.42  1150.8 20805.6 1151.4720826.19  1151.520867.07 1152.0820874.98 1151.61
20897.86  1150.920929.75 1151.1420942.37 1151.3920968.03 1152.0320974.67 1151.71
20985.96  1152.2 20992.1 1152.2121019.11  1151.6 21049.7 1150.39   210651149.567
21065.88 1149.5221082.61  1148.321125.78 1148.4321127.95 1148.2921144.39 1146.08
21148.56 1146.1221160.16  1144.921171.69 1144.7921177.64 1146.2721188.78 1149.56
 21195.8 1151.7321219.79  1149.8 21234.5 1158.9621247.11 1159.4221276.39 1160.73
21291.12  1161.321306.11    116721308.31 1168.0821317.52 1170.3521339.41 1170.72
 21360.4 1169.3821365.06  1168.921396.53 1167.5521401.42 1167.4821460.32 1167.06
21474.76 1166.9821510.63  1172.121519.63 1173.4921540.19 1170.6821545.19 1171.51
21572.22 1177.3721576.08    118021581.46 1182.9321594.26 1183.8521610.38 1184.69
21628.34 1185.4721664.95  1185.221683.62 1184.9821715.53 1185.1721741.04 1185.41
21751.82  1185.821768.03    1186 21827.3 1185.9921902.85 1186.0721926.28 1186.34
21956.88 1185.8421986.13  1185.9 22026.7    118622107.52 1185.8622135.75 1185.91
22153.92 1186.7122161.11  1186.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18043.55     .0519462.26    .035   21065     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19462.26   21065            599.2   599.2   599.2             .1       .3
Ineffective Flow      num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18043.5519462.26 1184.81   2106522161.11  1186.8

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.31

INPUT
Description:
Station Elevation Data    num=     182
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18260.48  1181.518288.51 1185.8718301.05 1191.0618312.67 1190.4518315.96 1190.41
18345.81  1189.318352.98 1186.8218366.88 1187.12 18370.7 1186.9618378.38 1187.39
18388.21  1188.118398.63 1188.3818415.14 1187.7418455.04  1186.118473.39 1180.03
18493.79  1170.118502.03 1167.8918514.32 1165.0418523.98 1164.5718534.13 1164.32
18550.44  1166.818580.05 1170.0818583.46 1170.3618621.47 1171.6118628.32 1171.82
18663.11  1172.318671.21 1172.52 18698.8 1172.6318734.87 1172.5818738.21 1172.65
18764.61  1172.318768.81 1172.1918778.99 1172.1318791.18 1171.8918801.71 1171.57
18821.35  1170.418848.56 1169.46 18856.1 1169.2718869.55 1168.1218875.46 1167.77
18886.96  1166.818894.87 1165.7218911.57 1162.7518915.08 1161.7818934.72 1162.45
```

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18940.54  1161.118944.97 1161.0419143.71 1161.0419169.01 1160.6219208.75 1162.17
19240.66  1162.619264.51 1162.6619269.89  1163.119289.29 1165.5319292.56 1165.82
19309.12  1169.619310.82 1170.0619318.34 1173.6619343.02 1186.2219348.81 1187.37
19360.06  1188.219395.94 1173.23 19430.5 1173.3819441.56 1179.1219452.97 1185.31
19458.91  1185.419469.49  1185.3 19500.9 1163.7419514.21  1154.519578.95 1154.71
19626.84  1154.819648.47  1154.219736.43 1152.0819774.46  1152.919796.75 1153.29
19806.29  1150.719809.19 1149.6219829.29 1150.0519851.93 1150.1919861.38 1150.35
19904.57  1150.619923.12 1150.2519969.31 1149.0619996.54 1148.83 20020.2 1148.35
 20043.8    114820086.59 1147.5420122.45 1147.3720155.61 1148.0220163.54 1151.16
 20166.7  1151.620179.31 1150.09   20189 1149.5220205.26 1149.4620219.88 1148.88
20226.16  1148.720231.26 1148.4120257.45 1147.4120262.99 1147.8220266.41 1147.51
20283.34  1146.820288.42 1146.8220294.46 1146.2220302.98 1146.2220318.06  1145.7
20328.39  1145.620338.24 1145.7120354.04 1146.2720361.33 1147.5620362.49 1147.59
20369.34  1148.920375.09 1149.4320385.68 1151.8220389.24 1152.6220396.92 1152.09
20406.33    115120436.89 1152.18 20442.2 1153.1120450.74 1154.0520506.03 1154.03
20524.74    1154 20559.5 1153.9320581.21 1153.83   20612 1154.6820648.99 1173.35
20654.48  1176.5 20662.8 1180.3620665.32 1180.0520667.75 1180.5420670.16 1180.23
20682.02    117620690.61 1173.33 20723.1  1158.720732.06 1154.1820757.62 1154.66
20787.67  1154.4 20867.1 1153.4320910.88 1154.3920925.21 1154.9620930.22 1155.43
20963.61  1159.820990.94 1163.3620998.37 1164.4221025.84 1166.82 21043.9 1168.25
21060.39  1169.421083.27 1171.8821107.82 1172.3621115.16 1172.7421122.26 1172.95
21133.52  1173.7 21138.6 1173.8421148.22  1175.321150.91 1176.1221159.45 1176.65
21181.39  1177.421210.61 1176.5921224.95 1176.6621274.36 1176.6521278.34 1176.91
 21285.5  1176.721292.94 1174.3821294.87 1174.6921302.18 1177.0321310.23 1175.93
21321.74  1175.421381.62 1176.7721389.48  1176.921439.94 1176.2221452.69 1184.77
21502.78  1184.321555.17 1184.7621571.85 1184.9421576.97 1184.9321740.59 1185.77
21770.72    118521786.13 1184.8721796.29 1185.4321814.78 1185.86 21828.5 1185.97
   21858  1185.921896.79 1185.75

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18260.48     .0519458.91    .03520667.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19458.9120667.75              106  477.07     507             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18260.4819458.91  1185.420667.7521896.79 1180.54

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.22

INPUT
Description:
Station Elevation Data    num=      64
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19306.77    118519319.42 1184.9519339.82 1178.1219359.81 1171.21 19379.9 1164.06
 19400.1  1156.619407.09 1153.9419430.58 1153.9819454.42 1153.9419478.39 1153.92
19499.01  1153.919519.71 1153.7419540.48 1153.5719561.31 1153.4319582.19 1153.31
19603.12  1153.2 19627.6 1153.0619648.62 1152.8619669.67  1152.519694.26 1152.07
19715.35  1151.519736.45 1150.9119757.55 1150.3819778.66    115019799.75 1149.86
19820.82  1149.819845.38 1149.68 19862.9 1149.4519883.89 1148.8919897.86 1148.68
19918.78  1148.719939.65 1148.7719960.45 1148.8219984.65 1148.8820005.31 1149.45
 20025.9  1149.420049.82 1149.2120073.61 1148.9520100.65 1148.8420124.16 1148.75
20147.53    114920170.75 1149.2920187.23 1149.3920220.98  1149.420270.26 1149.67
20312.26  1149.820350.95 1150.3320366.52 1153.33 20398.1 1154.6120459.08 1152.84
20509.22  1155.220526.73 1169.9720530.71 1172.8620547.19 1172.06 20560.8 1184.84
20565.55  1186.520569.82 1187.22 20574.8 1188.4420590.92 1191.8720598.08 1192.81
20608.57  1193.720654.24 1193.3620673.32 1193.2820746.65 1192.72

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19306.77     .0519306.77    .03520608.57     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19306.7720608.57              404     110     67             .1       .3

BRIDGE                 RIVER: Salt River
REACH: Reach 4            RS: 224.21

INPUT
```

```
Description:
Distance from Upstream XS =       0
Deck/Roadway Width        =      77
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      15
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19323.35  1190.4    118319503.35    1191    118319503.35    1191    1183
19523.85  1191.6  1183.419604.85  1192.8  1183.819604.85  1192.8  1183.8
19693.85  1193.8  1184.819788.85  1194.6  1185.619913.85  1195.1  1186.1
20043.85  1195.4  1186.420178.85  1195.4  1186.420319.35  1195.3  1186.3
20459.35  1194.6  1185.620643.35  1193.9  1184.920643.35  1193.9  1193.9

Upstream Bridge Cross Section Data
Station Elevation Data    num=      64
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19306.77    118519319.42 1184.9519339.82 1178.1219359.81 1171.21 19379.9 1164.06
 19400.1  1156.619407.09 1153.9419430.58 1153.9819454.42 1153.9419478.39 1153.92
19499.01  1153.919519.71 1153.7419540.48 1153.5719561.31 1153.4319582.19 1153.31
19603.12  1153.2 19627.6 1153.0619648.62 1152.8619669.67  1152.519694.26 1152.07
19715.35  1151.519736.45 1150.9119757.55 1150.3819778.66    115019799.75 1149.86
19820.82  1149.819845.38 1149.68 19862.9 1149.4519883.89 1148.8919897.86 1148.68
19918.78  1148.719939.65 1148.7719960.45 1148.8219984.65 1148.8820005.31 1149.45
 20025.9  1149.420049.82 1149.2120073.61 1148.9520100.65 1148.8420124.16 1148.75
20147.53    114920170.75 1149.2920187.23 1149.3920220.98  1149.420270.26 1149.67
20312.26  1149.820350.95 1150.3320366.52 1153.33 20398.1 1154.6120459.08 1152.84
20509.22  1155.220526.73 1169.9720530.71 1172.8620547.19 1172.06 20560.8 1184.84
20565.55  1186.520569.82 1187.22 20574.8 1188.4420590.92 1191.8720598.08 1192.81
20608.57  1193.720654.24 1193.3620673.32 1193.2820746.65 1192.72

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19306.77     .0519306.77    .03520608.57     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19306.7720608.57             .1       .3

Downstream  Deck/Roadway Coordinates
    num=      15
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
 19294.2  1190.4    1183 19474.2    1191    1183 19474.2    1191    1183
 19494.7  1191.6  1183.4 19575.7  1192.8  1183.8 19575.7  1192.8  1183.8
 19664.7  1193.8  1184.8 19759.7  1194.6  1185.6 19884.7  1195.1  1186.1
 20014.7  1195.4  1186.4 20149.7  1195.4  1186.4 20290.2  1195.3  1186.3
 20430.2  1194.6  1185.6 20614.2  1193.9  1184.9 20614.2  1193.9  1193.9

Downstream Bridge Cross Section Data
Station Elevation Data    num=      51
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19445.11  1184.819457.36 1174.9719470.77 1174.8819480.38 1164.9319485.98 1158.99
19496.11  1158.419519.75 1157.7319543.45 1157.4719567.19  1157.2 19585.5 1156.85
19594.94  1154.919615.68  1151.419639.88 1150.23 19662.5 1149.97 19682.4 1149.99
 19702.3  1150.119726.18 1149.8219746.07 1149.6619768.07 1149.5719783.14 1150.02
19805.66  1149.819829.45 1149.6319853.19 1149.4119876.89 1149.1319892.65 1148.94
19916.25    114919939.79 1149.0219951.53 1149.0520011.61 1149.1820015.14 1149.31
20028.65  1149.2 20044.7 1149.2520087.99 1149.1420143.11 1149.14 20170.3 1149.31
20276.33  1149.320304.88 1149.4320317.29  1149.620322.34 1150.5720486.04 1157.24
20495.82  1156.920504.08 1157.3220507.02 1159.7920526.44 1173.8420542.14 1172.85
20544.44    117520552.57 1184.2420557.11 1185.8220587.76 1196.2620704.48 1194.79
20707.75  1194.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19445.11     .0519445.11    .03520707.75     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19445.1120707.75             .1       .3

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
```

```
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  9

Pier Data
Pier Station     Upstream=   19515    Downstream=   19515
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Pier Data
Pier Station     Upstream=   19595    Downstream=   19595
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Pier Data
Pier Station     Upstream=   19685    Downstream=   19685
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Pier Data
Pier Station     Upstream=   19780    Downstream=   19780
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Pier Data
Pier Station     Upstream=   19905    Downstream=   19905
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Pier Data
Pier Station     Upstream=   20035    Downstream=   20035
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Pier Data
Pier Station     Upstream=   20170    Downstream=   20170
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
```

```
Pier Data
Pier Station     Upstream= 20310.5    Downstream= 20310.5
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Pier Data
Pier Station     Upstream=   20450    Downstream=   20450
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1189

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.20

INPUT
Description:
Station Elevation Data    num=      51
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19445.11  1184.819457.36 1174.9719470.77 1174.8819480.38 1164.9319485.98 1158.99
19496.11  1158.419519.75 1157.7319543.45 1157.4719567.19  1157.2 19585.5 1156.85
19594.94  1154.919615.68  1151.419639.88 1150.23 19662.5 1149.97 19682.4 1149.99
 19702.3  1150.119726.18 1149.8219746.07 1149.6619768.07 1149.5719783.14 1150.02
19805.66  1149.819829.45 1149.6319853.19 1149.4119876.89 1149.1319892.65 1148.94
19916.25    114919939.79 1149.0219951.53 1149.0520011.61 1149.1820015.14 1149.31
20028.65  1149.2 20044.7 1149.2520087.99 1149.1420143.11 1149.14 20170.3 1149.31
20276.33  1149.320304.88 1149.4320317.29  1149.620322.34 1150.5720486.04 1157.24
20495.82  1156.920504.08 1157.3220507.02 1159.7920526.44 1173.8420542.14 1172.85
20544.44    117520552.57 1184.2420557.11 1185.8220587.76 1196.2620704.48 1194.79
20707.75  1194.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19445.11     .0519445.11    .03520707.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19445.1120707.75              208      77      57             .1       .3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.19

INPUT
Description:
Station Elevation Data    num=      35
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19454.96  1184.419483.52  1161.319487.38 1157.1619491.44  1156.919617.69 1156.67
19623.23  1156.819624.53 1156.44 19686.6 1149.4419760.55 1149.1419778.52 1149.69
19796.09  1149.619806.97 1149.7919818.58 1149.6319896.58 1149.7319906.24 1149.71
19917.31  1149.920011.67 1149.2120038.97 1149.2420050.97 1149.3320070.28 1149.38
```

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20165.08  1149.420286.15 1149.3620307.09 1149.4120319.98 1149.6820493.09 1156.87
20504.22  1157.220509.34 1160.32 20526.6  1174.220530.81  1177.220542.55 1177.03
20568.26  1190.320577.52 1195.9520588.16 1198.3420607.63 1198.1620709.61 1197.44

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19454.96     .0519454.96    .03520709.61     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19454.9620709.61              171  172.54     177             .1       .3

BRIDGE                  RIVER: Salt River
REACH: Reach 4            RS: 224.175

INPUT
Description:
Distance from Upstream XS =      75
Deck/Roadway Width        =      61
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      11
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19452.47  1209.4  1209.419452.47  1209.4  1196.419588.47  1208.1  1195.1
19728.47  1206.8  1193.819868.47  1205.5  1192.520008.47  1204.3  1191.3
20148.47    1203    119020288.47  1201.7  1188.720428.47  1200.5  1187.5
20568.47  1199.2  1186.220595.67 1198.34 1198.34

Upstream Bridge Cross Section Data
Station Elevation Data    num=      35
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19454.96  1184.419483.52  1161.319487.38 1157.1619491.44  1156.919617.69 1156.67
19623.23  1156.819624.53 1156.44 19686.6 1149.4419760.55 1149.1419778.52 1149.69
19796.09  1149.619806.97 1149.7919818.58 1149.6319896.58 1149.7319906.24 1149.71
19917.31  1149.920011.67 1149.2120038.97 1149.2420050.97 1149.3320070.28 1149.38
20165.08  1149.420286.15 1149.3620307.09 1149.4120319.98 1149.6820493.09 1156.87
20504.22  1157.220509.34 1160.32 20526.6  1174.220530.81  1177.220542.55 1177.03
20568.26  1190.320577.52 1195.9520588.16 1198.3420607.63 1198.1620709.61 1197.44

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19454.96     .0519454.96    .03520709.61     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19454.9620709.61             .1       .3

Downstream  Deck/Roadway Coordinates
    num=      11
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19444.96  1209.4  1209.419444.96  1209.4  1196.419580.96  1208.1  1195.1
19720.96  1206.8  1193.819860.96  1205.5  1192.520000.96  1204.3  1191.3
20140.96    1203    119020280.96  1201.7  1188.720420.96  1200.5  1187.5
20560.96  1199.2  1186.220586.48 1198.21 1198.21

Downstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19462.47  1185.5 19469.8 1185.6619470.97 1184.7119497.84 1155.9919525.98 1154.16
19530.01  1154.219628.15 1155.8919643.87 1156.0819670.59 1149.4519675.68 1148.88
19725.27  1148.619728.27 1148.7119792.34 1148.5219832.02 1149.07 19874.4 1148.48
19892.65  1148.519931.19 1148.4319975.43 1149.2719996.04 1149.11   20002 1149.12
20067.69  1149.620173.33 1149.9120192.58  1149.9 20327.4 1150.2120410.35 1151.92
20443.52  1153.3 20500.1 1154.7220526.26 1170.9320528.13 1172.1620545.31 1177.82
20585.77    119720593.99 1198.2120639.84 1196.6520712.47 1196.03

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19462.47     .0519462.47    .03520712.47     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19462.4720712.47             .1       .3
```

```
Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  7

Pier Data
Pier Station     Upstream=   19590    Downstream=   19590
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1196
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1196

Pier Data
Pier Station     Upstream=   19730    Downstream=   19730
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1195
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1195

Pier Data
Pier Station     Upstream=   19870    Downstream=   19870
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1195
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1195

Pier Data
Pier Station     Upstream=   20010    Downstream=   20010
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1192
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1192

Pier Data
Pier Station     Upstream=   20150    Downstream=   20150
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1192
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1192

Pier Data
Pier Station     Upstream=   20290    Downstream=   20290
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1192
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1192

Pier Data
Pier Station     Upstream=   20430    Downstream=   20430
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1150       4    1190
Downstream     num=       2
```

```
    Width   Elev    Width   Elev
       4    1150       4    1190

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.16

INPUT
Description:
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19462.47  1185.5 19469.8 1185.6619470.97 1184.7119497.84 1155.9919525.98 1154.16
19530.01  1154.219628.15 1155.8919643.87 1156.0819670.59 1149.4519675.68 1148.88
19725.27  1148.619728.27 1148.7119792.34 1148.5219832.02 1149.07 19874.4 1148.48
19892.65  1148.519931.19 1148.4319975.43 1149.2719996.04 1149.11   20002 1149.12
20067.69  1149.620173.33 1149.9120192.58  1149.9 20327.4 1150.2120410.35 1151.92
20443.52  1153.3 20500.1 1154.7220526.26 1170.9320528.13 1172.1620545.31 1177.82
20585.77    119720593.99 1198.2120639.84 1196.6520712.47 1196.03

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19462.47     .0519462.47    .03520712.47     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19462.4720712.47              143     110      83              .1       .3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.14

INPUT
Description:
Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19459.38  1184.319465.68 1184.6519492.45 1161.0619501.14 1153.8719528.15 1153.13
19553.94  1153.819572.95 1154.2319596.91 1154.4219636.97 1154.7419650.11 1155.01
19674.08  1149.119693.35 1148.0219723.32 1147.8819756.48 1148.0219761.35 1148.16
19767.39  1147.919780.71 1147.6919806.34 1149.1519837.03 1150.1119847.77 1150.17
19872.55  1149.619907.37 1149.4919941.64 1147.8819965.67  1147.3   20043  1145.9
20045.27  1145.920095.82 1147.5220130.45 1148.4520186.83 1149.0220227.38 1147.78
20233.86  1147.420251.42 1147.4920319.37 1149.2820347.59 1151.5220414.65 1152.68
20471.19  1153.5 20498.3 1154.14 20528.1 1173.3220537.21 1172.6220541.83 1176.29
20559.39  1184.320602.79 1203.0520607.89 1205.6820610.22 1205.0220665.75 1203.77

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19459.38     .0519459.38    .03520665.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19459.3820665.75              312      86      56              .1       .3

BRIDGE                 RIVER: Salt River
REACH: Reach 4            RS: 224.13

INPUT
Description:
Distance from Upstream XS =       0
```

```
Deck/Roadway Width          =      86
Weir Coefficient            =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      14
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19401.14  1223.5    121119441.14    1224  1211.219466.14  1224.3  1211.3
19466.14  1224.3  1211.319556.64  1225.3  1212.319666.64  1225.4  1212.4
19796.64  1224.4  1211.419921.64  1222.6  1209.620056.64  1219.8  1206.8
20211.64  1216.4  1203.420317.14  1212.9  1199.920452.14  1209.6  1196.6
20601.14  1206.2  1193.220601.14  1206.2  1206.2

Upstream Bridge Cross Section Data
Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19459.38  1184.319465.68 1184.6519492.45 1161.0619501.14 1153.8719528.15 1153.13
19553.94  1153.819572.95 1154.2319596.91 1154.4219636.97 1154.7419650.11 1155.01
19674.08  1149.119693.35 1148.0219723.32 1147.8819756.48 1148.0219761.35 1148.16
19767.39  1147.919780.71 1147.6919806.34 1149.1519837.03 1150.1119847.77 1150.17
19872.55  1149.619907.37 1149.4919941.64 1147.8819965.67  1147.3   20043  1145.9
20045.27  1145.920095.82 1147.5220130.45 1148.4520186.83 1149.0220227.38 1147.78
20233.86  1147.420251.42 1147.4920319.37 1149.2820347.59 1151.5220414.65 1152.68
20471.19  1153.5 20498.3 1154.14 20528.1 1173.3220537.21 1172.6220541.83 1176.29
20559.39  1184.320602.79 1203.0520607.89 1205.6820610.22 1205.0220665.75 1203.77

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19459.38     .0519459.38    .03520665.75     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19459.3820665.75             .1       .3

Downstream  Deck/Roadway Coordinates
    num=      15
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19385.75  1223.4  1210.819425.75  1223.5    121119465.75    1224  1211.2
19490.75  1224.3  1211.319490.75  1224.3  1211.319581.25  1225.3  1212.3
19691.25  1225.4  1212.419821.25  1224.4  1211.419946.25  1222.6  1209.6
20081.25  1219.8  1206.820236.25  1216.4  1203.420341.75  1212.9  1199.9
20476.75  1209.6  1196.620625.75  1206.2  1193.220625.75  1206.2  1206.2

Downstream Bridge Cross Section Data
Station Elevation Data    num=      53
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19369.76  1184.219371.43  1184.319388.01 1173.96 19406.3 1162.3619420.85 1153.01
   19443  1153.119456.81 1153.0219479.86 1152.6419493.71 1152.4719512.21  1152.5
19535.36  1152.819553.91 1153.0419577.12 1152.7919589.45 1152.8119599.62 1150.36
19605.85  1153.119622.93 1153.1419642.23 1150.9519656.19 1149.1819679.46 1148.78
19698.07  1148.419721.33 1147.8919744.57 1147.2219763.15 1146.9419786.35 1146.82
19810.52  1146.719828.03  1146.819851.13 1146.7319874.18 1146.6619897.18 1146.52
19920.11  1146.4 19944.7  1146.119961.23 1146.0519978.74    1146   20065 1145.41
20131.27  1145.620165.43 1146.5720181.92 1146.7720200.65 1146.2520287.16 1147.65
 20310.4  1148.320366.05 1152.6220390.37 1153.0120494.49 1154.3520512.13 1165.82
 20524.3  1174.120534.14 1173.7920536.49 1173.59 20548.4 1182.7820591.46 1201.71
20596.63  1203.8 20650.4 1204.6920658.52 1204.53

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19369.76     .0519369.76    .03520658.52     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19369.7620658.52             .1       .3

Upstream Embankment side slope              =      0 horiz. to 1.0 vertical
Downstream Embankment side slope            =      0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested
```

```
Number of Piers =  9

Pier Data
Pier Station     Upstream=   19480    Downstream=   19480
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213

Pier Data
Pier Station     Upstream=   19575    Downstream=   19575
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213

Pier Data
Pier Station     Upstream=   19685    Downstream=   19685
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213

Pier Data
Pier Station     Upstream=   19815    Downstream=   19815
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1213

Pier Data
Pier Station     Upstream=   19940    Downstream=   19940
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1210
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1210

Pier Data
Pier Station     Upstream=   20075    Downstream=   20075
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1208
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1208

Pier Data
Pier Station     Upstream=   20230    Downstream=   20230
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1204
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1204

Pier Data
Pier Station     Upstream=   20335    Downstream=   20335
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1200
Downstream     num=       2
```

```
    Width   Elev    Width   Elev
       9    1150       9    1200

Pier Data
Pier Station     Upstream=   20470    Downstream=   20470
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1200
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1150       9    1200

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.12

INPUT
Description:
Station Elevation Data    num=      53
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19369.76  1184.219371.43  1184.319388.01 1173.96 19406.3 1162.3619420.85 1153.01
   19443  1153.119456.81 1153.0219479.86 1152.6419493.71 1152.4719512.21  1152.5
19535.36  1152.819553.91 1153.0419577.12 1152.7919589.45 1152.8119599.62 1150.36
19605.85  1153.119622.93 1153.1419642.23 1150.9519656.19 1149.1819679.46 1148.78
19698.07  1148.419721.33 1147.8919744.57 1147.2219763.15 1146.9419786.35 1146.82
19810.52  1146.719828.03  1146.819851.13 1146.7319874.18 1146.6619897.18 1146.52
19920.11  1146.4 19944.7  1146.119961.23 1146.0519978.74    1146   20065 1145.41
20131.27  1145.620165.43 1146.5720181.92 1146.7720200.65 1146.2520287.16 1147.65
 20310.4  1148.320366.05 1152.6220390.37 1153.0120494.49 1154.3520512.13 1165.82
 20524.3  1174.120534.14 1173.7920536.49 1173.59 20548.4 1182.7820591.46 1201.71
20596.63  1203.8 20650.4 1204.6920658.52 1204.53

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19369.76     .0519369.76    .03520658.52     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19369.7620658.52               54     337     429             .1       .3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 224.06

INPUT
Description:
Station Elevation Data    num=     220
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17003.84  1177.617013.07 1178.2217016.06 1178.1617034.66 1179.0217123.66 1179.97
17144.07  1179.617155.38  1166.917162.84 1157.4917172.03 1156.4417173.48 1156.39
17183.34  1144.517184.69 1144.45 17194.9 1148.9917202.37 1153.0817204.24  1156.9
17217.74  1158.217234.66 1160.0317239.02 1160.8617252.79 1173.5517260.85 1177.15
17276.64  1182.7 17282.3 1182.7117306.98  1182.917309.82 1182.88 17318.4 1179.63
17338.05  1180.817366.31 1182.3617380.12 1182.3417385.13  1182.517420.22 1182.52
17451.32  1182.217507.92 1182.1117537.23 1182.1117591.97 1181.9817637.72 1181.98
17693.32  1182.917705.59  1182.917736.82 1182.6417758.68 1182.6517801.52  1182.4
17831.63  1182.417850.97 1182.3817909.75 1181.2917929.83 1180.8618002.12  1180.6
18039.13  1180.218055.07 1180.2618079.91 1180.46   18092 1180.5918102.85  1180.8
```

```
18112.84  1182.818130.05 1181.4518137.45 1182.2118138.56 1182.0618165.85 1182.74
 18171.9  1182.1 18181.2 1181.7818194.57 1181.7818225.83 1182.1318230.33 1182.26
 18252.9  1193.618266.15 1197.4218274.76 1192.8418280.31 1192.0918293.74 1197.28
18303.53    119218309.55 1189.7918322.28  1184.118332.24 1186.65 18340.5 1192.92
18344.09  1190.118359.18 1191.2818377.55 1205.8918383.23 1205.2318388.46 1207.05
18394.99  1204.818415.59 1203.0918423.63  1202.318432.77 1204.5818433.96 1203.64
 18445.5  1195.918457.41  1187.318462.31 1183.26 18485.1 1182.49 18507.5 1193.19
18525.17  1195.318537.48 1195.5918548.89 1186.1718557.12 1185.5218573.46 1184.67
18576.86  1183.618582.63 1182.4218595.61 1182.1718647.54 1181.7518675.35 1181.28
18739.74  1180.518789.97 1181.3118819.97 1186.5318838.88 1187.3518893.02 1189.08
18917.81  1188.918934.77  1188.5 18952.9 1188.2118968.14 1187.8918979.66 1187.15
19017.37  1201.619033.52 1205.8519047.37 1206.2419051.79 1206.1519110.81 1206.29
19119.87  1206.7 19125.7 1206.7519160.77    119019171.87 1183.4519176.03 1181.17
19183.79  1178.519198.04 1178.5319216.49 1178.37 19223.1 1178.1219238.22 1177.97
 19250.3  1177.719271.13 1176.9819273.96 1176.7819309.85 1179.0419340.46 1178.18
19387.13  1178.519410.86 1178.79 19449.2 1179.6919455.36 1180.0319495.71 1184.21
19502.23  1178.419527.54 1153.1519576.04 1152.7819642.97  1152.519657.16  1152.5
19666.35  1151.219700.36  1146.619719.22 1147.45 19757.1 1147.7719766.98 1147.88
19814.43  1148.119816.86 1148.2219851.37 1148.2319858.69 1148.0919926.33 1148.15
19965.39  1148.319995.18 1147.5320002.72 1147.5420044.52 1146.7920077.23 1145.95
20136.56  1145.620146.09 1145.9220164.95 1146.2620177.31 1148.0120192.77 1151.26
20196.53    115220218.06 1151.7420240.17 1151.3720268.47  1151.620313.93 1152.45
20352.05  1152.620355.97 1152.7420359.68 1155.7920394.93 1182.9920408.99 1183.47
 20426.1  1177.320439.74 1172.4120463.71  1171.220466.41 1171.3220483.19 1171.03
20488.65    117120525.36 1171.2620534.74 1171.2320542.39 1171.5520550.95 1171.74
20576.87    117220580.84 1172.3920597.13 1173.4320612.26 1173.7820670.68 1174.41
20682.75  1174.120693.03 1174.0420701.44 1174.3120711.79 1174.3520720.14 1174.79
20746.14  1174.620766.04  1174.820781.52 1173.9620796.58 1174.3620808.59 1174.02
 20833.3  1173.620836.98 1173.6420864.99 1173.4220873.93 1174.3320876.66 1174.75
20893.77  1179.1   20898 1180.4920905.84 1180.4320924.38 1181.6420945.93 1182.55
20952.36  1182.720977.21 1182.7721016.96 1182.0121048.39 1181.2821143.31 1181.19
21162.41  1181.221273.72 1181.26 21307.4  1181.3 21428.5 1181.9921478.93 1182.21
21532.62  1182.221585.14 1181.97 21606.3 1182.0121621.25  1182.321691.57 1183.58
21753.76  1184.121765.95 1184.3421776.85 1184.3821836.32  1184.921887.13 1185.18

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17003.84     .0519495.71    .03520408.99     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19495.7120408.99              526     528     522              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17003.8419495.71 1184.2120408.9921887.13 1183.47

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.96

INPUT
Description:
Station Elevation Data    num=     191
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17290.78  1177.917320.83 1178.42 17361.7 1179.5517380.27 1179.7217386.87 1179.92
17404.95    1180 17471.5 1180.2217480.78 1180.1217492.53 1176.8517496.14 1175.14
17502.92  1175.517507.96 1175.1617543.83 1171.8917560.62 1171.2217575.12 1171.02
17671.74  1168.617680.17 1168.5917713.05 1168.0217786.45 1167.5117798.93 1167.27
17807.77  1167.2 17861.7 1168.7417897.59 1167.44   17914 1167.6517938.98 1167.61
17998.35  1168.118023.16 1167.8718069.41 1167.8518098.72 1167.4818120.53 1167.87
18165.36  1168.518187.87 1167.7618203.76 1167.8318229.49 1168.7218253.05 1179.48
18258.86    118218269.05 1181.5718295.91 1180.6418319.74 1180.6718349.66 1181.77
18351.15  1181.918375.11 1182.0618385.22 1181.7318410.31 1181.8518450.73 1181.77
18464.05  1180.718468.09 1181.2518477.99 1181.6818495.56 1182.2918499.89 1182.67
18508.06  1182.818532.64 1182.8418549.68 1182.67 18559.9 1182.3318571.25 1180.82
18579.22  1176.118585.62 1179.2218587.54  1180.818588.93 1181.1118610.18 1192.03
18617.78  1197.118626.93 1200.6718631.39 1199.9918638.83  1197.218666.77  1183.5
18676.38  1181.4 18718.9 1181.7718731.97 1181.8918763.09 1181.9518776.07 1185.74
18789.71  1188.318807.57 1184.2618812.37 1183.3218837.29 1183.11 18870.5 1183.15
18875.61  1183.418896.52 1183.4418904.39 1183.2418913.84 1183.2818934.54 1182.39
 18976.3  1180.718985.12 1180.5319009.01 1180.3919064.88 1178.9319075.85 1178.54
19130.89  1178.519138.47 1180.7719168.01 1190.57 19190.2 1191.4819196.43 1191.58
 19242.3  1192.8 19260.3  1192.419269.65 1192.7319280.12 1192.4719311.73 1191.17
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 19313.7  1191.519318.54 1191.4219324.95 1189.78 19331.8 1187.2919338.26 1187.78
 19347.2  1184.419355.81 1180.4319369.44 1180.16 19394.5 1179.8319402.58 1179.66
19415.83  1179.819502.56 1184.0719532.64 1151.8219564.13 1151.7419590.64 1151.74
 19601.3    115219627.85 1151.67 19669.9  1151.619680.29 1151.9319695.62 1147.83
19713.19  1144.119718.69 1142.8819733.23 1142.91 19781.3  1142.319793.79 1142.57
19834.64  1142.919860.64  1143.319894.35 1144.0319910.24 1144.2719927.36 1143.68
19983.64    114320008.49 1142.5620010.74 1142.6720053.57 1143.23 20071.3 1143.21
20092.99  1143.320135.07 1144.4520150.98  1144.820176.07 1146.5320180.63  1146.7
20204.61  1146.9 20227.3 1152.0120256.68 1152.4420266.01 1152.3420304.78 1151.16
20322.65  1151.620365.32 1151.2220375.82 1151.4620413.44 1180.1320415.97  1182.1
20428.34  1182.420446.79 1177.2620459.16 1173.5220472.94  1172.1 20479.4 1172.19
20479.58  1171.420486.84 1171.4220513.93 1170.9320518.25 1171.0120540.35 1172.19
20564.84  1171.220569.69 1171.0420584.83 1169.6320630.89 1170.1720631.43 1170.24
20652.15  1175.220685.65 1175.41 20700.1 1175.4720709.49 1175.5920722.72  1178.9
20752.73  1178.220764.21 1178.0720778.08 1178.7520785.94 1178.8520793.11 1179.21
20804.58  1179.220827.54 1178.7920853.71 1178.9220865.07 1179.0420889.56 1178.68
20922.25  1178.920934.34 1178.8120976.72 1183.0321090.21  1182.421129.92 1182.45
21285.66  1182.521367.62 1182.3421496.27 1182.7521584.34 1183.0121687.67  1183.5
 21789.4  1183.621885.23 1184.3721939.98 1185.2921986.39 1185.8422072.68 1186.18
22118.62  1186.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17290.78     .0519502.56     .0320428.34     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19502.5620428.34              523     540     537              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17290.7819502.56 1184.0720428.3422118.62  1182.4

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.86

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain
             Freeway
Station Elevation Data    num=     168
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17367.19    117717370.88 1177.1717379.66 1177.2617380.26 1176.9317410.61 1176.94
17449.52    117817478.55 1178.3517533.86    117717544.45 1177.1617593.39 1178.33
17606.33  1178.4 17636.5 1178.8217673.07 1179.2317758.25 1179.92 17768.1 1180.24
17777.85  1180.217837.63 1179.0817882.72 1179.9217888.26 1179.7317897.27  1179.8
17911.38  1180.117934.46  1179.817943.61 1179.1517990.72 1177.0618017.23 1177.75
18051.11  1178.818067.92 1179.6118088.59 1179.6518095.98 1179.5818161.69  1180.2
18180.05  1180.518194.78 1179.8918230.18 1178.6618289.57 1179.5718309.08 1179.83
18360.12  1181.218376.67 1181.7818438.88 1182.22 18484.2 1182.2418509.57 1182.12
18540.25  1182.118562.71  1182.218573.58 1185.4318588.83  1187.518604.17 1186.96
18625.08    118918627.36 1189.2918645.25 1188.9618657.63 1190.9118678.64 1193.13
18684.66  1193.118705.26 1190.2418715.77  1189.518735.31 1182.8418762.16 1182.74
18777.17  1182.918795.48 1182.8818810.22    118318865.29 1183.2118887.58 1183.84
18890.48    118418921.18 1184.7618930.16 1184.8418951.29 1184.8918974.91 1184.67
18985.39  1183.819013.14 1183.3519050.86 1183.9819086.23  1184.319095.21 1184.73
19101.07  1185.319118.67 1185.3419141.05 1186.0119150.82 1185.8319166.16 1185.68
 19180.1  1187.619190.98 1190.0219212.52 1185.9519218.02 1184.4119228.49 1183.92
19243.85  1184.319248.72 1184.2219292.18  1182.819299.64 1182.8819338.09 1183.98
19354.54    117719371.78 1180.7419380.11 1179.9919383.68 1177.5819387.45 1182.24
 19409.6  1186.219420.76 1187.8519430.15 1188.1919440.89 1190.1519468.54 1189.78
19482.11  1186.819546.16 1175.2319697.12 1148.04 19722.4 1145.5819795.69 1144.41
 19806.6  1144.519856.27 1143.5619878.51 1143.2719932.14  1142.319968.62 1142.12
20004.61  1141.320047.17 1140.9620068.21 1142.2420091.45 1144.4620112.69 1145.42
20132.42  1145.920167.92 1144.8920193.16 1145.1820216.62 1148.8420220.22  1149.5
20251.22  1149.920277.92 1149.8920301.76 1149.7420352.98 1150.05 20366.1 1150.08
20389.64  1168.720403.14 1179.6120404.29 1179.8320418.22 1180.4520437.42 1175.94
20469.85  1168.920491.48 1168.9720538.34 1170.1320588.95 1171.0420612.23 1171.04
20640.07  1172.420670.81 1171.8220709.86 1172.1820727.45 1172.2120735.22 1173.24
20744.18  1173.820764.63 1174.0120815.04 1175.5720828.27 1176.0720877.21 1178.27
20885.03  1178.520920.53  1179.120950.61 1179.6921007.41 1179.9321032.37 1180.97
21039.44  1181.221062.37 1181.2321124.51 1181.4121172.99 1181.5821242.53 1181.61
21320.88  1181.421380.01 1181.4121435.05 1181.0521488.03 1181.0721551.13 1181.44
21624.86    118221682.95 1181.9921796.03 1182.0421847.81 1182.1821903.19 1182.18
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22039.48  1182.422068.95 1182.66 22088.9 1182.7122176.35 1183.9722266.59 1183.92
22275.54  1184.122289.11 1184.01   22348 1184.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17367.19     .0519482.11     .0320418.22     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19482.1120418.22               485   483.1     485             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17367.1919482.11  1186.820418.22   22348 1180.45
Blocked Obstructions     num=       5
   Sta L   Sta R    Elev   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 19475.6 19484.5  1196.8 19535.1   19544  1196.8   19585   19594  1196.3
 19645.1   19654  1196.3 19680.1 19688.9  1196.3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.77

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain
             Freeway
Station Elevation Data    num=     117
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17399.57  1174.917400.26 1174.8917435.65 1177.6217438.58 1177.7217464.97 1182.29
17490.82  1187.517507.23 1190.8317538.98 1189.7317572.47 1188.9417652.84 1190.38
17717.62  1190.817732.88 1190.9717756.25 1191.4117849.87 1193.2117925.57 1194.57
17935.49  1194.717956.61 1194.7618028.33 1194.7818146.61    119618167.92 1196.28
18265.88  1197.318328.16 1198.1418391.93 1198.7418436.63 1198.8718530.47 1198.16
18546.24  1198.318609.96 1197.3318614.79 1197.2318649.62  1197.218678.23 1195.97
18755.94  1190.618764.14  1189.918779.31 1189.4518847.58 1187.8718973.11 1186.56
19074.07  1186.519128.87 1186.3919173.38 1186.3719195.67 1186.5519256.18 1186.83
19310.08  1186.219366.29 1185.4419430.72 1185.1519460.08 1173.0119515.79 1149.29
19531.09  1158.7   19571 1181.8519574.43 1181.2219580.27 1180.4519585.57 1180.59
19611.28  1155.719616.75 1150.3619722.66 1146.1519842.35 1141.0719875.23  1140.6
19909.34    114019911.41 1140.1219923.54 1139.8219962.82 1139.1919985.84 1139.44
20010.64  1141.120066.56 1143.2420078.64  1143.320088.48  1143.820108.47 1149.01
20113.16    115020144.65 1149.79   20155  1149.820187.85 1150.0320221.92 1150.18
20279.82  1150.520317.65 1177.9820330.93 1178.47 20338.8  1176.220354.89 1171.14
20385.37  1171.220434.76    117120469.72 1170.9420485.35 1170.7420529.34 1170.05
   20538    117020550.96 1170.2720575.01 1170.6620584.76 1171.0420607.11 1171.41
20617.58  1171.420654.99 1169.24   20670 1170.2520700.03 1172.4120706.85 1173.02
20752.86  1173.220757.87 1172.9420768.86 1172.8620817.61 1172.8720869.09  1173.7
20877.24  1173.820911.96    117420941.92 1174.0220951.19 1174.1221012.53 1177.47
21038.57    118021090.31 1179.75 21114.2 1179.7621128.06 1179.67 21293.1 1179.26
21306.94  1179.321471.68 1179.7621748.77 1179.7321778.35  1179.721842.42 1179.92
21980.15  1180.922038.55  1181.122203.83 1181.7122238.25    118322249.58 1183.18
22288.32  1183.6 22295.7  1183.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17399.57     .05   19571     .0320330.93     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         1957120330.93               500     500     500             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17399.57   19571 1181.8520330.93 22295.7 1178.47
Blocked Obstructions     num=       5
   Sta L   Sta R    Elev   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 19620.6 19629.5  1181.3 19668.1   19667  1181.3   19716   19725  1181.3
 19741.1   19750  1181.3 19776.1 19784.9  1181.3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.67

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain
             Freeway
Station Elevation Data    num=     143
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Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17393.92	1174.217	397.09	1174.317	410.06	1174.1617	421.92	1173.74	17422.7	1174.02
17432.28	1174.717	474.71	1175.9217	490.58	1176.1817	543.03	1177.5117	545.63	1177.81
17545.69	1176.917	584.93	1177.6617	602.38	1177.9717	620.23	1177.717	703.92	1177.76
17729.11	1178.2	17762.6	1178.34	17826.6	1178.89	17885.7	1179.0817	969.34	1179.77
18026.5	1180.318	099.63	1180.5218	162.88	1180.5218	214.49	1181.0118	259.08	1181.29
18289.38	1181.118	339.18	1181.1318	385.53	1181.3218	410.31	1181.3718	440.81	1181.58
18472.92	118218	477.29	1183.6118	502.05	1191.3118	518.32	1191.6818	621.65	1190.88
18625.47	1190.918	754.67	1191.1718	765.45	1191.1318	771.58	1191.33	18783.9	1191.58
18793.14	118918	803.45	1186.6918	832.52	1184.9718	883.33	1184.6318	920.46	1183.6
18931.67	1183.218	944.35	1183.3418	964.16	1183.2118	984.37	1182.6618	996.56	1182.63
19027.2	1182.719	051.04	1182.9719	091.19	1182.4119	109.06	1182.6719	141.05	1182.57
19144.53	1182.519	149.05	1183.4119	186.37	1190.0919	193.74	1189.9719	217.02	1189.24
19230.49	1189.5	19247.4	1188.9819	282.55	1189.0319	295.49	1190.5919	303.51	1188.45
19325.2	1186.319	329.83	1186.14	19338.3	1188.6719	368.01	1189.0619	373.02	1189.19
19414.93	1187.319	452.26	1187.08	19454.3	1187.0119	461.55	1184.5119	496.26	1169.42
19512.14	1175.119	522.15	1177.1619	543.81	1176.8119	556.81	1176.3419	582.32	1158.41
19592.31	1151.219	664.56	1148.33	19675.2	1148.4319	734.04	1148.3819	799.85	1145.91
19955.27	1139.719	975.38	1138.6219	983.51	1138.2619	991.27	1138.41	20043.6	1139.54
20069.12	1148.120	070.93	1148.8420	074.45	1148.7820	121.96	1148.2920	138.27	1148.74
20150.06	1148.920	182.62	1149.5620	204.53	1149.920	230.48	1172.2220	242.25	1170.91
20251.62	1176.120	257.81	1176.7320	264.06	1177.8220	278.16	1172.2220	293.04	1166.2
20295.38	1166.320	345.27	1166.4320	411.91	1167.1820	425.61	116820	439.72	1168.97
20456.21	1169.120	480.02	1169.720	494.61	1170.3820	578.71	1172.7620	588.37	1173.02
20677.11	1174.820	709.86	1175.44	20740.1	1175.1420	762.37	1174.9620	829.95	1174.28
20889.57	1174.1	20927.7	1173.7820	957.98	1174.1221	027.95	1174.5921	045.88	1174.79
21052.26	1176.221	064.54	1178.2621	129.54	1177.7221	152.28	1177.6221	179.46	1177.64
21247.92	117821	376.63	1178.9921	411.97	1178.9921	452.36	1179.0521	620.08	1179.05
21722.16	1179.221	805.32	1178.8721	922.37	1179.4921	977.74	1179.7122	095.91	1179.54
22121.69	1179.722	231.49	1181.5222	249.15	1181.8				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17393.92	.05	19522.15	.03	20264.06	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19522.15	20264.06	500.21	500.21	500.21	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17393.92	19522.15	1177.16	20264.06	22249.15	1177.82

Blocked Obstructions num= 5

Sta L	Sta R	Elev	Sta L	Sta R	Elev	Sta L	Sta R	Elev
19753.1	19762	1180.3	19803.1	19812	1180.3	19843	19852	1180.3
19893.1	19902	1180.3	19948.1	19956.9	1180.3			

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 223.58

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain Freeway
Station Elevation Data num= 149

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17435.18	1174.217	453.68	1173.7317	463.54	1173.8317	467.25	1174.1717	508.23	1176.68
17517.29	1176.517	527.22	1176.9217	541.86	1176.7717	713.93	1177.3817	735.32	1177.08
17772.95	1177.617	832.38	1177.5817	851.84	1177.8217	940.15	1176.4817	947.86	1176.81
17956.22	1176.417	977.35	1176.3918	024.24	1175.2118	056.96	1175.1618	085.37	1175.94
18088.44	1176.318	106.99	1178.2518	120.64	1178.4818	127.34	1178.718	148.87	1177.81
18214.7	1175.918	233.87	1177.3918	239.56	1177.87	18240.9	1178.57	18259.9	1181.46
18271.36	1184.218	275.71	1184.15	18299.2	1182.818	329.27	1183.2618	340.62	1183.51
18349.34	1183.618	414.51	1183.6618	450.13	1183.5918	458.45	1183.7518	499.99	1183.82
18522.14	1184.118	564.33	1184.2518	584.51	1184.0418	598.11	1183.9718	611.54	1183.79
18635.76	1183.618	651.95	1183.3818	674.54	1183.518	699.29	1183.5318	708.13	1183.47
18776.04	**1183.8**	**18804.8**	**1190.06**	**18810.25**	**119018**	**820.23**	**1188.118**	**837.76**	**1183.48**
18849.24	**1181.318**	**867.43**	**1175.41**	**18875.28**	**1175.36**	**18923.3**	**1175.38**	**19009.81**	**1175.37**
19020.86	1175.419	041.04	1175.2119	124.57	1174.5419	168.28	1173.419	207.61	1172.49
19225.97	1172.619	265.32	1172.54	19288.2	1172.0819	302.41	1177.6919	329.79	1187.75
19384.27	1187.519	393.47	1187.47	19456.3	1187.219	479.09	1176.5119	488.35	1171.78
19492.22	117319	502.01	1176.9119	522.19	1174.819	523.67	1173.6219	553.21	1151.58
19560.44	1151.219	605.69	1150.2519	634.94	1149.9319	664.77	1150.3519	695.83	1151.16
19704.22	1148.419	718.29	1144.3419	731.09	1144.3119	758.64	1144.0519	830.68	1145.3

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19907.88  1146.519982.52  1147.520019.67 1146.8620049.19 1148.0720073.47 1147.22
20089.26    114820151.23 1151.0420183.52 1171.9520186.51    1174 20196.9 1176.02
20210.58  1170.620219.04 1166.4720238.67 1161.6620241.79 1160.4920242.59 1160.55
20248.49  1158.320277.49 1160.7120280.55 1161.0220299.09 1163.2920322.39 1166.47
20329.43  1166.720389.83 1167.1320390.91 1167.1220443.51 1169.29 20467.7 1166.62
20506.97  1167.120537.88  1168.920555.63 1169.9220577.37 1170.5120628.48 1171.22
20692.86    117220704.62 1172.2720767.29 1175.8720792.93 1176.2520819.27 1175.42
20846.13  1174.4 20873.5 1173.4820960.44 1174.0920991.54 1174.2521004.17 1174.65
21018.88  1174.9 21056.8 1176.1721071.73 1176.5821079.62 1176.8721089.15 1176.84
21216.99  1177.321439.52 1177.46 21606.1 1177.5221625.18 1177.6221746.06 1177.96
21798.19    117821823.85 1177.8421958.38 1177.8521969.01 1177.9422028.24 1178.06
22089.21  1180.822096.49  1180.922148.85 1181.6922151.43 1181.68

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17435.18     .0519502.01    .035 20196.9     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19502.01 20196.9              490   501.3     510             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17435.1819502.01 1176.91 20196.922151.43 1176.02
Blocked Obstructions     num=       5
   Sta L   Sta R    Elev   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 19806.1   19815  1178.9 19856.1   19865  1178.9   19893   19902  1178.9
 19943.1   19952  1178.9 19998.1 20006.9  1178.9

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.48

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain
             Freeway
Station Elevation Data    num=     141
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17468.86  1173.717485.33 1173.9417486.96 1173.8517507.81    1175 17516.7 1175.34
17525.57    117617551.45 1174.9217584.51 1175.3817592.65 1174.8517604.44 1174.52
17618.53    117417652.51 1172.9317687.42  1173.417698.97 1173.0617728.44 1173.41
17800.52  1175.117862.46 1176.2117911.24 1176.5917948.63 1176.3417982.99 1176.62
17997.88  1176.318008.97 1175.5118030.49 1180.15 18061.8 1180.1518172.19 1180.99
18175.23    118118258.52 1180.6918268.75 1180.6118273.73 1180.6918382.17 1180.84
18393.04  1180.818485.78 1180.9518503.24 1180.9518598.18  1180.618684.56 1181.47
18746.96  1181.918762.99 1181.2718788.87 1180.3518795.74 1179.9218797.68 1179.96
18820.89    118018832.43 1179.22 18858.5  1178.318864.04 1178.2318955.78 1177.58
18966.64  1177.519038.35 1176.7219132.86 1177.4919135.49 1177.4819205.03 1176.45
19253.95  1177.5 19271.4  1178.219284.61 1177.32 19304.1 1176.6319310.74 1176.56
19315.32  1176.719332.95 1176.9519353.73  1177.519405.75  1175.719424.88 1175.08
19452.58  1173.719456.54 1173.5819476.03 1174.3719480.82 1174.4919489.74 1170.66
19502.46  1168.419503.91 1168.0319506.02 1166.6819533.24 1148.55 19572.3 1148.69
 19598.3  1148.519621.24 1148.61 19656.3 1148.9119664.93  1146.119676.86 1142.58
19706.28  1142.319720.85 1141.99 19764.5 1142.8619776.65 1143.1319797.04 1136.21
19802.89  1135.719830.38 1137.3519993.78 1145.8420044.25 1146.7220093.25 1146.16
20100.36  1146.520151.25 1148.22 20179.7  1171.320189.71  1172.920199.48 1166.42
20211.56  1160.820223.63 1160.9720242.43  1162.920248.79 1163.7820261.76 1164.45
20302.27  1166.420307.51 1167.5420322.47 1167.7520348.96 1168.4420362.51 1169.22
20387.23  1169.9 20413.1 1170.5920486.02 1171.1720526.99 1171.5720572.38 1171.53
20639.45  1169.820676.82 1169.9120696.25 1170.5520713.38 1170.5420778.73 1171.55
20799.79  1171.1 20813.8 1170.9820850.58 1170.1220863.64 1170.5220883.97 1170.42
20933.04  1170.420952.93 1170.3220964.22 1169.94   20980 1172.8221002.71 1175.36
21048.56  1174.721066.64  1174.421092.34 1174.6421145.45 1175.7221207.02 1175.89
21264.12  1175.621293.11 1175.5721416.28 1175.1421437.16 1175.13 21556.1 1175.58
21702.94  1175.821838.59 1176.2621851.05  1176.321941.47 1176.7821974.26 1176.35
21988.51  1176.322017.24 1178.4122039.31 1180.1322064.99 1180.1422104.44 1180.35
22184.55  1180.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17468.86     .0519480.82    .03520189.71     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19480.8220189.71              450  527.75     610             .1       .3
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Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17468.8619480.82 1174.4920189.7122184.55  1172.9
Blocked Obstructions     num=       5
   Sta L   Sta R    Elev   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 19883.1   19892  1177.9 19933.1   19942  1177.9   19971   19980  1177.9
 20021.1   20030  1177.9 20074.1 20081.9  1177.9

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.38

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain
             Freeway
Station Elevation Data    num=     145
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17443.57  1172.717469.17 1172.6517472.12 1172.5717502.47 1174.0417503.12 1174.13
17515.36    117417539.87 1173.7617549.87 1174.21   17554 1173.9517618.72 1174.01
17667.28  1173.817678.01 1173.2317705.16 1173.1917792.34 1173.5117869.86 1174.29
17905.98  1174.217975.22 1174.8618026.22 1175.8118052.96 1176.2118094.37 1176.33
18140.28  1176.618174.98 1176.9118249.51 1177.3518290.05 1177.7418334.57 1177.42
 18384.6  1177.218451.79  1177.418489.18 1177.3618507.52 1177.5118595.28 1177.82
18630.29    117818686.48 1177.41 18736.6 1177.1618815.25 1178.4118821.78 1178.81
18828.68    117918833.71 1178.7218836.97 1177.0118853.49 1178.3618859.34 1177.94
18869.82  1177.518883.07  1176.518891.04 1176.3118959.53 1175.2318969.54 1175.34
19000.16  1175.819099.13 1175.7719110.15  1175.819328.17 1177.0319332.99 1176.96
19344.26  1176.5 19360.1  1176.719388.96  1177.2 19427.5  1176.719461.98 1175.08
19468.83  1173.219477.87 1172.2719507.02 1150.2219510.76 1147.5119528.88  1147.3
19562.92    114719579.13  1146.8   19604 1146.7919654.35 1147.1419661.36 1146.11
19677.61    114419708.18 1145.7119722.83 1146.31 19748.8 1145.4319774.66 1145.54
19779.91  1143.319802.56 1134.6219814.17 1135.7119818.14 1135.2419827.96  1138.8
19843.94  1137.419848.21 1137.4919890.58 1139.3219974.33 1139.9920062.58 1146.79
 20110.3  1146.420162.59 1149.07 20209.4 1149.6320217.02 1149.7620220.23  1152.3
20241.46  1170.220255.78 1171.1120267.63 1163.04 20279.2 1164.0820311.28 1167.96
20322.04  1168.320344.18 1170.7820351.65 1171.4420384.79 1171.7220387.03 1171.79
20428.23  1170.820433.41 1171.0220476.89 1173.2420488.72 1173.4520503.14 1172.86
20506.24  1172.5 20515.5  1172.420542.85 1171.2720581.77  1169.520602.73 1169.37
20638.01  1168.620666.54 1168.2520690.86 1167.7720705.46 1167.7620739.16 1167.35
20759.97  1167.320777.72 1167.2720800.77 1167.2320818.95 1166.9620824.36 1167.18
20843.58  1167.320867.25  1167.120909.37 1166.6720925.09 1166.4220948.23 1166.23
21016.51  1165.621034.09 1165.7421053.29 1166.0321132.01 1166.0221201.52 1165.54
21219.24  1164.721229.57 1164.5221301.52 1167.1221303.14  1167.2 21347.7 1172.31
21351.52  1172.221397.58 1170.2221426.37 1170.1321486.04  1169.921582.73 1169.82
21632.95  1169.821652.23  1169.921726.81 1169.6821746.38 1172.7821752.68  1172.8
21794.34  1174.621860.56 1175.4221905.08 1175.8421960.01 1176.05 21979.3 1176.61

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17443.57     .0519388.96    .03520255.78     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19388.9620255.78           480.81  480.81  480.81             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17443.5719388.96  1177.220255.78 21979.3    1175
Blocked Obstructions     num=       5
   Sta L   Sta R    Elev   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 19973.6 19780.5  1176.7 19826.1   19835  1176.7   19876   19885  1176.7
   19918   19927  1176.7 19963.1 19971.9  1176.7

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.29

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain
             Freeway
Station Elevation Data    num=     158
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17523.28  1171.517532.04 1171.7417570.98 1174.0317586.45 1174.5317601.92 1174.03
17621.04  1172.717657.59 1172.7317666.52 1172.3817718.53 1172.5317857.57 1171.59
17875.54  1171.617943.75 1170.8118052.73  1170.218093.27 1170.0318123.63 1170.38
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18177.13  1170.118196.72  1170.218226.42 1170.1218258.72 1169.6418261.75 1169.74
18310.58  1168.918320.26 1168.0418343.64 1168.3118370.64 1168.0918423.69 1168.55
18437.48  1168.818479.02 1169.3618503.96 1169.8118511.25 1169.8518550.64 1170.34
18589.58  1170.118614.87 1170.18 18676.6 1170.3618688.14 1170.2518752.22 1170.61
18789.11  1170.618874.93 1170.46 18925.8 1170.2818940.63 1170.3418949.12 1170.46
 18987.3  1172.318999.12 1172.6219016.09 1173.3919038.27 1166.4619052.06 1165.22
19076.24  1163.419080.55  1162.719095.35 1162.4319129.46 1163.1519147.44 1163.59
19179.41  1163.619261.31  1163.919273.46 1163.6919338.09 1163.6619350.24 1163.38
19395.52  1163.119425.94 1163.0219441.51 1161.2819447.31    116319477.37  1171.6
 19497.4  1172.419507.93 1164.1319528.09 1148.8319568.15 1148.2819591.39 1147.99
19667.15    114819672.73 1148.0719706.82 1140.7319728.93 1140.6419735.54  1140.7
19744.68    114119777.17 1142.3519803.56 1144.9619821.96 1146.92 19849.3 1142.92
19865.29  1139.919870.05 1140.2119880.78 1140.0319896.74    114019911.18 1141.29
19931.76  1143.519933.34 1143.3619972.81 1142.4920118.81 1146.8820172.68 1148.59
20209.36  1148.920241.49 1148.4920271.36 1148.2220284.31 1148.7420307.48 1149.86
20320.29  1157.820341.89 1171.53 20351.2  1172.520353.34 1172.3220379.75 1171.36
20382.89  1171.520409.35  1171.820416.05 1172.5520423.83 1172.4320442.01 1170.46
20460.02  1170.520478.55 1170.27 20520.6 1169.6220548.31 1169.62 20549.7 1169.09
20562.52  1170.920582.01 1171.8820585.81 1171.3420601.09 1171.83   20631 1168.25
20637.44  1168.120669.02 1166.6620684.23 1166.2420725.61 1165.7420759.01 1165.69
20789.16  1165.820808.47 1165.8220844.88  1166.620872.96  1166.520965.66 1166.78
 21027.3  1166.721076.07 1166.5321110.08 1166.0321152.18 1166.08 21209.5 1166.28
21239.51  1166.321296.16 1166.6121300.44 1166.3621319.68 1166.2421367.52 1166.53
21398.73  1167.721420.45 1168.2821437.21 1170.5321446.59 1171.9121469.74 1170.65
21504.06  1168.421516.67 1169.8221549.22 1169.7221605.44 1170.0321625.62 1170.33
21665.96  1170.721685.93 1170.8621724.02 1170.9221739.49 1171.2321772.55 1171.24
21787.21  1171.5 21818.2 1171.3921856.22 1171.5621897.66 1171.7221913.09 1171.75
21918.05  1172.121942.88 1173.6521952.02 1174.8121992.43  1173.822007.99 1177.62
22011.51  1179.122013.78 1179.1422096.38 1178.31

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17523.28     .05 19497.4    .035 20351.2     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19497.4 20351.2           521.09  521.09  521.09             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17523.28 19497.4  1172.4 20351.222096.38  1172.5
Blocked Obstructions     num=       5
   Sta L   Sta R    Elev   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 19964.6 19973.5  1181.5 20013.1   20022  1181.5   20063   20072  1181.5
   20098   20107  1181.5 20148.1 20156.9  1181.5

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.19

INPUT
Description: Blocked obstructions coded in to model peirs for Red Mountain
             Freeway
Station Elevation Data    num=     158
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17650.34  1171.217678.35  1171.917691.98 1172.3417707.45 1171.8417713.66 1171.91
17790.76  1172.317838.48 1172.3317873.53 1172.4217925.49 1172.4117971.31  1172.5
18059.48  1172.218075.56 1173.5118080.64 1173.5118128.67 1172.9618134.91 1172.98
18215.85  1172.818294.94  1173.118303.18 1173.2618329.44 1173.8818353.75  1173.8
18377.46  1173.3 18405.2 1173.7118414.83 1173.7618420.25 1174.0118431.51 1174.02
18444.78  1171.318452.13  1170.318503.94 1168.4918522.49  1168.218575.75  1168.4
18632.59  1168.718694.01 1168.9518713.69 1168.9918726.85 1169.1118760.16  1169.3
18793.28  1169.718846.02 1170.0418894.04 1170.4418923.36 1170.5718954.76 1169.74
18960.47  1169.719015.35 1169.6519018.92 1169.61   19029 1171.4519065.48 1171.05
 19073.4  1171.2 19085.4 1170.6119121.97 1169.11 19140.2 1169.3619145.86 1169.34
19178.28  1167.5 19203.7 1163.5819232.02 1163.5719250.52 1163.1119298.61 1163.46
19308.15  1163.619316.43 1165.81 19339.2 1172.2719354.78 1173.0719384.55 1152.36
19388.62  1149.219396.89 1148.97 19486.2 1147.1919607.18 1146.0419616.58 1145.93
19631.39  1146.219667.04 1146.5719678.55 1145.2119705.63 1142.39 19751.3 1141.32
19773.84    114119795.59 1141.3419903.14 1143.2220007.95 1143.8420019.39 1144.06
20029.14    114420094.38 1144.0920097.06 1144.0720256.51 1148.9920296.71  1150.3
20338.31  1150.320347.97 1150.5120383.86 1151.0120406.21 1163.3920422.16 1173.86
20430.26    117320438.71  1172.320443.62 1174.5620464.89 1180.3520488.39 1183.69
20496.39  1180.4 20506.6 1178.7520518.46  1176.720528.16 1172.7720541.08 1167.65
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20562.49  1167.220563.76 1167.1920598.64 1166.74 20616.4 1167.17 20627.7 1166.81
20642.95  1166.520684.77 1165.6320697.36 1165.3120698.87 1165.27 20715.6 1166.26
20721.19  1166.720727.36 1165.7420745.23 1163.4520757.39 1164.5620768.47  1164.6
20777.52  1164.920788.42 1167.8420798.49 1171.3120812.18 1171.0820825.51 1171.23
20831.24  1171.520854.43  1171.420895.41 1171.5720911.32 1171.5720964.26 1171.38
21040.47  1171.321055.81 1171.2521087.67 1169.9721124.64 1169.6721133.61 1168.66
21152.32  1165.821213.88 1167.5721261.65 1167.3621281.84  1167.621345.28 1167.51
21367.09  1167.621416.35 1168.4621430.18 1168.4821465.15 1168.89   21486 1169.67
21504.91  1170.121550.81 1171.4921599.49  1171.521634.24 1171.4721644.23  1170.1
21654.66  1173.121661.33  1175.121703.61 1173.9321722.08 1172.8921758.01 1173.14
21774.57    117321822.57 1173.4421855.85 1173.5221902.62 1174.0121936.99    1174
21965.18  1174.222013.15 1174.3522076.41 1174.7822111.19 1175.0522215.69 1175.25
22285.39  1175.422321.58 1175.63 22379.5 1176.01

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17650.34     .0519354.78    .03520443.62     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19354.7820443.62              620  514.62     430              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17650.3419354.78 1173.0720443.62 22379.5 1174.56
Blocked Obstructions     num=       5
   Sta L   Sta R    Elev   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 20060.6 20069.5  1190.5 20113.1   20122  1190.5   20163   20172  1190.5
   20198   20207  1190.5 20248.1 20256.9  1190.5

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.09

INPUT
Description: Upstream face of McClintock bridge



Station Elevation Data    num=      40
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18410  1166.318957.34  1171.819060.89    117219241.27  1180.719241.37    1172
19241.46    117219348.67  1161.519354.58  1161.519408.63  1149.519465.04    1148
19470.96    114819527.96  1165.719581.41  1155.119587.33  1155.119651.04  1146.3
19697.78  1151.5 19703.7  1151.5 19767.7  1151.919814.15    115219820.07    1152
19929.73    115219936.44    115220000.94    115220046.89    115220052.81    1152
20111.49    115220163.27  1153.120169.18  1153.120226.78  1156.420279.64  1156.2
20285.56  1156.220306.86  1156.420363.17  1164.120394.43  1169.320394.53 1173.82
20394.63  1180.720648.67    117420914.95  1166.421053.02  1168.421565.84  1170.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18410     .0519241.37    .03520394.53     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19241.3720394.53           139.09  139.09  139.09              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1841019241.37    117220394.5321565.84 1173.82

BRIDGE                 RIVER: Salt River
REACH: Reach 4            RS: 223.085

INPUT
Description: McClintock Drive
Distance from Upstream XS =    27.8
Deck/Roadway Width        =    83.5
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      21
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18410  1166.3  1166.318957.34  1171.8  1171.819060.89    1172    1172
19060.89    1172    117219241.27  1180.7  1180.719241.27  1180.7    1172
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19348.67 1183.05 1176.1519465.04 1184.79 1177.8919581.41 1186.16 1179.26
19697.78 1186.96 1180.0619814.15  1187.1  1180.219930.52 1187.03 1180.13
20046.89 1186.15 1179.2520163.27 1184.84 1177.9420279.64 1182.98 1176.08
20394.43  1180.7 1173.8220394.63  1180.7  1180.720648.67    1174    1174
20914.95  1166.4  1166.421053.02  1168.4  1168.421565.84  1170.2  1170.2

Upstream Bridge Cross Section Data
Station Elevation Data    num=      40
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18410  1166.318957.34  1171.819060.89    117219241.27  1180.719241.37    1172
19241.46    117219348.67  1161.519354.58  1161.519408.63  1149.519465.04    1148
19470.96    114819527.96  1165.719581.41  1155.119587.33  1155.119651.04  1146.3
19697.78  1151.5 19703.7  1151.5 19767.7  1151.919814.15    115219820.07    1152
19929.73    115219936.44    115220000.94    115220046.89    115220052.81    1152
20111.49    115220163.27  1153.120169.18  1153.120226.78  1156.420279.64  1156.2
20285.56  1156.220306.86  1156.420363.17  1164.120394.43  1169.320394.53 1173.82
20394.63  1180.720648.67    117420914.95  1166.421053.02  1168.421565.84  1170.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18410     .0519241.37    .03520394.53     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19241.3720394.53             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1841019241.37    117220394.5321565.84 1173.82

Downstream  Deck/Roadway Coordinates
    num=      21
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18410  1166.3  1166.318957.34  1171.8  1171.819060.89    1172    1172
19060.89    1172    117219241.27  1180.7  1180.719241.27  1180.7    1172
19348.67 1183.05 1176.1519465.04 1184.79 1177.8919581.41 1186.16 1179.26
19697.78 1186.96 1180.0619814.15  1187.1  1180.219930.52 1187.03 1180.13
20046.89 1186.15 1179.2520163.27 1184.84 1177.9420279.64 1182.98 1176.08
20394.43  1180.7 1173.8220394.63  1180.7  1180.720648.67    1174    1174
20914.95  1166.4  1166.421053.02  1168.4  1168.421565.84  1170.2  1170.2

Downstream Bridge Cross Section Data
Station Elevation Data    num=      40
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18410  1166.318957.34  1171.819060.89    117219241.27  1180.719241.37    1172
19241.46    117219348.67  1161.519354.58  1161.519408.63  1149.519465.04    1148
19470.96    114819527.96  1165.719581.41  1155.119587.33  1155.119651.04  1146.3
19697.78  1151.5 19703.7  1151.5 19767.7  1151.919814.15    115219820.07    1152
19929.73    115219936.44    115220000.94    115220046.89    115220052.81    1152
20111.49    115220163.27  1153.120169.18  1153.120226.78  1156.420279.64  1156.2
20285.56  1156.220306.86  1156.420363.17  1164.120394.43  1169.320394.53 1173.82
20394.63  1180.720648.67    117420914.95  1166.421053.02  1168.421565.84  1170.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18410     .0519241.37    .03520394.53     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19241.3720394.53             .1       .3
Ineffective Flow     num=       1
   Sta L   Sta R    Elev
   1841019241.37    1180

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  9
```

```
Pier Data
Pier Station     Upstream=19351.63    Downstream=19351.63
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1161     5.9    1177
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1161     5.9    1177

Pier Data
Pier Station     Upstream=   19468    Downstream=   19468
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1148     5.9    1178
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1148     5.9    1178

Pier Data
Pier Station     Upstream=19584.37    Downstream=19584.37
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1155     5.9    1180
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1155     5.9    1180

Pier Data
Pier Station     Upstream=19700.74    Downstream=19700.74
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1151     5.9    1181
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1151     5.9    1181

Pier Data
Pier Station     Upstream=19817.11    Downstream=19817.11
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1152     5.9    1181
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1152     5.9    1181

Pier Data
Pier Station     Upstream=19933.48    Downstream=19933.48
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1152     5.9    1181
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1152     5.9    1181

Pier Data
Pier Station     Upstream=20049.85    Downstream=20049.85
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1152     5.9    1180
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1152     5.9    1180

Pier Data
Pier Station     Upstream=20166.23    Downstream=20166.23
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1153     5.9    1178
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1153     5.9    1178
```

```
Pier Data
Pier Station     Upstream= 20282.6    Downstream= 20282.6
Upstream     num=       2
    Width   Elev    Width   Elev
     5.9    1156     5.9    1177
Downstream     num=       2
    Width   Elev    Width   Elev
     5.9    1156     5.9    1177

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.08

INPUT
Description: Downstream face of McClintock bridge



Station Elevation Data    num=      40
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18410  1166.318957.34  1171.819060.89    117219241.27  1180.719241.37    1172
19241.46    117219348.67  1161.519354.58  1161.519408.63  1149.519465.04    1148
19470.96    114819527.96  1165.719581.41  1155.119587.33  1155.119651.04  1146.3
19697.78  1151.5 19703.7  1151.5 19767.7  1151.919814.15    115219820.07    1152
19929.73    115219936.44    115220000.94    115220046.89    115220052.81    1152
20111.49    115220163.27  1153.120169.18  1153.120226.78  1156.420279.64  1156.2
20285.56  1156.220306.86  1156.420363.17  1164.120394.43  1169.320394.53 1173.82
20394.63  1180.720648.67    117420914.95  1166.421053.02  1168.421565.84  1170.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18410     .0519241.37    .03520394.53     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19241.3720394.53              170  268.54     370             .1       .3
Ineffective Flow     num=       1
   Sta L   Sta R    Elev
   1841019241.37    1180

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 223.02

INPUT
Description:
Station Elevation Data    num=     168
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17971.69  1171.417974.78 1171.5318010.57 1170.2418044.22 1168.518064.14 1167.67
18117.68  1167.718156.47 1167.7518175.38 1167.3618188.46 1167.8918215.48 1168.55
18228.44  1168.718240.95 1168.7918256.37 1169.1118274.54 1168.7418301.38 1169.89
18315.99  1171.718333.85 1173.0118341.31 1172.3318347.67 1171.5418366.61 1169.89
18371.85  1169.218375.45 1168.5618412.76 1169.8818439.92 1170.3518447.07 1169.88
18465.53  1168.518484.53 1166.94   18497 1167.8118511.43 1167.2818522.44 1167.45
18523.02  1167.318528.81  1168.418559.96 1167.4818569.11 1167.3418590.71 1166.71
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18612.75  1165.918633.07 1163.4618644.79 1162.9218665.56 1162.6818699.39 1162.56
18713.58  1162.918754.75 1162.9518762.54 1163.3718767.23 1162.9618771.67 1163.35
18781.15  1163.618823.15 1163.7518836.52 1163.8718854.62 1163.7818858.39 1164.47
18889.29    116518899.81  1166.4 18906.1 1167.4218924.93  1163.418926.38 1162.97
18967.55    116319008.72  1162.919114.49 1162.91 19116.9 1163.3319120.76  1163.4
19129.15  1163.219165.22 1162.4419183.62 1162.4219185.96 1162.58 19204.6 1163.18
19228.85  1165.119254.14 1167.3819267.45 1166.7819280.62 1166.2719289.14  1167.6
19307.19  1170.919329.31 1172.9719341.36 1168.3519389.13 1149.67 19412.4 1148.34
19418.76  1148.119445.72 1147.9619454.69 1147.6719514.54  1147.119556.29 1146.76
19592.78  1146.8 19612.2 1146.3619666.81 1145.3819701.26 1145.06 19723.7  1144.6
19765.05  1143.819775.01 1143.1619791.43 1142.6419821.12 1140.0619834.25  1140.2
19839.35    114019849.98 1140.1519925.51 1141.5719940.87 1140.8719972.41 1141.21
19982.15  1141.2 20026.2 1141.7520050.74 1142.1520062.44 1142.2920115.32  1142.8
20138.82  1142.720209.03 1143.1320260.66 1144.1620276.37 1145.8420306.63  1146.7
20313.92  1147.420324.74 1147.3620401.47 1157.9220438.92  1162.6 20513.5 1172.12
 20538.9  1176.620545.23 1177.3220556.91  1177.520567.11 1177.5120588.99 1179.51
20606.17    117920612.09 1179.0920623.35 1181.2420638.78 1185.3320642.52 1186.06
20655.98  1186.6 20662.2 1186.5520689.46 1180.9820704.25 1178.1320714.55 1174.88
20730.77  1169.620741.14  1167.720748.35 1165.2520751.64 1163.7120761.41 1165.54
20766.25  1165.620816.03 1166.2420831.05 1166.3320909.51 1166.1820963.96 1166.38
21009.27  1166.721081.39 1167.3121099.05 1167.4221158.92 1167.5821181.89 1167.61
21196.89  1167.721236.98  1167.921249.56  1168.121284.25 1167.8221288.35 1167.89
21321.62  1168.121331.66 1168.0521361.53 1168.3521377.75 1168.3721399.11  1168.2
21407.41  1168.121438.42  1168.421470.92    116921541.91 1168.7721656.73 1168.69
 21674.4  1168.921749.08 1169.8621815.71 1170.0621880.09  1170.221923.59 1170.87
21933.59  1170.8 21941.3 1171.3621971.17 1171.9521984.85    117222018.46 1174.38
22045.18  1174.922071.91 1174.3522094.13 1172.35

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17971.69     .0519329.31    .035 20513.5     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19329.31 20513.5              500  494.97     480             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17971.6919329.31 1172.97 20513.522094.13 1172.12

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.93

INPUT
Description:
Station Elevation Data    num=     194
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18044.81  1170.318059.54 1170.0818082.34 1171.8418085.02 1170.8318112.24 1167.63
 18113.9  1167.218124.59 1162.9118127.16 1162.2918130.08 1161.9918135.27 1162.21
18172.95  1160.6 18181.4 1160.5618188.17 1159.9618203.15 1159.3518206.38 1159.06
18221.12    115918234.64 1158.8618250.81 1158.8418258.55 1159.0118270.09 1159.07
18289.38  1159.718302.61 1159.9218311.85 1159.4218323.82 1159.5818333.46 1158.91
18349.35  1158.118374.85  1152.518386.38 1150.7918392.15 1149.5618410.64 1144.97
18415.62  1144.618434.07 1143.9718463.53 1143.6218486.43  1143.118515.51 1142.98
18525.12  1142.318542.97 1142.2318577.36 1141.4918587.91 1141.5518619.96 1142.75
18644.69    114418653.36 1144.1818666.31 1144.9518693.59 1147.2118698.21 1147.82
18709.45  1149.918719.21 1152.2418725.67 1153.1318738.09 1155.0218743.38    1156
18748.91  1158.118756.46 1158.08   18770 1157.0118787.62 1156.8718791.91 1157.25
18813.17  1156.318841.62 1154.6618858.76    115618881.49 1158.0218897.61 1159.83
18907.73  1161.618909.57 1161.2218921.66 1160.5318925.78 1160.0818936.53 1160.16
18944.94    115818951.65 1157.8418969.72  1157.218987.28 1156.4418997.79 1156.43
19026.88  1157.9 19036.5 1157.8919047.12 1157.6619058.92 1157.59 19099.8 1158.02
19108.79  1158.619147.63 1165.0719162.91 1165.1119177.51 1164.6919182.74 1164.85
19226.65  1158.519240.77 1157.4719252.37 1157.0819268.47 1157.3119289.85 1157.28
19305.64  1155.8 19315.5  1154.619327.75 1157.3819348.09  1162.919351.76 1161.42
19354.63  1160.619361.43  1165.5 19371.1 1172.1119387.15 1171.4719415.35 1159.17
 19419.6    1157 19427.4 1156.4619448.81 1147.0519451.67 1145.84 19453.7 1145.59
19465.43  1145.919470.76 1143.8519475.04 1143.46 19484.7 1142.08 19505.7 1138.91
19533.01  1138.519591.33  1137.719639.73 1142.1419644.95 1142.5719647.95 1142.49
19700.44  1142.119806.44 1140.1719818.97    114019871.09 1139.54 19936.2 1140.13
19958.66  1140.120036.35 1140.820049.41 1140.8420133.62 1142.2120146.15 1142.34
20182.57  1142.620225.98 1142.6220260.54 1143.9720280.58 1149.6220311.81 1158.03
20316.46  1157.720329.75 1157.0520377.76 1169.8820403.92  1170.720412.11 1171.64
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20443.67  1176.420455.16 1176.3320541.87 1191.4220595.84 1199.6520620.14  1198.6
20626.95  1198.220640.27 1196.88 20653.4 1196.4920663.01 1196.6920672.83 1196.69
20685.41  1194.6 20691.5 1193.8720704.53 1189.7320740.62 1178.1220759.66 1171.95
20775.41    116720783.88 1166.34 20787.5 1166.1120791.24 1165.3720793.55 1164.63
20801.17  1163.120802.77 1165.4120807.08 1165.4420811.98 1165.1720812.34 1166.76
20813.33  1165.3   20817 1166.6720827.62 1166.5620840.67 1164.81 20874.4 1164.69
20892.67  1165.120934.23  1165.220939.07 1165.2520976.51 1169.7320985.15 1166.37
21017.72  1166.921088.07 1167.9721131.31 1168.5821159.63 1168.5621210.47 1169.22
21255.35  1169.821264.52 1169.9421268.88 1170.0121318.21  1172.221357.38 1170.99
21473.22  1172.221515.36 1172.5121548.08 1172.9221704.73 1174.1421756.14  1174.3
21889.34    117521937.15 1175.2622053.19 1175.7622078.57 1175.5222104.77 1176.51
22117.89  1176.922127.78 1177.06 22139.5 1176.87 22174.8 1177.13 22183.4 1176.84
22201.98  1177.122206.83 1177.2822210.88 1176.4922214.67  1176.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18044.81     .05 19371.1    .03520412.11     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19371.120412.11               470  502.27     520              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18044.81 19371.1 1172.1120412.1122214.67 1171.64

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.83

INPUT
Description:
Station Elevation Data    num=     207
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17961.21  1167.417965.29 1167.5217987.09 1167.5818016.31 1168.3518040.57 1169.48
18053.27  1169.818089.71 1170.3918126.28    117018156.09 1168.5418167.04 1167.63
18184.34  1171.618186.48 1172.0518190.33 1167.59 18199.7 1166.1718221.05 1165.01
18241.73  1162.918253.01 1160.7218263.42 1158.0918272.82  1155.918277.84    1154
18292.96  1152.518294.53 1150.19 18295.7 1149.9418308.08 1149.9318322.22 1151.36
18337.36  1152.518345.61 1155.0118380.53 1155.0118393.59  1155.718410.52 1155.78
18435.11  1158.118479.88 1158.07 18495.4 1160.3918515.38 1160.6518532.28 1159.17
18538.83  1159.118555.97 1159.18 18562.6 1159.5718579.85 1162.8318588.81 1162.83
18605.21    116118618.77 1158.0618626.76 1155.6518628.35 1154.9918639.46 1153.77
18647.65  1152.5 18657.1  1152.1 18666.6  1152.518686.41  1152.518700.37 1154.08
18709.28    115518722.91 1155.6618741.07 1156.1418775.85 1156.87   18780 1156.86
18789.49  1157.318814.28 1158.0518831.01 1162.1518842.81 1162.92 18853.6 1162.92
18905.71  1169.218910.16 1169.1418924.78 1170.0618934.46 1170.1618936.54 1169.63
18959.52  1162.918971.38 1162.5918975.93 1162.3219001.94  1161.219037.07 1161.69
19059.59  1161.719094.58 1162.2819115.59  1162.919122.44 1165.6419126.84 1167.22
19129.27  1165.619134.29  1162.919144.01  1158.719145.23 1157.9319202.96 1157.93
19225.71  1158.719235.33  1158.8   19252 1158.4719266.38 1157.9219299.83 1155.09
19334.93  1153.919365.14 1154.0719380.63 1156.5519394.72 1157.15 19409.5 1157.99
19412.49  1158.119414.28 1157.4219419.84  1158.419427.45 1161.3619450.79 1169.94
19465.83  1170.1 19478.7 1163.4519491.02 1156.9119505.27 1156.44 19516.1 1150.04
19549.08  1128.419573.13 1128.3919583.62 1127.9219586.27 1128.4119598.27 1129.07
19619.16  1130.419643.43 1135.8819649.42 1137.5419659.21 1137.7219711.71  1140.3
19717.47    1141 19755.3 1140.5619854.38 1140.2719898.28 1140.0219981.21 1139.71
19989.54  1139.620009.71 1139.6720095.91 1139.63 20129.9 1139.5220175.64 1139.06
20247.52  1138.420271.76 1138.2520345.97 1140.3120363.76 1146.0720370.31 1148.11
20401.04  1156.520419.29 1156.5320461.53  1167.820466.01 1169.0420477.75 1170.03
20509.81  1177.320549.27 1185.1820554.87 1186.39 20557.9  1186.3   20575 1186.24
20609.25    118720613.63 1186.9320631.69 1187.73 20662.3 1189.6620676.58 1188.95
20684.69  1188.520698.98 1188.4420708.31 1188.5520744.71 1187.7720760.91 1187.78
20790.04  1189.220803.44 1185.5920833.92 1177.4820865.39 1167.1620866.62 1167.15
20901.79  1165.720913.97 1164.6220923.87 1164.4420936.75 1166.8420944.23 1166.96
21041.84  1172.6 21060.9 1172.0421077.54 1171.9521146.04 1170.4821231.63 1170.86
21288.53    117221290.92 1171.5621309.06 1171.5421320.45 1172.4521339.54 1171.72
 21345.9  1169.721363.31 1166.5821373.76 1166.4421399.93 1166.6721408.61 1169.34
21416.67    1172 21433.8 1172.0121461.03 1171.9121465.67 1172.0221467.08 1171.64
21505.24  1164.421510.85 1164.3621522.52 1165.7121538.01 1165.2621590.57 1165.64
21602.98  1163.221619.14 1159,1921627.31 1158.4321649.11  1159.421673.25 1158.82
21704.37    115821712.13 1157.8721751.87 1158.57 21787.6 1165.4121817.59 1163.77
21841.71  1163.521855.88 1163.74 21924.9 1164.4721939.97 1164.4121947.94 1164.52
22001.19  1163.922058.68 1165.7922101.69 1171.9122109.78 1173.1822111.55 1173.13
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22121.15    117422125.94 1172.6722132.03 1171.3122144.69 1171.9522165.48 1171.51
22179.43  1171.222216.33 1170.96

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17961.21     .0519465.83    .03520477.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19465.8320477.75           497.11  497.11  497.11             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17961.2119465.83  1170.120477.7522216.33 1170.03

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.74

INPUT
Description:
Station Elevation Data    num=     161
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17982.09  1170.817992.53 1169.9617996.32 1169.8618032.69 1167.4518053.23 1168.73
18067.98  1172.7 18074.2 1171.33 18096.5 1177.1318098.56 1176.8218122.76 1171.53
18132.05    117018158.62  1168.518174.89 1167.3818208.93  1167.218216.61 1167.33
18232.17  1167.418267.41 1167.7518317.51 1168.8618334.53 1169.2118358.54 1170.24
18373.22  1168.218411.05 1162.7418436.87 1163.4118463.27 1164.0218480.46 1167.03
18508.28  1172.718515.09 1173.8818533.45 1172.14 18583.6 1166.2918588.28 1165.63
18605.22  1165.118653.94 1163.22 18673.1 1167.1918710.22 1173.45 18720.1 1174.09
18730.18  1170.318745.53 1167.3318755.93 1167.6618773.24 1166.6818779.21 1166.25
18799.28  1166.818826.98 1173.5218847.47 1178.5118872.64 1172.5318901.41 1166.37
18909.22  1166.818942.54 1167.8218959.71 1167.7718964.66 1169.7318972.24 1170.59
18980.05  1169.618988.04 1168.9319017.16 1173.3919090.23 1158.9919099.73 1158.44
19164.68    115619180.85 1155.0919200.88 1154.0519220.13  1153.119233.74 1153.84
19241.42  1153.8 19245.8 1154.3219257.91 1151.9919276.54 1155.7819292.29 1156.72
19301.43  1157.819319.12 1160.7419322.64 1161.5719341.09 1154.4719364.63 1145.65
19395.57  1144.519411.84 1144.8219474.07 1165.07 19487.8 1169.3919506.54 1171.93
19522.71  1165.919549.67 1155.6219563.25 1156.0219596.55 1136.4419598.23 1135.69
19629.09  1135.119639.29 1134.16 19653.9 1137.4219659.49  1138.119700.97 1138.67
19764.93  1139.319836.78 1140.5119894.72 1141.7119925.21 1140.4420018.05 1140.13
20037.37  1140.420062.45 1140.51 20167.3 1140.7420257.17 1140.8420313.38 1140.87
20371.73    114120391.45 1140.8620450.23 1139.7720455.53 1139.7120466.88 1141.52
20477.89  1143.520491.97    1145 20500.5 1149.8220505.97 1152.6120520.94 1152.55
20531.04  1156.820535.25 1156.83 20546.8 1156.5420591.55 1168.4720603.24 1168.78
20618.71    116920672.42 1173.0820694.37 1174.0620708.79 1175.5620722.38 1177.07
20727.88  1177.6 20764.4 1181.2920774.47  1182.520786.38 1183.7720818.82 1183.97
20847.26    1184 20877.3  1183.220881.97  1183.220885.59  1182.520892.04 1183.45
20900.03  1180.520903.33 1177.6720951.64 1161.29 20972.4 1162.0121006.74 1157.56
21022.81  1157.321045.77 1157.2221073.73 1157.6321119.61 1157.9821142.99 1158.06
21210.54  1157.421242.07 1156.91 21264.3 1156.46 21271.2 1156.4621311.68 1156.11
21335.69    115621344.52  1156.321396.55 1156.8421419.85 1157.2921471.72 1157.82
21481.43  1157.921517.63 1158.2921527.65 1158.3221541.52 1159.0321547.73 1159.45
21551.84  1160.621587.19  1170.8 21595.8 1169.7621601.57 1169.38   21616 1166.14
21620.18  1164.621633.88 1165.5621667.59 1167.3121681.23 1168.8721731.75 1169.61
21738.87  1169.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17982.09     .0519506.54    .03520603.24     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19506.5420603.24           482.71  482.71  482.71             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17982.0919506.54 1171.9320603.2421738.87 1168.78

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.65

INPUT
Description:
Station Elevation Data    num=     155
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
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17404.99  1171.717455.15 1171.3517594.58 1170.5917610.45 1172.77 17630.6 1178.06
17638.11  1176.917712.52 1163.4717721.07 1165.1217728.33 1166.2817752.53 1167.31
 17771.9  1166.817779.32 1167.5117803.99 1167.6917814.02 1166.8217816.45 1166.34
17824.79  1165.317834.91 1163.46 17861.4 1159.3417873.47 1161.2517930.08 1172.25
17936.15  1171.717941.52 1171.7617965.96 1171.2117984.66 1169.6718000.74 1167.89
18014.08  1167.418065.91 1162.0518071.71 1161.3418101.15 1164.6318108.42 1165.55
18123.61  1167.118134.43 1167.5518155.83 1167.7318233.81 1168.2118246.71 1168.88
18272.02  1170.118285.58 1171.0618324.19 1172.13 18330.8 1170.4418373.38 1166.99
   18419  1167.618428.86 1167.6618485.85 1168.3118500.56 1170.0618513.19 1168.65
18535.63  1165.5   18556 1163.11 18580.9 1163.7418595.32 1164.0318603.14  1165.8
18637.29  1174.118661.17 1167.1818678.19 1161.9318682.19 1162.0518707.41 1163.23
18713.37    116418740.98  1166.618748.05 1165.9218762.86 1163.9518780.67  1162.7
18809.79    116518837.54 1169.2718852.87 1169.7718873.86 1171.3618881.29 1170.69
18926.37  1163.818934.97 1163.7618985.26 1163.6818991.65 1164.4619036.98 1171.26
 19041.3  1171.619060.89 1169.1519075.83 1164.3519108.82 1163.1719143.06 1161.62
19162.71  1156.519197.45 1154.5819213.69 1153.4519241.35 1154.5819286.86  1154.2
19320.75  1152.919351.72 1153.0919400.99 1151.7119440.57 1151.6619449.53 1151.38
19485.79  1163.119496.37 1164.3219518.27 1171.0419534.96 1170.8919551.91 1165.46
19581.29  1155.319594.59 1155.4519603.69 1151.0119624.13 1141.58 19658.7 1141.45
19665.28  1141.519673.04 1144.5419673.96  1144.219688.76 1140.1819698.97 1141.24
   19764  1142.5 19808.2 1143.3519938.09 1141.3219942.81 1141.1920064.62 1140.14
20179.57  1141.220212.29 1141.2520266.54 1142.48 20341.2 1144.3220378.62 1143.45
20399.95  1142.720414.25 1142.3220445.28 1142.0920453.86 1141.6220485.29 1141.76
20511.56  1141.620521.79 1141.3820543.11 1143.7320548.38 1143.6220567.92 1143.82
20575.16  1143.720588.35 1143.3920613.27 1143.25 20632.9    1143 20668.5 1143.04
20713.81  1142.220780.36 1141.7520805.06  1141.320883.73 1139.3520935.22 1138.75
21003.81  1160.421126.11 1163.6821192.48 1143.6321221.17  1143.721231.48 1143.84
 21245.6  1144.3 21256.9 1148.8221270.39 1155.4821279.83 1154.4621291.04 1153.78
21301.04  1162.8 21310.2 1169.1321321.95 1168.4821323.69 1168.0421347.73 1165.04
21353.28  1164.921374.94 1165.5321404.93  1166.721441.38 1168.3721454.58 1169.63
21464.01  1169.821488.71 1169.5221502.48 1169.2421543.81  1168.721549.79  1168.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17404.99     .0519518.27    .03521126.11     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19518.2721126.11               525  522.87     470              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17404.9919518.27 1171.0420640.7521549.79    1168

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.55

INPUT
Description:
Station Elevation Data    num=     116
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17744.06  1173.817756.47 1173.1517762.55 1172.9817806.58 1172.6617834.02 1172.37
17897.72  1171.517912.67 1171.4217936.16 1172.2117971.06 1177.0818016.62 1169.19
18043.32  1170.818075.87 1171.83 18095.2 1170.0118100.43 1170.8218121.15 1171.17
18122.99  1171.4 18128.9 1175.8418143.27 1173.5718171.07 1168.8718204.45 1169.61
18211.64  1170.118243.71 1176.16 18293.5 1170.1418308.83 1168.7818326.93 1167.37
18356.47  1166.218528.14 1168.0318566.48 1168.4718595.99 1169.92 18646.3 1170.82
18668.09  1170.918678.44 1170.91 18698.5  1167.118705.62 1166.5118755.44 1164.83
18759.49  1165.718768.93 1166.0818777.73 1165.8418801.44 1165.5918860.97 1164.39
19004.58  1164.119009.16 1164.2419013.63 1164.0319062.68 1163.5319076.86  1164.4
19103.91  1164.5 19151.9 1164.9919161.32 1164.9219209.63 1165.3119216.64  1165.2
19241.21  1159.619298.08 1147.6719394.55 1147.2819419.11 1147.3119448.19 1156.85
19489.95  1170.919493.48 1170.4219501.76 1169.7419533.66    1159 19546.5 1154.48
19566.54  1155.519569.57 1156.3219572.55 1154.4619585.14 1145.7419593.28 1144.58
19627.97  1145.419680.55 1145.5719710.26  1145.919719.38 1147.7519726.64  1148.8
 19742.6  1143.819747.24 1142.7219752.29 1143.8819769.32 1147.4719781.32 1145.45
19790.31  1145.419861.96 1145.1419905.92 1144.2819999.24 1141.620018.77 1141.24
20134.34  1140.520140.11 1140.6720204.62 1143.0220265.64    1144 20342.6 1143.15
20404.82  1142.720491.58 1142.5720531.64 1142.25 20539.7 1142.2820651.51 1140.19
20679.09  1139.620708.14 1139.7120819.91 1140.0920839.79 1140.6920881.49 1142.31
20944.38  1143.820948.55 1143.72 20963.9 1142.8820996.56 1149.2421031.97 1155.32
21042.88  1157.521063.95 1155.6321069.25 1157.2421091.25 1164.7621110.23 1170.12
21117.13  1169.221127.04 1167.0321154.97 1157.0421158.21 1157.4721163.21  1157.1
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 21174.3  1174.721180.73  1177.321182.91 1177.6621220.99 1166.8521236.18 1173.93
21239.44  1174.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17744.06     .0419489.95     .0321110.23     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19489.9521110.23              530   514.6     510             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17744.0619489.95  1170.9   2079521239.44    1170

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.45

INPUT
Description:
Station Elevation Data    num=     130
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17826.14  1166.117847.35 1165.8317867.83 1165.71 17896.5  1165.817909.57 1166.58
17929.22    116717933.44  1166.617945.88 1166.5417964.38 1166.38 18000.7 1166.35
18014.83  1166.618040.52 1166.5718066.47 1166.6518080.29 1166.7318123.92 1167.09
18131.62  1167.418134.38 1168.08   18154  1167.218212.81 1167.9618217.63 1168.17
18231.89  1169.918236.14  1167.118313.15 1166.8418357.54 1167.0118365.31 1167.61
18405.52  1168.818432.68 1169.3818458.94 1174.2518467.92 1175.3318491.25 1168.94
18506.43  1165.618562.53  1166.518570.92 1166.6918593.26 1167.4618623.09 1171.06
18651.32  1179.518666.72 1172.8518692.67 1169.5918721.79 1167.8118740.05 1168.35
18748.81  1168.518764.51 1169.2218770.88 1168.66 18786.1 1167.02 18853.5 1167.63
18866.83    116818869.66  1167.518875.57 1166.1518880.81  1164.618907.18 1158.03
18921.75  1161.718935.89  1165.418956.79 1166.3418982.03  1172.319015.99 1169.97
19048.41  1170.419075.35 1171.83 19087.5 1171.4319130.27 1170.7819142.75 1166.75
19154.41  1162.819163.56    116419175.09  1163.519201.66 1158.0419213.04 1156.88
19233.35  1153.6   19253  1150.819268.39 1150.9619365.44 1151.2519368.91 1148.97
19388.71  1155.719435.01 1171.2419444.85 1169.7619461.47 1164.9119477.62 1160.68
19495.51  1155.419502.85 1155.3419515.29 1155.5719527.51 1149.7119535.78 1145.59
19536.81  1145.619644.25 1143.0319648.81 1142.9519707.18 1143.4419783.36 1144.02
19789.94  1143.419797.04 1145.6619802.38 1147.1519813.62  1144.819828.92 1141.14
19844.54  1143.119893.28 1142.1119913.38 1141.4319993.19 1139.6120050.51 1139.54
20076.37  1141.320156.81 1143.66 20186.3 1143.5720259.79 1142.42 20320.2 1141.63
20357.92  1141.420420.64 1142.1720455.71 1142.4720504.95 1142.4520589.88 1142.33
20612.55  1142.520668.97 1143.1520725.94 1143.7120759.88 1144.4520809.08 1155.95
20816.37  1157.620823.32 1157.4520847.23 1157.1120863.63 1162.9120877.99 1163.67
20879.89  1163.920893.74 1169.1420896.64 1170.0820908.16 1169.3520922.96 1165.23
20941.89  1165.820980.46 1167.0521028.71 1166.8421064.77 1166.6621080.34 1166.69
21162.91    116721209.22 1166.8221232.13  1166.521248.59 1166.7321260.16 1166.65

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17826.14     .0419435.01     .0320896.64     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19435.0120896.64              420  480.98     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17826.1419435.01 1171.2420896.6421260.16 1170.08

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.36

INPUT
Description:
Station Elevation Data    num=     113
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17829.74  1165.617834.64 1166.4517859.39 1168.06 17874.8 1167.8517883.61 1166.44
17891.32    116617905.68  1166.717910.66 1166.85 17931.6 1166.6517963.15 1169.29
17976.79  1170.118020.15 1178.9518025.61 1179.8718030.98 1181.1718059.18 1173.76
18085.25  1171.318126.63  1168.318145.23 1167.8118183.43 1166.8918206.06 1168.14
18216.67  1168.518225.99 1167.3418227.08 1166.8418279.16 1166.9218386.63 1167.36
18397.83  1167.318401.63 1167.4118496.65 1169.1318505.92 1167.2118516.61 1167.44
18531.18  1166.518559.17 1173.4718574.35 1178.2518597.15 1175.8318610.09 1170.58
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18625.22  1169.118658.09 1168.4618725.52 1165.3718730.59 1166.0618743.89 1167.52
18764.11    1170 18779.5  1169.118793.72 1168.4418798.51  1167.518801.48 1167.39
18877.88  1165.518888.14  1165.518925.88 1165.0318973.11 1165.6318993.98 1165.86
19007.51  1166.219014.24 1165.0719037.42 1159.2219048.71  1156.319055.17 1158.31
19074.18  1164.519172.16 1164.2719211.16 1163.9819222.42 1164.7219247.58 1157.64
19271.77  1151.119306.63 1151.0319368.58 1151.0619434.45 1169.5519443.83 1168.82
19449.19    116719486.22 1155.0519507.55 1155.5419520.37 1155.5719541.32  1150.7
19563.69  1145.619661.39 1144.7619678.04 1144.7119753.28 1142.0719759.31 1141.88
19766.05  1143.5   19782 1138.8719785.96  1139.519802.48  1141.819806.33 1140.93
19809.02    114019818.13 1140.8119874.46 1142.1119940.87 1143.5619953.56 1143.82
20023.18  1142.220089.25 1140.6120110.35 1140.7320205.36 1141.67 20230.2 1141.43
20341.82  1141.320370.04  1141.420462.13 1141.1520507.39 1140.9320520.17 1141.92
20552.46    114320589.84 1151.2920612.04  1156.220628.64 1156.4720643.46 1159.87
20682.64  1168.820693.89 1169.3120706.91  1164.320710.69 1164.3320728.15 1164.12
20754.56    116120763.64 1159.4820765.36    116020778.51 1161.2920813.26 1163.38
20835.33  1163.720851.05 1162.9520893.86 1163.81

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17829.74     .0419434.45     .0320693.89     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19434.4520693.89              630  487.06     380              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17829.7419434.45 1169.5520693.8920893.86 1169.31

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.27

INPUT
Description:
Station Elevation Data    num=     131
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18229.32  1166.118250.05 1166.7518278.94 1167.5818285.44 1167.1418297.52 1168.12
18329.34  1169.818330.87 1169.7618339.83  1170.518364.66 1170.43   18371 1171.75
18375.68  1170.918417.64 1164.1618452.44 1163.9818464.69 1164.1518471.17  1164.1
18538.67  1164.518554.41 1164.4818587.27 1164.4318589.89 1164.6318615.02 1165.44
18625.91  1165.4 18650.9 1164.1518657.49 1164.0518668.84 1165.5918673.08 1165.44
 18717.3  1164.8 18741.7 1164.1318764.17 1164.9718767.26 1164.8918812.34 1163.32
18834.79    116318851.48 1162.4718861.98 1163.4518904.93 1165.0718912.29 1164.97
18927.38  1164.518950.33 1164.2418972.81 1163.3118980.73 1164.2718986.42 1165.36
19008.46  1169.819012.93 1169.2319029.55 1168.0919075.71 1163.6819120.33 1161.85
19137.67  1160.3 19201.2 1163.0819216.26 1164.6319218.15 1164.6519257.26 1163.95
19328.26  1165.9 19358.6 1166.3919374.56 1166.11 19385.2 1165.64 19399.5 1166.09
19430.27    116719454.16 1164.5819474.54 1169.6819486.26 1168.1219517.16 1160.18
19533.88  1155.719554.39 1153.1819588.86  1146.319597.05 1144.7619600.22 1144.02
19651.54  1142.919713.94 1142.41 19735.4 1142.3319787.27 1141.4519800.41 1145.55
19820.21  1140.419825.33 1139.1919845.23  1141.919852.13 1140.9419867.25 1141.67
19999.63  1141.420113.28 1142.6420129.11 1142.7920164.57 1142.0820258.07 1140.03
20342.57  1140.820392.03 1141.39 20476.1 1142.52 20488.7 1142.7520507.64 1146.74
20554.17  1155.820568.05 1156.1820577.97  1156.620605.05 1164.0920624.27 1169.12
20636.35  1168.9 20655.6 1164.0320690.53 1162.2620715.35 1160.3420740.17 1158.79
20753.58  1158.720785.62 1158.8620816.23 1159.19   20824 1159.4620842.81 1161.22
20855.55  1162.520868.51 1162.1420883.38 1163.0920895.84 1162.9920931.13 1163.95
21041.27  1165.921067.94 1165.8521130.05 1165.7421136.02 1165.8421184.06 1165.94
21195.48  1165.921255.31 1165.8221260.95 1165.7421313.65 1166.0421421.15 1165.43
21464.35  1165.421495.94 1171.4121510.65 1171.6421536.01 1172.2521550.81 1175.26
21574.05  1179.721595.71 1180.7421599.29 1180.8521685.97 1184.0821687.38 1183.98
21734.88  1179.821743.24 1176.77 21756.8 1171.0421769.18 1168.2521771.73  1168.4
21818.53  1171.7

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18229.32     .0419474.54     .0320624.27     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19474.5420624.27              580  492.86     420              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18229.3219474.54 1169.6820624.2721818.53 1169.12
```

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.17

INPUT
Description:
Station Elevation Data num= 231

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16001.28	1173.216	010.24	1172.96	16032.2	1172.6	216044.46	1172.7	416072.51	1173.58
16077.13	1173.816	081.42	1173.4	216085.11	1173.5	516102.83	1172.3	816202.06	1169.35
16236.12	1169.116	281.24	1169.316	375.72	1169.5	916406.04	1169.0	316421.21	1168.99
16455.41	1168.516	471.91	1168.3	416489.06	1167.9	916504.99	1166.9	216518.22	1166.52
16523.56	1165.916	529.35	1166.0	816581.29	1167.86	16593	1168.2	316595.27	1167.94
16606.1	1167.9	16637.2	1166.9	616661.28	1167.1	716722.46	1167.0	116768.48	1166.99
16797.65	1166.216	858.29	1166.21	16905.4	1167.52	16963.1	1167.7	816968.54	1167.39
16979.96	1167.617	062.68	1167.42	17168	1167.0	217184.94	1166.1	317202.21	1164.72
17215.82	1164.817	241.17	1164.99	17254.1	1164.3	717271.04		116417305.87	1164.04
17427.69	1163.417	492.61	1163.2	717565.11	1163.2	817704.21	1163.27	17771.8	1163.04
17801.01		116417904.68	1163.9	117988.14	1163.5	318058.06	1162.9	218197.72	1162.68
18243.48	1162.518	253.17	1162.6	918287.07	1163.7	118315.46	1164.6	318341.15	1163.04
18367.15	1163.518	377.33	1163.9	818386.58	1168.4	518398.81	1173.3	518402.08	1174.3
18404.07	1174.318	449.38	1168.48	18475.7	1163.7	418505.44	1161.5	618520.42	1160.36
18528.89	1160.718	554.16	1160.6	918559.77	1160.7	718579.21	1160.5	618623.02	1160.19
18690.01	1172.8	18697.1	1173.8	18744.97	1164.34	18791.4	1166.4	818805.54	1165.03
18818.85	1165	18868.9	1165.3	18908.37	1164.7	618934.23	1164.2	218949.94	1163.61
18964.81	1163.918	985.69	1163.8	619046.21	1163.0	419063.07	1163.7	219072.52	1163.62
19091.14	1163.919	152.99	1164.1	119189.83	1164.1	19253.84	1162.6	719285.42	1161.92
19297.98	1161.819	313.24	1162.0	419363.42	1163.0	219379.89	1155.4	619381.52	1154.82
19388.63	1155.919	408.47	1157.1	19420.26	1160.5	319436.44	1166.8	519443.16	1169.64
19461.81	1167.819	499.77	1157.2	19509.91	1154.53	19529.3	1152.7	319570.72	1143.58
19641.21	1141.919	649.85	1141.6	419696.84	1139.5	119716.44	1139.1	19786.79	1138.18
19811.5	1139.519	819.37	1140.9	519834.32	1137.1	619843.55	1138.8	819905.75	1140.12
19917.22	1140.319	949.02	1140.1	320048.18	1139.4	920083.29	1139.8	120176.26	1140.46
20216.1	1140.520	303.83	1140.69	20341.8	1141.4	720409.23	1142.98	20457.3	1153.58
20483.6	1156.420	519.65	1165.3	220529.27	1167.7	320541.18		116920556.34	1163.19
20598.89	1161.120	612.54	1160.1	720659.27	1156.8	520687.65	1156.8	120732.69	1158.03
20775.8		116020806.38	1161.8	220818.05	1161.0	420822.41	1162.9	320838.59	1164.49
20840.87	1164.5	20852	1167.2	720871.21	1171.6	120891.26	1170.5	920977.83	1170.8
20998.33		117121023.94	1170.7	621097.19	1170.8	221115.39	1170.4	521133.64	1165.82
21147.36	1162.621	177.14	1162.9	21179.91	1162.8	621213.22	1163.11	21250	1161.44
21259.45	1163.721	274.23	1167.4	921297.37	1165.7	621362.64	1165.2	921368.24	1165.41
21391.63	1166.121	412.38		116721432.43	1166.4	921488.36	1164.9	321512.65	1166.08
21558.53	1165.721	608.54	1183.1	421613.67	1184.1	721627.01	1186.0	321673.59	1186.66
21700.29	1186.621	715.78	1186.2	121747.01	1184.71	21759.1	1180.3	921769.12	1172.95
21779.93	1168.4	21788.9	1166.3	621797.62	1164.23	21808.8	1163.7	321825.05	1163.92
21856.54	1163.721	864.78		116221873.76	1160.8	21886.62	1163.2	921926.57	1163.46
21986	1165.621	987.67	1165.6	322058.41	1165.7	222082.99	1165.8	822150.65	1164.38
22157.49	1164.322	190.04	1164.83	22237.4	1164.83	22269.6	1165.0	222339.21	1165.01
22414.64	1163.622	484.43	1163.5	922534.23	1163.4	722604.52	1163.0	822624.87	1162.71
22673.28	1162.622	727.45	1162.8	122784.46	1165.9	122800.58	1166.5	22818.56	1166.73
22879.81	1167.822	900.34	1168.2	922918.49	1168.9	622970.85	1170.4	223041.65	1171.11
23054.92	1171.423	065.88	1171.5	323088.44	1171.9	323135.78	1172.4	123169.17	1173.16
23181.67	1172.923	198.65	1173.03	23265.1	1173.7	623291.59	1174.0	323297.34	1174.22
23306.8	1174.323	381.41	1174.9	923408.83	1175.24	23411.3	1175.13	23431.3	1173.63
23439.11	1173.8								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16001.28	.04	19443.16	.03	20541.18	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19443.16	20541.18	410	381.57	360	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16001.28	19443.16	1169.64	20541.18	23439.11	1169

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.09

INPUT
Description: Upstream face of Rural Road Bridge

Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19571.9	1151.6	19577.9	1151.6
19580.9	1148.1	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4	19736.9	1136
19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7	19819.9	1136.7
19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137	19934.9	1137.1
19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9	20092.9	1137.6
20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138	20176.9	1138
20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139	20361.4	1139.4
20418.9	1140.8	20424.9	1140.8	20448.4	1141.1	20477.9	1152.8	20515.9	1157.5
20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3
20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4
20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168
21220	1164								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19457.3	20545.9	154.01	154.01	154.01	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 222.085

INPUT
Description: Rural Road
Distance from Upstream XS = 30
Deck/Roadway Width = 94
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 15

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19030	1164	1164	19200	1168	1168	19457.2	1171.8	1171.8
19457.3	1171.81	1165.1	19571.9	1174.22	1167.6	19692.9	1176.2	1169.53
19813.9	1177.62	1170.95	19934.9	1178.62	1171.95	20055.9	1179.06	1172.39
20176.9	1179.11	1172.44	20297.9	1178.63	1172	20418.9	1177.57	1170.9
20539.9	1176.12	1169.45	20660.9	1174.15	1167.5	20781.6	1171.74	1165.07

Upstream Bridge Cross Section Data
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19571.9	1151.6	19577.9	1151.6
19580.9	1148.1	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4	19736.9	1136
19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7	19819.9	1136.7
19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137	19934.9	1137.1
19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9	20092.9	1137.6
20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138	20176.9	1138
20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139	20361.4	1139.4
20418.9	1140.8	20424.9	1140.8	20448.4	1141.1	20477.9	1152.8	20515.9	1157.5
20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3
20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4
20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168
21220	1164								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Coeff Contr.	Expan.
19457.3	20545.9	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

Downstream Deck/Roadway Coordinates
num= 15

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19030	1164	1164	19200	1168	1168	19457.2	1171.8	1171.8
19457.3	1171.81	1165.1	19571.9	1174.22	1167.6	19692.9	1176.2	1169.53
19813.9	1177.62	1170.95	19934.9	1178.62	1171.95	20055.9	1179.06	1172.39
20176.9	1179.11	1172.44	20297.9	1178.63	1172	20418.9	1177.57	1170.9
20539.9	1176.12	1169.45	20660.9	1174.15	1167.5	20781.6	1171.74	1165.07

Downstream Bridge Cross Section Data
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19571.9	1151.6	19577.9	1151.6
19580.9	1148.1	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4	19736.9	1136
19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7	19819.9	1136.7
19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137	19934.9	1137.1
19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9	20092.9	1137.6
20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138	20176.9	1138
20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139	20361.4	1139.4
20418.9	1140.8	20424.9	1140.8	20448.4	1141.1	20477.9	1152.8	20515.9	1157.5
20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3
20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4
20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168
21220	1164								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Coeff Contr.	Expan.
19457.3	20545.9	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

Upstream Embankment side slope = horiz. to 1.0 vertical
Downstream Embankment side slope = horiz. to 1.0 vertical
Maximum allowable submergence for weir flow = .95
Elevation at which weir flow begins =
Energy head used in spillway design =
Spillway height used in design =
Weir crest shape = Broad Crested

Number of Piers = 10

Pier Data
Pier Station Upstream= 19574.9 Downstream= 19574.9
Upstream num= 2

Width	Elev	Width	Elev
6	1151.6	6	1167.6

Downstream num= 2

Width	Elev	Width	Elev
6	1151.6	6	1167.6

Pier Data
Pier Station Upstream= 19695.9 Downstream= 19695.9
Upstream num= 2

Width	Elev	Width	Elev
6	1136.4	6	1169.53

Downstream num= 2

Width	Elev	Width	Elev
6	1136.4	6	1169.53

Pier Data
Pier Station Upstream= 19816.9 Downstream= 19816.9
Upstream num= 2

Width	Elev	Width	Elev

```
       6  1136.7       6    1171
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1136.7       6    1171

Pier Data
Pier Station     Upstream= 19937.9    Downstream= 19937.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1137.1       6 1171.95
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1137.1       6 1171.95

Pier Data
Pier Station     Upstream= 20058.9    Downstream= 20058.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1136.9       6 1172.39
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1136.9       6 1172.39

Pier Data
Pier Station     Upstream= 20179.9    Downstream= 20179.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1138       6  1172.4
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1138       6  1172.4

Pier Data
Pier Station     Upstream= 20300.9    Downstream= 20300.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1139       6    1172
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1139       6    1172

Pier Data
Pier Station     Upstream= 20421.9    Downstream= 20421.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1140.8       6  1170.9
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1140.8       6  1170.9

Pier Data
Pier Station     Upstream= 20542.9    Downstream= 20542.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1166.7       6  1169.5
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1166.7       6  1169.5

Pier Data
Pier Station     Upstream= 20663.9    Downstream= 20663.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1156       6  1167.5
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1156       6  1167.5

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
```

```
        Energy
        Momentum                Cd    =     1.2
        Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
        Energy Only

Additional Bridge Parameters
        Add Friction component to Momentum
        Do not add Weight component to Momentum
        Class B flow critical depth computations use critical depth
            inside the bridge at the upstream end
        Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 222.08

INPUT
Description: Downstream face of Rural Road Bridge



Station Elevation Data     num=       61
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
   18210     1164    19030     1164    19200     1168  19457.2   1171.8  19457.3   1165.1
 19457.3   1164.6  19498.1   1157.6  19551.1     1152  19571.9   1151.6  19577.9   1151.6
 19580.9   1148.1  19635.4   1138.8  19692.9   1136.4  19698.9   1136.4  19736.9     1136
 19745.9     1136  19764.9   1136.2  19792.4     1137  19813.9   1136.7  19819.9   1136.7
 19839.9   1136.2  19859.9   1136.2  19890.9   1136.7  19913.4     1137  19934.9   1137.1
 19940.9   1137.1  19998.4   1137.1  20055.9   1136.9  20061.9   1136.9  20092.9   1137.6
 20102.9   1137.8  20106.9   1137.8  20131.9     1138  20146.9     1138  20176.9     1138
 20182.9     1138  20240.4   1138.9  20297.9     1139  20303.9     1139  20361.4   1139.4
 20418.9   1140.8  20424.9   1140.8  20448.4   1141.1  20477.9   1152.8  20515.9   1157.5
 20530.9   1162.1  20539.9   1166.7  20545.9   1166.7  20564.4   1165.4  20580.4   1162.3
 20601.4     1157  20660.9     1156  20666.9     1156  20669.9     1156  20728.9   1156.4
 20769.9   1155.9  20781.6   1157.4  20781.7     1165  20781.8   1171.7    21050     1168
   21220     1164

Manning's n Values         num=        3
     Sta    n Val      Sta    n Val      Sta    n Val
   18210      .04  19457.3      .03  20545.9      .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19457.3 20545.9               580  440.56     330              .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18210 19457.3  1165.1 20545.9   21220  1166.7

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 221.99

INPUT
Description:
Station Elevation Data     num=      200
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
 17228.1  1167.317258.96  1166.117291.63 1169.2217293.52 1169.2917354.45  1166.5
17358.04  1166.517386.91 1165.9417430.53 1165.4517465.42 1164.7717504.19 1164.11
 17517.7  1163.817557.37  1163.117568.46 1162.9917596.15 1163.2317646.22 1163.04
17664.33  1162.917731.94 1162.7717764.84 1162.5317842.88 1162.3817895.13 1162.14
   17950  1161.817992.32  1161.618008.74 1161.4718042.78  1161.318085.64 1161.18
18095.78  1161.218181.67  1161.618206.63 1161.5818296.43 1161.3918335.79 1161.37
18389.47  1161.418419.45 1161.3218459.39 1161.0518508.93 1160.9918618.73 1161.02
18725.56  1160.9 18734.5 1160.8618810.21 1161.3518837.68 1161.38 18936.6 1161.27
18955.95  1161.3 19027.2 1161.5919072.68 1161.6519091.72 1161.7819107.22 1161.43
19117.15    116119125.19 1161.4319167.72 1161.1819170.23 1161.22 19204.7 1160.86
19214.48  1160.419272.73  1160.3 19280.4 1159.8619312.77  1158.419334.57 1157.04
19362.41    116519375.13 1168.7819387.53 1170.49 19423.3 1155.8119424.11 1155.59
 19444.1  1156.819466.76 1156.0619473.13 1155.6719487.21 1154.3419498.52 1154.09
19508.31  1154.719522.21 1145.7319526.03  1145.919542.04 1145.9819548.13 1143.76
19549.74  1142.819578.31 1142.7219608.92  1142.319622.35 1142.55 19625.8 1142.43
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19629.95  1141.919662.92 1140.93 19757.8 1138.1419790.37 1138.3419889.34 1139.22
20013.16  1138.7 20021.4 1138.6820046.59 1139.2720150.57 1141.4820168.42 1141.41
20279.22  1139.720311.82 1140.8520339.33 1142.0820380.39 1150.36 20395.1 1153.35
20408.91    115520451.75    116420464.34 1166.74 20474.1 1168.5820520.34  1161.8
20524.22  1161.5 20551.1 1161.72   20569 1158.5420579.56 1158.1920581.69 1157.82
20619.68  1158.120624.32 1158.2720636.26 1158.2420682.65 1158.2220708.27 1159.65
20747.43  1165.120810.38 1169.0920865.53 1168.6120878.38 1168.5920925.02 1169.04
20977.87  1168.520990.49 1168.5121017.94 1163.9121020.96 1162.2221027.69 1160.11
21041.39  1160.221048.88 1164.4621051.31 1164.7321103.84 1164.3321113.72  1164.2
21167.12  1164.321199.72 1164.3321238.15  1164.721244.69 1165.5121250.07 1165.47
21255.82  1165.121263.75 1162.5921273.81 1162.5321441.29 1161.9221461.92 1162.62
21468.87  1162.721483.54 1163.6221530.74 1164.7821532.64 1165.6121578.49 1184.47
21580.42  1185.3 21583.3 1185.1521603.14 1184.67 21614.3 1183.9921640.68 1182.58
21655.09  1182.321667.69 1183.0721684.27 1183.8121707.08 1185.4621717.84 1185.84
21729.19  1185.721758.49  1174.321786.72 1161.7321788.91 1161.4121814.08 1161.25
21824.13  1161.621829.11 1162.3821843.37 1161.5321858.77 1161.6121885.49 1161.81
21909.83  1161.921920.48 1162.5721936.69 1162.9721976.35 1162.1622029.88 1162.27
22120.51  1161.822128.67 1161.8122133.27  1161.722196.18  1161.722222.92 1162.51
22230.32  1162.322238.27 1161.4122269.18 1161.3222332.41 1161.2122339.87 1161.48
22350.41  1161.222441.19 1161.62   22490 1162.0622504.47 1163.38 22519.1 1163.04
22613.27  1163.222638.03 1163.1522664.13 1163.0222668.84 1163.1522699.98 1163.56
22742.99  1164.122775.57 1163.9622823.75 1164.1222840.56 1164.3622888.81 1164.88
22942.19  1167.3 22960.9 1168.0822991.37 1168.8923023.13 1170.1923043.49 1170.56
23080.41  1171.5 23092.3 1171.8823129.53 1172.7523168.04 1173.2423174.01  1173.4
 23188.8  1174.123254.98 1175.0523286.26 1175.3623307.91 1175.3123338.46 1175.78

Manning's n Values        num=       3
     Sta   n Val      Sta   n Val      Sta   n Val
 17228.1     .0419387.53     .03 20474.1     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19387.53 20474.1               560   510.5     470              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 17228.119387.53 1170.49 20474.123338.46 1168.58

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.89

INPUT
Description:
Station Elevation Data    num=     169
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18161.32    118918182.36  1186.318272.19  1173.418277.68 1174.3718296.84 1174.62
18327.04  1175.418351.63 1176.5318365.81 1176.4718388.58 1173.4518404.71 1171.92
18446.03  1166.118461.79 1165.9918502.06 1164.7218528.23 1163.6618553.47 1163.24
18598.41  1161.818644.49 1161.0318701.92 1161.2718748.85 1160.9118822.97 1160.98
 18837.4  1160.818915.81 1159.6318968.45 1158.7418983.15 1158.6718996.08 1157.52
19009.62  1160.319015.83 1160.0819057.14 1158.8119066.94 1159.5119089.99 1160.29
19119.06  1159.219179.93 1157.8919232.08 1150.4919251.46  1147.819253.61 1147.74
19274.36  1149.419275.56 1149.6919289.33 1154.4219294.75 1154.7619323.57 1162.64
19337.79  1166.819346.18 1170.3319348.98 1171.3219356.76 1167.87 19392.1 1153.75
19419.99    115419429.76    115419442.34 1151.9919445.01 1151.3119459.64 1155.29
19467.67  1155.219471.52 1155.2919483.77 1143.0219487.24 1139.7219528.76 1138.45
19558.85  1136.219601.29 1140.0819609.97 1140.8919619.19  1141.219633.53 1141.98
19640.82  1141.419722.43 1138.7719766.05 1141.1319851.35 1141.2319899.11 1141.41
 19971.6  1141.820028.47  1142.120089.74 1140.2420162.05 1138.7520164.13 1138.79
20287.09  1142.320291.34 1143.12 20307.8 1146.8120329.94 1151.3720348.08 1151.72
20368.68  1158.420396.08 1167.7520399.15 1167.0620418.06 1166.1520493.63 1157.15
20555.01  1161.620570.26 1159.6820578.82 1159.4920608.46 1159.2220621.68 1159.42
20638.74  1159.620651.79 1161.3820659.22 1161.8620698.49 1161.6220728.25 1161.37
20744.67  1160.920770.67 1161.38   20785 1161.5120804.72 1162.2620819.52 1162.09
20838.48  1161.420858.28 1161.1520886.14 1161.6320893.59 1161.6620905.54  1163.3
 20935.3  1163.721015.06 1163.9621093.11 1165.0121110.98 1164.8221127.65 1165.42
21134.25  1164.621296.92 1164.5921311.66 1164.5421316.66 1164.72 21334.9 1164.56
21355.48  1175.621391.39 1177.2321394.96 1177.2821400.07 1178.5621427.55 1188.09
21450.73  1186.821483.68  1187.721495.96 1188.6621508.88 1189.3621573.43 1189.89
 21580.3  1189.821592.27  1188.121680.11 1173.1221681.99 1169.9721688.73 1162.25
21708.44  1162.321714.52 1160.2821755.73 1161.1921799.28 1163.7121812.85 1164.18
21862.85  1163.621920.72 1164.5221934.83 1164.5521954.46 1164.7422023.38 1165.15
22048.76  1165.322090.36 1165.2922124.89 1164.7122171.39 1164.9422212.98 1165.03
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22233.83  1164.122262.05 1162.5922302.38 1163.9522321.75 1164.4222378.71 1165.58
22439.74  1166.422445.13 1166.3922478.45 1167.1722486.73  1167.2 22585.5 1167.34
22634.36  1167.422668.78 1167.2822679.97    116722713.73  1166.422753.65 1173.52
22759.09  1173.5 22832.7 1173.2523002.71 1173.8423015.32 1173.7923050.61 1173.31
23077.36  1174.223124.52 1175.3623128.21  1175.623147.58  1177.823156.31 1178.95
23182.18  1179.223220.56 1178.5423281.93 1178.4623334.21 1178.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18161.32     .0419348.98     .0320396.08     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19348.9820396.08              520  490.84     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18161.3219348.98 1171.3220396.0823334.21 1167.75

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.80

INPUT
Description:
Station Elevation Data    num=     188
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18195.87  1210.618206.33 1210.0618268.65  1207.718276.94 1206.4918283.96 1202.79
18294.72  1196.1   18328  1195.6 18348.1 1194.8518356.04 1193.3918362.14  1191.1
18363.55  1190.418376.79 1190.8918403.03 1190.6118417.69 1191.3818420.16 1190.98
18433.12  1187.718482.24 1174.0618510.47 1165.9118531.57 1164.6418556.08 1164.03
18589.61  1163.318608.83 1162.9318655.29 1161.9618713.56  1162.2 18738.5 1162.31
 18742.4  1162.318799.21 1161.8518835.11 1161.9618846.72 1157.9818857.05  1160.4
18899.99  1159.618937.49 1161.0518945.96 1158.9318992.28 1157.1618998.83 1156.99
19066.83  1148.419070.07 1148.4619150.04 1151.3119165.16 1159.1819179.04 1164.33
19192.16  1166.319195.49 1166.4219232.95 1150.4219238.01 1148.57 19280.9 1149.18
 19284.1  1149.219286.96 1149.8819309.57 1154.62 19343.5 1164.43   19350 1166.39
19358.97  1169.619377.34 1161.6319390.65 1162.2319400.98 1162.0819440.36  1153.1
19442.53  1152.619470.25 1155.0719483.92 1153.7119502.11 1140.4419505.02 1138.54
 19552.6  1138.419570.23 1136.3519606.09  1141.819612.72 1142.8419636.74 1140.36
19648.42  1139.419749.09 1138.8419776.44 1138.3319782.55 1138.4319887.19 1138.83
19912.95    113920001.53 1137.4320047.61 1136.6720132.52 1139.6820179.34 1141.16
 20233.4  1141.520271.09 1141.6720287.08 1145.2820323.83 1152.9520330.37  1152.9
20343.75  1152.320373.84 1163.6320381.57 1166.2920391.18 1165.1620399.13 1164.63
20408.31  1165.320429.06 1164.8320451.18 1164.1920458.79 1162.2720470.36 1159.85
20477.35  1159.820491.93 1160.07 20518.7 1160.9620526.46 1161.0320538.42 1161.44
 20552.5  1161.820568.77 1161.75 20595.3 1161.5320629.76 1161.6620662.92 1161.53
20708.54  1161.520747.81 1161.5320775.58 1161.73 20798.6 1161.5520821.58 1161.65
20884.34  1161.320914.55 1161.0420959.94 1159.8621031.24 1160.4221040.75 1160.45
21059.65  1160.321087.69 1159.5921099.74  1159.821116.21 1161.7621127.28 1162.66
21137.95    116321140.46 1163.6321200.32 1166.2921210.81 1167.1421271.48 1170.41
21287.77  1171.821295.81 1172.3821342.69 1174.3721350.38 1174.6321426.93 1178.54
21434.63  1178.5 21457.9 1171.0921479.51 1164.5221490.56 1163.8421503.06 1162.78
21513.46  1162.721527.74 1162.0521536.21 1161.2321562.56 1160.8921573.78    1161
 21584.6  1161.721591.93 1162.0521606.96 1162.16 21640.1 1163.16 21656.9 1163.53
21703.98  1163.921707.22 1164.0321726.09 1163.98 21805.8    116321849.97 1162.23
21891.14  1161.821947.27 1161.3421979.38 1161.2621998.69 1160.9922060.89 1162.34
22079.78  1162.422113.99 1163.1622118.49 1161.5122131.71  1162.422155.67  1162.8
22201.25  1163.722220.21 1164.2622245.94 1164.9722262.29 1166.2322281.29 1165.81
22306.73  1166.222343.14 1166.6422360.44 1166.5522371.75 1165.9922383.67 1165.02
22420.14  1165.822446.45 1166.5522468.98 1166.7222538.97 1167.4122578.44 1167.76
 22579.7  1168.1 22607.9 1172.3422616.63 1172.59 22677.7 1173.5722730.96 1173.31
   22777  1173.722794.36 1173.9222872.47 1174.3122927.16 1174.42 22933.6  1174.9
23008.51  1175.123039.74 1174.8823081.93  1176.123090.79  1176.523108.08 1178.43
23114.74    117923130.35 1178.9223148.09 1179.07

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18195.87     .0419358.97     .0320381.57     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19358.9720381.57              520  512.31     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
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18195.8719358.97 1169.620381.5723148.09 1166.29

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.70

INPUT
Description:
Station Elevation Data num= 177

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18313.4	1207.718331.21	1190.5518353.07	1178.818357.74	1176.4918383.22	1173.02				
18388.14	1172.318425.75	1170.5818484.17	1168.7218551.42	1167.0518573.43	1166.72				
18584.11	1166.418612.02	1166.118666.45	1165.1418709.95	1164.5718726.98	1164.56				
18729.96	1164.218733.93	1163.2518741.54	1162.5318742.43	1162.1818754.36	1163.08				
18794.42	1162.618812.28	1162.6918870.65	1154.7118917.38	1147.9218947.73	1148.51				
18977.47	1147.618991.82	1147.9819043.31	1149.0519071.02	1149.34 19075.1	1149.34				
19218.77	1147.519309.85	1147.1419357.44	1148.89 19370.6	1153.0119374.03	1154.48				
19383.37	1157.319409.57	1165.8719416.32	1167.3919421.68	1168.7419441.88	1160.62				
19459.38	1153.519474.54	1154.2519485.11	1154.6919494.75	1154.6919501.02	1152.62				
19518.83	1152.919535.86	1153.5819541.98	1153.519565.71	1139.8519619.86	1137.57				
19624.35	1137.419634.06	1138.1619660.31	1140.4219662.96	1140.1519791.68	1137.6				
19926.34	1134.319979.53	1136.720001.72	1137.3420058.56	1139.0320103.44	1138.63				
20193.46	1137.320218.21	1137.9220297.42	1140.9920315.77	1140.8320327.65	1141.87				
20331.56	1143.420336.16	1143.5320357.62	1149.4220366.55	1151.7520376.48	1153.55				
20406.45	116020424.35	1163.9820429.66	1164.0320438.47	1163.4820446.38	1162.45				
20476.02	115920483.23	1158.6 20515.8	1158.9820530.06	1159.9620558.19	1161.28				
20591.52	1160.420616.24	1159.9120664.46	1158.5620680.13	1158.6420702.62	1158.97				
20737.58	115920784.83	1158.7320829.13	1157.4720912.47	1159.31 20933.1	1159.79				
20954.93	1168.120977.63	1177.37 20995.9	1178.3420999.53	1178.6321081.63	1178.23				
21083.63	1178.321093.55	1179.7221128.13	1178.7621190.62	1177.2721209.18	1169.86				
21229.58	1162.821237.19	1161.4921239.52	1160.521268.55	1159.9721291.89	1164.94				
21301.26	1164.621306.68	1160.4621324.48	1162.9221348.89	1164.3721402.27	1165.51				
21434.96	1171.321449.56	1172.621463.69	1174.8121490.56	1175.2421526.24	1176.75				
21542.59	1176.9 21555.5	1177.5721594.85	1177.4521622.38	1182.0421629.26	1182.57				
21641.43	1185.221667.39	1189.6221680.98	1193.8521697.93	1199.2921733.38	1207.61				
21756.81	1212.3 21768.5	120821815.78	1183.421825.94	1181.6921855.64	1176.17				
21869.96	1173.421875.52	1172.6721880.58	1172.5221930.63	1170.1321938.76	1170.01				
22003.3	1170.822072.34	1170.32 22089.3	1170.2822143.78	1170.4722201.32	1171.17				
22221.23	1171.122291.67	1171.4622308.03	1171.6122363.53	1171.522371.52	1171.81				
22441.39	1173.922459.63	1172.9122477.06	1172.7122511.23	1172.422515.43	1172.41				
22546.13	1171.8 22567.5	1171.8222627.63	1172.7922675.51	1172.3122686.47	1172.26				
22704.37	1171.522733.97	1171.2722742.09	1170.6222760.68	1176.4922765.21	1177.15				
22771.49	117722794.55	1175.722832.55	1176.3922848.45	1175.4222869.41	1174.44				
22880.16	1176.522885.04	1177.5922896.93	1177.4722930.49	1176.9222938.35	1177.12				
22981.95	1177.623029.34	1178.5123071.34	1179.2223088.16	1179.47 23096.5	1179.4				
23160.94	1179.423225.52	1179.55							

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18313.4	.0419421.68	.0320429.66	.04		

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19421.6820429.66		480	491.61	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18313.419421.68	1168.7420429.6623225.52	1164.03			

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.61

INPUT
Description:
Station Elevation Data num= 191

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18678.5	1212.418683.01	1211.0318689.82	1208.6518703.07	1203.7518715.48	1197.08				
18718.55	1195.818720.66	1195.518744.02	1195.4518748.36	1194.6518750.08	1194.6				
18759.03	1190.218792.02	1157.918804.93	1145.3418829.12	1143.2718856.12	1158.13				
18869.54	1164.718908.36	1164.2118915.11	1164.0518951.93	1163.4818960.49	1163.42				
18973.47	1163.718982.88	1159.4319016.44	1146.2119049.87	1145.7719063.08	1145.72				
19079.13	1146.119082.86	1146.0219107.73	1144.8919133.21	1145.2419143.93	1145.87				
19188.53	1147.319247.86	1145.4819284.38	1143.8519314.17	1148.4419314.76	1148.92				
19372.29	1147.9 19392.3	1154.35 19397.5	1156.1319421.34	1162.4519434.25	1166.14				

```
 19434.8  1165.419438.93 1168.4219443.22 1166.7919476.46  1154.419486.31 1154.09
19501.93  1153.419519.36    115419529.18 1153.9119533.42 1152.29 19542.7 1151.89
19551.94  1152.419558.35 1151.9819564.25 1151.9819583.11 1139.9319591.56 1134.39
19648.21  1136.719677.11 1137.8119809.86 1133.9819916.35 1134.7919935.06  1134.9
19990.46    113920010.96 1140.7420062.96  1140.820076.44  1140.7 20137.2 1140.74
20205.46  1141.5 20305.7 1140.7320341.53 1140.2220343.81 1140.6620353.78  1143.7
20380.41    115220388.69  1152.720419.66  1161.520433.82 1165.4620447.28 1164.42
20458.72  1163.620475.45 1161.0720499.06 1157.2720531.49 1159.46 20545.4 1157.98
20571.87  1157.520578.81 1157.4320606.24 1157.4420616.16 1157.3220640.05  1157.8
20691.04  1159.220694.58 1159.3920702.31 1160.6720707.85 1161.2620714.52 1162.18
20723.12  1167.320734.57  1173.620755.69 1173.7420780.53 1173.7520796.22 1174.01
20840.73  1174.2 20850.6 1174.0920857.79 1173.8920868.54 1174.3120895.56 1174.78
20907.19  1172.420920.14 1169.14 20926.2 1169.7520939.07 1165.5220960.36 1163.32
20975.48  1163.420989.85  1161.321006.64  1160.321028.57 1158.06 21060.5 1158.44
21092.06  1158.421120.46 1158.39 21145.3  1158.321150.14 1158.4421173.57 1162.29
21204.33  1166.621232.66 1165.1321234.44  1163.821241.62  1161.221250.13 1163.07
 21260.5  1164.121290.65 1165.0921299.98 1165.7321315.94 1168.1721326.38 1170.72
21348.18    117421409.65  1182.721454.08 1187.7721464.71  1188.721505.76 1190.37
21573.42  1179.921596.51  1181.6 21602.4 1181.9321622.23 1184.8221655.45 1189.32
21671.98  1191.621711.23 1194.45 21728.2 1197.1321777.27 1203.8321788.71 1204.26
21819.26  1205.621841.15 1206.0321867.01 1203.1921903.18 1197.41 21932.3 1194.88
 21945.8    119321985.87 1185.7222004.02 1184.45   22027 1184.1422057.67 1187.79
 22075.1  1189.922085.84 1188.5622113.34 1185.4522115.25  1184.122125.69 1182.83
22154.69  1179.7 22155.4 1179.7422176.65 1181.88   22200 1182.5622220.51 1182.03
22230.57  1181.222264.92 1177.4222278.13 1178.0922302.74 1178.9722350.33 1177.43
22381.18  1175.522383.12 1176.0522397.28 1175.3622403.14 1174.6822437.65 1172.38
22439.41  1172.422472.76 1174.72 22494.1 1175.0622505.84 1175.9322516.42 1175.14
22553.24  1180.522562.01 1180.8922577.08 1180.9622612.44  1183.222617.73 1183.38
22632.53    118522658.81 1185.2322669.56 1185.0522713.55 1181.8422715.82 1182.17
22718.59  1183.922723.52 1182.7522735.39 1183.0422743.11 1182.4122776.65 1180.99
22777.91    1181

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 18678.5     .0419438.93     .0320433.82     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19438.9320433.82              420   571.5     760              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 18678.519438.93 1168.4220433.8222777.91 1165.46

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.50

INPUT
Description:
Station Elevation Data    num=      99
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18724.69  1224.318736.78 1219.5918740.72 1217.9418746.27 1217.0418762.15 1207.06
18762.87  1206.718779.35 1201.5318780.37 1201.4418804.96 1196.5818807.77 1195.77
 18813.4  1193.418835.21  1186.218863.88 1163.3718883.84 1146.59 18910.1 1145.79
18943.52  1162.218976.58 1161.2319025.23 1159.8119050.06 1159.0519062.67 1155.45
19088.81  1148.419103.99 1147.8719122.88 1146.9819152.74 1146.2419167.01 1146.34
19212.01    114619222.05  1145.919247.66 1143.7919287.05 1144.0419295.73 1144.26
19308.12    114519350.49 1146.95 19384.7 1147.3819388.07 1147.3819414.13 1154.24
19421.77  1156.319446.99 1162.6919452.98 1164.4319460.46 1168.1319464.91  1166.3
19478.02  1160.419495.41 1160.5219508.22 1160.4419514.49 1158.7319535.89 1151.98
19549.16  1150.819564.95 1151.31 19579.7 1152.1919590.95 1145.0219596.41 1141.22
19623.73  1140.819639.47 1140.6119660.34 1139.6819721.27 1136.87 19768.9 1134.08
19897.56  1136.119971.91 1135.1120028.81 1134.2520038.11  1134.620049.15 1134.86
20117.01  1139.220150.41 1141.0120157.19 1142.5520260.17 1138.9820290.02 1138.35
20365.62  1141.320376.07  1141.720405.82 1151.5420446.21 1151.9420448.54 1152.35
20489.79  1164.320506.63 1164.7320509.77 1164.73 20520.6 1162.9220538.53 1168.66
20542.37  1169.820552.68 1169.0720605.25 1166.0920627.64 1167.6620657.69 1167.36
20681.46  1166.720690.88 1166.4620703.82 1164.0120710.31 1162.1920726.22 1162.62
 20744.7  1162.720753.41 1160.0420774.01 1167.2820778.57 1169.3120780.54 1169.82
20811.33  1168.3 20827.3 1167.9420859.08 1166.6320875.49  1164.420883.33 1165.77
20891.67  1168.620906.56 1171.6420926.89 1172.5320993.81 1186.59

Manning's n Values        num=       3
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     Sta    n Val      Sta    n Val      Sta    n Val
18724.69      .0419460.46      .0320506.63      .04

Bank Sta: Left    Right     Lengths: Left Channel    Right      Coeff Contr.    Expan.
      19460.4620506.63                510  506.96     520               .1        .3
Ineffective Flow      num=        2
   Sta L    Sta R     Elev    Sta L    Sta R     Elev
18724.6919460.46 1168.1320506.6320993.81 1164.73

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 221.40

INPUT
Description:
Station Elevation Data     num=      257
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
 18652.1     120518671.59 1200.55 18699.2 1192.2318707.99 1189.4118714.68 1186.79
18723.36     118518763.39 1171.9318779.65  1168.318828.27 1168.4118858.97 1168.65
18906.14  1168.718911.84  1168.8 18935.5  1168.318948.16 1164.5318978.02 1157.09
18991.43  1153.918993.58 1154.1419033.37 1154.6919043.37 1154.2719048.94 1154.21
19058.77  1155.4   19061 1155.4319072.37 1156.3719083.23 1155.7119097.13 1154.73
19138.46  1157.519155.07 1158.69 19166.8 1160.4819213.05 1159.5419241.37 1159.48
19249.06  1159.719254.05 1160.3219283.37 1155.5219311.47 1150.07   19324 1147.37
19346.26     114319354.28 1142.1619356.11 1143.0319383.67 1149.5519407.07 1154.11
19408.59  1154.519441.58 1164.73   19445 1164.1819449.43 1164.8919456.36     1167
19480.62  1155.819493.16 1155.2619503.91 1155.0919516.58 1152.8119532.23  1150.2
19549.14  1149.419559.75 1150.4919570.58 1151.7319577.91 1151.2619582.95 1144.43
19585.63  1141.619594.37 1142.4919600.79  1143.519607.14 1144.8319609.31 1143.89
19614.57  1142.9 19642.3 1142.5519646.34 1142.3119655.98 1142.2319677.03 1141.26
19785.47  1136.219807.92 1135.8319895.92 1136.1519914.19 1136.14 20045.5 1133.76
20050.59  1133.820171.35 1133.2120255.63 1134.7920306.82 1135.7920337.14 1138.04
20387.05  1141.820396.05 1145.8720408.08 1150.7920422.65 1151.3220452.05 1152.87
20470.54  1154.620487.47  1155.920500.27 1157.3720515.11 1158.7220540.48 1158.55
20565.02  1164.520574.62 1165.2420584.25 1172.1720634.72 1172.0620641.89 1172.43
20707.14  1172.320716.33 1172.3720721.03  1172.320750.05  1170.120764.44  1169.4
20772.33  1167.620776.01 1167.4420794.23 1162.0120800.86  1161.7 20810.3 1161.98
 20838.2  1163.320845.54 1160.1720866.66 1166.5920871.05 1167.99 20875.8  1166.2
20899.66  1165.720912.01 1164.9220916.66 1164.9320938.55 1165.6820948.58 1166.45
20975.14  1171.221020.84 1175.8221052.25 1177.7721102.75 1181.2521116.56 1182.68
21155.53  1188.321201.77 1195.6521207.52 1195.9721276.43 1202.8821289.39 1204.13
21317.85  1200.121330.02 1198.3121339.16 1199.1121370.97 1200.8721397.84 1202.14
21460.04  1212.621461.59 1212.93 21511.7 1221.68 21546.9 1227.7821568.77 1231.32
21596.38  1236.721640.13 1248.9921665.43 1254.4621692.78 1259.56 21697.2 1261.03
21707.51  1262.821716.32 1264.1421791.55 1258.9721850.25 1252.0221857.65 1251.19
 21863.4  1250.921873.08 1249.5221962.35  1236.321967.51 1234.8822016.88 1223.25
22023.23     122122031.27 1218.5822051.75 1221.3922060.31 1222.41 22065.8 1221.88
22075.24  1221.822110.52  1220.622144.58  1217.822155.42 1217.2122158.53 1218.51
22163.19  1217.922183.22 1217.3822190.13 1217.5522193.29 1217.3122226.28 1216.97
22232.43  1216.422242.46  1216.522284.81 1216.1322320.94 1222.5322333.23 1223.12
22342.68  1222.822351.29 1224.6722382.67 1218.2622390.51 1216.7722398.53 1216.19
22438.98     121222481.19 1205.9622485.17 1205.8422495.98 1207.0122527.13 1211.09
22538.15  1210.522559.76 1210.6422596.84 1207.2322607.16 1206.6422631.18 1207.75
22642.13  1208.922661.99 1211.4922692.22 1215.9622711.98 1218.9922736.36 1222.44
22759.23  1226.622790.77 1230.6122805.91 1232.9622825.04 1233.1522836.73 1232.68
22882.49    1227   22887  1226.622917.78 1225.0722938.05 1223.2122955.82 1221.49
22986.03  1220.122992.72 1219.9423006.88 1220.1423022.46 1219.8223026.55 1219.54
23080.52  1217.323088.12 1216.7923104.31 1216.5723143.27 1215.0623148.76 1213.09
23210.02  1216.323269.57 1218.8923283.38  1221.523289.05 1222.3223321.66 1224.79
23339.03  1223.923382.95 1229.7323387.74 1229.7423463.23  1228.723483.01 1229.12
23493.93  1229.123502.63 1230.1723505.14 1230.0323546.35 1228.46 23548.8 1228.39
23564.58  1228.623601.96 1229.2423609.11 1229.5323678.59 1231.4823685.07     1231
 23726.3  1231.623727.36 1231.35 23756.2 1229.7323766.62 1230.4923771.63 1230.44
23785.18  1231.523801.99 1230.46 23826.7 1232.6923886.44 1237.0223911.27 1238.22
23924.45  1235.923934.49 1236.5723940.75 1237.1523973.91 1242.3323982.18  1242.1
24021.62     124224040.01 1246.7524072.75 1251.9524101.71 1252.04 24161.4 1253.55
24168.61  1253.724171.81 1255.3924181.98 1263.1424201.38  1262.624227.48 1260.64
24240.14  1254.924260.47 1254.1824287.05 1247.7624294.26 1248.0924294.86 1247.75
24296.66  1255.9 24312.7 1255.49

Manning's n Values         num=        3
     Sta    n Val      Sta    n Val      Sta    n Val
```

18652.1 .0519456.36 .03520584.25 .05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19456.3620584.25 460 504.7 540 .1 .3
Ineffective Flow num= 2
Sta L Sta R Elev Sta L Sta R Elev
18652.119456.36 116720584.25 24312.7 1172.17

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.31

INPUT
Description:
Station Elevation Data num= 360

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14992.66	116	815026.77	1165.5	815030.91	1165.4	315037.28	1165.7	915069.86	1165.82
15070.88	1165.4	15076.04	1166.05	15112.2	1165.5	615117.18	1165.4	215176.25	1165.01
15268.31	1164.9	15278.91	1164.6	415310.35	1164.4	715385.32	1164.7	515490.94	1165.08
15609.05	1165.4	15625.53	1165.2	915743.82	1165.4	515753.35	1165.4	515780.48	1165.01
15782.39	116	515782.71	1165.6	115787.31	1165.6	15811.68	1165.0	215873.21	1164.99
15876.97	1165.2	15893.61	1165.5	815958.36	1166.1	215987.66	1165.4	815998.23	1165.4
16040.32	1164.6	16069.32	1164.2	116070.86	1164.1	16186.62	1164.7	16236.42	1164.9
16259.59	1165.2	16271.17	1164.7	416276.84	1164.6	116297.25	1164.4	116321.85	1164.32
16329.32	1164.4	16345.93	1164.9	116406.44	1165.3	116457.25	1164.3	716498.72	1164.04
16502.17	1164.4	16544.29	1164.36	16621.4	1164.5	616666.91	1163.6	16685.69	1163.52
16694.4	1163.8	16717.07	1164.3	616743.19	1164.8	116765.72	1164.1	516823.31	1163.91
16851.5	1163.8	16935.43	1163.8	416940.48	1163.7	917003.31	1163.5	117032.32	1163.48
17077.17	1163.3	17096.38	1163.1	517107.31	1163.3	917112.64	1163.2	117125.84	1163.24
17161.34	1163.5	17169.83	1163.4	217179.29	1163.5	617207.69	1163.2	117221.38	1162.96
17239.25	1163.1	17363.03	1164.3	317429.76	1164.3	517603.57	1163.9	817646.95	1164.09
17662.19	1163.4	17722.37	1164.3	217801.03	1165.3	117825.03	1166.6	117856.64	1166.07
17901.38	1165.3	17920.15	1165.3	17958.22	1165.9	118003.49	1166.1	918024.75	1170.8
18038.49	1173.9	18053.57	1174.2	818097.69	1178.8	118109.61	1179.78	18124.8	1180.63
18152.51	1181.8	18164.97	1181.25	18180.7	1181.3	718206.05	1183.77	18213.6	1183.47
18219.9	1182.1	18233.66	1176.7	818241.03	1176.4	18270.87	1176.4	518283.06	1176.9
18335.33	1176.8	18373.63	1176.5	118418.06	1176.2	318454.07	1175.5	818466.72	1174.93
18495.09	1174.4	18504.69	1173.4	118523.54	1171.2	718563.58	1165.3	718572.61	1163.79
18588.35	1162.8	18593.96	1161.4	218608.67	1160.4	218622.35	1160.4	518651.41	1161.09
18709.57	1159.2	18728.59	1158.67	18749.8	1157.6	618796.71	1157.2	618803.75	1157.23
18846.73	1156.1	18868.26	1155.6	818901.47	1155.89	18906	1156.0	818912.34	1155.78
18948.25	1154.7	18955.06	1155.9	418961.51	1156.8	218967.74	1155.5	618980.99	1153.68
19023.11	1154.3	19073.86	1154.52	19114	1153.94	19122.7	1153.8	519156.14	1152.27
19180.43	1151.5	19195.14	1153.55	19209.9	1154.8	619219.29	1153.9	19227.23	1151.53
19234.54	1149.8	19264.72	1148.6	119301.88	1149.1	819312.66	1149.2	419321.63	1153.07
19345.79	1160.5	19359.34	1163.9	319372.89	1160.0	119413.94	1149.2	719424.31	1150.02
19429.24	1151.4	19449.21	1156.05	19463.2	1155.7	519470.75	1155.3	719482.11	1155.91
19490.16	1156.5	19515.24	1157.13	19531.2	1156.8	519538.57	1156.7	519557.52	1156.05
19569.37	1154.3	19578.77	1150.9	819621.52	1135.6	919639.77	1137.6	619664.83	1138.36
19683.76	1139.6	19696.55	1140.2	19792.75	1135.9	519801.48	1135.6	319809.81	1135.64
19930.61	1135.6	19952.6	1135.0	220048.27	1131.9	820062.35	1131.4	320118.13	1132.03
20188.61	1132.8	20256.01	1133.8	320328.23	1134.9	920344.49	1135.7	320398.32	1150.33
20444.56	1149.3	20448.72	1149.2	420500.55	1153.6	220532.37	1161.4	920549.57	1160.51
20591.58	1159.6	20597.21	1163.8	720601.99	1167.9	620608.04	1168.4	920623.32	1170.4
20633.95	1185.3	20664.73	1188.4	320691.02	1193.5	20695.44	1193.75	20731.2	1194.65
20757.37	1194.2	20802.53	1193.12	20875.7	1170.62	20935.8	1151.7	721005.31	1151.38
21015.05	1151.4	21032.49	1159.2	121042.59	1162.2	821067.91	1162.0	621078.72	1162.04
21087.43	1159.8	21108.55	1164.4	321119.27	1166.3	721136.51	1168.7	821156.97	1171.78
21181.55	1173.2	21224.13	1174.0	921225.45	1174.0	321237.16	1172.6	21259.28	1173.37
21263.15	1173.9	21265.76	1174.5	421290.93	1181.3	21294.11	1181.6	821307.93	1184.1
21311.44	1183.9	21323.42	1186.2	721330.86	1188	21350.2	1190.65	21383.8	1193.88
21398.66	1195.9	21412.73	1196.4	821457.15	1199.4	621465.59	1200.2	921472.67	1200.3
21494.72	1199.8	21504.66	1199.8	721507.38	1199.5	221513.07	1199.3	721550.52	1198.95
21556.04	1198.4	21565.5	119	721600.52	1193.2	121641.91	1195.5	321657.62	1196.55
21668.48	**1196.8**	**21700.06**	**1197.98**	**21737.6**	**1200.9**	**21761.14**	**1203.2**	**121776.72**	**1202.99**
21809.75	**1199.3**	**21823.95**	**1196.4**	**121841.35**	**1193.7**	**221860.33**	**1190.6**	**21870.81**	**1190.21**
21876.3	1189.3	21877.32	1189.7	321886.39	1182.7	921889.31	1181.9	321924.92	1198.54
21961.7	1215.8	21975.74	1215.3	122016.97	1216.2	222055.35	1216.9	922056.74	1217.21
22068.24	1217.5	22085.46	1210.45	22117.6	1198.1	722144.34	1201.08	22149.1	1201.3
22172.26	1201.8	22186.69	1198.3	822212.74	1192.7	822227.35	1191.2	322233.87	1190.29
22238.41	1190.5	22264.25	1201.5	422293.82	1203.8	922306.88	1204.9	622329.48	1205.83
22355.06	1204.2	22362.7	120	522381.95	1207.7	322409.35	1210.8	322422.38	1213.82

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22452.03  1217.322465.67 1218.1822486.12  1219.922521.14 1223.9922541.54 1227.41
22565.51  1228.622593.47 1229.64 22599.6 1229.7422632.35 1229.8822692.15 1230.21
22784.26  1230.222789.94 1230.1722834.18 1226.2422845.95 1225.0822870.24 1222.04
22905.22  1217.122943.77 1215.8322971.27 1217.64 22987.3 1217.5323025.79 1216.08
23041.13    121423057.71 1212.1823080.55 1212.9723085.19  1212.623101.56 1209.96
 23105.4  1210.623114.94 1213.9723128.29 1214.0623160.28 1220.45 23227.7  1228.4
23255.87    122723295.71 1225.98 23316.8    122523353.75  1229.123362.76 1229.54
23379.03  1231.9 23383.4 1231.6123400.86 1232.7623414.28 1233.17 23442.3 1232.57
23485.54  1233.523504.28 1234.0523519.98 1232.6823538.44 1233.3823551.81    1234
23569.64  1228.823593.85  1222.623612.35 1221.1423617.94 1220.7723666.63 1216.36
23697.32  1211.923718.26 1215.2423733.11 1216.4123754.02 1217.7123795.87 1220.44
23802.27  1220.723810.78 1221.2423853.34 1227.82 23875.7 1228.4323907.31 1226.99
23909.33  1227.223932.78 1230.3323960.12 1231.3523975.15 1230.8224031.74 1235.23
24040.61    123624080.63 1234.3324095.36 1232.62 24155.4 1226.3824156.92 1226.27
24172.86  1226.224184.42 1228.2624192.42 1228.4324207.32 1228.1624216.38 1228.09
24250.41  1227.724277.05 1230.7924281.21 1231.1724306.16 1232.5824320.27 1232.46

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14992.66     .0519515.24    .03520532.37     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19515.2420532.37              220  262.31     780              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14992.6619515.24 1157.1320532.3724320.27 1161.49

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.26

INPUT
Description: Upstream face of New Mill Ave Bridge

Station Elevation Data    num=      54
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19250.65  1153.419328.32    116019346.95    115519365.49    115019373.18    1148
19379.27  1147.819405.67  1147.219421.12    114719428.81    114819435.43    1150
19440.82    1151 19460.6    115219485.32    115319495.66 1152.2119516.22 1152.05
19528.92 1144.09 19563.1 1136.9519641.28  1134.4   19667 1129.59 19688.2 1134.81
 19787.1 1134.0319809.84 1128.0719835.67 1132.6619929.08 1131.1719952.46 1124.29
19982.57 1130.0120059.41 1129.6620080.56 1127.3220095.93 1126.5720108.75 1125.93
20132.81 1129.2420168.05 1130.1720215.61 1131.5120238.76 1127.6220269.26  1131.4
20316.63 1134.3620387.64 1136.4720404.56 1148.3720438.76 1149.1820479.33 1160.19
 20557.7 1158.2320571.28    1158 20594.5  1157.820611.72    115720615.34    1157
20632.65  1156.220645.98  1155.920657.81  1156.5 20658.7  1155.120676.27  1156.3
20734.91  1175.520745.77  1179.220783.91  1191.920790.27  1195.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19250.65     .0519495.66    .03520479.33     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19495.6620479.33           101.04  101.04  101.04              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19250.6519495.66    115520479.3320790.27 1160.19

BRIDGE                 RIVER: Salt River
REACH: Reach 4            RS: 221.25

INPUT
Description: New Mill Avenue Bridge (North Bound)
Distance from Upstream XS =    26.5
Deck/Roadway Width        =     48
Weir Coefficient          =    2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      23
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19250.65    1175    115019250.66    1175    116419321.13 1175.65 1170.65
19391.61 1175.95    116419462.08 1176.25 1171.2519532.56 1176.55  1164.8
```

```
19603.04 1176.85 1171.8519673.52 1177.15  1165.219743.99 1177.45 1172.45
19814.47 1177.82  1165.819884.95 1177.52 1172.5219955.43 1177.22  1165.2
 20025.9 1176.92 1171.9220096.38 1176.62  1164.820166.86 1176.32 1171.32
20237.34 1176.02    116420307.81 1175.72 1170.7220378.29 1175.42  1163.5
20448.77 1175.12 1170.1220519.25 1174.82    116320589.72 1174.52 1169.52
20660.19 1174.22    1163 20660.2 1174.22    1150

Upstream Bridge Cross Section Data
Station Elevation Data    num=      54
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19250.65  1153.419328.32    116019346.95    115519365.49    115019373.18    1148
19379.27  1147.819405.67  1147.219421.12    114719428.81    114819435.43    1150
19440.82    1151 19460.6    115219485.32    115319495.66 1152.2119516.22 1152.05
19528.92 1144.09 19563.1 1136.9519641.28  1134.4   19667 1129.59 19688.2 1134.81
 19787.1 1134.0319809.84 1128.0719835.67 1132.6619929.08 1131.1719952.46 1124.29
19982.57 1130.0120059.41 1129.6620080.56 1127.3220095.93 1126.5720108.75 1125.93
20132.81 1129.2420168.05 1130.1720215.61 1131.5120238.76 1127.6220269.26  1131.4
20316.63 1134.3620387.64 1136.4720404.56 1148.3720438.76 1149.1820479.33 1160.19
 20557.7 1158.2320571.28    1158 20594.5  1157.820611.72    115720615.34    1157
20632.65  1156.220645.98  1155.920657.81  1156.5 20658.7  1155.120676.27  1156.3
20734.91  1175.520745.77  1179.220783.91  1191.920790.27  1195.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19250.65     .0519495.66    .03520479.33     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19495.6620479.33             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19250.6519495.66    115520479.3320790.27 1160.19

Downstream  Deck/Roadway Coordinates
    num=      23
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19250.65    1175    115019250.66    1175    116419321.13 1175.65 1170.65
19391.61 1175.95    116419462.08 1176.25 1171.2519532.56 1176.55  1164.8
19603.04 1176.85 1171.8519673.52 1177.15  1165.219743.99 1177.45 1172.45
19814.47 1177.82  1165.819884.95 1177.52 1172.5219955.43 1177.22  1165.2
 20025.9 1176.92 1171.9220096.38 1176.62  1164.820166.86 1176.32 1171.32
20237.34 1176.02    116420307.81 1175.72 1170.7220378.29 1175.42  1163.5
20448.77 1175.12 1170.1220519.25 1174.82    116320589.72 1174.52 1169.52
20660.19 1174.22    1163 20660.2 1174.22    1150

Downstream Bridge Cross Section Data
Station Elevation Data    num=      54
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19250.65  1153.419328.32    116019346.95    115519365.49    115019373.18    1148
19379.27  1147.819405.67  1147.219421.12    114719428.81    114819435.43    1150
19440.82    1151 19460.6    115219485.32    115319495.66 1152.2119516.22 1152.05
19528.92 1144.09 19563.1 1136.9519641.28  1134.4   19667 1129.59 19688.2 1134.81
 19787.1 1134.0319809.84 1128.0719835.67 1132.6619929.08 1131.1719952.46 1124.29
19982.57 1130.0120059.41 1129.6620080.56 1127.3220095.93 1126.5720108.75 1125.93
20132.81 1129.2420168.05 1130.1720215.61 1131.5120238.76 1127.6220269.26  1131.4
20316.63 1134.3620387.64 1136.4720404.56 1148.3720438.76 1149.1820479.33 1160.19
 20557.7 1158.2320571.28    1158 20594.5  1157.820611.72    115720615.34    1157
20632.65  1156.220645.98  1155.920657.81  1156.5 20658.7  1155.120676.27  1156.3
20734.91  1175.520745.77  1179.220783.91  1191.920790.27  1195.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19250.65     .0519495.66    .03520479.33     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19495.6620479.33             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19250.6519495.66    115520479.3320790.27 1160.19

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
```

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Maximum allowable submergence for weir flow =      .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  9

Pier Data
Pier Station     Upstream=19391.61    Downstream=19391.61
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165

Pier Data
Pier Station     Upstream=19532.56    Downstream=19532.56
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165

Pier Data
Pier Station     Upstream=19673.52    Downstream=19673.52
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166

Pier Data
Pier Station     Upstream=19814.47    Downstream=19814.47
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166

Pier Data
Pier Station     Upstream=19955.43    Downstream=19955.43
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1028      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1028      10    1166

Pier Data
Pier Station     Upstream=20096.38    Downstream=20096.38
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1025      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1025      10    1166

Pier Data
Pier Station     Upstream=20237.34    Downstream=20237.34
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165
```

```
Pier Data
Pier Station     Upstream=20378.29    Downstream=20378.29
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1128      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1128      10    1165

Pier Data
Pier Station     Upstream=20519.25    Downstream=20519.25
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum               Cd   =     1.2
       Yarnell                KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.24

INPUT
Description: Downstream face of New Mill Ave Bridge


Station Elevation Data    num=      54
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19250.65  1153.419328.32    116019346.95    115519365.49    115019373.18    1148
19379.27  1147.819405.67  1147.219421.12    114719428.81    114819435.43    1150
19440.82    1151 19460.6    115219485.32    115319495.66 1152.2119516.22 1152.05
19528.92 1144.09 19563.1 1136.9519641.28  1134.4   19667 1129.59 19688.2 1134.81
 19787.1 1134.0319809.84 1128.0719835.67 1132.6619929.08 1131.1719952.46 1124.29
19982.57 1130.0120059.41 1129.6620080.56 1127.3220095.93 1126.5720108.75 1125.93
20132.81 1129.2420168.05 1130.1720215.61 1131.5120238.76 1127.6220269.26  1131.4
20316.63 1134.3620387.64 1136.4720404.56 1148.3720438.76 1149.1820479.33 1160.19
 20557.7 1158.2320571.28    1158 20594.5  1157.820611.72    115720615.34    1157
20632.65  1156.220645.98  1155.920657.81  1156.5 20658.7  1155.120676.27  1156.3
20734.91  1175.520745.77  1179.220783.91  1191.920790.27  1195.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19250.65     .0519495.66    .03520479.33     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
     19495.6620479.33           185.11  185.11  185.11             .1        .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19250.6519495.66    115520479.3320790.27 1160.19

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.2

INPUT
```

Description: Upstream face of Old Mill Ave Bridge

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19150	1163.219	151.72	1163.3	19171.3	1159.719	182.63	1153.219	194.41	1153.2
19194.5	1154.119	194.68	1155.119	215.25	1150.119	236.37	115	019248.15	1150
19268.09	115	619282.77	116	019303.26	116	019324.72	115	519340.96	1151
19362.53	1150.919	373.13	115	219396.42	1151.919	419.26	115	219443.64	1150.2
19452.61	115	019459.68	115	119483.61	115	119487.05	115	019493.21	1147.7
19497.2	1146.819	510.34	114	019518.41	1138.419	520.86	1138.319	530.74	1135.8
19541.7	113	519562.09	1133.119	589.92	113	219604.42	1131.819	611.22	1131.4
19619.1	1131.519	649.46	113	119658.43	113	119682.63	113	119704.66	1131
19713.07	1131	19754.5	113	119776.89	113	119797.37	1131	19817.4	1130.1
19836.52	113	019839.42	113	019861.27	1129.419	867.06	1129.419	900.87	1129
19922.35	112	919945.55	112	919963.49	1128.219	984.25	112	820003.37	1128.7
20014.97	1128.8	20036.9	112	920062.37	1129.220	084.03	1129.420	099.26	1129.8
20128.71	113	020145.21	113	020161.79	1131.120	183.09	113	220199.13	1132.8
20227.41	1133.420	254.78	1134.420	274.45	1135.120	298.28	113	620315.23	1137.3
20321.57	1138	20342.6	1143.720	347.59	114	520352.93	1146	20377.4	1147
20396.98	115	420410.66	115	920427.79	115	920440.12	1156	20468.5	1155.2
20484.07	115	620494.69	115	620509.54	1157.620	525.22	115	920533.29	1160
20550.32	116	120562.56	116	220580.14	116	320602.54	1164.820	606.89	1165.6
20617.12	1166.620	624.55	1166.620	643.58	1168.320	667.87	1168.6		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19150	.05	19419.26	.03	20410.66	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19419.26	20410.66	91.95	91.95	91.95	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19150	19419.26	115	20410.66	20667.87	1159

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 221.195

INPUT
Description: Old Mill Avenue Bridge (South Bound)
Distance from Upstream XS = 22.98
Deck/Roadway Width = 46
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 27

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19150	1175	1175	19150.1	1175	1175	19200	1175	1156
19244.57	1175	1169	19302.58	1175	1169	19361.94	1175	1169
19421.3	1175	1153	19480.67	1175	1169	19540.03	1175	1150
19599.39	1175	1169	19658.75	1175	1150	19718.12	1175	1169
19777.48	1175	1150	19836.84	1175	1169	19896.2	1175	1150
19955.57	1175	1169	20014.93	1175	1150	20074.29	1175	1169
20133.65	1175	1150	20193.02	1175	1169	20252.38	1175	1150
20311.74	1175	1169	20371.1	1175	1150	20429.11	1175	1169
20487.11	1175	1156.520	517.01	1175	1175	20517.02	1175	1175

Upstream Bridge Cross Section Data
Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19150	1163.219	151.72	1163.3	19171.3	1159.719	182.63	1153.219	194.41	1153.2
19194.5	1154.119	194.68	1155.119	215.25	1150.119	236.37	115	019248.15	1150
19268.09	115	619282.77	116	019303.26	116	019324.72	115	519340.96	1151
19362.53	1150.919	373.13	115	219396.42	1151.919	419.26	115	219443.64	1150.2
19452.61	115	019459.68	115	119483.61	115	119487.05	115	019493.21	1147.7
19497.2	1146.819	510.34	114	019518.41	1138.419	520.86	1138.319	530.74	1135.8
19541.7	113	519562.09	1133.119	589.92	113	219604.42	1131.819	611.22	1131.4
19619.1	1131.519	649.46	113	119658.43	113	119682.63	113	119704.66	1131
19713.07	1131	19754.5	113	119776.89	113	119797.37	1131	19817.4	1130.1
19836.52	113	019839.42	113	019861.27	1129.419	867.06	1129.419	900.87	1129
19922.35	112	919945.55	112	919963.49	1128.219	984.25	112	820003.37	1128.7
20014.97	1128.8	20036.9	112	920062.37	1129.220	084.03	1129.420	099.26	1129.8

```
20128.71    113020145.21    113020161.79  1131.120183.09    113220199.13  1132.8
20227.41  1133.420254.78  1134.420274.45  1135.120298.28    113620315.23  1137.3
20321.57    1138 20342.6  1143.720347.59    114520352.93    1146 20377.4    1147
20396.98    115420410.66    115920427.79    115920440.12    1156 20468.5  1155.2
20484.07    115620494.69    115620509.54  1157.620525.22    115920533.29    1160
20550.32    116120562.56    116220580.14    116320602.54  1164.820606.89  1165.6
20617.12  1166.620624.55  1166.620643.58  1168.320667.87  1168.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   19150     .0519419.26    .03520410.66     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19419.2620410.66             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1915019419.26    115520410.6620667.87    1159

Downstream  Deck/Roadway Coordinates
    num=      27
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19150    1175    1175 19150.1    1175    1175   19200    1175    1156
19244.57    1175    116919302.58    1175    116119361.94    1175    1169
 19421.3    1175    115319480.67    1175    116919540.03    1175    1150
19599.39    1175    116919658.75    1175    115019718.12    1175    1169
19777.48    1175    115019836.84    1175    1169 19896.2    1175    1150
19955.57    1175    116920014.93    1175    115020074.29    1175    1169
20133.65    1175    115020193.02    1175    116920252.38    1175    1150
20311.74    1175    1169 20371.1    1175    115020429.11    1175    1169
20487.11    1175  1156.520517.01    1175    117520517.02    1175    1175

Downstream Bridge Cross Section Data
Station Elevation Data    num=      94
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   19150  1163.219151.72  1163.3 19171.3  1159.719182.63  1153.219194.41  1153.2
 19194.5  1154.119194.68  1155.119215.25  1150.119236.37    115019248.15    1150
19268.09    115619282.77    116019303.26    116019324.72    115519340.96    1151
19362.53  1150.919373.13    115219396.42  1151.919419.26    115219443.64  1150.2
19452.61    115019459.68    115119483.61    115119487.05    115019493.21  1147.7
 19497.2  1146.819510.34    114019518.41  1138.419520.86  1138.319530.74  1135.8
 19541.7    113519562.09  1133.119589.92    113219604.42  1131.819611.22  1131.4
 19619.1  1131.519649.46    113119658.43    113119682.63    113119704.66    1131
19713.07    1131 19754.5    113119776.89    113119797.37    1131 19817.4  1130.1
19836.52    113019839.42    113019861.27  1129.419867.06  1129.419900.87    1129
19922.35    112919945.55    112919963.49  1128.219984.25    112820003.37  1128.7
20014.97  1128.8 20036.9    112920062.37  1129.220084.03  1129.420099.26  1129.8
20128.71    113020145.21    113020161.79  1131.120183.09    113220199.13  1132.8
20227.41  1133.420254.78  1134.420274.45  1135.120298.28    113620315.23  1137.3
20321.57    1138 20342.6  1143.720347.59    114520352.93    1146 20377.4    1147
20396.98    115420410.66    115920427.79    115920440.12    1156 20468.5  1155.2
20484.07    115620494.69    115620509.54  1157.620525.22    115920533.29    1160
20550.32    116120562.56    116220580.14    116320602.54  1164.820606.89  1165.6
20617.12  1166.620624.55  1166.620643.58  1168.320667.87  1168.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   19150     .0519419.26    .03520410.66     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19419.2620410.66             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1915019419.26    115520410.6620667.87    1159

Upstream Embankment side slope              =     0 horiz. to 1.0 vertical
Downstream Embankment side slope            =     0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested
```

```
Number of Piers =  10

Pier Data
Pier Station     Upstream=19302.58    Downstream=19302.58
Upstream     num=        2
    Width   Elev    Width   Elev
      14    1125      14    1155
Downstream     num=        2
    Width   Elev    Width   Elev
      14    1125      14    1155

Pier Data
Pier Station     Upstream= 19421.3    Downstream= 19421.3
Upstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=19540.03    Downstream=19540.03
Upstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=19658.75    Downstream=19658.75
Upstream     num=        2
    Width   Elev    Width   Elev
      14    1125      14    1155
Downstream     num=        2
    Width   Elev    Width   Elev
      14    1125      14    1155

Pier Data
Pier Station     Upstream=19777.48    Downstream=19777.48
Upstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream= 19896.2    Downstream= 19896.2
Upstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20014.93    Downstream=20014.93
Upstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=        2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20133.65    Downstream=20133.65
Upstream     num=        2
    Width   Elev    Width   Elev
      14    1125      14    1155
```

```
Downstream      num=        2
    Width    Elev     Width    Elev
      14     1125       14     1155

Pier Data
Pier Station      Upstream=20252.38     Downstream=20252.38
Upstream      num=        2
    Width    Elev     Width    Elev
       9     1125        9     1155
Downstream      num=        2
    Width    Elev     Width    Elev
       9     1125        9     1155

Pier Data
Pier Station      Upstream= 20371.1     Downstream= 20371.1
Upstream      num=        2
    Width    Elev     Width    Elev
       9     1125        9     1155
Downstream      num=        2
    Width    Elev     Width    Elev
       9     1125        9     1155

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 221.19

INPUT
Description: Downstream face of Old Mill Ave Bridge

Station Elevation Data     num=       94
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
   19150  1163.219151.72  1163.3 19171.3  1159.719182.63  1153.219194.41  1153.2
 19194.5  1154.119194.68  1155.119215.25  1150.119236.37    115019248.15    1150
19268.09    115619282.77    116019303.26    116019324.72    115519340.96    1151
19362.53  1150.919373.13    115219396.42  1151.919419.26    115219443.64  1150.2
19452.61    115019459.68    115119483.61    115119487.05    115019493.21  1147.7
 19497.2  1146.819510.34    114019518.41  1138.419520.86  1138.319530.74  1135.8
 19541.7    113519562.09  1133.119589.92    113219604.42  1131.819611.22  1131.4
 19619.1  1131.519649.46    113119658.43    113119682.63    113119704.66    1131
19713.07    1131 19754.5    113119776.89    113119797.37    1131 19817.4  1130.1
19836.52    113019839.42    113019861.27  1129.419867.06  1129.419900.87    1129
19922.35    112919945.55    112919963.49  1128.219984.25    112820003.37  1128.7
20014.97  1128.8 20036.9    112920062.37  1129.220084.03  1129.420099.26  1129.8
20128.71    113020145.21    113020161.79  1131.120183.09    113220199.13  1132.8
20227.41  1133.420254.78  1134.420274.45  1135.120298.28    113620315.23  1137.3
20321.57    1138 20342.6  1143.720347.59    114520352.93    1146 20377.4    1147
20396.98    115420410.66    115920427.79    115920440.12    1156 20468.5  1155.2
20484.07    115620494.69    115620509.54  1157.620525.22    115920533.29    1160
20550.32    116120562.56    116220580.14    116320602.54  1164.820606.89  1165.6
20617.12  1166.620624.55  1166.620643.58  1168.320667.87  1168.6

Manning's n Values         num=        3
     Sta    n Val      Sta    n Val      Sta    n Val
   19150     .0519419.26    .03520410.66     .05
```

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19419.2620410.66              790  650.87     300             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1915019419.26    115520410.6620667.87    1159

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.06

INPUT
Description: Upstream face of SPRR bridge



Station Elevation Data    num=      60
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18840  1164.719100.66 1166.5319100.76  1162.219100.86  1158.719131.19  1154.4
19133.48  1154.419162.91    1152 19165.2    115219194.54  1148.619195.73  1148.6
19196.93  1148.619226.26    114819228.55    114819257.89    114819260.28    1148
19289.61  1147.6 19291.9  1147.619321.44    114619326.41    114619331.88  1145.7
19359.72    114519370.37    114519402.49    114419419.89  1144.519427.85  1144.5
19432.82  1146.319452.71  1147.819498.46    115019517.35    115119571.55  1150.3
19579.51  1150.319619.89  1132.119682.54    112619723.61    112819731.57    1128
19801.88  1126.819874.97    112619882.93    112619953.04    112620026.94  1126.1
20034.89  1126.120110.17    113020187.95  1133.4 20196.3  1133.420272.28    1135
20350.05  1135.220358.01  1135.220380.68    113520414.49  1145.720440.35  1151.3
20479.13  1157.420494.05  1151.820501.31    115020509.27    115020515.93    1150
20603.15  1151.420611.11  1151.620631.99 1167.5220640.04  1167.520868.78    1168

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18840     .0519517.35    .03520479.13     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19517.3520479.13            84.74   84.74   84.74             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1884019517.35    115520479.1320868.78  1157.4

BRIDGE                 RIVER: Salt River
REACH: Reach 4            RS: 221.055

INPUT
Description: Southern Pacific Railraod
Distance from Upstream XS =      31
Deck/Roadway Width        =      23
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      20
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18840  1164.7  1164.719100.66 1166.53 1166.5319100.76 1166.53 1162.23
19131.19  1166.6  1162.319162.91 1166.65 1162.3519194.54 1166.72 1162.42
19226.26 1166.78  1162.519257.89 1166.84 1162.5419289.61 1167.09 1161.79
19321.44 1167.09 1161.7919419.89 1167.45 1162.1519571.55 1167.45 1162.15
19723.61 1167.46 1162.1619874.97 1167.48 1162.1820026.94 1167.51 1162.21
20187.95 1167.53 1162.2320350.05 1167.55 1162.2520501.31 1167.57 1162.27
20603.15  1167.5  1162.220631.99 1167.52 1163.07

Upstream Bridge Cross Section Data
Station Elevation Data    num=      60
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18840  1164.719100.66 1166.5319100.76  1162.219100.86  1158.719131.19  1154.4
19133.48  1154.419162.91    1152 19165.2    115219194.54  1148.619195.73  1148.6
19196.93  1148.619226.26    114819228.55    114819257.89    114819260.28    1148
19289.61  1147.6 19291.9  1147.619321.44    114619326.41    114619331.88  1145.7
19359.72    114519370.37    114519402.49    114419419.89  1144.519427.85  1144.5
19432.82  1146.319452.71  1147.819498.46    115019517.35    115119571.55  1150.3
19579.51  1150.319619.89  1132.119682.54    112619723.61    112819731.57    1128
19801.88  1126.819874.97    112619882.93    112619953.04    112620026.94  1126.1
```

```
20034.89  1126.120110.17    113020187.95  1133.4 20196.3  1133.420272.28    1135
20350.05  1135.220358.01  1135.220380.68    113520414.49  1145.720440.35  1151.3
20479.13  1157.420494.05  1151.820501.31    115020509.27    115020515.93    1150
20603.15  1151.420611.11  1151.620631.99 1167.5220640.04  1167.520868.78    1168

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18840     .0519517.35    .03520479.13     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19517.3520479.13             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1884019517.35    115520479.1320868.78  1157.4

Downstream  Deck/Roadway Coordinates
    num=      20
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18840  1164.7  1164.719100.66 1166.53 1166.5319100.76 1166.53 1162.23
19131.19  1166.6  1162.319162.91 1166.65 1162.3519194.54 1166.72 1162.42
19226.26 1166.78  1162.519257.89 1166.84 1162.5419289.61 1167.09 1161.79
19321.44 1167.09 1161.7919419.89 1167.45 1162.1519571.55 1167.45 1162.15
19723.61 1167.46 1162.1619874.97 1167.48 1162.1820026.94 1167.51 1162.21
20187.95 1167.53 1162.2320350.05 1167.55 1162.2520501.31 1167.57 1162.27
20603.15  1167.5  1162.220631.99 1167.52 1163.07

Downstream Bridge Cross Section Data
Station Elevation Data    num=      60
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18840  1164.719100.66 1166.5319100.76  1162.219100.86  1158.719131.19  1154.4
19133.48  1154.419162.91    1152 19165.2    115219194.54  1148.619195.73  1148.6
19196.93  1148.619226.26    114819228.55    114819257.89    114819260.28    1148
19289.61  1147.6 19291.9  1147.619321.44    114619326.41    114619331.88  1145.7
19359.72    114519370.37    114519402.49    114419419.89  1144.519427.85  1144.5
19432.82  1146.319452.71  1147.819498.46    115019517.35    115119571.55  1150.3
19579.51  1150.319619.89  1132.119682.54    112619723.61    112819731.57    1128
19801.88  1126.819874.97    112619882.93    112619953.04    112620026.94  1126.1
20034.89  1126.120110.17    113020187.95  1133.4 20196.3  1133.420272.28    1135
20350.05  1135.220358.01  1135.220380.68    113520414.49  1145.720440.35  1151.3
20479.13  1157.420494.05  1151.820501.31    115020509.27    115020515.93    1150
20603.15  1151.420611.11  1151.620631.99 1167.5220640.04  1167.520868.78    1168

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18840    .03519517.35    .03520479.13    .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19517.3520479.13             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1884019517.35    115520479.1320868.78  1157.4

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  16

Pier Data
Pier Station     Upstream=19133.34    Downstream=19133.34
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
```

```
Pier Data
Pier Station     Upstream=19165.06    Downstream=19165.06
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream= 19193.7    Downstream= 19193.7
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19228.41    Downstream=19228.41
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19260.04    Downstream=19260.04
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19291.76    Downstream=19291.76
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19323.59    Downstream=19323.59
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19424.89    Downstream=19424.89
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=19576.55    Downstream=19576.55
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
```

```
Pier Data
Pier Station     Upstream=19728.61    Downstream=19728.61
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=19879.97    Downstream=19879.97
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20031.94    Downstream=20031.94
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20192.95    Downstream=20192.95
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20355.05    Downstream=20355.05
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20506.31    Downstream=20506.31
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20608.15    Downstream=20608.15
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
```

Number of Bridge Coefficient Sets = 1

```
Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer
```

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream water surface

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.05

INPUT
Description: Downstream face of SPRR bridge

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18840	1164.719	100.66	1166.53	19100.76	1162.21	9100.86	1158.71	9131.19	1154.4
19133.48	1154.419	162.91	1152	19165.2	1152	19194.54	1148.61	9195.73	1148.6
19196.93	1148.619	226.26	1148	19228.55	1148	19257.89	1148	19260.28	1148
19289.61	1147.6	19291.9	1147.61	9321.44	1146	19326.41	1146	19331.88	1145.7
19359.72	1145	19370.37	1145	19402.49	1144	19419.89	1144.51	9427.85	1144.5
19432.82	1146.31	9452.71	1147.81	9498.46	1150	19517.35	1151	19571.55	1150.3
19579.51	1150.31	9619.89	1132.11	9682.54	1126	19723.61	1128	19731.57	1128
19801.88	1126.81	9874.97	1126	19882.93	1126	19953.04	1126	20026.94	1126.1
20034.89	1126.12	0110.17	1130	20187.95	1133.4	20196.3	1133.42	0272.28	1135
20350.05	1135.22	0358.01	1135.22	0380.68	1135	20414.49	1145.72	0440.35	1151.3
20479.13	1157.42	0494.05	1151.82	0501.31	1150	20509.27	1150	20515.93	1150
20603.15	1151.42	0611.11	1151.62	0631.99	1167.52	20640.04	1167.52	0868.78	1168

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18840	.035	19517.35	.035	20479.13	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19517.35	20479.13	210	167.68	80	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18840	19517.35	1155	20479.13	20868.78	1157.4

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.02

INPUT
Description:
Station Elevation Data num= 285

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15044.3	1161	15046.74	1160.81	15054.99	1160.99	15067.31	1160.69	15118.09	1159.67
15188.86	1159.91	5261.54	1159.97	15295.45	1160.14	15332.02	1158.61	15339.82	1158.24
15380.65	1157.71	5388.69	1157.76	15513.83	1159.11	15577.72	1158.42	15622.59	1158.37
15670.19	1158.31	5740.55	1159.18	15755.81	1159.19	15780.94	1158.42	15794.9	1158.07
15840.15	1157	15862.8	1158.04	15868.58	1158.25	15878.24	1158.27	15931.25	1157.44
16026.39	1158.3	16042.1	1158.35	16063.87	1158.06	16173.44	1157.72	16198.77	1157.57
16240.13	1156.91	6263.89	1157.77	16286.32	1156.49	16315.25	1157.68	16425.38	1156.64
16472.1	1156.21	6481.97	1156.13	16484.62	1156.24	16543.72	1155.97	16656.3	1155.75
16680.03	1156.41	6701.67	1155.68	16728.06	1157.12	16750.9	1156.95	16855.76	1157.05
16901.91	1157.11	6958.94	1156.62	17074.38	1155.66	17090.35	1156.28	17098.2	1156.49
17121.74	1155.11	7157.02	1155.39	17177.67	1155.37	17290.67	1155.81	17359.48	1156.44
17401.65	1156.61	7496.83	1157.47	17533.23	1157.71	17610.32	1157.96	17651.54	1158.27
17781.11	1158.51	7812.58	1158.83	17889.77	1158.48	17945.95	1158.43	18065.89	1158.44
18105.38	1158.31	8202.28	1157.88	18260.45	1157.84	18310.83	1158.05	18378	1158.54
18419.2	1157.71	8429.86	1157.38	18444.45	1157.77	18468.43	1158.25	18483.22	1156.71
18487.84	1156.7	18552	1157.62	18598.58	1157.51	18671.6	1157.47	18724.73	1157.28
18802.71	1157.11	8855.51	1156.89	18882.85	1156.41	18939.89	1157.01	18962.01	1156.9
18980.67	1156.71	8996.52	1156.75	19046.82	1156.39	19054.65	1155.95	19125.72	1152.64
19144.8	1157.3	19147.3	1157.81	19158.87	1158.78	19187.22	1152.73	19199.35	1150.01
19201.06	1149.31	9219.83	1149.87	19235.69	1149.95	19258.88	1149.01	19304.33	1148.04

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   19324  1149.519332.28 1149.3819355.27 1148.9819376.72 1147.7219403.68 1146.08
19419.08  1147.1 19423.4 1147.2919495.54 1154.05 19517.5 1152.0319549.33 1135.36
19552.87  1133.419554.34 1133.5319573.39 1132.4719596.68 1135.0219601.53 1134.82
19702.75    113119732.46 1130.5319814.47 1130.3419836.04 1130.1819975.05  1131.8
20064.35  1130.620095.86 1130.06 20155.2 1130.7520233.83 1131.55 20325.5 1131.38
20386.81  1145.120408.54  1147.820419.42 1150.0620451.78 1156.5920491.77 1150.65
20510.97  1153.420514.94 1153.3720528.31 1152.7620572.59 1150.3120585.04 1150.64
20626.37  1151.520662.58 1160.2420712.66  1177.620718.86 1179.5720725.27 1182.13
20753.98  1190.920766.38 1193.5620794.56 1193.4920802.53 1193.0320860.02 1192.48
20891.04    118920921.83 1184.5520973.53 1176.5821007.78 1169.71 21020.9  1166.7
21043.59  1167.921058.76 1167.3921077.96  1165.121084.16 1164.5121125.91 1172.49
21137.04  1175.421155.09 1177.0621179.84 1178.32 21199.1  1179.721217.63 1179.96
21324.45  1182.921329.09 1182.8921337.12 1180.9721339.29 1181.3121359.14 1183.27
21368.63  1182.221379.89  1181.421410.49 1180.9921439.46 1180.7821455.92 1180.06
21468.95  1179.321470.21 1179.7421475.48 1179.9821499.92 1177.2821505.23  1176.9
 21509.4  1177.821555.88 1191.1721570.26 1193.9721572.09 1194.7821600.37 1195.61
21610.52  1195.621618.72 1196.1321666.21 1196.3721680.57 1195.6921714.58 1194.78
21730.11  1194.521742.46 1194.7221795.72 1191.81 21831.3  1190.321844.02 1190.21
 21857.8  1193.421868.24 1193.7721900.08 1195.1721920.57 1195.0221934.48 1195.09
21969.69  1194.521976.39 1193.8721983.44 1192.3322009.08 1186.9922014.93 1184.49
22029.94  1180.922037.04 1182.4622091.03  1189.922162.07 1190.8722166.94 1190.86
 22215.5  1190.322266.04 1190.12 22298.3 1190.6622366.78 1191.9122403.52 1189.31
22423.03  1187.822445.82 1188.4322464.84 1187.8522480.95 1189.1422494.56  1191.3
22503.83  1193.722519.51 1197.4522549.87 1199.2322551.71 1199.2822593.44 1188.58
22602.18  1185.622606.36 1186.2422646.46 1190.4822659.37 1191.9222679.25 1194.21
22689.24  1194.122712.89 1193.6422724.02 1195.1522742.53 1197.0522793.34 1205.23
22794.69  1205.422840.11 1208.5922859.08 1209.79 22867.2 1210.3722871.18 1210.29
22901.97  1208.622925.46 1204.6423009.68 1186.9123011.18 1186.9423034.04 1191.67
23060.11  1195.323082.52 1198.0423142.98 1202.9323146.07 1203.2723211.74 1208.21
23222.67  1208.123242.42 1208.1323281.11 1207.76 23320.2 1206.15 23334.1 1205.52
23424.31    120223453.03  1200.923472.73 1201.06 23496.6 1201.1623505.04 1201.36
23591.98  1201.9   23598 1201.4423626.23  1199.923657.13 1197.9823660.64 1198.11
23675.64  1198.123734.52 1195.3923759.52 1194.3723785.55 1193.0323838.22 1191.33
23861.28  1192.223891.49 1195.2623911.55 1198.0423951.75 1201.5423963.55 1202.44
   23973  1202.723990.63  1205.124027.75 1209.5124034.76 1210.3724051.49 1211.52
24083.81  1214.424148.96 1215.7424163.71 1211.2224178.37 1212.1424204.33 1211.22
 24212.4  1210.124281.78  1202.424340.67  1209.424367.64 1210.2124376.47 1210.31

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 15044.3    .03519495.54    .03520451.78    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19495.5420451.78               530  503.55     450              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 15044.319495.54 1154.0520451.7824376.47 1156.59

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.92

INPUT
Description:
Station Elevation Data     num=     308
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
15056.94  1158.315076.82 1156.2415078.01  1156.515085.42 1156.98 15091.4 1157.54
15092.38  1157.715132.68 1156.1915136.58 1156.0115142.69 1156.0415285.82 1156.09
15333.21  1155.415354.33 1154.7815385.82  1155.3   15402 1155.4715501.97 1156.32
15525.24  1156.115590.72  1155.4 15610.6 1155.3415746.64  1155.415775.17 1154.91
15792.22  1154.915831.19  1154.715850.08 1154.5815854.93 1154.5115860.35 1153.76
15861.43  1153.815883.33 1156.1415928.57 1155.6115962.04 1155.2815975.13 1155.33
15996.69  1155.316126.78 1154.9316218.25  1154.616274.39  1155.216288.62 1155.19
16354.88  1154.616404.13  1154.616519.19 1154.5716521.31 1154.67 16544.3 1155.19
16674.08  1156.216693.66 1155.3916704.58 1155.2116754.43 1154.7516767.64 1154.51
16947.93  1153.917054.56 1153.2917089.35 1154.5817115.83 1153.75 17124.3 1154.05
17152.88  1154.717229.24 1155.1717259.62  1155.517358.95 1154.9317368.96 1155.12
17384.65  1156.217408.17  1154.917428.41 1156.2717434.19 1156.3417506.93 1156.38
 17532.5  1156.617643.84 1156.4817662.16 1156.6117702.03  1156.7 17817.4 1156.92
17830.58    115717917.79 1157.63 17979.7 1157.6518018.43 1157.5218084.18 1157.06
18143.35  1157.518147.32 1157.5318297.14 1157.2318301.96 1157.2118323.41 1156.76
18375.77  1155.818380.73 1155.7918409.33 1155.7318422.82 1155.5118452.23 1155.53
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18468.78  1155.918481.68 1155.8618496.53 1156.0318551.56 1155.6718647.29 1154.57
18693.89  1153.918707.39 1153.6418754.24 1153.7618813.55 1153.8718864.59 1154.06
18887.41  1154.718913.94 1155.0118934.68 1156.2318984.13 1150.57 18986.8 1150.32
19004.77  1153.319026.27 1156.8819040.29 1157.5319050.92 1155.8519073.98 1152.34
19092.01  1151.619116.39 1150.0519123.92 1149.3619138.68 1149.3619192.02 1149.53
19214.34  1149.919229.37 1152.6419252.46 1158.11 19262.2 1158.8719297.45 1157.11
19318.87  1155.819324.16 1154.79 19345.6 1150.2119393.36 1149.0719440.17 1147.87
19483.52  1147.719505.95 1147.4519520.91 1149.2619533.07 1150.9619545.94 1150.41
19576.51  1134.619587.17 1129.16 19608.3 1130.0919676.46 1131.71 19705.2 1131.96
19733.24  1131.719838.63 1130.3519914.22 1131.5819977.78 1132.5720015.93 1131.94
20098.73  1130.320220.32 1131.4420236.84 1131.5620266.69  1131.620358.46 1131.61
20387.17  1140.320398.68 1143.6220414.42 1144.9120423.49 1145.3220434.59 1145.09
20452.66    114920478.34 1155.8620500.34 1153.6620517.26 1151.7820534.04 1153.66
20550.83  1155.220586.97 1152.9420612.39 1156.7520658.12 1163.3320671.02 1163.53
20687.74  1163.420738.56  1179.820774.83 1191.3720800.66 1191.22 20804.1 1190.88
20824.56  1189.420851.13 1190.8420874.18 1191.0820941.46 1192.1620978.01 1191.07
 20982.4  1190.821008.46 1193.5321016.52  1192.821033.82 1192.7121056.09 1192.73
21105.45  1178.521154.97 1162.9421224.56 1163.9221300.76  1165.7 21334.6 1167.81
21348.51  1166.721358.61 1165.4721385.06 1167.9521409.45    1166 21414.6 1165.77
21417.39  1168.521429.15 1178.6621433.72 1178.4321441.24 1177.6621447.86 1177.93
 21464.7  1178.421471.88 1177.9321486.87 1177.4521524.71 1176.6921570.22 1175.12
21579.81  1175.321582.09  1175.221594.81 1172.4521597.81 1172.4521618.81 1176.85
 21623.8  1177.721636.86 1177.4221646.82 1176.7321679.64 1174.7821702.01 1174.22
21704.67  1174.721721.42 1174.9421740.46 1176.1321746.66 1176.3521773.81 1176.59
21787.05  1176.121792.77 1175.4521822.28 1176.8621838.23 1177.1221868.53 1177.94
21871.44  1178.121877.86 1177.8521903.56  1176.521908.69 1173.6421921.88 1172.56
 21936.7  1176.721948.26 1177.5221955.08 1178.1821978.05 1179.6421987.23 1181.32
21991.73  1181.922001.18  1181.922022.78 1184.1222029.69 1184.9622051.86 1185.91
 22081.2  1187.122087.57 1187.4522112.52 1185.6622122.29 1184.3322146.68 1182.16
22172.21  1180.522189.25 1177.5122196.21 1176.8622204.41 1176.3722207.61  1176.5
22229.25  1175.422252.83 1180.4922263.35 1181.2422272.03 1180.5422326.75 1180.19
22330.68  1180.422367.48 1183.9222408.32 1184.9122434.33 1185.4222440.61 1185.34
 22461.3  1184.822481.54 1184.4322517.74 1184.5322541.33 1184.8122553.21 1185.68
22570.11  1186.422584.93 1186.97 22604.7 1184.4422607.62 1184.4822721.99  1184.8
 22726.6  1184.922765.21 1185.9622787.42 1186.2622818.78 1187.4622872.88 1187.93
22898.91  1188.522965.49 1188.2222983.54 1188.2923016.85 1188.23 23021.3 1188.26
23043.47  1188.123076.97 1188.9423136.37 1189.8523145.85 1189.96 23155.9  1189.9
 23179.9    119023187.54  1189.8 23204.3 1186.5723224.62 1187.0323236.98  1187.6
23243.05  1187.723255.26 1188.0123303.44 1189.1923309.59 1188.4823351.25 1190.31
23380.47  1191.823416.36 1197.29 23505.4 1208.9423549.46 1211.2323567.19  1208.6
23587.21  1206.323594.62 1205.28 23633.5 1204.4423643.71 1204.5823649.32 1204.52
23711.69  1196.823723.75 1196.1423748.17 1199.0523751.46  1199.623757.89  1199.8
23799.99  1196.223808.97  1197.423828.15 1197.9323867.37 1201.7523874.94 1203.82
23883.19  1204.323910.05  1204.923941.39 1204.66 23953.4 1204.6623981.76 1204.51
 24044.8  1204.324075.27 1204.0924100.71 1203.7524146.43  1203.524160.54  1203.4
24169.47  1203.124242.01 1203.0724250.55 1203.64

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
15056.94    .03519533.07    .03520478.34    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19533.0720478.34               560  518.52     450              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
15056.9419533.07 1150.9620478.3424250.55 1155.86

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 220.82

INPUT
Description:
Station Elevation Data    num=     315
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14966.67  1155.7 14994.9 1155.2315013.71 1154.0115021.11 1153.2415050.66 1152.65
15099.94  1152.7 15126.2 1152.59 15191.9 1152.8615243.19 1152.4715250.24 1152.37
   15320  1152.915352.84 1153.5415386.05 1153.4815392.04  1153.2   15408 1152.23
15416.37  1152.315429.68 1152.5715444.43 1152.3415469.09 1152.2515557.75 1151.86
15628.53  1152.5 15672.2 1152.9815686.44 1151.5315728.08 1152.1615748.26 1152.35
15782.75  1153.415803.31 1152.7815849.34 1152.4115922.54 1151.5415965.71 1151.57
16105.59  1151.516112.76 1151.6116148.28 1154.0316175.63 1153.9116187.03 1153.49
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16210.44  1153.416219.87 1153.1616229.03 1153.4316231.92 1153.7216303.07 1152.63
16354.15  1152.716380.98 1152.7216394.77 1152.6216430.95 1152.8916514.83 1153.13
16560.89  1153.416578.84 1152.5816629.65 1150.4216648.01 1150.4516695.46 1150.95
 16724.6  1151.116832.81 1151.8416937.42 1151.7816970.15 1152.3916981.11 1152.48
16989.67  1152.917011.25 1152.7717034.73  1153.117039.76 1153.3217062.09 1155.14
 17147.1  1153.917172.08 1154.0217193.39 1155.5217202.14 1155.8817248.97  1155.9
17265.63  1155.717297.38 1154.7617315.73 1153.8717319.73  1153.617352.48 1154.26
17361.43  1154.417372.68 1154.3117442.96 1153.6417471.11 1154.4117499.21 1155.65
17565.37  1155.417596.88 1155.26 17615.1 1155.8517640.73 1156.4517653.51 1156.31
 17664.8  1156.1   17677 1156.53 17703.8 1156.6217762.99 1156.09 17805.4 1156.21
17842.82  1156.417871.78 1156.8517885.61 1156.3717937.13 1156.8617965.61 1157.26
17997.08  1157.118162.42 1157.1318212.41 1157.0118217.42 1156.9518247.84 1155.01
18291.62  1156.818294.91 1157.0618323.51  1154.6 18349.5    115418364.36 1153.56
18380.47  1154.618411.31 1153.6718465.27 1153.4618533.94 1152.5818551.54 1152.58
18577.54  1152.418629.65 1152.66 18635.6 1152.8318686.63 1153.7818723.07 1154.13
18733.12  1154.818806.96 1153.9518815.49 1153.6318848.51 1149.7218861.19 1148.53
18876.01  1148.818879.55 1149.3218908.05 1153.79 18919.3  1153.418983.58  1152.3
 19000.8  1151.8   19010 1153.7419023.73 1156.2719034.07 1157.2919037.58 1156.53
19073.99  1149.119089.08 1149.2819093.85 1149.0719102.34 1150.4219115.72 1150.38
19135.01  1150.619152.18 1149.5919196.97 1148.9719202.14 1148.8119216.01 1149.13
19228.26  1148.919235.07 1147.76 19299.3 1147.9219335.62 1148.2519357.09 1148.57
19390.82  1155.419394.26 1155.99 19404.6 1156.6619422.48 1152.7119456.86 1145.22
 19466.2  1146.6 19492.6 1150.1519507.76 1150.84 19513.3 1145.1319521.34  1137.9
19535.91  1139.419554.48 1132.9419565.22 1129.5619593.76  1130.319639.73 1131.73
19657.19  1131.519773.87 1129.9819873.48 1130.9819913.76 1131.1919944.72    1131
20035.35    113020064.49 1130.0120174.19 1130.0420216.93 1129.9920301.27 1129.71
20329.01  1130.720343.21 1135.16 20365.9 1143.6920387.28 1144.4620416.82 1145.17
20440.64  1151.120462.85  1156.620480.62 1156.2620503.43 1156.0220520.86 1155.78
20610.58  1177.320618.09 1178.9720650.23 1177.9220654.43 1179.0820672.84 1182.98
20691.43  1182.520711.77 1182.3120726.85 1180.5720751.98 1176.5320790.42 1177.83
20866.31  1179.420886.86 1179.8820891.78 1179.88 20945.2 1178.3320946.24 1178.46
20970.97    118320977.55  1183.620990.97 1182.3621016.54 1183.8421027.23 1184.24
 21049.3  1185.621139.77 1162.3121157.79 1157.6621160.49  1157.421179.51 1154.73
21238.31  1153.5 21243.5 1153.8121315.86 1157.2921324.45 1157.58 21363.1 1159.48
21380.83  1160.521399.61  1165.321437.88 1163.9621447.56 1160.68 21454.8 1158.03
 21473.7  1158.4 21494.5  1158.621549.92 1158.2921575.58 1159.9421603.97  1164.9
21625.71  1169.521631.47 1171.1821647.04  1167.921667.64 1170.4121673.43 1170.97
21685.04  1170.721720.26 1171.3321734.34 1171.5221777.94 1171.02 21794.5 1171.13
21803.73  1171.321815.17 1171.7121830.12 1169.9221841.34 1168.2821848.75 1169.53
21866.74  1173.421873.12 1174.9221919.28 1175.2721939.52  1175.221987.72 1175.35
22008.71  1176.122022.69 1176.3122044.47 1176.4222061.01 1176.7122105.28 1176.92
22127.76  1176.8 22155.6 1177.4622185.01 1176.6822253.65  1177.122327.29 1175.37
22341.26  1175.322408.59 1175.9722420.56 1182.1222430.93 1184.4122455.02 1185.54
22498.64  1186.422528.32 1187.0822547.85 1187.3722613.03 1189.7722628.56 1190.15
22692.42  1189.822729.49 1189.3222816.03  1184.922825.01 1184.5222851.72 1184.29
22871.37  1184.422899.79 1183.2922924.29 1182.57 22945.8 1182.4122971.38 1183.08
23000.84  1183.123020.21 1182.8223025.73 1182.6623052.98 1181.4223076.38 1181.53
 23096.7  1183.223121.44 1183.4223159.34 1183.8523161.94 1183.9523164.26 1183.42
23185.17  1177.5 23201.8 1179.4323212.44 1181.8223218.91 1181.0323257.33 1180.08
23268.82  1179.923272.49 1179.9923283.71 1180.6923311.15 1184.3823344.13 1191.98
23371.97    119323403.29 1193.4523452.17 1193.4923455.92 1193.2223484.16 1191.65
23502.65  1190.223526.76 1188.9323566.97 1189.7423575.16 1189.7123648.69 1209.57
23653.44  1209.323683.28 1207.3723709.76 1198.46 23757.7 1193.1823760.97 1193.22
23768.31  1193.723820.08 1193.0623832.26 1193.0323856.11 1193.4623876.79 1194.23
23913.62    1195 23920.1    1195 23937.7 1196.5823939.72 1197.1523954.29 1198.94
 23987.9  1197.123991.34 1197.1324013.63 1197.9624016.42 1197.9624029.48 1194.99

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14966.67    .03519507.76    .03520462.85    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19507.7620462.85              500  494.93     490            .1        .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14966.6719507.76 1150.8420462.8524029.48  1156.6

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 220.73

INPUT
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Description:

Station Elevation Data num= 313

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14797.3	1154.31	4913.57	1152.42	14944.1	1152.26	14944.42	1151.47	14966.97	1151.88
14980.8	1152.31	5003.23	1152.21	5059.05	1152.19	15081.02	1152.11	15093.12	1152.34
15126.06	1152.11	5181.19	1151.61	15210.79	1150.47	15233.66	1151.47	15251.43	1150.94
15273.4	11	5115362.88	1150.59	15379.06	1150.05	15423.88	1149.95	15459.88	1149.65
15539.57	1149.31	5572.44	1149.28	15584.29	1149.51	5599.68	1150.44	15612.48	1148.8
15672.24	1149.41	5700.28	1151.35	15798	1151.37	15867.6	1150.99	15916.69	1151.03
15952.86	11	5116008.14	1150.91	16080.12	1151.75	16088.31	1151.84	16116.46	1153.28
16139.26	1152.91	6148.32	1152.62	16153.19	1153.23	16160.23	1153.56	16218.88	1151.88
16243.62	1151.31	6274.61	1151.3	16363.6	1151.49	16393.63	1151.52	16435.51	1151.52
16490.57	1151.81	6564.86	1151.81	16567.24	1151.77	16703.9	1151.52	16710.5	1151.66
16724.61	1151.71	6797.96	1151.77	16899.05	1151.75	16906.7	1152.02	16932.49	1152.13
16942.39	1152.2	16955.5	1152.76	16971.52	1153.25	16982.43	1153.08	16998.31	1153.1
17049.19	1153.11	7072.46	1153.08	17121.46	1152.89	17145.41	1153.03	17192.67	1153.2
17215.62	1153.21	7238.43	1153.03	17247.66	1152.63	17269.82	1153.19	17281.82	1153.38
17364.73	1153.4	17374.5	1153.64	17397.24	1153.36	17437.21	1153.78	17481	1154.3
17525.1	1153.81	7548.55	1153.43	17626.8	1154.29	17747.58	1156.28	17767.79	1154.13
17778.06	1154.21	7792.77	1154.55	17840.7	1154.96	17896.44	1155.19	17915.02	1155.09
17924.66	1154.91	7968.81	1154.31	18001.48	1154.43	18082.98	1154.32	18106.55	1154.56
18117.14	1154.61	8144.52	1155.13	18166.73	1155.06	18183.2	1155.13	18210.02	1155.28
18218.19	1155.21	8251.96	1154.51	18271.92	1154.17	18289.25	1153.69	18309.93	1154.27
18348.27	1153.31	8353.67	1153.17	18492.05	1153.31	18501.57	1153.27	18558.69	1153.22
18604.41	1153.21	8618.27	1152.91	18676.89	1152.15	18726.4	1149.04	18748.84	1147.58
18787.16	1146.91	8832.85	1146.21	18862.62	1152.72	18869.61	1154.01	18945.35	1153.81
18952.13	1152.51	8954.69	1152.24	18985.94	1152.96	19036.14	1153.25	19045.15	1154.09
19057.29	1152.31	9087.96	1150.45	19132.13	1150.49	19162.52	1150.91	19192.54	1151.69
19218.75	1151.21	9232.69	1151.84	19251.32	1151.43	19302.95	1151.56	19341.3	1150.74
19381.97	1149.61	9439.95	1151.67	19450.97	1151.96	19479.57	11	5819490.11	1159.02
19492.12	1158.5	19515.2	1153.56	19531.14	1150.79	19555.44	1133.36	19557.72	1132.21
19576.93	1131.51	9658.15	1128.96	19701.95	1127.69	19712.81	1128.35	19715.3	1128.61
19760.95	1129.31	9803.61	1129.34	19851.53	1129.51	19950.1	1130.61	19973.26	1130.69
20100.83	1130.92	0112.26	1130.99	20141.19	1130.47	20222.72	1129.06	20239.48	1128.75
20265.71	1129.52	0365.39	1132.38	20374.45	1134.07	20381.94	1136.31	20423.81	1148.67
20441.46	1153.62	0453.82	1155.55	20476.74	1158.07	20495.14	1160.26	20503.4	1162.18
20564.01	1175.52	0578.57	1176.65	20595.22	1178.91	20620.06	1178.54	20631.53	1178.69
20644.53	1178.72	0676.97	1173.58	20739.84	1163.12	0756.44	1163.61	20786.35	1163.92
20833.99	1164.9	20861.4	1164.23	20868.64	1164.33	20875.76	1164.24	20907.84	1164.16
20926.94	1165.92	0936.61	1166.42	20963.09	1168.25	20978.69	1174.43	21014.75	1188.53
21036.74	1188.62	1049.33	1188.61	21126.03	1167.39	21141.74	1163.46	21147.25	1162.17
21162.06	1159.52	1169.27	1159.28	21221.77	1159.61	21288.72	1159.11	21296.9	1160.02
21311.98	1162.22	1324.94	1161.83	21345.92	1161.38	21351.63	1158.53	21364.03	1152
21386.28	1152.22	1402.73	1143.16	21406.95	1140.73	21424.81	1142.25	21442.17	1149.28
21451.75	1153.32	1477.29	1153.24	21492.55	1153.12	1565.24	1152.78	21589.18	1151.51
21648.09	11	5121676.81	1150.71	21687.2	1153.03	21691.96	1153.87	21694	1153.58
21705.22	1153.52	1747.92	1152.74	21763.65	1155.18	21768.74	1156.06	21780.97	1157.01
21785.19	1157.72	1799.01	1160.84	21849.66	1162.72	1868.62	1160.99	21880.15	1161.95
21897.96	1164.42	1923.34	1164.55	21939.34	1165.09	21967.35	1166.13	21991.87	1166.37
22036.99	1167.12	2046.99	1168.09	22070.54	1166.34	22091.72	1167.65	22094	1167.89
22100.85	1167.62	2114.57	1167.48	22158.49	1166.67	22173.5	11	6722193.46	1166.44
22234.87	1166.22	2258.75	1166.45	22292.82	1167.3	22320.1	1167.43	22329.22	1167.07
22352.2	1166.42	2366.09	1167.14	22415.22	1167.47	22453.69	1167.77	22492.16	1168.56
22642.92	1170.22	2688.53	1170.48	22739.89	1170.76	22822.87	1170.76	22871.73	1170.39
22889.98	1170.72	2937.42	1171.88	23028.91	1173.81	23031.57	1173.91	23070.19	1175.98
23095.28	1176.52	3102.86	1176.88	23148.1	1179.42	3163.39	1179.85	23165.07	1180
23188.47	1180.42	3213.41	1179.72	23249.54	1179.93	23278.98	1180.03	23290.4	1180.18
23363.69	1180.82	3383.38	1180.42	23401.79	1180.07	23419.41	1180.21	23433.68	1178.29
23452.43	1175.52	3471.84	1176.63	23487.22	1174.68	23499.32	1176.09	23523.76	1176.96
23530.78	11	7723580.84	1178.87	23599.92	1179.73	23610.68	1180.24	23668.01	1183.3
23684.49	1183.12	3737.23	1183.18	23753.82	1183.99	23771.45	1184.51	23788.82	1185.45
23802.17	1184.92	3805.38	1184.67	23809.24	1184.87	23813.53	1184.64	23851.27	1183.72
23864.52	1183.82	3891.02	1183.26	23892.96	1183.32	23897.08	1182.72	3973.88	1172.66
24039.67	**1173.42**	**4085.52**	**1187.32**	**4090.47**	**1189.08**	**24151.58**	**1190.78**	**24165.54**	**1191.26**
24172.71	**1191.42**	**4192.87**	**1191.59**	**24242.54**	**1192.26**	**24276.93**	**1192.61**	**24289.34**	**1195.49**
24302.68	1197.9	24332	1197.62	24347.55	1198.15				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14797.3	.035	19490.11	.035	20495.14	.035

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Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19490.1120495.14               510  501.55     490              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14797.319490.11 1159.0220495.1424347.55 1160.26

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.63

INPUT
Description:
Station Elevation Data    num=     293
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   14824  1150.314870.19 1149.9714906.61 1150.46 14934.6 1150.2714996.54 1149.63
 15005.4  1149.3 15035.6 1149.7215073.05  1149.715119.49  1149.515140.51 1148.65
15164.17  1149.515176.48  1149.815188.71 1149.7615222.37 1149.9215284.22 1149.41
15311.03  1149.715339.76 1150.2615407.72  1149.715469.64 1149.4815540.95 1149.31
15601.47  1148.5 15631.9 1149.3115681.89 1149.8615766.94 1149.9815791.74 1149.81
15882.72  1150.615969.23 1150.4816026.97 1151.3716037.23 1150.8716047.44 1150.22
16051.03  1150.216077.31 1149.2216098.49 1151.2216164.63  1150.5 16172.4 1150.53
16267.84  1150.416308.54  1150.716383.35 1151.4916440.92 1151.5216503.85 1151.17
 16547.1  1151.116625.17 1151.0116666.85  1151.616686.26 1152.1516703.27 1151.91
16750.45  1151.516831.13  1151.716846.42 1151.6516860.48 1151.3716872.44 1151.59
16891.43  1151.516919.41 1152.1416929.14 1152.2317034.57 1152.1617112.73 1152.31
17151.56    115317174.16 1152.4717213.39  1152.617256.25 1152.1517300.25 1151.98
17312.74  1152.617370.38 1154.2517456.04 1154.2317496.26 1154.1117547.83  1153.9
17604.31  1153.817688.93 1153.5717722.82 1153.2717729.13  1153.5 17744.1 1153.57
 17804.7  1154.117925.11 1154.3217981.54 1154.5718023.62 1154.5918059.13 1154.52
18113.05  1154.118137.88 1154.1318140.35 1154.1918159.61 1154.6618172.45 1154.58
 18185.1  1154.318215.34 1153.5718233.36 1153.9918307.25 1153.1518360.97 1153.08
18408.08  1153.518500.25 1153.0518520.71  1152.718535.53 1152.6918539.52 1152.17
18551.01  1151.718558.74 1151.5318573.36 1151.0118611.78 1150.64 18625.8 1150.46
18647.75    1153 18657.7 1153.8318674.43 1152.7718723.13 1152.7418734.97 1152.54
18743.63  1152.318780.43 1150.66   18816 1152.1118843.95 1154.4218864.43 1154.66
18922.43  1156.418936.63 1156.4318972.93  1153.519047.63 1154.08 19180.2 1154.87
19184.81  1154.819228.77 1154.5319245.97 1154.4819262.55  1154.519312.33 1154.65
19339.84  1154.719364.44  1154.119384.69 1152.6419429.36 1143.5519434.17 1143.26
19437.42    114419487.14 1156.1819502.33 1159.1819508.86 1156.1319533.27 1145.86
19545.56    114719552.18 1142.2519562.89 1133.6419591.04 1132.3719650.01 1129.14
19773.79  1129.519790.22 1129.4919802.35 1129.2519912.09 1127.17 19968.5  1127.1
19998.74  1127.320051.26 1129.3720068.85  1129.420178.63 1128.86 20268.5  1129.8
20304.69  1130.520328.46 1130.7120359.22 1130.6120416.92 1138.2420430.96 1145.24
20440.58  1147.420475.73 1155.9620483.75 1156.0920494.25 1156.7520495.83 1156.24
20517.61  1161.220571.44 1174.4720606.77 1174.2720610.81 1174.1320641.95 1166.52
20689.44    115520692.07 1155.0820726.24 1156.4420766.82 1157.2520783.96  1157.5
20815.62  1157.220830.99 1157.1320842.11 1156.8720875.53 1156.8520911.76 1160.68
20935.56  1160.520937.82 1160.6120985.04 1183.8420990.99 1183.96 21011.6 1182.74
21099.54  1158.421115.04 1154.1821117.51 1154.2621170.33 1155.5921193.48 1158.99
21199.07  1159.921207.28 1159.7521228.86 1158.6121250.98 1150.8821272.44 1151.36
 21291.3  1141.221314.36  1141.121321.72 1145.03 21333.2 1151.5321348.91 1151.86
21376.92  1151.521411.05 1151.4221474.01 1151.0921553.59 1151.1121637.39 1150.79
21722.63  1150.721785.67 1150.7321874.62 1151.9921878.38 1152.0321921.19 1159.69
21948.69  1160.721992.61 1162.1922000.71  1160.522008.81 1158.6122018.63 1159.95
 22032.5  1161.722048.31 1161.6422055.74 1161.93   22094 1163.0822134.12 1164.39
22143.98  1165.122154.38 1163.8722176.46 1161.48 22190.1 1164.8922195.05 1164.95
22228.55  1165.122302.09 1165.7922385.05 1167.1522394.52 1167.2222452.52 1166.41
22520.66  1165.622561.39 1165.1922580.78 1165.3522602.39  1165.622636.28 1164.69
22655.55  1164.422690.77 1163.5122697.75 1163.3822702.64  1162.322753.06 1152.71
 22801.2    115422825.88 1154.6122880.79 1160.43 22884.4 1160.7322888.09 1161.52
   22924  1165.522955.81  1163.922967.88 1163.3822985.75 1163.4523003.91 1166.93
 23020.6  1168.423039.26 1170.1523047.39  1171.7   23059 1174.3223113.46 1183.75
23129.96  1186.623137.87 1187.1623234.39 1195.15 23268.4 1196.11 23278.9 1196.22
23289.67  1196.623300.62 1197.46   23329    119523354.08 1190.0723359.12 1190.93
23364.81  1192.823377.13 1196.3123381.26 1196.9523402.82 1194.9923412.98  1193.6
23418.94  1192.523442.23 1187.8523455.44 1185.93 23473.3 1182.7723480.12 1183.18
23500.09  1183.523511.29 1183.9223528.38 1179.1323531.54 1177.8723542.35 1178.74
23558.13  1179.723564.97 1179.9723576.86  1179.4 23611.1  1177.423628.94  1181.9
 23666.9  1192.123690.06 1192.8823754.42  1196.123759.24 1196.8323774.42  1193.2
23805.81  1186.423842.08 1186.1223884.13 1185.9323889.09 1185.6423923.01 1182.75
23994.76  1183.224012.39 1183.04 24030.1 1180.4624046.96 1185.0124084.61 1190.55
 24101.8    119124136.25 1191.4224170.43 1192.0824211.66 1193.0424220.01 1193.29
```

24252.23 1192.824282.41 1193.1324299.04 1193.29

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14824	.035	19502	.033	20494	.025

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19502.3320494.25 490 501.08 510 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14824	19502.33	1159.18	20494.25	24299.04	1156.75

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.54

INPUT
Description:
Station Elevation Data num= 318

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14801.12	1148.11	4812.54	1148.07	14917.34	1147.38	14942.26	1146.51	14971.01	1147.44
14987.16	1147.61	5014.67	1147.51	5087.52	1147.27	15174.13	1146.91	15179.25	1146.71
15198.73	1145	15227.13	1146.94	15255.43	1148.17	15326.06	1148.53	15350.94	1148.42
15371.84	1147.71	5395.39	1147.66	15403.6	1147.58	15438.23	1147.87	15442.3	1149.14
15474.44	1148	15485.49	1148.24	15528.24	1149.06	15544.24	1148.76	15568.11	1147.38
15645.6	1147.2	15695.2	1147.44	15712.03	1150.09	15760.49	1149.27	15778.54	1148.93
15796.55	1148.91	5878.15	1149.43	15936.34	1149.46	16036.67	1148.95	16081.24	1148.97
16132.26	1149.4	16138.4	1149.41	6193.74	1149.93	16245.08	1150.16	16287.42	1149.78
16328.17	1149.91	6408.16	1150.19	16436.34	1149.18	16469.09	1150.55	16478.31	1150.91
16494.71	1150.11	6516.71	1150.01	16578.93	1150.06	16592.92	1150.04	16698.21	1150.06
16766.45	1150.81	6795.37	1151.58	16822.36	1151.34	16839.56	1150.86	16850.28	1150.99
16914.07	1151.51	6976.42	1151.49	17033.22	1151.69	17080.06	1151.62	17109.07	1151.67
17180.95	1151.71	7204.63	1151.85	17265.71	1151.93	17282.42	1151.89	17301.8	1151.62
17351.35	1151.81	7381.17	1151.71	17423.14	1151.85	17451.37	1151.55	17471.72	1151.43
17490.39	1151.21	7550.02	1151.43	17577.93	1151.85	17591.81	1152.31	7603.93	1153.05
17616.04	1153.61	7638.31	115	17648.83	1154.09	17661.78	1153.85	17698.43	1153.35
17750.33	1152.91	7802.96	1152.58	17845.63	1152.33	17856.54	1152.76	17871.73	1153.13
17899.64	1153.41	7932.91	1153.42	18011.33	1152.71	18028.57	1152.71	18060.3	1152.8
18070.9	1152.21	8125.61	1152.41	8139.99	1152.37	18143.34	1152.62	18154.39	1153.04
18165.9	1151.81	8176.18	1150.86	18193.98	1152.21	8210.24	1153.28	18363.83	1153.68
18515.17	1151.31	8533.63	1151.15	18547.59	1150.93	18583.44	1149.87	18589.14	1149.66
18591.13	1149.81	8623.29	1151.39	18643.25	1151.88	18663.74	1152.21	18689.11	1152.2
18762.5	1153.21	8764.59	1154.01	18797.54	1153.85	18841.07	1153.68	18888.92	1153.68
18894.16	1154.51	8906.46	1156.01	18923.78	1154.16	18930.74	1153.33	18931.5	1153.54
18944.76	1153.71	8973.23	1154.48	19043.11	1154.46	19057.5	1154.41	19086.5	1154.14
19126.25	1154.11	9221.41	1155.18	19262.48	1155.41	9316.88	1155.92	19322.58	1155.97
19351.74	115	19373.63	1146.84	19398.6	1135.71	19415.07	1133.45	19418.42	1133.67
19443.87	1140.8	19492.1	1154.08	19508.34	1157.81	9536.59	1143.13	19546.11	1145.24
19563.04	1133.21	9565.48	1131.54	19567.11	1131.57	19586.71	1130.79	19664.41	1129.89
19726.79	1129.61	9754.39	1129.25	19798.54	1128.69	19848.54	1128.01	19888.08	1128.08
19987.58	1127.82	0102.16	1127.39	20114.83	1127.32	20125.16	1127.38	20240.77	1127.91
20326.68	1128.42	0349.68	1128.48	20357.7	1128.57	20425.53	1139.15	20428.07	1139.71
20437.09	1143.82	0447.18	1145.96	20460.57	1149.85	20481.21	1155.31	20491.27	1156.3
20505.8	1155.52	0544.78	1163.97	20582.75	1163.93	20596.25	1163.63	20608.52	1160.71
20642.57	1152.3	20672.4	1152.46	20684.76	1152.52	20753.51	1154.32	20766.23	1154.3
20791.41	1154.12	0805.86	1153.82	20841.26	1153.72	20868.87	1156.83	20900.95	1156.86
20917.6	1158.72	0924.05	1159.27	20934.41	1159.92	0951.83	1161.36	20968.01	1154.61
20989.78	1146.5	21025.2	1145.43	21038.38	1147.04	21076	1157.72	21110.76	1156.47
21129.93	1151.62	1132.61	1150.85	21158.94	1153.37	21176.73	1153.62	21197.09	1154.4
21203.78	1150.12	1217.27	1140.36	21245.34	1139.79	21262.49	1139.68	21275.44	1145.24
21284.3	1150.72	1302.26	1150.47	21311.98	1150.82	21327.71	1151.08	21377.48	1150.22
21401.21	1149.8	21454	1149.85	21556.04	1149.73	21633.17	1149.73	21650.47	1149.83
21796.34	1150.22	1872.57	1150.21	21917.66	1149.93	21954.45	1149.87	21974.64	1154.51
21994.3	1158.72	2036.34	1159.52	22058.49	1155.53	22082.22	1159.65	22098.66	1158.78
22143.89	**1160.72**	**2168.86**	**1159.91**	**22182.01**	**1159.42**	**22189.91**	**1159.84**	**22193.83**	**1159.44**
22212.89	**1157.9**	**22227.2**	**1159.97**	**22231.65**	**1160.35**	**22233**	**1161.45**	**22274.63**	**1161.04**
22292.93	1157.12	2314.39	1152.55	22336.43	1152.72	2394.74	1152.72	22536.32	1152.44
22549.68	1154.12	2578.44	1156.55	22587.09	1157.59	22601.62	1158.32	22634.03	1160.85
22649.16	1163.22	2652.36	1164.76	22698.86	1170.88	22732.02	1178.52	22750.13	1180.51
22764.69	1183.82	2786.36	1185.09	22801.42	1186.77	22807.62	1186.95	22821.79	1185.8
22837.43	1182.4	22869.3	1183.02	22895.2	1182.52	22904.25	1179.58	22933.69	1169.33
22950.9	1170.82	2965.88	1173.22	22982.72	1171.57	23029.35	1168.28	23037.9	1169.19

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23050.74  1171.323094.46 1178.9623104.35 1180.55 23113.1 1181.4323129.31 1184.41
23158.01  1185.823167.19 1186.1223175.38 1186.0823251.08 1186.5223315.44 1186.17
23330.46  1186.923340.75 1188.0823347.56 1187.9923361.34  1188.323374.98 1185.09
23384.93  1182.523392.12 1183.48 23403.1  1183.123417.07 1183.02 23439.8 1181.66
23467.05  1173.623510.61 1166.0723546.75  1173.923560.99 1175.2423605.58  1179.9
23610.35  1180.223648.59 1176.5123658.04 1177.0623679.04 1179.3723737.48 1184.35
23746.68  1185.423757.51 1186.2123782.27 1187.8323806.71 1188.2923814.08 1187.68
23822.57  1185.6 23836.1 1184.4523839.74 1183.76 23876.7 1183.32 23932.7 1183.22
23939.22  1185.2 23942.1 1185.6123948.18 1186.9323956.29  1188.123973.47 1189.62
23995.43  1189.424030.29 1190.38 24061.1  1191.724079.65 1192.3124092.29 1193.11
24108.39  1192.1 24116.9 1191.9224122.12 1191.1124132.53 1189.8524183.32 1184.77
24208.61  1178.324227.19 1182.9124228.22  1183.1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14801.12    .03519508.34    .03520491.27    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19508.3420491.27               470  492.46     510              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14801.1219508.34  1157.820491.2724228.22  1156.3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.45

INPUT
Description:
Station Elevation Data    num=     300
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14746.98  1146.214752.11 1146.1614851.06 1146.0614881.09 1144.1414910.13  1145.7
 14925.3  1146.214999.81 1146.2415023.75 1146.2715115.38 1145.8115137.82 1145.45
15144.01  1145.315160.69 1145.3815176.34 1145.6815184.15 1146.3315241.95 1146.63
15281.17  1146.915309.12  1146.715343.83    114715371.59 1147.2715386.45 1147.23
15467.17  1146.815478.24 1147.0415519.72 1147.2615566.17 1147.44 15703.9 1148.08
15879.53  1149.315903.48 1149.4416002.54 1148.8216043.15  1148.716096.54 1148.58
16155.73  1148.316205.69  1148.416292.19 1148.4916344.01 1148.0616355.56 1149.08
 16366.8  1149.516377.57 1150.2516384.06 1149.3116467.03 1150.6416629.45 1154.53
16647.95  1154.4 16654.8 1154.4816671.82 1152.76 16685.8 1149.8216704.38  1150.2
16731.97  1150.516753.89 1149.6616759.47 1149.5416774.45 1150.0116781.12 1150.37
 16822.5  1150.216914.48 1150.3916964.07 1150.2517015.87 1150.1817115.48 1150.27
17187.88  1150.717261.47 1150.67 17330.5 1150.5317389.14 1150.5417454.55 1150.76
 17484.6  1150.717564.97 1150.2817593.47 1150.3217606.17 1150.2717616.31    1150
17625.19  1150.517645.56 1151.2317649.08 1151.2317705.84 1152.0317761.81 1152.59
17778.02  1151.717799.36 1151.1417813.13 1151.0917884.85 1151.54 17965.3 1150.68
18001.45  1150.418020.96 1150.1318030.58 1149.7618070.55 1149.5518080.22 1149.88
18090.73  1150.118108.23 1149.2918115.98 1148.8418187.96 1148.5718459.38 1149.73
18486.51  1149.818492.09 1149.6618519.46 1148.9918529.99 1150.0518545.81 1150.22
18609.17  1148.218628.58 1148.6118662.47  1151.718721.65 1156.1918808.58 1156.99
18824.67  1156.718860.42 1155.8618934.66 1154.0418956.18 1153.3718972.54 1154.24
18977.64  1154.918986.44 1154.3919001.14 1153.6219022.53  1154.219085.01  1153.2
19149.05  1152.419204.31 1151.8819229.04 1153.6719242.84  1154.819261.71 1156.74
19263.03  1156.919275.24 1157.38 19303.4    115819310.63 1156.9519326.37 1154.84
19333.35  1154.419355.52 1153.5919361.74 1154.7619392.06 1140.4819416.73 1129.63
19490.61  1151.619495.17 1152.9419510.69 1154.9219520.68 1151.3319544.52 1143.35
19553.74  1145.619572.14 1129.7819665.24  1130.6 19786.7 1126.5519856.98 1127.38
19925.41  1128.220052.36 1125.95   20178 1126.88 20308.6 1125.4320337.05 1126.91
20359.69  1128.1 20418.9 1136.7720433.54 1138.95 20442.6 1142.9720452.11 1145.04
20459.98    114720486.73 1153.9820501.85  1152.220505.69 1151.8420508.94 1152.23
20520.58  1154.920536.79 1154.8820579.49 1153.9820596.08 1152.7320626.31 1153.04
20638.92    115320676.95 1152.0420712.89 1150.9420732.98 1151.7420744.81  1151.6
20771.95  1151.720800.57 1150.8220804.59 1150.6620830.42 1153.22   20875 1152.73
 20887.8  1152.8 20896.5 1150.8620922.93 1145.5220938.03 1144.7720957.31 1143.67
20981.34  1145.2 21015.1  1155.521034.51 1153.2821041.76 1152.6621066.29 1144.28
21135.83    114421154.19 1144.24 21225.1 1144.7721232.85 1146.0921249.91 1149.32
21275.87  1149.621280.71 1149.5421284.16 1148.1521300.98 1140.5821329.25 1140.09
 21345.2  1140.121351.19 1143.0121365.21 1149.0121385.23 1148.6221389.35 1148.63
21391.53  1148.321406.85 1147.2221414.28 1147.4621430.38 1147.5121459.89 1147.66
21501.59  1148.421669.43 1148.6921698.08 1148.7121706.27 1148.7621828.84 1149.75
21966.13  1148.821975.32 1148.8421988.33 1149.16 22026.1 1156.0122047.67 1158.88
22052.31  1158.922066.78 1157.4622089.29 1162.0122094.55 1163.0222102.22 1160.22
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22108.11  1160.522126.83 1162.3522134.31 1162.3122140.23 1162.1422171.87 1161.82
22185.25  1161.822223.04 1161.0622229.65 1160.8922241.59 1158.9322247.22 1158.16
22263.02  1155.722277.72 1160.44   22295 1158.7122312.49 1164.6222323.46 1167.71
22326.51  1168.422334.35 1169.15 22354.2 1171.2822358.34 1170.9122366.27 1170.67
22389.93  1162.722426.46 1165.3522447.68 1166.6122460.42  1164.922478.36 1161.88
22493.23  1158.822548.65 1168.96 22557.7 1170.7722571.15 1171.6722589.76  1171.8
 22608.2  1171.822632.49 1165.5422655.97 1165.2122666.17 1165.2122706.69 1158.21
22733.65  1159.722770.59 1156.4322796.01 1159.7722799.92 1160.1522833.84 1160.25
 22864.9  1161.2 22880.6 1162.6722890.85  1164.422917.15 1165.0522930.23 1166.18
 22940.6  1166.122971.53 1172.2822986.71 1172.4923002.29 1172.9423015.56 1171.39
23034.78  1168.723058.87 1169.2223069.85 1169.3623104.84 1169.6223151.57 1170.04
23174.83  1169.823201.95 1169.7423205.45 1168.8823214.31 1167.4123241.36 1161.69
 23247.9  1164.623269.96 1170.2123283.36 1169.65   23293 1169.8223295.79 1169.72
23312.61  1169.923326.72 1172.2923338.48 1174.1123365.04 1174.7823374.67 1175.28
23401.49  1178.323428.88 1181.8923450.92 1183.1123467.59 1185.44 23529.2 1187.78
23533.18  1187.7 23583.4 1181.3623609.86 1183.1123613.57 1183.2923632.88 1182.66
23672.89  1182.4 23712.1 1182.3223727.43 1181.9423751.66 1181.0823776.53 1180.43
23781.57  1180.223801.96 1180.4923855.26 1180.9723873.06 1182.9523882.04 1182.85
23890.47  1182.2 23941.5 1180.4824011.76 1178.4824062.88  1178.924078.81 1178.99

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14746.98    .03519510.69    .03520486.73    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19510.6920486.73               500  506.77     520              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14746.9819510.69 1154.9220486.7324078.81 1153.98

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.35

INPUT
Description:
Station Elevation Data    num=     282
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14725.39  1145.514734.14 1145.4714749.59 1144.9614753.94 1145.18 14770.5 1144.77
14783.72  1144.614795.36 1144.6514804.37 1144.8614823.99 1144.8814829.06 1145.62
14835.67  1145.614923.33 1146.6814966.39 1146.4815039.52 1144.9215045.24 1145.66
 15049.3  1145.415062.11 1143.8115082.92 1144.6315099.12 1144.9315101.95 1145.22
15117.01  1145.315160.07 1146.3815194.51 1145.6815220.11 1146.5815232.48 1147.61
15296.52  1147.915307.85 1148.1615314.28 1147.7815336.75 1146.0615367.99 1146.25
15380.22  1146.615393.86  1146.715413.12 1147.5615440.83    1147 15456.8 1146.91
15523.42  1146.915540.82  1146.815642.16 1148.2615661.09 1148.1515833.01  1148.5
15861.97  1148.515964.59 1148.2916035.38 1148.9416050.56 1148.7816104.11 1147.66
16136.13  1146.716148.11 1146.7816172.71  1148.116238.71  1147.116270.89 1146.98
16286.77  1146.816359.94 1147.9216384.15 1146.6516386.33  1146.616400.88 1146.88
16413.24  1147.316428.09 1148.8916462.01 1149.0116531.58 1147.9216596.51 1149.25
16636.45  1149.316648.83 1148.0116654.62 1147.9216676.35 1148.0716697.82  1148.6
16721.43  1149.416751.94 1149.3516845.03  1149.616937.24 1149.04   16966 1148.95
16985.73  1148.717000.91 1148.6417010.69 1148.7617021.47 1148.78 17049.3 1150.14
17054.03  1150.317064.58 1150.3617143.42 1150.3717240.43 1150.2117273.08 1150.21
17281.85    115017305.82 1149.4917311.15 1149.6117331.18 1149.7117358.67 1150.37
17459.87    115017469.16 1149.9817595.87 1150.0917634.61 1150.0117716.87 1150.04
17758.47    115017893.22 1148.82 17925.8 1148.53 17948.2 1148.8517992.64 1147.73
18001.09  1148.418006.03 1148.57 18044.3 1147.6518078.29  1147.218112.96 1147.66
18176.17  1147.818180.45  1147.918266.54  1148.718279.26 1148.7318359.82 1148.08
18394.67  1147.718462.46 1146.6618497.19 1146.2418505.15 1145.9518558.58 1146.42
18561.93  1146.518574.15 1145.8918595.21 1146.5218611.09 1146.7118633.45  1146.7
18642.24  1147.418655.46 1146.77 18672.4 1144.1318674.03 1143.1418695.73 1143.25
18701.34  1143.418727.85 1146.6818745.64 1149.8518777.23 1154.1818821.24 1153.45
18871.15  1153.118908.75  1152.918933.78  1152.318959.08 1151.7818968.95 1152.17
18989.29  1152.319036.39 1152.8219038.88 1152.9619060.44 1153.5219080.83 1154.35
19090.67  1152.719128.69 1153.0119148.78 1152.9819202.42 1153.73 19280.2 1153.64
19308.46  1156.219353.13  1154.119365.17 1153.4319392.88  1154.119395.59 1153.96
19400.85  1151.119432.33    113319500.71 1151.3719502.69 1151.8219519.66 1156.41
   19539  1146.619549.07 1141.9719557.01 1144.4219564.03 1141.7219603.77 1127.37
19631.86  1127.419687.85 1127.18 19723.5  1126.719825.47 1126.6819862.39 1126.52
19883.63  1126.319989.51 1124.35 20081.1  1126.420115.32 1127.1320127.17 1126.67
20175.73  1125.820246.04 1123.9920276.03 1124.8520290.12  1125.320372.13  1127.3
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20426.97    113020449.72 1141.49 20458.5 1143.7720477.29 1147.7320496.54  1151.9
 20511.6    115020518.58 1149.2220530.19 1149.95 20547.5 1151.1520575.07 1150.27
20578.53  1150.420588.29 1151.2920610.78 1150.9220640.86 1150.5520660.11 1150.35
20675.24  1149.720706.15 1147.9420728.63 1148.9820731.37 1149.6420735.97 1149.28
20740.15  1149.220789.02 1148.11 20809.2 1148.1820846.38 1150.5920864.44 1151.29
20872.47  1151.620873.77 1151.3420912.02 1145.6220928.49 1145.1420966.28 1143.83
20978.93  1143.820990.28 1143.4721008.25 1148.1521024.38 1152.2921058.78 1151.06
21066.86  1148.221075.46 1144.2421155.96 1144.04 21229.4 1143.8821316.03 1143.34
21317.74  1144.121331.92 1148.7521359.64 1149.1121360.18 1148.6321373.89 1139.71
21393.03  1139.1 21415.4 1138.9221429.42 1143.5721439.44 1147.28 21455.6 1147.16
21462.13    114721473.03 1146.3821482.38 1145.7521499.16 1145.1621579.66 1145.51
21791.94  1147.221856.09  1147.321869.98 1147.3921943.36 1147.4921995.53 1147.19
22028.65  1147.122031.46  1149.1 22070.6 1152.4822088.35  1151.622103.06 1146.47
22110.94  1143.922119.14 1148.6122129.17 1155.6622158.73 1155.2822205.83 1154.86
22246.47  1161.822259.44 1164.1622279.81 1167.2422295.82 1166.5922298.17  1166.8
22321.53  1168.122331.99 1168.5522364.86 1167.8622419.41 1167.48 22478.6 1167.24
 22491.1  1167.122538.98 1166.3322594.96 1166.6122606.99 1166.5222640.11 1166.05
22667.95  1165.422685.57  1166.122706.79  1167.222735.69 1165.75 22764.9 1163.86
22804.35  1162.422865.92 1157.0422891.83 1157.29 22902.1 1157.0622941.33 1156.81
22981.98  1166.723006.53 1173.7623009.37 1172.4123011.72 1171.7923017.67 1172.14
23044.31  1173.1 23056.5 1172.5523110.78 1172.9823119.28 1173.12 23122.8 1173.01
23172.06  1172.223191.68 1172.5223195.02 1172.36 23209.6 1170.9423219.89 1172.82
23223.55  1173.223263.08 1166.54

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14725.39    .03519519.66    .03520496.54    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19519.6620496.54               490  500.81     520             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14725.3919519.66 1156.4120496.5423263.08  1151.9

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.25

INPUT
Description:
Station Elevation Data    num=     349
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 14669.3  1141.2   14696 1141.4114716.46  1141.814734.89 1140.2414738.34    1140
14768.15  1141.614812.37 1141.57 14838.8 1141.9814890.22 1142.5414893.45 1142.47
14952.96  1141.914990.54 1141.8415014.65 1141.27 15045.5 1141.8115053.65  1141.8
15146.97  1141.515157.23 1141.7815244.56 1144.0415266.24    114415326.43 1145.26
15385.32  1145.515516.41 1144.4715540.47 1144.3515579.56 1145.6615680.58 1144.02
 15706.7  1143.615726.55 1143.5915754.97 1145.0815769.83 1145.7915806.78 1145.19
15847.95  1144.815908.04 1146.0615939.34 1146.5415962.83 1146.1915972.94 1145.65
15986.85  1145.316000.95 1145.1216024.19 1145.6416105.28 1146.1816115.42 1146.22
16230.86    114816244.42 1147.2716258.68  1146.616266.61 1146.3216293.47 1146.09
16301.66  1146.116383.22 1146.72 16414.9 1146.7216482.81 1147.2316504.83 1147.38
16572.16  1147.316578.56 1146.9516609.46 1146.1916633.03 1146.9816649.47 1147.34
16683.41  1147.616741.32  1147.916756.58 1147.7616770.63 1147.5516808.89 1147.46
16851.53  1147.916901.19  1148.2 16920.3 1147.6716939.23 1147.3216953.12 1147.51
16967.88  1147.916989.95 1147.7317061.99 1148.6517131.84 1148.8517184.33 1148.44
17227.94  1148.517239.04 1148.3917265.97 1149.68   17292 1147.8517303.04 1148.05
17309.99  1148.717320.73 1148.4817366.68 1149.6917373.41 1149.8317389.09 1149.83
17504.52  1149.717533.74 1148.0917546.98 1147.4617587.64 1147.7717659.68 1148.62
17759.26  1148.117829.13 1147.4417834.45  1147.417847.61 1146.5917850.37  1146.8
17860.97  1146.217879.42 1146.0417912.16 1145.8617921.91 1145.9417941.62 1146.82
17978.97  1146.718099.37 1145.6918178.51  1145.818227.54 1145.4618292.64  1145.2
18360.29  1144.418416.44 1142.6318447.34 1143.2418474.49 1144.5118542.66 1145.67
18546.53  1145.818577.13 1147.42 18602.8 1148.6518619.79 1147.8918649.25 1147.01
18663.27  1146.818687.94 1145.9318750.86 1146.48 18782.2 1147.0118849.61 1148.48
18902.85  1149.518980.06  1149.718987.95 1150.0619004.24 1149.5619011.28 1149.54
19087.34  1151.919090.48 1151.93 19116.5 1151.9719124.55 1151.0419130.34  1150.2
19136.83  1150.819146.03 1152.0419162.08 1151.7919184.38 1151.3719206.42 1149.61
   19218  1148.319242.91 1147.7319260.28 1147.3719277.78  1146.619296.05 1145.93
19315.11  1148.319336.56  1151.319384.06 1151.8519403.77 1151.9719432.88 1151.94
19442.06  1151.6    19447 1147.9919457.65  1140.919488.89 1147.4519507.63 1151.32
19522.87  1153.519554.33 1141.0819559.11  1142.319561.79 1142.7619577.69 1136.68
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19600.27  1127.1 19613.8 1127.0619660.05 1126.5519717.39 1125.9919739.56 1126.02
19798.63  1126.819898.04 1124.5719925.47 1124.0119948.27 1124.3720038.98 1126.03
20051.01  1126.220181.25 1124.1520280.79  1127.520309.66 1128.5920371.33 1129.09
20431.79  1129.720446.94 1136.33 20454.8 1139.6220497.24 1150.3120498.94  1150.8
20540.34  1145.8   20550 1146.6220568.14  1147.920569.31 1148.1420569.71 1149.34
20592.92  1148.820615.52 1148.5720619.54 1149.0520637.93 1149.7620641.95 1149.18
20651.88  1149.320653.82 1148.88 20662.5 1149.8520690.24 1147.9520704.98 1147.45
20728.18  1147.420749.28 1147.1420765.93 1149.2920797.28  1149.1   20812 1148.78
20834.04  1147.320847.92  1146.920861.76  1147.120865.13 1146.4620867.65 1146.92
20905.04  1152.120905.07 1153.1420907.01 1154.1120925.14 1154.0120942.62 1153.22
20957.29  1149.520973.44  1145.220977.87 1146.6120993.54 1145.9521027.21 1144.25
21036.39  1143.921082.58 1143.7121083.18 1145.3121084.35 1145.0621107.03  1150.4
21112.26  1151.521115.86 1151.5221117.26 1152.5721125.17 1149.5121134.03 1149.45
21148.61  1149.9 21148.7 1150.6621156.06 1144.26 21157.4 1143.3221171.27 1144.61
21173.46  1144.121197.06  1143.421201.63 1142.89 21219.1 1142.8121272.36 1142.43
 21272.7    114321303.18 1142.4621324.66  1142.421372.84 1143.3121390.94 1143.96
21395.65  1143.821402.53 1145.5121413.78 1148.6421416.07 1150.17 21438.9 1150.43
21442.05    114921444.91 1144.69 21449.4 1138.83 21459.3 1140.6621484.71 1140.34
21496.57  1140.121500.37 1138.96 21509.3 1143.17   21515 1145.9921516.27 1146.41
21546.73  1147.821548.94 1145.9921550.77 1145.8721558.28  1146.921558.63 1146.08
21583.57  1147.621585.59 1147.6321600.87 1147.8621609.33 1146.6521625.89 1145.94
21667.88  1145.621692.76  1145.521702.11 1146.1721712.99 1147.5821755.73 1146.47
21773.13  1145.821804.28 1146.5721809.78 1146.8221824.28 1146.55 21830.5 1146.34
21838.18  1146.421853.31 1147.6221862.39  1148.221878.77 1148.5721886.99 1147.25
21892.55  1146.921912.24 1146.8321949.06 1146.8821955.72  1147.121992.39 1148.08
21993.27  1147.622003.04 1147.1322013.87 1147.6422020.58 1148.74 22023.8  1151.5
22024.87  1151.922029.37 1150.5622030.61 1149.95 22030.9 1147.6822032.04  1148.3
22032.09  1151.922033.36 1151.0522035.83 1147.6122045.88 1147.6522054.82 1147.85
22058.73  1148.1 22068.2 1147.8722076.26 1147.4422083.29 1151.88 22088.5 1152.85
   22095  1153.722102.18 1152.4722111.71 1147.84 22113.2 1147.2722117.92 1149.93
22123.62  1153.522130.31 1157.38 22135.7 1154.4822157.41 1155.91 22163.5 1154.36
22180.59  1149.122181.12 1148.0622186.75 1150.0122199.13 1153.6922201.91 1154.62
22205.97  1155.622211.34 1155.3222231.42 1153.9522233.49 1154.2422248.76 1154.93
22294.99  1152.7 22358.5 1153.4722364.22 1153.5322412.11 1154.8322415.49 1155.76
22415.89  1156.822419.27 1155.9522429.54 1155.0922450.54 1157.8922483.44 1163.47
22508.73  1163.122514.12 1162.8622521.49 1163.24 22541.1 1163.8922546.09 1164.17
22553.57  1165.122559.79    116622607.78 1166.6422685.95 1168.0322694.88  1168.1
22712.45  1167.922738.54 1167.6422764.84 1166.4922775.76 1163.4422783.83  1165.1
 22785.1  1165.522819.35 1165.8922846.71 1163.9122860.22 1164.0522888.52  1161.7
22898.03  1162.322908.01 1162.0322927.09 1162.6822936.67 1162.76

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14669.3    .03519522.87    .03520498.94    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19522.8720498.94               500  500.83     490              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14669.319522.87  1153.520498.9422936.67  1150.8

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.16

INPUT
Description:
Station Elevation Data    num=     259
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14558.26  1140.114601.34 1139.8814620.29 1139.8914648.79 1141.5114664.25 1140.61
14699.34  1141.614718.01 1141.5914790.33 1141.5914818.53 1141.8614895.67 1142.18
15034.84  1143.915053.17 1143.6715096.39 1143.07 15111.3 1142.9515132.96 1142.95
15169.64  1143.415197.82  1143.915251.91  1143.9 15289.9 1145.8415300.92 1146.51
15495.98  1143.615524.65 1143.3315535.19 1143.5115572.76 1144.2615589.11 1144.43
15614.98  1144.515687.06 1145.09 15734.3  1145.415803.62 1144.7615859.66 1144.21
15868.89    114415893.57 1144.0515934.43 1145.12 15967.5 1145.1315993.08 1145.16
16008.42    114516039.76 1144.5416055.43 1144.9516152.98 1145.9816156.28 1146.02
16187.56    114516196.71 1144.9916210.32  1145.416216.18 1145.4316233.87    1145
16271.52  1145.116327.67 1145.4216366.09 1145.9616374.17 1146.13 16417.1 1146.31
16484.92  1146.416497.32 1146.5916513.78 1146.6816539.16 1145.3716560.28 1145.35
16577.35  1145.416668.97 1146.28 16689.1 1145.34 16700.4 1144.9516728.75 1145.08
16832.02  1147.6   16837 1147.6316858.13 1146.3916867.63  1146.616879.67 1146.67
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16908.91  1146.317022.46 1147.49 17149.3 1147.8217167.69 1146.39 17175.6 1146.74
17193.26  1148.3 17217.1 1148.3117227.91 1148.1517242.49  1147.817354.23 1148.45
17382.23  1148.517409.55 1147.8117425.59  1147.5 17568.1  1145.117649.12 1144.43
 17682.1    114417710.46 1144.2617771.01  1145.217778.25 1145.3117792.86 1145.15
17804.62  1145.217817.29  1145.1 17852.1 1144.9817869.04 1144.8817987.97 1145.36
 18006.3  1145.718056.03 1146.1818068.08 1145.9318098.69 1146.5618107.36 1146.63
18142.42  1145.718202.88 1144.1618218.04 1144.5218233.08 1145.3518252.18 1145.25
 18278.9  1145.318290.75 1145.4518340.71 1145.9618372.38  1145.718379.92 1145.53
18409.63  1146.318413.87 1146.2918430.47 1145.1818457.38 1145.0518514.13 1144.57
18547.44    114518575.72 1145.1618655.55  1145.418750.49 1145.4418839.08 1144.51
 18847.3  1144.318925.78 1141.8419006.31 1143.6819012.55 1143.7919121.56 1145.48
19156.79    114519203.49 1146.0219209.43 1146.3419219.89 1146.3819234.21 1146.33
19241.65  1147.119268.87 1147.9919272.29 1147.9719289.79 1150.2519300.47 1154.06
19315.85  1159.119322.74 1156.4619341.28 1149.8619361.08 1149.4319367.81 1149.26
19378.01  1149.519399.76 1149.5319414.12 1149.7719415.39  1149.719451.58 1138.81
 19454.2  1137.919501.23 1151.1519510.31 1154.0819515.25  1152.719522.24 1151.84
   19532  1151.219539.77 1147.8819547.51  1145.919556.05 1144.17 19561.2 1141.76
19575.95  1134.219608.44 1130.73   19637 1126.5319664.14    112619716.23 1126.18
19735.51  1126.219805.41 1126.3419854.78 1126.2319862.41 1126.2419977.89 1125.59
   19988  1125.620055.71 1125.5720098.15 1125.8920118.29 1125.4620225.13 1126.19
20246.76  1126.320256.27 1126.1120377.74 1124.5820386.58 1125.4320451.67    1132
20465.75  1138.520490.53 1148.3420493.76 1149.9420502.77 1150.2120505.34 1151.16
20515.14  1151.320526.39  1151.220530.89 1151.2520537.96    115120557.56 1150.15
 20577.7  1150.1 20612.4 1148.9920650.93 1150.9220676.41 1152.4220699.12 1147.44
20720.21  1143.7 20762.3 1144.7220828.37 1145.5220830.49 1145.6420878.51 1145.14
20899.15    114520915.75  1144.320933.85 1142.5120938.75 1142.3520943.08 1141.87
20946.54    1143 20949.2 1143.0520955.72 1146.9220979.74 1153.8221012.55 1164.51
21027.23  1164.521059.64 1164.5821097.75 1151.75 21122.9  1143.621126.93 1143.42
21131.64  1141.121138.96 1141.4821158.51 1134.1421211.22 1134.05 21230.9 1140.88
21249.19  1141.7 21275.9 1150.2321278.43 1150.9921287.42    115121297.37 1149.81
21321.46  1148.5 21328.5 1143.8621330.79  1142.521351.03 1141.66 21363.9 1141.47
21393.58  1141.921405.26 1141.3121438.19 1141.29 21452.4 1141.3521473.13 1141.81
21484.79  1145.4 21494.9 1148.1921509.25 1148.8521523.37 1149.9721530.92 1145.09
21541.36  1138.521588.15 1139.0721600.99 1144.8421630.49 1145.3621652.18 1145.66
21693.37  1145.921699.87 1145.9421757.41  1147.221786.74  1147.821819.64 1148.51
21823.23  1148.421876.31 1147.9821940.69 1150.4721968.32 1151.6621985.13 1153.34
21989.98  1154.122011.31 1154.5622029.38 1154.7822035.21  1152.322042.51 1148.88
22067.57  1152.922071.58 1152.8822102.57 1153.0922111.37 1153.5522128.28 1154.08
 22141.3  1159.122153.18 1163.8722186.69 1177.0722190.01 1177.08

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14558.26    .03519510.31    .03520515.14    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19510.3120515.14              480  495.84     550              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14558.2619510.31 1154.0820515.1422190.01  1151.3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.06

INPUT
Description: Upstream face of Preist Rd Bridge
Station Elevation Data     num=      34
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
   18820     1144   19040     1148   19210     1152 19541.7 1156.02 19541.8 1149.07
 19541.9   1148.5 19555.9 1148.27 19568.6 1138.69 19576.6 1137.91 19594.4 1126.86
 19652.1   1126.1 19661.1 1124.14 19665.1 1124.14 19728.4  1122.9 19781.5 1123.99
 19785.5 1123.99 19844.6  1123.1   19903 1123.46   19963    1123 20023.2 1123.05
 20101.5   1123.6 20105.9 1125.63 20146.2  1126.4 20204.1 1126.31 20267.2  1126.5
 20327.5 1126.27 20388.2  1126.3 20452.8 1126.86 20488.2 1148.53 20494.5 1148.52
 20504.7 1148.55 20504.8  1158.3 20504.9  1165.2   21100   1180

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18820    .035 19541.8    .035 20504.8    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19541.8 20504.8             176.4   176.4   176.4              .1       .3
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Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18820 19541.8 1149.07 20504.8   21100  1158.3

BRIDGE                  RIVER: Salt River
REACH: Reach 4             RS: 220.05

INPUT
Description: Priest Road
Distance from Upstream XS =       0
Deck/Roadway Width        =     105
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18820    1144    1144   19040    1148    1148   19210    1152    1152
 19541.7 1156.02 1156.02 19541.7 1156.02 1149.07 19661.1 1157.26 1150.31
 19781.5 1158.44 1151.49   19903 1159.65  1152.7 20023.2 1160.89 1153.94
 20142.2  1162.1 1155.11 20263.2 1163.32 1156.37 20384.2 1164.33  1157.4
 20504.7  1165.2 1158.25

Upstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18820    1144   19040    1148   19210    1152 19541.7 1156.02 19541.8 1149.07
 19541.9  1148.5 19555.9 1148.27 19568.6 1138.69 19576.6 1137.91 19594.4 1126.86
 19652.1  1126.1 19661.1 1124.14 19665.1 1124.14 19728.4  1122.9 19781.5 1123.99
 19785.5 1123.99 19844.6  1123.1   19903 1123.46   19963    1123 20023.2 1123.05
 20101.5  1123.6 20105.9 1125.63 20146.2  1126.4 20204.1 1126.31 20267.2  1126.5
 20327.5 1126.27 20388.2  1126.3 20452.8 1126.86 20488.2 1148.53 20494.5 1148.52
 20504.7 1148.55 20504.8  1158.3 20504.9  1165.2   21100    1180

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18820    .035 19541.8    .035 20504.8    .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
       19541.8 20504.8             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18820 19541.8 1149.07 20504.8   21100  1158.3

Downstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18820    1144    1144   19040    1148    1148   19210    1152    1152
 19541.7 1156.02 1156.02 19541.7 1156.02 1149.07 19661.1 1157.26 1150.31
 19781.5 1158.44 1151.49   19903 1159.65  1152.7 20023.2 1160.89 1153.94
 20142.2  1162.1 1155.11 20263.2 1163.32 1156.37 20384.2 1164.33  1157.4
 20504.7  1165.2 1158.25

Downstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18820    1144   19040    1148   19210    1152 19541.7 1156.02 19541.8 1149.07
 19541.9  1148.5 19555.9 1148.27 19568.6 1138.69 19576.6 1137.91 19594.4 1126.86
 19652.1  1126.1 19661.1 1124.14 19665.1 1124.14 19728.4  1122.9 19781.5 1123.99
 19785.5 1123.99 19844.6  1123.1   19903 1123.46   19963    1123 20023.2 1123.05
 20101.5  1123.6 20105.9 1125.63 20146.2  1126.4 20204.1 1126.31 20267.2  1126.5
 20327.5 1126.27 20388.2  1126.3 20452.8 1126.86 20488.2 1148.53 20494.5 1148.52
 20504.7 1148.55 20504.8  1158.3 20504.9  1165.2   21100    1180

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18820    .035 19541.8    .035 20504.8    .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
       19541.8 20504.8             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
```

```
   18820 19541.8 1149.07 20504.8   21100  1158.3

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  7

Pier Data
Pier Station     Upstream= 19663.1    Downstream= 19663.1
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1151
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1151

Pier Data
Pier Station     Upstream= 19783.5    Downstream= 19783.5
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1152
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1152

Pier Data
Pier Station     Upstream=   19905    Downstream=   19905
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1153
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1153

Pier Data
Pier Station     Upstream= 20025.2    Downstream= 20025.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1154
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1154

Pier Data
Pier Station     Upstream= 20144.2    Downstream= 20144.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1156
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1156

Pier Data
Pier Station     Upstream= 20265.2    Downstream= 20265.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1157
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1157

Pier Data
Pier Station     Upstream= 20386.2    Downstream= 20386.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1158
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Downstream      num=        2
    Width    Elev     Width    Elev
       4     1126        4     1158

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 220.03

INPUT
Description: Downstream face of Preist Rd Bridge
Station Elevation Data     num=       34
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
   18820     1144    19040     1148    19210     1152  19541.7  1156.02  19541.8  1149.07
 19541.9   1148.5  19555.9  1148.27  19568.6  1138.69  19576.6  1137.91  19594.4  1126.86
 19652.1   1126.1  19661.1  1124.14  19665.1  1124.14  19728.4   1122.9  19781.5  1123.99
 19785.5  1123.99  19844.6   1123.1    19903  1123.46    19963     1123  20023.2  1123.05
 20101.5   1123.6  20105.9  1125.63  20146.2   1126.4  20204.1  1126.31  20267.2   1126.5
 20327.5  1126.27  20388.2   1126.3  20452.8  1126.86  20488.2  1148.53  20494.5  1148.52
 20504.7  1148.55  20504.8   1158.3  20504.9   1165.2    21100     1180

Manning's n Values         num=        3
     Sta    n Val      Sta    n Val      Sta    n Val
   18820     .035  19541.8     .035  20504.8     .035

Bank Sta: Left    Right     Lengths: Left Channel    Right      Coeff Contr.    Expan.
       19541.8 20504.8                 840    799.9     720              .1        .3
Ineffective Flow      num=        2
   Sta L    Sta R     Elev    Sta L    Sta R     Elev
   18820  19541.8  1149.07  20504.8    21100   1158.3

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 219.88

INPUT
Description:
Station Elevation Data     num=      261
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
14514.07     1139  14534.1  1138.8514545.54  1138.9814568.07   1140.1  14616.5  1140.32
 14716.7     114114745.12  1140.8614840.33  1140.2214862.85  1139.8514909.77  1139.33
14931.77   1140.714961.51   1141.914973.84  1141.5414992.46  1141.1915030.45  1141.06
15047.06   1140.915059.77  1141.3515078.45  1141.7915107.01   1139.96  15123.4  1140.12
15199.13   1140.215217.64   1140.415301.85  1142.5415323.64  1141.0115345.17  1140.24
15380.24   1140.315441.95  1139.8815464.09  1139.7615548.89  1141.7815563.61  1142.06
15578.38   1140.715601.21  1140.0615608.94  1140.0515634.45   1140.815649.04  1140.83
15719.22   1141.115815.93  1141.6315837.84  1140.6315860.05  1140.1515893.02  1140.86
15939.51   1140.715978.38  1140.66 16064.4  1143.1516070.41  1143.2216095.29  1141.64
**16115.96  1141.316119.03  1141.416134.54  1141.5716146.86  1141.8916169.82  1142.09**
**16236.82  1143.516306.63  1144.916330.96  1145.5516356.32  1145.0416390.25   1144.9**
16418.37   1146.116499.77  1146.4116543.51  1146.5816545.29  1146.4416607.82  1144.66
16624.62   1144.816876.38  1145.0516916.17  1145.3116938.38  1145.3816953.95  1145.54
16977.85   1144.516984.79   1144.217015.75  1144.0517019.85  1144.4117024.96  1143.93
 17076.6   1143.617080.54   1143.817109.82  1143.5817203.42   1142.58  17223.3  1142.22
17320.75   1142.517338.45  1142.89 17457.6  1141.9117572.79  1141.5117582.93  1141.38
17588.97   1141.517626.53  1141.14 17630.9  1142.0117642.89  1143.3117665.29  1142.28
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17673.37    114217690.74 1141.9117757.85 1141.6317933.69 1140.81 18090.1 1139.93
18246.31  1140.218269.96 1140.2318307.92 1140.4718469.32 1140.3818475.89 1140.37
18530.05  1136.118574.27 1136.1918616.16 1136.3218617.38 1136.0718669.45  1135.5
18722.74  1135.618758.73 1136.0818801.35  1134.818813.29 1134.5418825.95 1134.44
18948.97  1133.119124.49 1134.1719150.71  1134.319175.81 1134.2619242.66 1133.74
19280.61  1132.319300.45 1131.8419312.63 1131.1619339.53 1130.9919367.29 1130.67
19377.92  1131.719385.17 1132.6819400.47 1133.2319437.39 1135.05 19458.1 1136.05
19516.39    1148 19523.8  1146.619527.76 1145.4119551.27 1140.2319567.62 1136.33
19583.83  1126.819590.67 1122.2919682.49  1119.519806.82 1121.44 19858.6 1121.91
19875.84  1122.219937.15 1123.8620067.48 1122.2620073.13 1122.35 20196.5  1124.7
 20230.3  1124.9 20327.1 1125.5120344.25 1125.1420441.63 1124.5120459.19  1124.5
20462.04  1124.8 20473.1 1132.2220494.93 1145.8320511.31 1147.1320520.67 1147.25
20532.47    114320552.33 1139.5420569.55 1144.1120630.63 1158.5220644.87 1158.83
20659.44  1158.920689.08 1158.5720709.23 1158.6120742.28 1150.78   20786 1140.17
20820.66  1139.5 20838.8 1133.3520851.83 1135.7120873.02 1138.6220904.34 1139.63
20914.53  1139.9 20930.3 1137.2420954.89 1142.7820967.13 1145.6921028.23 1143.73
21038.71  1143.321109.85  1143.721125.63 1139.4921156.43 1131.7721173.08 1134.84
21202.67  1140.221223.83 1140.4121235.54 1140.6821249.54 1140.6721256.44 1139.08
21276.33  1134.721309.24 1141.7421343.49 1149.2821373.03 1150.3921382.21 1150.93
21405.52  1145.321425.87 1140.3621435.22 1142.9821447.44 1146.1221457.15 1145.21
21464.44    114521476.64  1148.621498.65 1140.9221504.19 1139.1421507.27 1139.27
 21525.4  1140.621536.85 1145.3321548.26 1150.5621562.18 1151.0821573.25 1151.75
 21581.8    114421586.19 1140.4221590.74 1137.0321614.98 1137.7421621.41  1144.2
21627.18  1149.221647.99  1149.8 21676.5 1150.3921698.78 1150.07 21704.8 1149.87
 21714.9  1149.921718.82 1149.7721741.72 1150.2721756.99 1151.8521761.84 1152.29
21770.32  1152.321786.83 1151.7721798.92 1151.1621812.42 1151.1921825.82 1150.99
21841.46  1151.2 21860.1  1150.721867.61 1153.49 21875.5 1156.1121881.43 1153.28
21885.28  1151.321896.51 1150.9421900.43 1152.4121904.66  1153.521912.81 1153.49
21913.99  1153.121919.15  1152.321957.76 1150.7221960.81 1150.53 22016.2 1147.91
22029.46  1147.522127.03 1149.3122174.32 1150.1222250.23 1150.3622289.13  1150.5
22314.04  1150.822475.21 1153.3722608.07 1155.77 22672.8 1156.7422834.76    1159
22874.27  1159.322935.54  1159.822958.25 1160.0923019.14 1167.4423077.95 1168.76
23103.21  1168.623119.43 1169.0623164.87 1169.3323224.52 1170.5523231.74 1170.44
23235.16  1170.923266.86 1171.7123290.08 1172.1123294.62 1172.4523314.61 1171.39
23332.24  1171.523335.15 1171.4723373.54 1177.4523376.52 1178.07 23468.6  1178.9
23524.62  1178.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14514.07    .03519516.39    .03520520.67    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19516.3920520.67               460   484.7     520              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14514.0719516.39    114820520.6723524.62 1147.25

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.79

INPUT
Description:
Station Elevation Data    num=     223
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14407.68  1139.214468.83 1139.8214485.33 1139.93   14518 1139.8914548.99 1139.18
14620.03  1139.314668.12 1139.7514706.45 1139.75 14832.3 1138.32 14892.5 1138.09
14904.61  1138.414928.04 1139.2714997.05  1138.815025.99 1136.9215055.19 1137.74
 15090.5  1138.515126.36  1138.715276.76 1139.2915340.82 1138.8715451.12  1139.3
15529.41  1139.415612.27 1139.3515725.83 1139.7115741.08 1140.0815775.12 1140.19
15873.79  1141.115910.11 1141.2616021.21 1142.5916027.75 1142.6516074.81 1142.62
16203.28  1142.416247.36 1143.1616274.57  1144.116342.63  1144.716451.28 1144.81
16487.53  1144.7 16516.2 1144.8916536.79 1144.2516570.44 1145.2216584.21 1144.78
16632.47  1144.416744.74 1143.9216831.02 1144.4116889.17 1144.8416901.11 1144.25
 16918.3  1143.216943.53 1142.6816949.05 1142.4916952.26 1142.8116973.17 1144.37
17009.58  1142.617012.25 1142.5817042.77 1142.6217159.75 1142.8817191.74 1142.05
17223.52    114017234.95 1139.8317330.48 1139.5117360.77 1139.3717365.29 1139.49
 17445.7  1142.117479.75 1141.5517492.77 1141.4917510.85  1141.817541.66 1142.67
17553.26  1141.217563.12 1140.3817572.19 1140.3817574.51 1140.2717590.06 1142.39
17593.85  1142.2 17613.7 1140.4117649.97 1140.0617656.94 1140.1817712.79 1140.21
17932.29  1139.9 17938.1 1139.86 18254.9 1138.88 18262.6 1138.8218381.92 1137.77
18518.03  1136.2 18535.5 1135.61   18599 1133.35 18634.5 1133.9718668.91 1134.64
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18727.87  1134.518773.84 1134.0518956.07 1133.5618965.29 1133.44 19059.1  1132.9
19149.42  1133.919199.61 1132.9119285.53 1130.6719300.58 1130.7119327.48  1130.9
19342.87  1132.319349.94 1132.8119375.09 1133.5419402.26 1134.4219422.93 1134.51
19423.57  1134.719466.98 1147.5119474.09 1146.3619481.23 1144.9219507.83 1138.04
19514.17    113619520.98 1131.6219534.67 1122.9819592.24 1120.5519613.26 1119.63
19623.23  1119.319688.14 1120.2319747.16 1121.3319877.07  1122.519969.89  1120.9
20006.98  1120.320045.82 1121.0820135.59 1122.5320261.98 1121.5920265.76  1121.6
20295.54  1122.620397.76 1126.4220419.57 1124.74 20440.4 1133.4120472.23 1147.56
20487.01  1145.720493.02 1145.2820504.32 1143.7720510.94 1142.2720531.87 1138.63
20596.65  1152.720619.85 1157.4520637.69 1159.2620644.03 1159.7920670.81 1161.71
20683.95  1159.720702.44 1157.3620720.83 1150.4920759.31 1140.3120765.94 1139.93
20789.25  1140.220811.57 1140.6220865.32 1141.1120911.37 1158.9320922.09 1158.31
20932.71    115920934.31 1158.7820968.75 1152.6221013.76 1144.3221015.69 1144.31
 21022.9  1143.121061.13 1154.7121124.06 1152.7221135.53 1154.6221141.27 1155.41
21152.79    1155 21206.9 1153.2421239.23 1145.1821269.78 1140.3821302.85  1132.7
21322.67  1134.821350.48 1138.3921372.98 1139.9421392.52 1142.1321424.09 1142.33
21440.91  1142.721452.58 1144.8121463.84  1145.121485.26 1145.44 21502.6  1143.2
21531.89  1138.721567.05 1130.0121573.87 1128.1321581.65  1128.2 21617.3 1128.89
 21677.8    112921696.74 1134.5721704.97 1135.9521714.07 1137.8421721.93 1138.03
21766.84  1148.121770.48 1148.9121794.34 1149.1921802.49 1149.1321828.42 1149.17
21837.25    114421853.31 1137.0321870.03 1137.7821879.62 1143.2621892.74 1147.42
 21907.6  1147.621916.48 1148.1521934.61 1150.2321941.35 1153.1721953.82 1152.82
21966.37  1149.821979.15 1150.1321998.44  1152.2 22030.3 1150.0522129.14 1150.78
22161.16  1151.122177.76  1151.422249.65 1151.8622358.89 1153.65 22474.2 1154.86
22489.84    115522654.62 1155.9222702.02 1155.8522777.01 1156.42 22806.8 1156.72
22838.75  1158.322897.88  1162.222928.01 1163.1622940.21 1163.2122970.64 1163.66
22986.06  1163.823007.96 1163.52   23070 1163.8923246.96 1167.5623338.09 1168.22
23382.44  1168.723389.54 1168.2823399.66 1167.31

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14407.68    .03519466.98    .03520472.23    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19466.9820472.23              420  490.52     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14407.6819466.98 1147.5120472.2323399.66 1147.56

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.70

INPUT
Description:
Station Elevation Data    num=     215
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14633.62  1140.414764.84 1139.6614844.88 1138.8314895.18  1138.214947.92 1139.47
14963.26  1139.814966.51 1139.6114991.08 1137.8315049.71 1138.8215058.26 1138.83
 15086.6  1137.815264.28 1140.2115343.48 1140.9315407.52  1140.715507.95 1139.72
15562.35  1140.1 15691.2 1140.2815750.02 1140.5615864.61 1140.6915930.64 1140.63
16007.91    114116038.86  1140.916078.48 1141.21 16114.7 1143.4716117.13 1143.72
16132.24  1143.816319.58 1144.1116329.22 1144.7816335.73 1144.8216362.18 1144.66
16407.68  1144.816486.45 1144.5416566.52 1145.1616580.76 1145.0516604.06 1143.08
16634.35  1144.616658.71 1144.9716665.82  1145.216684.38 1144.7116816.17  1142.9
16816.85    114316945.54 1143.75   16958 1143.85 16965.7 1143.5316989.86 1142.72
17017.43  1142.217023.42 1143.57   17028 1144.3717070.17 1142.5517071.47 1142.53
17250.94  1143.217259.15 1142.5517296.62 1139.9717355.46 1140.5417369.68 1140.64
17502.59  1141.117532.54 1140.9417570.73  1140.917608.36 1139.8317626.76 1138.78
17637.22  1138.517654.23 1140.8517673.44  1139.217682.64 1139.17 17842.4 1139.03
18023.52  1139.5   18102 1139.6218204.04 1139.3318279.06 1139.1418308.99 1138.59
18495.46  1136.318551.03 1135.6918588.44 1133.9518714.96 1128.2218826.61 1128.03
18839.02  1128.118938.73 1128.52 19017.9 1128.6319037.93 1128.9919100.52 1128.87
19215.21  1128.719248.29 1128.8219280.17 1128.3819285.54 1128.3919377.57 1128.99
19395.02  1129.119399.73 1129.4219421.42 1131.0719429.68 1131.5419452.68 1133.19
19491.29  1141.619513.76 1146.6119524.58 1142.8219527.35 1142.2119559.25 1136.62
19567.04  1134.6 19575.1 1128.5519581.75 1122.9919637.42 1122.6719690.95  1122.4
 19797.6  1121.419814.69 1121.2519944.41 1122.6719984.25 1121.3720074.13 1118.48
20130.98    111920202.55 1119.7920273.94 1117.5720313.19 1116.1320332.53 1115.81
20402.51  1119.220464.33 1122.1320480.18 1122.2420528.41 1140.9920544.81 1147.24
20549.49  1144.320565.63 1141.6120590.33 1140.7220662.36 1137.1320667.43 1136.89
20671.64  1135.720680.37 1133.5520690.16  1132.8 20707.5 1138.3320711.62 1139.31
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20731.52  1141.720768.16 1143.3820787.42 1141.6920798.95 1140.1220809.29 1138.44
 20869.2  1140.220902.92 1135.4520947.18 1134.4920962.23 1131.89 20977.7 1128.91
20991.82  1132.421009.72 1135.7721050.94 1133.8521052.85 1133.8121105.52 1135.74
 21109.2  1135.821221.24    113521227.41 1134.8521230.59    113521252.61 1135.61
 21276.6  1135.421303.51 1135.3621333.85 1136.77 21360.7 1137.0121389.07 1138.72
21409.47  1137.321419.54 1137.7921465.27 1139.8721480.19 1138.1721506.69 1150.76
21546.35  1168.721550.48 1169.9721604.24  1167.321613.96 1166.8721616.47 1166.63
 21645.1  1163.321671.54 1163.5121686.93 1163.0721711.68 1162.5421739.31 1154.45
21794.52  1140.921869.82 1128.8221877.11 1128.89 21907.6  1129.621954.37 1143.66
21956.14  1144.421959.45 1144.43 21987.8 1141.7922006.39 1147.7522022.35 1151.08
22052.98  1150.322078.71 1149.3422092.62 1142.1922103.59 1136.1922124.51 1136.06
22138.52  1144.322141.96 1147.6922156.81 1149.3122167.82 1149.4322200.31 1153.08
22222.88  1151.422229.35 1150.6322241.45 1150.9822343.53 1154.4922382.64 1154.34
22464.86  1152.822498.09 1153.02 22580.2 1152.4122599.65 1152.7522733.11    1156
22805.72  1157.522816.51 1157.7922822.49 1157.6822872.27 1158.8722908.77 1159.42
22937.69  1160.222950.05 1160.2522960.03 1161.3922979.67 1162.5323004.16 1164.17
23009.95  1164.823114.11 1165.3223142.08 1165.5823151.18 1165.5523172.79  1165.8
23290.13  1165.923336.65 1165.86 23397.6  1166.723466.81 1167.6723469.22 1167.72

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14633.62    .03519513.76    .03520544.81    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19513.7620544.81              460  477.05     540              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14633.6219513.76 1146.6120544.8123469.22 1147.24

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.61

INPUT
Description:
Station Elevation Data    num=     247
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14651.85    113914697.71 1139.0414706.79 1139.2614797.41 1139.2514832.95  1139.2
14844.59  1139.614933.07 1139.2814966.85  1138.8   14984 1138.8215010.87 1138.63
15043.23  1138.615099.91 1138.9115111.66 1138.8915134.51 1137.9215148.37 1137.92
15170.52  1139.215175.81 1139.4815229.08 1140.1515270.91 1139.9215321.35 1138.54
15375.73  1138.715408.15 1139.8315518.03 1140.66 15549.8  1140.815558.72 1140.49
   15632  1141.515661.19 1142.4115682.16 1142.2915689.74 1142.5915770.19 1141.99
15835.24  1141.415897.66  1140.4 15980.3 1141.5216082.87 1141.2816109.07 1142.53
 16147.7  1142.216164.41 1142.0816230.45 1141.9416252.58 1141.7816272.83 1141.24
16331.44  1142.716387.34 1141.6716436.59 1141.59 16504.6 1141.9116621.43  1142.3
16634.06  1142.416667.37 1142.9816680.81 1143.2616687.07 1143.5316701.14 1143.11
16713.57  1143.116747.97 1144.2616848.16 1142.4416890.73 1141.8916912.08 1142.01
17022.75  1142.317052.97 1141.5717071.64 1141.2217081.48 1141.2817101.73  1141.8
17111.26  1143.217137.12 1142.3617146.81 1142.3717267.43 1141.9417308.32 1143.04
17345.72  1140.617355.11  1139.917473.15 1139.0917558.32 1139.8817564.58 1139.88
 17633.8  1139.617650.52 1138.62 17664.3 1137.9517680.79 1137.3217692.86 1137.23
17708.67  1139.817728.45 1138.1117754.54 1137.9917807.05 1138.0617893.02 1137.96
17960.54  1138.918084.72 1139.0518124.45 1139.3118170.64 1139.3618306.01 1139.48
18513.36    113618525.09 1135.4918583.09 1132.5918644.56 1131.7118654.84  1131.2
18688.32  1130.218706.18  1130.118794.11 1129.9918840.37 1129.3418887.46 1129.98
18906.22    113018996.02 1129.8419017.85 1130.2819115.34 1130.2519143.84 1129.67
19176.75  1130.419191.32 1130.7419203.48 1131.6619219.44 1132.6819254.19 1133.06
19278.79  1133.119306.96 1132.4419356.04 1132.4719384.96 1131.2519394.54 1130.47
19402.54  1130.1   19406 1129.5319422.11 1130.32 19422.9 1131.1519452.59 1130.78
19474.18  1130.519479.79 1131.7119521.95 1141.9819538.73    114319567.21 1132.83
19578.53  1133.719586.01 1126.9319591.37 1123.0319602.42 1122.5619639.62 1122.19
 19707.4    1122 19754.2 1121.5219835.67 1120.8619908.35 1120.4419950.69 1119.77
20036.32  1118.920140.17 1116.92 20150.7 1116.66 20252.9 1115.7320301.64 1115.21
20353.37  1113.520368.53 1112.3920394.53 1112.4220422.02 1114.24   20533 1122.59
20538.69  1123.720567.99 1144.3920580.96 1144.9320583.69  1144.820590.96 1144.01
 20610.7  1141.320627.36 1137.2520651.52 1136.4920666.08 1136.3720680.19 1136.77
20701.25    113620726.85 1130.6620736.71 1131.1620750.66 1137.8920758.46 1137.99
20777.34  1138.620826.99 1139.6820833.14 1139.7820839.92 1138.7620884.09 1131.99
20911.21  1132.320923.05 1132.4620996.31 1131.9121019.84 1131.3821081.49 1131.24
21118.96  1136.121149.81 1140.1621211.27 1140.2421225.22 1139.7821242.25 1137.36
21291.23    112921297.81  1128.821317.56 1127.8921350.78 1125.1521363.69 1125.19
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21393.12  1125.521440.76  1125.6 21481.2 1129.1721521.37 1131.2921550.21 1132.19
21583.63  1131.121639.47 1128.3121672.65 1126.5121687.56 1126.7321734.61 1126.85
21739.13  1127.121789.72 1128.7121824.55 1128.3421840.03 1128.8721848.07 1128.71
21859.98  1128.721864.54 1128.5421904.22 1128.7121949.34 1128.6521963.01 1130.96
22011.99  1135.422017.42 1136.9822038.21 1141.8522075.75 1150.3722107.68 1155.01
22114.05  1154.422129.53 1153.5422138.87 1150.2222145.72 1149.0722175.39 1149.55
22194.88  1149.922212.13  1139.722217.47 1136.4722241.39 1136.4722243.16 1137.31
22256.99  1145.122272.64 1146.1322275.06 1147.2422276.96 1147.1622290.77 1144.06
 22302.5  1144.522334.77 1145.6922344.24  1146.622351.31 1148.6622385.92 1154.54
22400.67  1153.222413.67 1151.8922423.88 1154.03   22433 1157.7622450.45  1154.1
22462.91  1151.622469.36 1154.7622484.16 1164.5322493.46 1168.4522501.87 1170.86
22504.27  1171.9 22524.4 1178.5822529.11 1177.8522539.59 1176.7622577.15 1166.66
22590.78  1163.6 22595.1 1162.9422601.97 1159.9422605.98 1159.8822666.91 1156.76
22700.56  1156.522804.52 1154.99 22876.8 1155.0722934.19 1156.52 22999.2 1156.68
23150.41  1183.423163.78 1183.43

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14651.85    .03519538.73    .03520567.99    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19538.7320567.99               470  499.49     550              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14651.8519538.73    114320567.9923163.78 1144.39

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.51

INPUT
Description:
Station Elevation Data    num=     242
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 14907.1  1137.714918.73 1137.5614943.68  1136.914991.19 1137.3315029.11 1136.79
15038.26  1137.415056.17 1137.4915077.68 1136.7415084.36 1136.3615145.62 1137.65
15159.83  1138.115191.79 1138.62 15219.5 1138.3115314.53 1137.8715372.32 1137.67
15419.74  1137.9 15530.8 1137.8915575.07 1138.6315616.57 1139.5415715.85 1139.83
15727.73  1139.915781.62 1140.1515840.29 1140.3315854.62 1140.2415893.97 1140.25
15961.21  1140.416003.39 1140.32 16029.7 1142.2516075.73 1142.3116283.73 1142.46
16362.84  1142.816386.02 1142.7316472.11 1142.65 16477.3 1142.4616543.73 1142.86
16653.27  1142.816670.33 1142.6816703.08 1141.8916716.48 1141.9816736.38 1140.55
16769.06  1140.416801.48 1141.57 16866.3 1141.5716886.73  1141.516948.97 1141.02
17014.66  1140.917033.21 1140.6217052.23 1140.4417116.76 1139.5417168.51 1138.92
17181.51  1138.8 17196.8 1138.89 17299.4 1138.9917325.94 1138.8617385.87 1138.88
17413.69  1138.817461.57 1138.1417509.77 1137.9517545.89 1137.6817558.05 1137.47
17599.64  1136.917623.36  1137.117657.94 1136.8917675.27 1136.6417692.51 1136.22
17714.36  1136.217724.37 1135.8317742.56 1137.4317752.02 1136.6417767.46 1136.54
17774.03  1136.817783.01 1134.9817787.08 1133.8517793.02 1134.85 17805.5 1136.75
17828.82  1136.617884.99 1135.8217895.95  1135.817940.12 1136.2517951.48 1136.31
17977.27  1135.7   17988 1135.2118036.31 1135.1218041.95 1135.2618062.82 1135.39
18123.49  1135.818159.15 1135.6118203.12 1135.6218239.59 1135.77 18296.3 1135.65
18329.98  1135.618390.66 1135.5818422.21 1135.3918476.58 1135.1918517.78 1135.18
18538.38  1135.218544.05 1135.0818639.41 1133.5118667.57 1132.9218700.21 1133.48
18714.34  1133.418716.44 1133.1618733.91 1130.6318744.18 1131.4818768.41 1133.61
18843.86  1150.318891.18 1160.5818941.06 1161.9818957.81 1162.1219011.57 1181.38
19169.29  1180.219211.07    118019230.82 1180.2419273.33    118119315.33 1181.79
19356.71  1169.719383.56 1161.6819385.62  1161.5 19429.2 1158.9219434.44 1158.89
19478.03  1145.419488.25 1142.3119493.28 1140.5919501.81 1142.0819510.14 1141.72
19517.38  1141.6 19542.2 1132.64 19548.7  1130.519559.57 1131.4119570.41 1123.16
19581.96  1121.919595.79 1121.31 19725.6 1121.4719755.91 1121.6919812.57 1121.45
19889.13  1120.719969.48 1119.3320064.29 1117.4520129.14 1116.0520175.09 1115.73
20184.45  1115.520262.78 1112.9720304.95  1112.120375.67 1111.6420433.28 1112.87
20459.44  1113.620487.19 1115.0320510.33 1116.6320522.25 1117.2620554.82 1137.43
20564.57  1144.120581.79 1143.4720589.29 1141.9320590.28 1141.4320616.53 1139.57
20622.56  1139.2 20683.6 1138.1920692.96 1137.8520705.62 1136.820732.71 1132.48
   20735  1132.420740.07 1132.8720748.73 1135.9220753.07 1137.6120755.82 1138.25
20763.22   113820775.75 1137.6320812.37 1139.3120825.87 1139.8720839.04 1137.72
20866.18  1133.5 20882.4 1133.2620889.04 1133.37 20922.3 1137.6620933.37 1138.59
20961.26  1138.8 20989.1 1138.3320997.01 1137.6621014.79 1133.9621019.19 1134.13
21021.53  1135.321064.97 1129.99 21128.4 1128.5121138.81 1128.3221180.03 1126.32
21212.36  1126.721232.49 1126.48 21238.9 1126.2721265.92 1125.9321350.77 1126.01
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21412.28  1126.121431.15  1126.221465.26 1126.0321542.92 1127.5621549.51 1127.62
21567.64  1127.121620.01 1125.9221642.33 1125.4921694.68 1125.7821703.12 1126.65
21734.34  1127.721742.84 1128.18 21778.7    112821854.71 1126.0921911.52 1136.78
   21941  1142.721967.33 1142.9122014.55  1143.422037.84 1143.2822067.55 1143.66
22085.53  1144.522100.03 1145.4422104.75 1143.3922121.49 1135.5322139.24 1135.99
22150.56  1140.922158.78 1144.3622180.45 1145.44   22223 1147.23 22227.4 1147.33
22270.04  1149.522316.45 1151.4122326.33  1151.722388.88 1151.6822435.89 1152.28
 22483.7  1153.122562.58 1154.9322591.21 1155.5622600.01 1156.2122604.66 1156.84
22623.42  1159.622642.13 1156.9122666.24 1158.4322703.02 1161.0722911.95 1162.55
23047.74  1163.6 23098.1 1170.3523103.39 1170.6523146.48 1170.0823170.95 1170.08
23186.03  1170.223222.21 1170.81

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14907.1    .03519517.38    .03520564.57    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19517.3820564.57              450  497.52     570             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14907.119517.38  1141.620564.5723222.21  1144.1

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.42

INPUT
Description:
Station Elevation Data    num=     283
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14620.63  1134.2 14673.5 1134.5814680.49 1134.5914707.56 1134.8114736.04 1134.79
14744.71  1134.714800.61 1134.9614852.42 1135.3614872.53 1135.3414996.62 1136.02
15024.81    113515040.07 1134.9515072.78 1135.3415104.52 1135.2815154.61 1136.63
15165.85  1136.915189.91 1138.6215193.62 1137.7815202.22 1134.6315208.04  1134.7
15230.27  1135.6 15279.9 1136.4115359.95  1138.115389.72  1138.115395.67 1137.87
15416.25  1137.315441.94 1137.3615550.39 1137.8415645.01  1138.215651.61 1138.28
15660.76  1138.915673.51 1139.0115715.64 1139.3215799.73 1139.6615841.82 1139.75
15849.26  1139.316021.57 1139.0416032.03 1139.0916042.84    113916062.45 1138.95
16064.41  1139.116223.75 1141.6116265.53 1141.8616287.67 1141.7116449.11 1141.24
 16462.9  1141.216484.58  1141.5 16497.9 1141.99   16504 1141.1916513.84 1141.32
16535.01  1142.116564.67 1143.5116604.72 1143.4916672.76 1142.6716718.88 1142.56
16728.56  1142.316754.76 1139.6616760.38 1139.1816766.02 1139.2116791.74 1139.76
16802.67  1140.316809.73  1140.716853.31 1141.09 16866.4 1141.5816896.15 1140.65
 16991.5  1140.617013.35  1140.6 17024.6 1141.7617043.95 1141.6517087.99 1141.09
 17208.6  1141.517267.12 1141.4917365.55 1140.0817436.94 1139.4317452.76  1138.9
17466.98  1138.517497.46  1138.117509.21 1139.7517513.99 1138.9717519.24  1138.8
17531.44  1137.817538.37 1137.4817552.39 1137.1617562.24 1136.6417576.82 1135.79
17610.19    113617630.25 1136.3317662.06  1137.817672.48  1138.217695.69 1138.05
17714.32  1139.717717.99 1140.2317745.18 1138.9817754.43 1138.6117769.56 1141.21
17783.85    114417790.83 1142.19 17810.4 1136.6217845.26 1136.4817930.63 1135.13
17975.54  1135.117978.83 1135.2418025.92 1134.7118058.25  1134.618076.99 1134.66
18217.18  1135.718226.55 1133.3118241.01 1135.6218256.47 1135.6418279.52 1135.46
18286.14  1135.618295.02 1135.5518333.81 1132.1218340.04 1131.7118387.94 1135.18
18393.95  1135.718463.66 1136.2918499.34 1133.1618545.13 1133.6618628.93 1133.24
18656.03  1133.318678.14 1132.9818714.94 1133.0118758.06 1133.4218795.14  1133.9
18830.65  1134.5   18880 1128.2918906.58  1125.318940.59 1122.7118983.81 1122.31
19027.77    112219068.19 1122.0119132.24 1122.1819198.69 1121.9619255.29 1121.89
19282.93    112219295.93 1122.1919333.76 1122.2919352.48 1122.2519363.04 1122.92
19404.32  1129.519408.06 1130.1119449.44 1140.8919462.92 1140.8119472.78 1137.63
19494.42  1130.119504.35 1130.3219516.83 1121.3219539.04 1120.0519623.47 1120.98
19657.78  1121.119662.93 1121.2719766.98 1119.81 19812.7 1119.45   19910 1117.34
19929.43    111720002.58 1116.5320063.35 1115.0420103.33 1113.8320178.65 1112.08
20203.64  1111.920267.44 1112.0220326.95 1111.8320341.15 1112.1320358.47 1112.72
20387.52  1113.920468.61 1117.0920476.84 1117.2120495.66 1129.7220514.18 1141.84
20532.19  1142.120544.18 1142.07 20576.7 1134.0220592.21 1134.4820598.18 1133.02
20609.17  1133.720613.05 1134.1420628.23 1134.44 20637.8 1135.1820652.72 1136.85
20684.01  1135.620695.37 1136.7720707.99 1136.04 20716.2 1135.0920749.84 1137.24
20759.31  1137.420786.29 1138.8220810.01 1139.9920832.42  1139.220870.53 1137.79
20878.86  1136.520928.26 1128.47 20940.8 1128.7220962.91 1129.5420981.03  1130.3
21015.89  1131.721089.81 1134.4821093.81 1134.4621134.01    113421148.67  1133.8
21157.69  1133.321183.89 1133.3321227.68 1132.8521268.38 1132.1221273.64 1131.97
21336.46  1126.721392.95 1125.0521397.81 1124.7621407.96 1124.5821460.82  1124.5
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21471.44  1124.421512.83 1124.1821533.57 1124.1421553.12 1123.4121623.27 1124.22
21637.25  1124.621691.89 1124.6221698.28  1124.721741.53 1125.0721808.74  1125.6
21829.98  1126.821869.21 1129.3521894.88 1128.1621924.41 1126.4421938.23 1126.38
21949.98  1126.222000.57 1138.9322008.84 1141.2522012.87  1141.222064.49 1140.14
22080.36  1141.422100.73 1143.4722110.57 1143.8722133.37 1145.1222145.89 1139.12
22155.02  1135.122171.69  1134.722193.79 1144.2922211.23 1146.1122231.01 1146.26
22232.93  1146.422244.68 1146.54 22338.9 1148.3422367.96 1148.6922424.19  1149.5
22497.87  1151.422554.89 1152.6622637.92 1153.26 22674.7 1153.6622750.04 1154.03
22794.83  1157.122799.99  1157.422831.07 1159.4122855.05 1158.9722870.31 1158.88
22901.38    115922946.92 1159.6522974.31  1160.223008.94 1161.16 23025.1 1161.51
23092.92  1161.823115.83 1162.42 23147.8 1163.8823158.86 1165.5923168.54 1165.75
23183.72  1165.123195.54 1165.3723227.06 1164.5423241.21 1164.7623252.68 1164.69
23266.75  1165.623333.43 1166.79 23388.4 1168.0423423.21 1168.1423441.97 1167.96
23471.66  1167.123478.89 1168.5723509.38 1171.02 23539.8 1170.6323560.68 1171.68
23569.43  1171.423601.93 1170.3723628.07    1170

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14620.63    .03519462.92    .03520514.18    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19462.9220514.18               410  470.96     560             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14620.6319462.92 1140.8120514.1823628.07 1141.84

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.33

INPUT
Description:
Station Elevation Data    num=     258
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14841.36  1134.914851.62 1134.9214986.39 1135.6915015.71 1134.2315048.43 1132.55
15064.99  1135.615077.24 1137.3715090.55 1136.9215107.89 1135.84 15137.1  1136.5
15169.63  1137.115190.15 1138.2815199.59 1138.6415219.78 1136.0615223.87 1135.36
15243.59  1135.7   15361 1137.5315386.12 1137.4815405.99 1137.3915495.79 1137.51
15535.52  1137.615568.85 1137.3615587.44 1137.5115612.13 1137.3515647.48 1137.44
15656.66  1137.415694.61 1137.9215725.84 1137.7215731.28 1137.3115778.13 1136.69
15789.04  1136.415803.97 1137.1115947.32 1137.4215958.36 1137.4915987.54 1137.58
16219.35    113916282.77 1139.3716338.88 1139.0416423.21  1139.116549.15 1140.03
16592.29  1140.116707.93 1140.2816713.27 1139.9216735.83  1138.916737.63 1138.91
16763.34  1138.316797.85 1139.2916807.74 1139.2116836.98 1139.6316863.67 1140.18
16869.35  1140.116878.64 1140.1416942.64 1139.7817051.78 1139.7617102.12 1139.21
17127.15  1137.317133.29 1137.3417184.62 1136.9517193.09 1137.13 17194.3 1137.62
17205.76  1138.317211.37 1139.6717229.73 1139.66 17245.6 1139.7717263.96 1139.51
17304.03    113917333.74 1138.6117347.51 1138.6117381.09 1138.7517419.19 1138.53
17430.86  1138.417481.44 1137.25 17507.6 1136.8417512.96 1135.8617526.61  1134.7
17560.02    113617577.76 1136.2117583.19 1136.4517642.53 1137.15 17674.8 1136.95
17726.24  1136.417754.01  1138.817771.95 1138.6417779.81 1137.9917783.59 1137.84
 17805.2  1137.617819.74 1135.9417851.93  1135.317952.13 1134.6317978.25 1135.43
17987.86  1135.918048.27 1135.6118082.89 1135.7618091.62 1135.2418115.85 1132.38
18121.19  1130.418173.85 1132.8418204.13 1134.8718215.33 1134.7318235.15 1134.23
18245.91  1133.6 18272.8 1133.6718524.41 1132.8918554.65 1132.9818633.36 1134.09
18649.38  1133.718657.54 1134.1718734.52  1134.718736.34 1134.8118743.56 1133.61
18823.84  1122.518836.47 1121.3918886.49 1121.3219032.83 1121.3319164.54 1121.16
19273.71  1120.819316.38 1120.7319353.68 1129.46 19356.3 1130.1119387.11 1140.42
19401.15  1140.719430.58 1131.0319433.25 1130.4419440.95 1130.2819456.11 1120.51
19466.61  1119.119470.89 1118.66 19509.1 1118.0719568.12 1117.48 19622.9 1116.83
19650.25  1116.819723.26 1116.4819829.07 1115.4619902.92 1114.7120012.93 1113.82
20033.87  1113.420068.17 1113.6820220.97 1114.5620303.43 1115.97 20407.5 1117.25
20417.61  1116.820425.97 1121.5520432.73 1126.22 20441.7 1127.1420446.02    1127
20448.12  1126.420468.98 1140.1920472.46  1142.720489.35 1141.5120513.06 1134.97
20534.13  1128.820589.19 1128.8520625.02 1128.4820653.51 1130.9220708.31 1135.72
20718.59  1136.720761.09 1141.52 20808.6 1143.3620830.76 1144.0320884.38 1143.63
20943.28  1131.620945.41 1131.3620993.85 1128.9421054.83 1125.3221097.16 1124.39
   21129  1123.421157.24 1123.0721195.02 1121.7121198.85 1121.4221223.93 1120.31
21232.62  1120.321244.16 1119.7321265.72 1118.5321292.93 1119.8321308.98  1120.4
 21324.3  1119.6 21342.6 1119.2721353.11 1119.1621376.01 1119.8921408.57 1119.63
21420.04  1119.4 21551.9 1119.0321578.61 1118.9121611.11 1118.9821630.95 1118.96
21654.33  1118.921754.59 1117.2421853.36 1118.9521863.14 1118.9221865.77 1119.91
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21871.39  1121.521913.22 1132.4321950.91 1133.3821985.87 1133.9122014.52 1134.22
22035.73  1134.322065.09 1139.7822077.42 1142.2822107.86 1143.5922122.28 1143.72
22126.11  1141.822139.29 1136.3422162.26 1135.1122173.92 1141.7422176.48 1142.95
22185.97  1143.722202.29 1144.8722217.97 1146.3422251.08 1145.9322299.83    1147
22323.78  1146.222335.91    114722349.03 1146.9722415.35 1147.9522509.12 1148.69
22562.42  1148.622614.12 1149.0122625.45  1148.922636.25 1151.0322650.36 1153.26
22663.97  1152.222680.81 1150.1722694.38 1148.9622708.16 1148.6522727.33 1148.54
22807.97  1149.422847.56 1150.3422868.91 1151.0522935.83 1151.8522981.91 1153.39
23005.61  1153.723057.16 1155.2623071.69 1156.2423083.89 1156.6923100.19 1154.27
23104.54  1153.823117.44 1154.1423135.42 1154.8223144.94  1155.623159.22 1156.91
23196.77  1157.623229.58 1158.0823258.36 1158.67 23280.1 1158.6123480.04 1157.24
23577.25  1156.923595.16 1157.2123646.88  1159.323719.99  1162.423735.38 1163.17
23741.97  1163.423751.71 1163.1223801.94 1162.7323824.49 1163.9323832.95 1164.01
 23842.9  1163.5 23866.3 1162.3323879.96 1162.97

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14841.36    .03519401.15    .03520468.98    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19401.1520468.98              380  467.92     590             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14841.3619401.15  1140.720468.9823879.96 1140.19

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.24

INPUT
Description:
Station Elevation Data    num=     257
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14646.32  1134.4 14764.4 1134.8614831.71 1135.2314844.69 1135.3214892.21 1135.13
14921.24  1136.1 14974.7 1136.8515052.31 1137.3915099.21 1135.7215106.88 1135.32
15191.55  1136.5 15221.5 1135.0315226.48 1134.8215290.32 1135.3915323.23 1136.13
15326.62  1135.515337.03  1133.2 15387.5  1136.915433.06 1136.8215539.19 1136.44
15563.61  1136.515584.96 1136.2615688.79 1136.3815695.05 1135.9915719.52 1135.69
15887.11  1136.815940.24 1136.78 16059.1 1137.2916082.72 1136.7916111.12    1137
16127.59  1137.316170.82 1136.9616226.37 1137.0716275.63 1137.5416304.44 1137.29
16307.79  1137.316370.75 1137.2416425.82 1138.2816473.32 1137.3416495.94 1137.47
 16507.5  1137.516558.97 1137.71 16592.8 1137.7916628.27 1137.7916662.48 1138.27
16689.32  1138.416702.03 1138.5216719.82  1138.516738.98 1138.6216748.91 1139.41
 16767.6  1138.516784.38 1138.4216821.91 1138.9316850.35 1139.4216859.33 1140.14
16912.28  1140.516970.34 1140.0717198.01 1139.3917221.24 1137.3317234.49 1136.34
17272.18    113617407.34  1136.817431.72 1137.0717446.85 1138.0917480.31 1136.81
17503.82  1136.617552.53 1136.83 17569.7 1136.94 17610.6 1137.2917626.55 1136.28
17635.29    113617643.59 1134.9817663.91 1133.89 17678.4 1134.4517692.56 1134.59
17721.15    113617738.84 1136.6917764.86 1136.6617777.72 1136.8517849.78  1136.8
17857.28  1136.8 17920.2 1136.6817947.94 1136.02 17966.4 1133.7518068.06  1132.7
18108.56  1132.618142.81 1132.7918249.02 1134.2818324.26  1134.318363.86  1134.1
18388.07    113418408.92 1134.1118487.59  1133.9   18590 1133.7418649.24 1133.42
18688.62  1133.4   18708 1134.8118788.17 1134.32 18850.1 1125.4518883.57 1120.97
18904.83  1120.918973.61 1120.9919117.02 1121.6919122.76 1121.7619163.61 1121.65
19204.77  1120.9 19305.4 1121.68 19367.5 1122.1319377.18  1124.519399.49 1130.11
19405.74  1131.919428.05 1138.8819436.24 1138.9319441.07 1138.7619464.52 1131.35
19472.76  1128.619475.72 1128.9219481.84  1129.219490.28 1123.7519495.88 1119.82
19503.56  1119.119575.02 1115.2519583.91    111519682.24 1114.3819737.43 1113.53
19806.63  1112.119846.97 1112.4519977.39 1113.8520018.91 1114.3620027.94 1114.39
20058.13  1114.620207.74 1115.4620265.72 1116.1120322.01 1116.5920376.48  1116.2
20413.78  1116.120439.92 1115.7520457.36 1115.0320474.25 1128.7420483.45 1128.29
 20490.4  1125.720496.83 1127.9520517.22 1140.0920530.41 1139.8920544.69  1136.8
20554.93    113520563.19 1131.38 20602.3 1126.1320608.87 1125.9320653.81  1124.9
20698.56  1125.320771.04 1126.2520771.61 1126.2520807.58 1129.5620831.36 1132.98
20878.82  1134.420898.67 1136.1420912.37  1137.120969.84 1138.0320996.46 1138.65
 21043.1  1138.521053.53 1138.3921079.47 1137.9921082.55    113821086.12 1137.57
21103.33  1135.9 21110.2 1136.1121117.68 1136.1221123.72 1136.7321137.71 1137.27
 21143.9  1136.421154.24 1135.8721198.86 1135.4221233.74 1134.8521241.56 1134.96
21272.19  1135.821279.85 1135.0821422.76 1121.1221458.02 1117.8821468.74 1117.79
21523.76  1116.221590.37 1116.0721601.66 1117.2921641.76 1117.1321703.21 1117.25
21782.66  1117.921808.93 1117.7821876.88 1123.4821880.78 1123.5621951.95 1122.71
21979.11  1130.621989.42 1133.9922008.61 1134.67 22014.2 1134.9222020.74 1132.65
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22039.31  1125.622058.15 1119.4722076.68 1119.4622090.39 1119.6622107.16 1118.76
22119.61  1119.822181.31 1120.1222186.64 1122.02 22214.9 1132.6122243.91 1132.68
22264.09  1132.8 22473.5 1134.7822506.19 1134.9922560.06 1135.8122567.51 1135.83
22587.56  1137.4 22634.1  1143.622671.68 1141.5522679.57  1139.322697.08 1134.87
22713.99    113522737.51  1135.3 22749.5 1140.24 22757.1 1142.88 22793.1 1142.58
22801.02  1142.722827.93 1143.2122856.02 1143.2222872.09 1143.1322876.42 1143.53
22909.59  1145.122925.78 1146.0222929.43 1146.1523082.04 1146.0923143.84 1147.23
23171.14  1147.123190.17 1146.9923218.04 1147.7423270.26 1148.0123343.11  1149.1
23374.31  1149.523407.84 1150.1823457.49 1151.5823483.69 1152.1223507.96 1153.18
23515.86  1152.523528.25 1151.8523547.44 1152.9523572.23 1153.9423612.48 1153.79
23645.45  1153.923690.07 1154.0823716.54  1154.323755.06 1154.7423786.78 1154.49
23851.78  1155.123862.13 1155.0723875.66 1155.2623957.31 1155.8423980.42 1155.71
24063.68  1154.624074.39 1154.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14646.32    .03519436.24    .03520517.22    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19436.2420517.22              510  511.34     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14646.3219436.24 1138.9320517.2224074.39 1140.09

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.14

INPUT
Description:
Station Elevation Data    num=     234
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
15164.78  1136.4 15208.2 1137.0915256.23 1136.8815380.96 1136.5515422.24 1136.39
15435.33  1136.415446.04 1136.2115465.53 1135.9415519.25 1134.2415542.67  1133.6
15565.73  1134.215589.49 1134.6615597.77 1134.6215670.72 1135.4915802.44 1135.74
 15827.2  1135.616196.09 1135.6116201.64 1135.6116664.74 1136.68 16758.6 1135.75
16870.13  1135.916954.81 1136.2817040.55  1135.217082.77 1134.7317168.23 1133.92
17192.15  1135.117206.81  1134.717223.42 1134.4917230.65 1134.2817259.46 1132.73
   17365  1132.617440.14 1133.0817514.47 1132.9517584.53 1132.6517773.68 1137.58
17780.81  1138.217796.97 1138.1817831.92 1137.0717866.27 1136.6717871.77 1136.17
17888.74  1135.217911.91 1133.48 17919.2    1133 17927.9    113317951.44 1132.88
17984.39  1135.217989.89  1135.618002.57 1135.7218097.83 1135.8618160.79 1136.77
18183.72  1136.918208.57 1134.2718242.11 1129.9418247.45 1129.9918284.14 1130.13
18376.13  1130.818429.04  1131.118436.08  1131.218491.49 1131.7318511.74 1132.63
18546.94  1134.418670.73 1133.5318717.03  1133.318776.64 1132.84 18789.6 1133.66
18817.97  1134.818852.69  1134.418893.54 1134.2518904.92  1133.318910.67  1132.7
 19016.8  1119.619037.75  1117.319042.38 1117.5419090.57 1117.8119140.69 1117.58
19217.98  1116.819251.56 1116.4319288.52 1117.0219303.43 1118.6519325.43  1118.5
19342.44  1119.319372.01 1123.3719386.41 1125.47 19406.2 1130.4919430.09 1138.01
19445.31  1137.9 19448.4 1137.3219468.34 1137.0519470.09 1136.9519495.93  1119.9
19497.57  1119.419524.89 1116.2619534.77 1115.2419568.82 1113.75 19629.2 1110.42
19649.81  1110.419773.39 1111.3819866.54 1111.8719893.37  1112.119927.72 1112.67
 20063.1    111520149.03 1116.8720181.57 1116.6120245.29 1115.6620275.45 1115.54
20310.17  1115.120452.52  1113.920463.91  1114.320480.07  1124.6 20483.3 1126.74
20492.82  1126.320496.53  1124.320511.26 1132.7120520.48 1138.2420530.15 1138.08
20534.29  1138.620543.75 1136.1120548.42 1135.0420558.57 1131.5120568.89 1128.37
20596.43  1129.2 20621.7 1130.1920681.66 1129.7920717.17 1129.3620767.68 1128.58
20836.05  1134.320871.71 1137.1920937.38  1130.120964.21 1130.2520977.27 1129.96
20988.72    113120999.08 1131.6721036.18 1132.4821072.43 1126.93 21081.9 1127.27
21087.68  1128.721133.93 1128.9821141.15 1129.1221151.53 1126.3921185.85 1126.17
21209.44  1126.3 21212.2 1126.37 21217.6 1127.6121219.95 1127.9321263.22 1138.51
21266.96  1137.221284.09 1133.4221291.61 1133.1821300.74 1133.3221322.62 1133.52
21361.86  1132.9 21390.2 1132.2221394.13 1132.2321454.34 1132.0121464.97 1132.11
21476.33    113221540.74  1130.121568.29 1129.4421620.64 1129.1721647.09 1129.18
21664.31  1127.6 21721.5 1124.2421749.96 1123.15 21761.9 1122.5521827.64  1121.5
21865.73  1121.621878.81 1121.4421934.36 1121.9821941.03 1122.6821973.53 1124.83
22017.41  1131.822035.36 1133.1122053.41 1133.2922108.52  1123.122141.46 1123.59
22167.67  1120.622180.34 1119.6322268.31 1119.6322278.16 1119.7622302.79  1119.7
22329.17  1119.8   22368 1119.3622378.55 1119.3922389.88 1120.52 22476.5 1126.06
22551.91  1133.122556.71 1133.4722560.92 1134.0522592.74 1134.85 22613.6 1135.73
 22620.2  1135.722655.58 1135.1522684.66 1135.1422717.56 1134.8322753.82 1134.64
 22781.4  1134.822794.68 1134.9222875.32 1135.3822948.92 1135.3822981.01 1138.44
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23018.92  1140.623038.12 1141.63 23095.2 1141.9123112.63 1142.0923153.66 1142.77
23186.62    114323201.76 1139.76 23217.3  1135.323240.34 1135.36 23254.3 1135.04
23274.71  1140.723282.92  1142.723291.34  1142.623321.33 1142.6623331.53 1143.07
23349.27  1144.823367.87 1144.8623401.72 1143.9123459.98 1143.2823542.75 1142.68
23622.63  1143.623653.75 1143.6823696.07 1143.7723727.01 1145.1723773.37  1151.8
23779.91  1151.323805.74 1149.9723818.61 1151.1923823.91 1151.5623874.31 1151.28
23926.63  1151.223980.52 1151.0824041.38 1151.27 24067.8 1151.47

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
15164.78     .0519470.09    .03520520.48     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19470.0920520.48              760  550.34     260             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
15164.7819470.09 1136.9520520.48 24067.8 1138.24

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.03

INPUT
Description: Upstream face of Hohokam Bridge



Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   17290    113617865.96  1134.318102.01    113618281.41    114018715.74    1144
19304.64  1144.319304.73  1137.619326.92 1137.68 19359.5 1113.8819387.82  1113.1
19395.38  1112.919424.18  1112.919429.84  1112.919484.41  1112.919548.81  1112.9
19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19304.73 20420.4           190.12  190.12  190.12             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

BRIDGE                 RIVER: Salt River
REACH: Reach 4            RS: 219.02

INPUT
Description: Hohokam Expressway (SR 143)
Distance from Upstream XS =    31.5
Deck/Roadway Width        =     127
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      16
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   17290    1136    113617865.96  1134.3  1134.318102.01    1136    1136
18281.41    1140    114018715.74    1144    114419304.73  1144.3  1144.3
19304.73  1144.3 1137.6819424.18 1144.43 1137.7219548.81 1145.27 1138.56
19673.45 1145.64 1138.9319798.08 1146.04 1139.3319922.71 1146.44 1139.73
20047.35 1146.71    114020171.98 1146.99 1140.2820299.45 1146.24 1139.53
20420.31 1145.24 1138.53

Upstream Bridge Cross Section Data
Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   17290    113617865.96  1134.318102.01    113618281.41    114018715.74    1144
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19304.64  1144.319304.73  1137.619326.92 1137.68 19359.5 1113.8819387.82  1113.1
19395.38  1112.919424.18  1112.919429.84  1112.919484.41  1112.919548.81  1112.9
19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19304.73 20420.4             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

Downstream  Deck/Roadway Coordinates
    num=      16
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   17290    1136    113617865.96  1134.3  1134.318102.01    1136    1136
18281.41    1140    114018715.74    1144    114419304.73  1144.3  1144.3
19304.73  1144.3 1137.6819424.18 1144.43 1137.7219548.81 1145.27 1138.56
19673.45 1145.64 1138.9319798.08 1146.04 1139.3319922.71 1146.44 1139.73
20047.35 1146.71    114020171.98 1146.99 1140.2820299.45 1146.24 1139.53
20420.31 1145.24 1138.53

Downstream Bridge Cross Section Data
Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   17290    113617865.96  1134.318102.01    113618281.41    114018715.74    1144
19304.64  1144.319304.73  1137.619326.92 1137.68 19359.5 1113.8819387.82  1113.1
19395.38  1112.919424.18  1112.919429.84  1112.919484.41  1112.919548.81  1112.9
19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19304.73 20420.4             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station    Upstream=   19427    Downstream=   19427
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
```

```
Pier Data
Pier Station     Upstream= 19551.6    Downstream= 19551.6
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19676.3    Downstream= 19676.3
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19800.9    Downstream= 19800.9
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19925.5    Downstream= 19925.5
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20050.2    Downstream= 20050.2
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20174.8    Downstream= 20174.8
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20299.8    Downstream= 20299.8
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd    =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer
```

```
High Flow Method
       Pressure and Weir flow
           Submerged Inlet Cd          =
           Submerged Inlet + Outlet Cd =       .8
           Max Low Cord                =

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.01

INPUT
Description: Downstream face of Hohokam Bridge



Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   17290    113617865.96  1134.318102.01    113618281.41    114018715.74    1144
19304.64  1144.319304.73  1137.619326.92 1137.68 19359.5 1113.8819387.82  1113.1
19395.38  1112.919424.18  1112.919429.84  1112.919484.41  1112.919548.81  1112.9
19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19304.73 20420.4           111.97  111.97  111.97             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.97

INPUT
Description: Upstream face of SR153 bridge



Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19459.46 1135.8719459.491135.86719466.11 1135.1519468.94 1133.6419479.54 1133.83
 19514.5 1110.2819546.88 1106.45   19567 1107.5619619.62 1109.1319692.07 1108.21
19758.59 1107.6719818.56 1108.5419830.19 1110.4719898.06 1111.2119960.72 1111.55
20034.81 1112.5720102.55 1113.8220108.76 1113.8220114.29 1112.0320176.09 1111.76
20220.38 1112.2420246.16 1111.6420315.81 1109.6620366.41 1111.1620389.63 1110.76
20460.12 1110.5220486.51 1126.3920497.67  1126.120529.61 1135.4720537.11 1136.26
20575.51 1125.3220617.67 1125.62

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19459.46     .0519459.46    .03520537.1I     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19459.4620537.11           138.88  138.88  138.88             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19459.4619459.46 1135.8720537.1120617.67 1136.26
```

```
BRIDGE                    RIVER: Salt River
REACH: Reach 4               RS: 218.965

INPUT
Description: SR 153
Distance from Upstream XS =     10.9
Deck/Roadway Width        =      117
Weir Coefficient          =      2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       10
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19480.19 1148.46 1141.7919595.74 1149.67    114319720.43 1150.63 1143.96
19851.65 1151.18 1144.5119988.08  1151.3 1144.6320128.34 1151.01 1144.34
20271.02 1150.29 1143.6220414.69 1149.15 1142.4820557.89 1147.59 1140.92
20670.18 1146.05 1139.38

Upstream Bridge Cross Section Data
Station Elevation Data    num=       32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19459.46 1135.8719459.491135.86719466.11 1135.1519468.94 1133.6419479.54 1133.83
 19514.5 1110.2819546.88 1106.45   19567 1107.5619619.62 1109.1319692.07 1108.21
19758.59 1107.6719818.56 1108.5419830.19 1110.4719898.06 1111.2119960.72 1111.55
20034.81 1112.5720102.55 1113.8220108.76 1113.8220114.29 1112.0320176.09 1111.76
20220.38 1112.2420246.16 1111.6420315.81 1109.6620366.41 1111.1620389.63 1110.76
20460.12 1110.5220486.51 1126.3920497.67  1126.120529.61 1135.4720537.11 1136.26
20575.51 1125.3220617.67 1125.62

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19459.46     .0519459.46    .03520537.11     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19459.4620537.11             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19459.4619459.46 1135.8720537.1120617.67 1136.26

Downstream  Deck/Roadway Coordinates
    num=       10
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19480.19 1148.46 1141.7919595.74 1149.67    114319720.43 1150.63 1143.96
19851.65 1151.18 1144.5119988.08  1151.3 1144.6320128.34 1151.01 1144.34
20271.02 1150.29 1143.6220414.69 1149.15 1142.4820557.89 1147.59 1140.92
20670.18 1146.05 1139.38

Downstream Bridge Cross Section Data
Station Elevation Data    num=       27
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19456.79 1136.1819464.29 1135.7619489.35  1117.819499.81 1118.12 19527.2 1106.31
19575.01 1106.8619638.48 1107.0819694.95 1108.06 19764.4 1108.5219823.34 1109.68
19828.52 1110.8419896.81 1110.9319965.33 1111.4520032.89 1111.9220105.85  1113.1
20175.18 1113.6320247.98 1113.2220326.04 1112.5620392.18 1111.7220465.08 1112.15
20485.85 1125.4920496.63  1125.520529.33 1135.7420537.91 1135.9420572.86 1123.41
20600.86 1123.9220641.85 1122.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19456.79     .0519456.79    .03520537.91     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19456.7920537.91             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19456.7919456.79 1136.1820537.9120641.85 1135.94

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
```

```
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station     Upstream=19595.74    Downstream=19595.74
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=19720.43    Downstream=19720.43
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=19851.65    Downstream=19851.65
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=19988.08    Downstream=19988.08
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20128.34    Downstream=20128.34
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20271.02    Downstream=20271.02
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20414.69    Downstream=20414.69
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20557.89    Downstream=20557.89
Upstream     num=       2
```

```
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.96

INPUT
Description: Downsteam face of SR 153 Bridge


Station Elevation Data    num=      27
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19456.79 1136.1819464.29 1135.7619489.35  1117.819499.81 1118.12 19527.2 1106.31
19575.01 1106.8619638.48 1107.0819694.95 1108.06 19764.4 1108.5219823.34 1109.68
19828.52 1110.8419896.81 1110.9319965.33 1111.4520032.89 1111.9220105.85  1113.1
20175.18 1113.6320247.98 1113.2220326.04 1112.5620392.18 1111.7220465.08 1112.15
20485.85 1125.4920496.63  1125.520529.33 1135.7420537.91 1135.9420572.86 1123.41
20600.86 1123.9220641.85 1122.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19456.79     .0519456.79    .03520537.91     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19456.7920537.91              570  812.27     860             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19456.7919456.79 1136.1820537.9120641.85 1135.94

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.80

INPUT
Description:
Station Elevation Data    num=     213
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19230.12  1143.619275.95 1142.49 19298.4 1144.28 19303.6  1144.219362.21 1142.77
19364.55  1140.419366.35 1142.6619389.24 1134.9919390.52 1122.5519391.85  1122.6
19416.06  1130.919425.99 1133.9219434.92 1133.9919474.23 1134.4419480.09 1134.58
19492.34  1124.519519.89 1106.5719533.48 1106.1119592.78 1106.4819642.24  1105.7
19715.63  1105.819775.16 1106.6819831.61 1107.97 19872.3 1108.48 19895.6 1109.05
19928.19  1109.119966.84 1109.25 20037.5 1109.5420055.76 1109.4920162.44 1109.04
20198.37  1109.220274.27 1110.1320332.25 1110.0820384.73 1109.7920452.41 1109.37
20471.54  1109.420477.22 1113.1620493.52 1124.5920502.73 1124.4720535.08 1134.09
20552.07  1133.620585.31 1120.9620621.87 1120.8720643.27 1121.3620749.27 1124.15
20777.33  1124.620801.74 1125.3320805.79 1123.6920853.71 1105.0920865.69 1106.02
20888.39  1108.620913.05  1110.620935.57 1109.4620977.88 1108.4720986.53 1107.98
21008.91  1108.321050.42 1110.1321079.18 1111.2521102.02 1113.4921107.04  1113.8
21135.68    111321151.72 1113.0121172.25 1114.7421188.09  1114.921191.61  1115.1
21258.86  1116.221268.91 1117.35 21306.2  1120.521325.06 1121.5721339.08 1121.32
```

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21382.66  1125.721405.75 1126.6321437.56 1128.9221454.27 1129.0321463.86 1128.46
21487.06  1127.421495.49 1126.2121514.26 1120.7221537.98 1114.5621552.41  1114.4
21626.08  1115.621671.81  1116.621688.82 1117.0721700.81 1117.3221702.91 1117.56
 21721.4  1117.6 21734.8 1117.71 21761.1 1118.0321780.54 1118.0621807.71 1118.39
 21822.7  1117.721848.49 1123.8821868.08 1123.8621893.84 1130.1221938.83 1140.09
 21950.2  1143.221956.33 1142.6521973.66  1141.522005.29 1142.4922008.68 1142.57
22014.31  1141.122068.94 1126.05 22071.3    112622075.71 1124.2822103.57 1119.37
22106.12  1119.722113.78 1118.4822125.91 1118.7222153.35 1120.12 22180.4 1121.54
22185.65  1123.222195.49 1122.3722234.58 1132.0522241.99 1132.9322266.04 1139.38
 22272.8  1139.422279.88 1141.2922314.52 1141.1822318.47 1140.5222367.43 1137.26
22376.61  1137.122424.35 1134.5922441.67 1134.2722484.91 1130.7122499.19 1130.52
22523.07    113022552.05 1128.5822597.93 1126.7222608.56 1125.9422634.89 1124.45
22654.45  1123.622664.92 1123.9422741.48 1124.0222747.42 1124.5422755.92 1124.96
22779.02  1124.222788.15 1123.9122812.66  1125.822823.63 1126.7422839.46 1126.96
22899.37  1127.522912.58 1126.92 22915.4 1127.0922947.98 1126.5422957.23 1126.42
22968.67  1126.4   22995 1126.7823026.16 1124.0723056.06 1126.0623079.88 1125.62
23086.46  1125.723110.22 1126.0623151.93 1126.5623168.97 1129.0923194.38 1132.61
23290.06  1134.1 23301.8 1134.3523310.28 1134.3723321.13 1134.2723395.93 1133.92
23443.43  1133.8 23480.6 1133.8223509.86  1133.923529.21 1135.8523552.04 1138.26
23569.37  1136.923592.68 1135.6923612.48 1136.2223630.71 1140.4423636.28 1140.87
23652.07  1139.923682.97 1137.8123713.99 1140.5223764.56 1138.6823773.35  1139.1
23815.87  1141.323837.66 1142.1223901.64 1136.6223913.74  1135.723925.44 1138.06
 23940.8    114123974.94 1136.2823984.38 1134.5624000.07 1133.4824033.62 1133.42
24086.89  1133.424105.37 1133.3924131.81 1133.5824293.82 1135.3624310.94 1135.55
24349.58  1135.124361.28 1135.14   24407 1137.4924417.24 1138.0424455.36 1133.54
24462.51  1132.424534.87 1133.1224550.07 1133.1524640.38 1134.3724663.08 1138.06
24668.93  1138.924699.68 1141.6224715.43 1139.4824720.82 1140.0924732.47  1141.2
 24750.1    114124759.71 1139.5324790.49 1134.5224804.27 1134.5524813.68  1134.9
24876.08  1134.924898.65 1135.0724949.53 1135.35

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19230.12     .0519480.09    .03520535.08     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19480.0920535.08              480   483.7     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19230.1219480.09 1134.5820535.0824949.53 1134.09

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.71

INPUT
Description:
Station Elevation Data    num=     291
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
13108.87  1138.413278.13 1138.5313307.83 1138.3813369.82 1138.4613396.93  1138.8
13681.94    113913897.73 1137.1313907.57 1136.8614314.75  1139.514476.52 1139.45
 14689.5  1132.7 15041.7 1130.2615083.77 1130.6815151.48 1130.9315504.29 1131.44
15564.72  1132.815830.77 1134.2616062.47 1135.1616238.42 1135.1616416.42 1136.23
16480.68    113416485.06 1133.4916492.54 1134.8916507.64  1135.516531.61 1133.05
 16537.1    113316566.43 1133.8216604.42 1135.2316704.47 1133.4716721.25 1133.25
16727.23  1132.9 16808.6 1132.5416818.38 1132.5516874.33 1132.7316906.02 1132.65
16975.84  1132.416982.59 1132.4617030.46 1132.4217080.83 1132.8317122.75 1133.03
17174.22  1133.517207.36 1134.33 17218.2 1134.6417224.56 1134.4417340.33 1133.83
17601.54  1131.9   17628 1131.7617647.96 1131.4517657.08 1131.2817666.42 1129.12
17724.79  1131.917772.56 1133.17 17777.1 1130.1817790.25 1130.3417836.23 1130.75
18016.48  1129.918128.88 1129.2318194.29  1129.3   18238 1129.3318243.61 1130.64
18256.49  1132.618278.83 1129.23   18287 1129.3418316.96 1129.9418323.31 1130.38
18332.92  1130.918344.89 1130.5318358.07 1130.0518382.67 1130.0518587.59 1129.78
18623.24  1130.118624.56 1130.48 18746.1  1132.918749.34  1132.718766.91 1132.42
18775.97    113118795.74 1129.27 18814.3 1130.0618834.44 1128.8518838.62 1130.36
18846.35    113418864.57 1138.9818879.51 1138.8818912.85 1137.7318930.83 1137.25
18944.55  1137.718973.23 1137.5419001.84 1137.5619025.44 1131.3819066.86 1120.02
19083.85  1118.419144.47 1118.3419171.15 1118.04 19215.4 1117.9819224.64 1119.98
19233.12    111819300.65 1117.8119361.77  1118.419378.92 1122.1419405.15 1131.47
19410.65  1130.919436.06 1130.4619437.98 1131.0719444.77 1134.3419448.35 1134.51
19476.64  1135.319500.13 1124.4819501.23 1124.1319509.49 1123.8619528.44 1113.43
19542.17    110619564.08 1105.7819571.57 1105.61 19630.1 1105.3819746.14 1105.97
19859.52  1107.919892.83 1108.8719921.72 1109.0520003.31  1109.120074.85 1108.65
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20166.82  1109.320212.22  1109.320321.34 1109.9720337.16 1110.0320349.18 1109.84
20411.63    110920450.83 1108.8420472.69 1108.84 20504.8 1128.6420519.04 1131.65
20524.71  1132.620547.92 1133.2720556.12 1133.4720580.57  1126.420603.69 1119.89
20612.35  1121.520637.84 1125.53 20641.6 1125.24 20677.4 1121.7120712.93  1119.5
20739.22  1118.420808.72 1114.5920856.68 1113.7720868.49 1113.5320875.65 1113.13
20940.08  1111.821015.17 1111.1821108.82 1109.8821109.54 1109.9121184.42 1110.28
21206.58  1110.621258.63 1112.2121369.54 1112.4521478.56 1112.17 21503.8 1112.42
21620.62  1112.721626.81 1112.5321638.76 1111.6421660.46 1111.9521684.09 1112.65
21719.47    111721739.99 1119.4521752.31 1120.9921757.21 1121.2221797.09 1122.35
21830.57  1123.121858.67 1123.4121923.95 1109.0721958.12 1109.2421967.64 1112.07
22011.58  1125.422044.59 1124.6522088.13 1117.2622090.44 1116.7322092.67 1117.05
22120.97    1120 22146.3  1119.622181.35 1119.6922189.51 1118.1622194.81 1119.97
22213.55    112722229.71 1130.1122266.38 1131.5722288.71 1134.4822301.95 1135.03
22316.34  1135.322365.48 1136.8722375.39 1136.93 22387.6 1136.1522431.44 1133.09
22484.06  1132.722493.44  1133.522540.73 1131.8422546.12 1132.2122556.56 1131.39
22566.44  1130.322599.84 1128.46 22620.5 1127.4422635.98 1126.1622664.49 1125.49
22685.81  1124.422701.91 1125.3522717.77 1125.7922736.68 1126.5322746.98  1127.1
22783.01  1126.222829.29 1124.8122848.45 1124.6422869.88 1124.5322899.64 1123.26
22923.72  1122.622943.69 1122.14 22948.5 1121.9722986.22 1120.4623019.17 1119.18
 23039.9  1118.623068.79 1116.0923110.64 1113.6223133.17 1116.2623146.64 1118.45
 23171.6    112123212.57 1124.4323232.65 1124.8523281.57 1124.7423307.15 1125.08
23324.89  1125.423375.35 1125.6623416.55 1127.2923447.76 1128.5523475.32 1129.54
23493.64  1130.623506.14 1131.0823535.86 1132.1323602.75 1133.1323621.85 1133.17
23649.32  1133.723722.66 1132.9123759.51 1132.77 23785.2 1132.8123802.65 1133.05
23884.02  1133.723946.91 1133.73 23971.7 1136.6823990.48 1135.9624014.85 1136.68
24039.25  1135.1 24044.2 1135.3524063.83 1137.1724124.43 1137.1924168.68 1136.85
24191.37  1136.624236.32 1137.1224243.91  1137.324299.17 1137.3224337.13 1136.68
24392.36  1137.524404.14 1136.6724453.95 1134.3124469.33 1134.7724501.82 1136.19
 24514.8  1135.524528.89 1135.2824550.09 1133.6924574.19 1133.9324611.53 1134.04
24618.78  1134.124640.33 1134.5824672.32 1135.5424677.18 1135.7224706.31 1138.81
24724.88  1138.524729.54 1138.2224740.65 1137.2224765.72 1134.4724778.49 1132.36
24788.01  1132.324815.55 1132.1624847.55 1135.1524859.82  1136.424883.17 1136.98
24886.57  1137.124910.41 1138.8424915.93 1138.4924941.99  1138.924953.01 1136.56
24968.51  1138.424999.47 1133.9325033.02  1135.225040.52  1135.325101.43 1135.95
25106.12  1135.7

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13108.87     .0519476.64    .03520556.12     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19476.6420556.12           508.24  508.24  508.24             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13108.8719476.64  1135.320556.1225106.12 1133.47

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.61

INPUT
Description:
Station Elevation Data    num=     310
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
13289.47  1137.613346.61 1137.6913482.79 1137.6413524.63 1137.7413688.14 1137.42
13855.31  1137.513919.18 1137.1514090.61 1136.2214232.62 1137.0514635.33 1135.72
14873.58  1129.114982.81  1127.915191.31 1129.8215261.79 1130.5215396.44 1131.02
15844.49  1132.3 16148.8 1133.4516363.69 1134.4216707.94 1132.8916805.22 1133.12
16983.62  1131.717212.16 1130.3217224.59 1131.2817233.14 1130.1717346.12 1131.24
17604.77  1129.817635.65 1129.5417645.26 1130.8517654.92  1132.217662.71 1132.17
 17810.2  1129.817837.84 1129.5117849.59 1129.2117930.21 1128.6917940.16 1128.66
17952.59  1128.9 17980.9 1128.2918009.99 1130.1818183.13 1130.4118387.14 1131.31
18397.06  1129.618417.48 1129.6618465.37 1129.5918493.07 1128.7818564.61 1129.68
18609.66    113018660.73 1130.8318672.49 1131.37 18695.9 1131.9718703.44 1132.15
 18755.9  1134.118816.02 1117.8818839.85 1111.2718852.69    110918869.25  1109.3
18881.75  1109.118916.84 1107.9318921.76 1107.4918952.11 1106.1818955.67 1105.93
18981.82  1112.419003.97 1116.7819055.59 1116.5219074.97 1115.8319079.61 1118.02
 19087.8    112019098.23 1123.3819124.36 1122.1219140.32 1121.5919170.65 1121.15
19193.18  1121.119207.75 1125.3519228.42 1131.1119242.79 1130.8619263.02 1130.77
19306.93  1125.119312.04 1124.1219319.87 1124.1319366.08 1124.0319392.22 1125.51
19396.62  1125.519421.36 1127.2119427.81 1128.6319442.05 1132.2519449.11 1132.57
19482.22  1133.619499.23 1124.64 19504.2 1122.2119514.31 1122.7619528.38    1116
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19541.06  1107.419630.81 1106.1919658.86 1105.7819730.79 1106.2819780.04  1107.2
19894.68    110919936.32 1109.7219984.17 1109.1120102.24 1108.0220114.96 1107.83
20134.74  1106.220205.93 1103.1120220.47 1101.9120244.57 1102.6820310.43 1106.81
 20324.3  1107.920346.83 1108.0620468.14    110820471.94 1107.8120491.39 1120.07
20494.43  1121.820504.21 1123.0720506.16 1123.6520537.49 1132.2320544.75 1132.58
20551.74  1132.320579.63 1121.7720586.05 1119.8820608.67 1118.89   20662 1116.23
20674.67  1116.320680.85 1115.1720694.05 1109.8120719.15 1109.5220728.31 1108.98
20752.41  1108.420762.22 1108.2520766.77  1108.320790.72 1110.4420816.61 1110.84
20839.45  1110.8 20861.8 1111.3520877.19 1110.6120884.38 1110.5120897.32 1110.56
20916.71  1110.920990.92 1110.9521014.14 1110.9321065.12 1110.2921077.78 1110.01
21117.21  1109.621156.35  1109.621163.52 1109.4321238.03 1109.7621256.45 1109.92
21291.06    111021327.34 1110.5221360.83 1110.9121389.39 1110.9521433.02 1111.25
21460.08  1111.121531.74 1112.1521537.12 1112.1821549.16 1113.1821603.09  1112.3
 21607.6  1112.121670.02 1112.45 21678.5 1112.51 21688.3 1114.3521710.39 1116.34
21720.35  1117.421727.17 1117.2521766.26 1119.95 21770.7 1119.7421792.95 1120.46
21804.93  1121.721837.79 1126.9121846.13 1126.5621906.58 1124.6421909.29 1125.34
21929.66  1128.221936.81  1129.6 21962.3 1131.3121980.76 1130.5921985.59 1129.73
21993.41  1129.421996.46 1129.5222045.28 1130.3622052.37 1130.0522059.43 1128.13
22063.42  1127.822076.54 1124.2322084.51  1124.122127.04 1123.1922132.06 1123.02
22150.35  1124.522178.85 1122.6422191.89 1120.9222200.66 1120.65 22216.9 1120.48
22251.77  1123.722265.75 1128.5722296.06 1127.4122308.55 1127.0422323.19 1126.36
22367.62  1127.322418.57 1128.2922437.08 1130.3722455.65 1129.5422486.69 1124.45
22502.31  1123.822519.76 1124.97 22562.1  1124.322602.04 1123.9122615.19 1122.85
22623.99  1123.422655.54 1121.8322660.03 1123.1122676.42 1123.8722690.98    1124
22711.45  1123.722730.92 1123.3522784.64 1123.5322809.85 1123.5822842.56  1123.8
22895.97    112422931.57 1124.5422956.78 1124.7723019.28 1125.0923038.53 1124.54
23047.09  1124.623076.14 1125.3323083.49 1125.4723128.33 1125.8523138.25 1125.61
23155.78  1125.923235.12  1126.6 23303.4 1126.69 23334.8 1126.57   23363 1126.56
23393.12  1126.923442.45    112723477.82 1127.5123509.64 1128.3223529.43 1128.91
23554.38  1129.323596.01 1129.3123619.55 1129.4823629.35  1129.423639.35  1129.2
23687.46  1129.523751.05 1124.6923803.22 1123.9123830.76 1122.5523869.72 1121.45
23929.15  1119.723934.29 1118.8423957.84  1118.823973.32  1120.424001.29 1119.61
 24018.6  1118.424053.99 1118.2624070.18 1117.5324089.61  1117.824139.08 1118.67
24148.68  1120.324159.19 1121.0224170.32 1128.4724184.95 1129.0724197.81 1135.17
24205.02  1134.924232.89 1126.2224279.33 1127.4324318.02 1124.7624353.43 1123.93
24413.74  1126.524459.64 1127.9824527.69 1128.7724546.54  1129.524611.74 1132.52
24627.28  1134.3 24674.5 1134.8224685.21 1134.7724700.05 1134.9124713.14 1134.95
 24799.3    113524804.43 1135.02 24807.1 1135.4424821.43 1140.4624826.53 1139.51
24850.13  1137.324872.13 1135.5224876.66 1134.9224944.38 1134.8624960.25 1134.97
24973.27  1138.2 24980.7 1140.3225022.17 1134.4525025.06 1134.1625048.29 1133.48
25064.13  1133.7 25071.8  1133.725105.59 1133.9725116.87 1134.9325132.09 1136.51
25153.12  1136.225164.17 1136.28 25189.7 1137.7325214.04 1133.4425223.69 1132.41
25242.27  1135.725245.39 1136.3525248.39 1135.9825256.53 1134.5825272.47 1134.91
25348.94  1135.725355.24 1129.0125359.63 1134.7925370.17  1135.925396.51 1136.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13289.47     .0519482.22    .03520544.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19482.2220544.75              510  503.43  503.43             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13289.4719482.22  1133.620544.7525396.51 1132.58

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.52

INPUT
Description:
Station Elevation Data    num=     293
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
13520.55  1136.713713.31 1136.5813814.93 1136.7913884.19 1136.6513954.33 1136.67
 14334.5  1134.914700.72 1132.2215036.75  1128.415107.35 1127.7215258.92 1127.77
15377.61    112815613.04 1130.02 15863.4 1130.7216367.69 1132.4316490.01 1132.98
16574.82  1132.616937.95 1133.4717050.22 1132.5417078.18 1132.35 17107.8 1131.82
17136.29  1131.417179.59 1130.9717232.08  1130.517279.59  1130.4 17321.3 1130.07
17369.88  1130.717412.05 1130.4917523.48 1130.1917566.99 1129.85   17625 1129.36
17694.84    112917720.53 1129.0817760.84 1129.3717779.61 1129.6117856.52 1130.91
17893.45  1130.718025.87 1130.8118040.83 1130.6618114.49 1130.6318192.45 1130.49
 18208.3  1130.418225.32 1131.0318235.41 1130.7818236.01 1129.6418240.94 1128.75
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18278.92  1128.318333.44 1127.3918352.18 1127.1618457.54 1125.47 18481.2 1125.43
18498.98  1124.618527.85 1124.4818554.49    112318599.47 1123.5418650.02 1123.68
18712.82  1123.318730.78  1123.418795.31 1124.9218810.33  1124.818831.47 1118.31
18835.93  1117.218838.89 1117.0818857.05 1114.3518866.76 1114.1918868.51  1114.6
18877.42  1118.918880.85 1118.9818881.54 1118.3518887.17 1118.4418910.52 1123.14
18920.95  1122.218941.87 1126.2918947.26 1126.6518960.51 1128.52 18981.6  1132.7
18994.16  1132.519018.91 1132.4219050.87 1138.8119159.68 1158.4119182.71  1158.2
19323.86  1157.5   19325    115719327.65 1154.5719344.49  1147.919382.47 1133.65
19388.43  1133.719432.59 1133.2719466.14 1133.0819479.04 1133.6319487.75 1129.05
 19501.3  1121.119510.55 1121.5819534.34 1109.08 19551.4 1108.3919665.81 1106.79
19705.17  1106.219721.96 1106.1419884.09 1107.2119912.48 1107.4320050.27 1107.75
20057.61  1107.8 20166.9 1106.1920204.03 1104.4320244.72 1102.8420285.16 1101.37
 20301.5  1101.620369.81 1104.6420374.23    110520394.86 1105.6820436.47 1106.97
20477.38    110720481.03 1109.6420496.77 1120.4120506.37 1120.8920538.63 1131.04
20553.62  1131.720591.55 1119.7420594.81 1118.6820613.68 1114.9120635.98 1112.62
20675.54  1099.720678.64 1099.0320682.23 1099.0220739.38 1097.1520788.35 1097.76
20801.92    109820829.02 1101.2220859.02 1103.3320894.78 1102.81 20900.6 1103.25
20903.68  1103.720932.83 1108.6920940.53 1108.8220991.79 1112.0921058.92  1118.3
21085.19  1117.921088.69 1117.4221095.04 1116.2121131.47 1117.0321156.06 1117.27
21195.65  1117.121219.18 1117.0121276.88 1116.14 21291.3 1116.07 21338.7 1121.85
21356.23  1124.221399.91 1130.7921407.41 1130.7921452.82 1132.1521536.82  1131.9
21555.83  1131.921588.13 1131.9721636.88    113221650.96 1131.9621685.86 1132.35
21690.23  1132.321700.14 1132.2621733.05  1132.521757.59 1132.7621778.07  1133.8
21802.82  1137.621804.23 1137.5921846.73 1137.2521857.32 1136.1521880.77  1131.1
 21896.4  1127.621903.63 1126.5321921.13 1126.5521933.54 1125.2421956.75 1124.42
21973.29  1123.222020.69 1122.1722035.17 1121.93 22056.8 1128.4722089.51 1136.91
22103.55  1135.922107.83 1135.8722119.52  1136.522126.06 1135.16 22163.1 1126.68
22182.81    113122194.22  1133.922210.19  1134.722244.21 1134.8422256.17 1134.43
22267.18    112922274.88 1126.53 22290.5 1125.9122312.48 1125.7722319.59  1122.2
22323.34  1119.722374.63 1118.7722379.21 1118.6322386.82 1118.0522403.27 1123.76
22410.86  1125.622415.81 1125.8822424.66 1126.0922436.88 1120.6422441.79 1119.13
22453.68  1119.322527.01 1121.7122532.78 1121.5522534.67 1120.3522554.12 1122.78
22567.56    112522589.46 1123.6522635.82 1123.8722659.76 1122.6722672.91 1121.96
22677.08    112222703.59 1123.3122710.13 1126.07 22728.4 1131.3422748.95 1131.15
22794.47    113022834.69  1129.922844.73 1129.7922923.99  1131.222935.86  1131.3
22965.43  1131.122981.01 1131.4123053.43 1131.9623080.08 1131.8823100.03 1130.64
23174.29  1130.423197.67 1130.3723225.76  1129.823498.31 1126.5123522.66 1127.21
23529.18  1126.923544.73 1126.4923582.11 1126.6423598.43 1126.8123711.29  1128.3
23742.87  1128.7 23753.9 1128.8823845.68 1130.2923893.22 1127.8123934.64 1128.42
 23960.7  1129.124032.63 1130.6724099.62 1132.4924106.15  1132.424183.48 1131.53
24227.48  1131.624250.72 1131.2224308.44 1129.7724349.13 1129.1524384.59 1128.57
24410.64  1128.524453.99 1129.4224470.86 1129.6524490.94 1129.8524539.99 1129.93
24662.52  1130.524667.04 1130.4724710.85 1129.8924728.61 1129.9924749.63 1126.91
24760.99  1127.424799.79 1129.1424828.87 1131.4624914.09 1132.1624924.15 1132.05
   24953  1131.324972.86 1131.6224988.29 1131.6925008.74 1132.2725053.34 1132.33
25062.05  1132.125126.76 1132.72 25187.6  1132.6 25219.2 1132.1625232.25 1131.65
25245.66    113125279.69 1131.7125286.23 1132.0425289.47    113225314.49 1132.24
25348.03  1135.225375.67 1134.8725378.89 1134.7525383.39 1134.9725408.48 1134.65
25435.96  1133.5 25444.9 1133.8425468.99 1134.2325552.04 1133.7925558.09 1133.72
25566.36  1133.4 25567.2 1133.6325571.42 1133.78

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13520.55     .0519487.75    .03520553.62     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19487.7520553.62              520  496.02     460             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13520.5519487.75 1129.0520553.6225571.42  1131.7

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.42

INPUT
Description:
Station Elevation Data    num=     280
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
13775.01  1135.114010.58 1134.9814024.29 1135.0114476.92 1133.61 14664.6 1132.73
15249.61  1129.115272.55 1128.9715497.69 1128.2415619.78 1128.2215827.23 1129.02
16085.44  1129.916488.61 1131.2716651.78 1131.7716720.37  1131.716732.64 1131.77
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16747.49  1131.717267.73 1130.1917278.36 1129.9117295.48 1129.3317322.39  1128.3
17469.28  1122.417486.47 1122.64 17548.9 1123.8817669.09 1120.3517792.62 1129.96
17835.52  1130.417876.22 1131.3517910.24 1141.8217925.46 1146.3617942.58 1150.47
17951.24  1151.517959.47 1149.1717971.21 1147.4218007.39 1147.4918021.48 1147.48
18076.85  1147.618098.93  1147.618120.08  1147.718230.52 1148.6918247.11 1148.77
18361.71    115018371.34 1149.9718405.87 1150.5818450.66 1137.6318465.78  1133.1
18474.03  1133.718490.29 1135.4418519.06  1127.518528.95 1124.8418568.93 1123.21
18584.02  1127.318596.35 1127.0318661.21 1125.6518663.21 1126.4118720.01 1146.17
18757.32  1157.918760.54 1157.8418779.39 1157.1518835.55 1157.2718916.49 1156.91
19045.66  1156.619319.48 1155.8519374.57 1155.8119417.64 1137.3719430.47 1131.73
 19443.1  1130.719449.06 1131.0419466.92 1131.6219480.61 1131.4819502.37 1122.14
19524.32  1112.519564.21 1107.96 19571.3 1107.3919585.69 1107.2619627.57 1107.72
19738.83  1106.219816.62 1105.5419875.67 1106.3219888.83 1106.3119942.45 1107.02
20038.66  1108.120092.59  1106.720123.26 1105.9720163.88 1104.9320218.93 1103.78
20266.68    110320272.84 1101.5620385.12 1103.6320394.06 1104.0420401.77 1103.76
20412.72  1104.420467.02    110620482.46 1105.7420499.22 1117.0320502.07 1119.07
20512.29  1119.420536.34 1127.8120543.39 1130.1820557.73 1130.9220566.34 1128.05
20582.27  1124.520585.48 1123.5220594.97  1122.220621.82 1117.38 20631.3 1119.51
20652.33  1122.720668.26 1123.2620702.27 1127.3720710.06 1128.6320732.51  1131.4
20758.16  1131.520795.49 1132.1620806.82 1129.1220847.88 1118.3320864.52 1114.75
20898.27  1114.620944.31 1128.2220955.86 1127.9220972.57 1127.7221005.35 1118.14
21017.74  1113.521036.21 1113.5421093.74 1129.3421102.08  1131.821107.21 1131.77
21139.91  1131.421173.22 1130.6821186.04  1130.621251.13 1130.84 21275.6 1130.51
21298.56  1130.521347.39 1130.5521368.37 1130.5521373.25 1129.9421378.56 1129.69
21406.12  1129.521442.19 1129.4921465.44 1127.6421476.37 1126.6121490.38 1127.15
21525.98  1128.621556.47 1129.2721651.65 1131.1621678.33 1131.3421733.77 1131.79
21746.38  1131.821762.15 1132.0121788.93 1131.6621846.42 1131.7821880.42 1131.26
 21911.5  1129.821973.41 1129.2321986.11  1128.722032.49  1129.7 22039.2 1128.83
22056.94    112622063.39 1126.3722071.03 1125.3422087.39 1125.6222100.05 1123.67
22130.04  1117.222141.04 1118.8522154.83 1118.8122204.54 1117.0422224.25 1118.25
22232.98  1118.122247.02 1117.3822266.11 1118.25   22310 1105.5122315.56 1105.31
22357.67    110522362.33 1105.0622383.86 1109.9822420.72 1117.9522423.69 1118.09
22446.86  1116.9   22480 1117.1822481.83 1117.13 22486.8 1124.0722500.99  1127.9
22531.09  1117.322533.46 1117.2622556.26 1115.9622566.75 1114.7622569.13 1115.35
 22577.1  1114.722588.06  1116.922596.98 1118.4522609.35 1120.2922621.47 1124.08
22640.38  1124.122662.28 1121.4322713.76 1120.6422722.87  1121.122742.51 1122.87
22748.68  1122.222764.92 1120.5122801.71 1123.0422827.81 1122.4122857.28 1121.58
22879.07  1130.9 22884.7 1133.3722887.08 1133.2422893.55 1132.3822908.19 1132.36
 22913.5  1132.323065.86 1131.5823176.13 1129.96 23301.7 1129.8923359.12 1129.96
23409.31  1129.223692.08 1127.7723732.77 1125.6423760.65 1124.8323763.49 1124.63
23786.32  1125.123812.67 1126.6623836.06 1127.4823846.11 1127.6823930.48  1129.1
23972.68  1129.324063.93 1130.0124113.45 1130.52 24141.3 1130.9824223.71 1131.91
24249.38    113224295.28  1131.924327.93 1131.9824404.92 1132.5724410.12 1132.43
24465.19  1130.624471.68 1130.5524546.64 1129.19 24597.6 1128.8324622.78 1128.68
24686.97  1129.424688.17 1129.4724758.56 1129.1524761.02 1129.1224913.06 1129.62
24922.11  1129.524944.11 1128.3124988.23 1129.1425003.98 1129.1425033.94 1129.55
25070.29  1130.425102.72 1130.8525114.57 1130.5225116.25 1131.0625122.69 1129.84
25127.81  1129.525153.98 1129.4125177.68 1129.1425187.58 1129.1325234.01 1129.23
25282.86  1129.225300.51 1129.9125358.34 1130.0725365.57 1129.7525404.43 1131.61
 25414.9  1131.725448.77 1131.5725457.29 1131.6825468.39 1131.4825513.33 1131.41
25547.39  1134.725565.27  1134.825590.42 1133.6525626.59 1130.45 25655.8 1132.23
25661.35  1132.325709.11 1132.8325724.62 1132.5425726.43 1131.35 25730.8 1132.12
 25743.2  1131.625745.24 1132.2825797.56 1134.1525803.07 1134.9225849.59 1134.74

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13775.01     .0519480.61    .03520557.73     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19480.6120557.73              520  502.97     490             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13775.0119480.61 1131.4820557.7325849.59 1130.92

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.33

INPUT
Description:
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
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19387.78  1144.119429.55 1124.7119449.63  1126.119472.34 1127.5719492.02 1118.59
19511.87    111019534.79  1108.419542.81 1107.94 19578.9 1108.5119663.53 1107.59
19764.35  1106.319769.36 1106.1919825.17 1104.8219868.37  1104.819892.81 1103.54
19948.78  1100.119973.71 1100.7419988.39 1101.0120011.72 1104.5620091.58 1101.71
 20153.7  1099.320209.26 1100.8620254.62 1101.9420337.67 1102.6120362.43 1102.91
20378.77    110320387.77 1103.2320508.48 1105.6320514.91 1109.4320529.36 1118.94
20540.63  1119.220571.05 1129.2120584.85 1130.7420606.94  1123.920614.38 1126.66
20618.72  1127.820652.72 1127.3520707.48 1126.9820729.09 1127.4220739.18 1126.24
20744.96  1125.820766.02 1127.0820810.51  1127.520886.12 1128.01

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19387.78     .0519472.34    .03520584.85     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19472.3420584.85               540  490.24     430              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19387.7819472.34 1127.5720584.8520886.12 1130.74

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.24

INPUT
Description:
Station Elevation Data    num=     324
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14281.15  1132.314294.13 1132.2214327.07 1132.6314444.34 1132.29 14473.6 1132.04
14812.04  1130.9 14850.4 1130.5614891.53 1130.3914908.34 1133.1914928.23  1130.3
14933.22  1129.314941.85 1129.4514974.01 1130.3315003.74 1128.6215020.27 1127.76
15079.03    112815088.04 1128.2515242.58  1127.515489.93 1126.2515549.45 1127.35
15564.61  1127.315608.44 1126.2715682.97 1124.7315687.27 1125.3915695.05 1127.11
15710.18    112715715.16  1124.215719.03 1124.1515721.97 1127.2915752.54 1127.65
15752.69  1126.615758.62 1126.8315770.79 1127.7915776.01 1126.38 15788.1 1124.29
15819.42    112315835.05 1124.8615867.55 1123.5115876.02 1123.3515906.46 1123.78
15954.59  1124.515982.54 1124.5215994.01 1125.7916063.25 1125.7816151.28 1126.16
16207.83    112616278.28 1126.6116282.62 1126.6316355.64 1127.3116388.04 1127.58
16531.67  1127.216541.91 1127.1616583.04 1127.0416727.63 1127.3616824.43    1128
17061.82    112917085.46    112917100.15 1129.2917106.77 1126.8417117.12 1130.56
17126.18  1130.417134.91 1128.7917146.65 1128.3517165.73 1127.8317174.12 1127.92
17185.89  1127.617191.97 1127.9417318.87 1128.8417332.85 1125.9417334.08 1125.62
 17402.7  1125.917412.17 1125.4617472.29  1125.8 17497.5  1125.717532.13 1125.67
17545.25    112617566.52 1125.8117671.52 1125.35 17788.5 1124.8817813.93 1125.31
17823.82    112517839.63 1125.0917863.14 1125.0217870.61 1125.1617934.37 1124.27
18023.41  1123.118035.66 1122.5318059.85 1122.0218125.47 1122.1318138.27 1121.98
18168.78  1121.618186.76 1121.7318198.69 1121.4518233.59  1123.118242.95 1122.77
18246.99  1123.318267.59 1124.23 18314.4 1142.9318321.06 1145.1118345.79 1144.88
18349.32    114518373.63 1155.5218376.41 1156.82 18433.9 1156.8218630.99 1157.04
18777.37  1156.118818.63    114518867.89  1131.9 18880.1    112818893.85 1127.32
18901.85  1128.618916.95 1125.8718935.45 1122.0318951.27 1119.2718982.36 1119.01
19005.36  1121.519011.28 1122.0519015.06 1122.1919031.88  1122.519106.52 1148.14
19125.17  1146.819181.33 1148.3419228.76    114919283.57 1150.0119313.78 1135.95
19331.42    1127 19342.2  1127.419354.24 1125.99 19367.3 1123.05 19381.9 1123.21
19402.58  1124.219443.72 1108.3719471.62 1106.8419480.14  1106.619516.23 1106.49
19589.68  1106.419697.03 1105.6619730.91 1105.3419746.01 1105.3319769.76 1104.71
19868.35  1102.719883.89 1102.2619931.39 1101.5919957.76 1100.8220042.64 1097.97
20126.23  1100.320176.46 1102.5920207.92  1103.720250.28 1102.8420326.23 1103.73
20432.28  1109.320433.99 1109.4520471.71 1126.7920485.96 1127.1420523.63  1128.2
 20544.5  1129.320568.69  1129.620603.51 1127.9420701.54 1124.6320702.21 1124.62
20813.09  1126.220826.16 1126.8920863.31 1128.3520894.59 1129.7420903.36 1129.71
20970.77  1129.820996.41 1129.6221048.71 1129.5721056.52 1129.1821080.73 1127.63
21108.17  1127.121228.87 1124.2621241.08 1124.1621263.84 1122.9321272.69    1124
21322.72  1126.521331.62 1127.0321340.68 1127.1321364.71 1127.1321401.73 1128.31
21452.16  1129.621476.08 1129.4321492.69 1128.8321504.29 1128.6921528.64 1128.66
21545.85  1128.721577.95 1128.9721623.11 1129.8221660.11 1130.5421702.15 1130.95
21744.94  1131.1 21774.1 1130.6521789.64 1130.2921839.52 1130.4221874.34  1130.7
21913.79  1131.222022.05 1131.96   22073  1132.422076.85 1132.4722200.69 1133.72
22214.11  1133.822287.79 1134.3422314.82 1134.37 22325.6 1134.8222363.39 1124.23
22406.05  1114.122426.12 1113.7222470.29 1116.5722488.42 1119.1722498.19 1120.38
22507.98  1120.922525.74 1124.0122567.51 1122.3822578.13 1122.8922586.38 1122.09
22647.15  1120.522666.66 1120.7222681.19 1120.8122705.18 1119.7522736.27 1121.34
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22749.25  1119.822756.63 1119.0722784.53 1116.0522790.26 1115.62 22815.2 1115.09
22841.03  1115.322876.59 1134.9622878.62 1135.7322910.16 1134.8922922.83 1134.86
23114.14  1133.523169.47    1133 23215.7 1132.3923407.55 1131.4123450.64 1131.42
23490.55  1131.223528.56 1130.8723563.62 1130.4623799.81  1131.923848.96 1132.08
23871.12  1131.5 23921.1 1130.6923993.48 1127.4424002.94 1127.0724049.87  1125.6
24092.02  1128.224104.78 1129.0824133.99 1129.3624163.13 1129.6924173.94 1129.75
24244.74  1127.124277.59 1126.5724286.89 1126.4624303.01 1126.5124345.78 1126.75
24387.44  1127.924411.12 1128.5324423.87 1128.99 24460.4 1130.5424490.97 1131.01
24506.05  1131.424531.86 1131.6224575.75 1132.1224649.38 1131.3924700.08 1129.79
24754.03  1128.924776.59 1128.5624817.88 1126.6624822.08 1126.4424842.73 1126.58
24894.53  1127.424961.15 1128.47 24972.7 1128.5725001.71 1128.1625084.39 1126.72
25096.93  1128.225109.76  1131.225129.07 1129.0625136.25 1128.4225145.94 1128.72
25171.53  1129.9 25181.2 1126.9725186.07 1128.4925187.12 1129.0425249.47 1128.45
 25258.1  1128.425264.74  1128.525299.93 1128.3525328.56 1127.3825343.06 1127.07
25363.92  1127.325390.79 1127.4625409.45 1127.9625420.07 1128.0925436.16 1129.31
25469.58  1128.925521.34 1128.9125613.95  1128.625666.19 1129.0825710.72 1128.79
25731.38    113025741.87 1129.2525760.39 1127.4825768.13 1128.9525782.49 1131.99
 25787.4  1131.825792.25 1132.0325810.17 1129.4625817.06 1128.5725835.57 1132.57
25872.44  1127.7 25891.8 1129.42 25901.1  1130.725922.95 1129.3725964.82 1129.19
25969.18  1128.925975.96  1128.125978.38 1127.9425982.79 1128.5725987.59 1128.38
25991.84  1129.826007.52 1130.3326009.17 1130.5626057.44 1130.37

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14281.15     .0519402.58    .03520471.71     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19402.5820471.71              530   499.8     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14281.1519402.58  1124.220471.7126057.44 1126.79

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.14

INPUT
Description:
Station Elevation Data    num=     318
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14350.76  1131.4 14360.5 1131.19 14380.3 1130.9914402.86 1130.3114523.31  1130.4
14558.91  1130.514601.58 1131.52 14607.6 1130.7514614.45 1130.71 14640.8 1131.37
14643.11  1131.414662.14 1128.62 14674.8 1128.0714682.93 1127.2214744.46 1126.69
14768.12  1126.214773.04 1126.98 14787.2 1127.7214806.51 1129.2414824.82 1129.08
14866.74  1129.514881.86 1129.5914910.06 1129.44 14927.4 1129.4314943.48  1130.9
14952.89  1130.714977.11 1130.1414989.12 1130.0815017.11 1130.1615033.54 1128.84
15048.73  1127.515056.11 1127.2815085.71 1127.16 15209.5 1126.3715261.62 1126.35
15295.84  1125.615419.85 1124.9315690.95 1123.2315720.15 1122.9515785.69 1122.08
15800.05    112215804.38 1122.83 15816.3 1124.5715819.09 1125.6615835.48 1125.52
15874.31    112615894.58 1124.9115895.96 1124.9415900.13 1124.3115906.72 1123.58
15930.36  1121.415936.63 1121.8115947.56  1121.915974.16 1121.9516016.36 1121.83
16077.77  1122.816092.84 1123.0616119.47  1123.116337.61 1124.3616489.75 1125.38
16571.31  1125.916583.51 1126.7116603.58 1126.5316652.76 1125.7816711.29  1127.7
16721.78  1127.716820.47 1126.8416870.62 1127.2317155.31 1127.5417209.46 1127.64
17241.33    112817289.47 1126.6517295.26 1126.45 17420.9 1127.1917443.24 1127.22
17523.36  1125.8 17640.8 1124.8317661.78 1124.5117675.93 1125.4917683.63 1123.97
17705.03  1125.317723.81 1125.9117732.55 1125.8717905.79 1124.2817944.72 1124.69
17946.94  1124.617957.23  1123.317970.64 1123.1917998.24 1123.37   18014 1124.37
18044.09  1124.2 18096.7 1123.3618131.43 1122.8718157.23  1122.618197.27 1122.04
18331.89  1120.218345.39 1122.9818370.13 1125.5918378.71 1125.3218383.68 1126.39
18385.72  1126.618396.44 1126.46 18430.4 1137.8218473.63 1146.4618488.54  1147.2
18500.26    1147 18510.1 1146.8918524.49 1150.3218537.76 1151.9718547.33 1151.61
18562.12  1150.5 18577.7 1149.0318587.35  1148.218612.13 1146.5418643.16 1145.07
18662.15    114518718.32  1145.418740.77  1146.518765.55 1145.56 18774.7 1144.91
18811.46  1141.918825.91 1140.0318866.94  1137.418884.39 1135.9418897.58  1133.7
18937.82    112618957.94 1126.0618969.28 1125.61   18988 1126.6219020.92 1127.19
 19025.1  1127.719059.91 1119.4119064.89 1119.32   19147 1118.7319196.03 1119.11
19302.51  1119.619337.55 1123.7719356.32  1124.1 19371.2 1124.6619394.21 1115.35
19415.94  1106.719425.04  1106.319434.74 1106.0319498.22 1106.0819552.71 1106.72
19581.09    110719629.75 1106.9519660.81 1107.3219690.23 1103.8319697.76    1103
19716.45  1102.6 19829.2 1098.8519866.79  1097.819909.76 1097.4419995.42 1096.58
20006.26  1096.820023.96 1097.2420085.84 1099.1520115.65 1099.97 20182.6 1101.96
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   20283  1103.620349.46 1104.7320371.68 1105.2220380.43 1105.4920405.54 1107.57
20407.13  1108.420439.17 1127.5920443.28  1127.420479.36 1125.2520486.53 1125.45
20510.81  1126.320537.57 1126.6920540.25 1126.5720544.23 1126.7920562.34 1127.27
 20603.9  1127.720612.27 1127.7820633.08 1128.2320685.44 1128.5720713.21 1128.87
 20724.9  1128.920808.95 1128.2920843.53 1128.5720884.76 1128.7920923.99 1129.06
21008.49  1130.321041.05 1130.5621067.09 1131.0621146.87 1131.1921252.16 1128.62
21277.89  1128.621308.89  1128.421329.11 1128.6621348.83 1128.5521371.59 1128.78
21421.52  1129.821460.12 1130.5221478.73 1130.9921495.99 1130.6121545.78 1128.71
21560.66  1128.521593.98 1127.5921596.07 1127.7321611.54 1127.5721667.83 1128.58
21730.45  1130.321779.03  1131.221797.76  1131.521816.59 1131.4421855.31 1130.98
22073.65  1132.822372.55 1135.2122384.75  1135.322428.62 1133.2822438.48 1132.72
22443.59  1132.822447.83 1131.9722490.73  1117.222493.13 1116.2222529.32 1116.88
22536.55  1117.622574.86 1116.7222618.58 1118.3422640.82 1117.39 22645.3 1117.04
22669.98  1114.722675.32 1114.3522697.34 1113.8422704.24 1114.37 22721.9  1113.9
22722.46    1114 22765.5 1116.01 22773.6 1115.6622832.46 1115.1222868.61 1114.72
22882.99  1115.122920.52 1116.4822958.38 1131.9622995.46 1135.4823196.44 1135.17
23243.36  1135.223337.14 1135.1123455.35 1134.0223586.54 1133.4223625.18 1133.11
23674.29  1133.123740.74 1133.0523928.91 1132.5823999.09 1132.0724023.54 1131.05
24073.23  1128.824088.58 1128.2124125.81 1126.3424169.63 1128.8524178.41 1129.23
24251.68  1130.724280.87 1129.6424321.48 1128.0324333.82 1127.6524363.84 1126.83
24421.49  1127.724483.92 1128.0924515.57 1129.2624532.73 1129.9524581.95 1131.16
24615.01  1131.1 24653.2 1131.17 24709.3 1130.59 24725.8  1130.524735.01 1130.31
24777.12  1129.924856.35 1128.12 24865.8 1127.9424907.23  1125.724920.27 1125.79
24973.31  1126.725051.33 1127.0725079.85 1127.07 25153.6 1126.5825188.05 1128.94
25223.43    112925254.08 1130.2425269.45 1130.3325273.77 1129.9325317.22 1127.88
25328.61  1127.425354.49 1127.4525380.43  1126.7 25385.4 1126.62 25436.9 1127.12
25502.21  1127.725527.97 1127.0625535.81    112725554.55 1127.55 25570.5 1127.35
25633.81  1128.325699.62 1128.6725742.65 1129.15 25771.9 1129.3725792.08 1128.67
25835.89  1127.825850.73 1131.8325853.04 1132.2825866.15 1133.2125876.19 1131.85
25898.18  1130.425909.01 1131.6925913.03 1131.6125938.93 1130.5925954.13 1128.84
25961.67  1127.925966.17 1127.8525975.16 1128.3826017.24 1128.4326055.88 1128.69
26064.78  1128.826071.65 1128.5326202.12 1128.02

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14350.76     .05 19371.2    .03520439.17     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19371.220439.17               570  508.89     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14350.76 19371.2 1124.6620439.1726202.12 1127.59

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 218.04

INPUT
Description:
Station Elevation Data    num=     130
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17025.05  1126.717046.46 1126.6617139.85 1126.68 17265.6 1126.98 17285.3 1126.99
 17339.8  1127.117368.81 1127.7117375.93 1127.9617387.18 1128.1717399.25 1127.84
17425.14  1126.717437.07 1126.49 17443.1 1125.6617467.12 1123.7517508.82 1122.55
17536.65    112317568.13 1123.0117580.98 1122.3817590.29 1122.4317737.66 1123.45
17892.94  1124.617942.04 1124.6717951.06 1123.7118005.77 1119.67   18021 1119.54
18108.49  1118.518113.14 1118.5618129.44  1118.318131.07 1118.6218140.77 1119.36
18159.33  1118.818165.64 1118.8118293.58 1119.5118321.22 1119.5418390.72 1121.27
18439.76  1122.1 18441.1 1121.7118457.03 1122.6518466.03 1121.87 18467.4 1121.17
18470.13  1120.7 18474.7 1120.9718485.79 1120.9818515.24 1116.82 18517.3 1116.63
18549.38  1118.918564.81 1119.3118595.58 1120.0518630.98 1121.3218644.41 1121.61
18659.16  1121.718670.18 1126.3218672.29 1126.7218689.39 1126.0318707.18 1125.77
18714.82  1125.718750.94 1125.4918765.73 1124.81 18771.4 1124.4418787.46 1123.56
18862.77  1122.218887.84 1121.6718909.59 1121.5219049.37 1120.9319094.29 1121.96
19129.54    112119132.79 1120.9219136.43 1127.4619145.96  1127.519158.33 1126.69
19170.06  1126.9 19198.7 1121.9819200.91 1121.7719219.25 1120.7519316.08 1120.12
19340.27  1123.519351.62 1123.1919368.53  1123.619373.14 1123.59   19383 1119.27
19413.55  1106.419423.75 1106.15 19454.2 1106.0719510.81 1106.9219515.21 1106.82
19530.82  1106.719539.61 1106.0819596.44 1104.6419612.21 1104.4819614.42 1104.01
19628.94  1100.219678.34 1099.73 19708.5 1099.8619778.52  1097.919799.29 1097.18
19818.75  1096.919885.99 1095.5119934.83  1096.6 19989.8 1097.9120057.89 1098.84
20096.88  1099.820130.66 1100.6420148.07 1100.9620181.53 1101.7720219.75 1102.33
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20259.67  1103.220339.61 1104.9220350.78 1105.1620367.87 1105.3520406.19 1105.85
 20408.5  1105.9 20411.5 1107.5320446.86 1125.39 20467.7 1124.1920481.88 1123.33
20490.04  1123.820513.05 1125.2720532.42 1125.5120536.37 1125.64 20537.8  1125.4
20549.12  1124.620567.27 1125.6620581.06 1126.0720588.15 1125.7220618.54 1126.06
20620.89  1126.220648.58 1126.33 20670.2 1127.8520705.59 1128.4920744.91 1129.44

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17025.05    .03519373.14    .03520446.86    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19373.1420446.86              540  508.91     460             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17025.0519373.14 1123.5920446.8620744.91 1125.39

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.95

INPUT
Description:
Station Elevation Data    num=     119
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17269.81  1125.117273.65 1125.3117289.07 1126.8517434.97  1126.917475.06 1126.89
17493.89  1126.9 17506.3 1125.66 17546.6 1125.0417678.95 1124.7617692.55 1124.75
17751.24    112417816.86 1123.93 17839.6 1123.7417848.23 1120.8817852.14 1119.42
17876.17  1119.517936.73  1119.717973.64 1119.46 18018.6 1119.0918087.43 1119.08
18147.97  1119.418189.16 1119.4418196.58 1119.5518235.93 1118.5418249.03  1118.3
18334.83  1119.218407.85 1119.58 18448.5 1119.97 18467.9 1120.2118500.62 1120.46
 18563.9  1120.318638.14 1120.5118712.75 1120.52 18765.5 1120.3918793.15 1120.44
18809.28  1120.7   18831  1120.718971.29 1120.2519017.17 1120.1919080.19 1119.71
19143.83  1118.8 19163.6 1118.7519200.56 1118.0319203.44 1117.9119216.64 1117.75
19241.81    111819247.01  1117.819304.49 1117.7319309.51 1117.5919327.42 1119.41
19336.96  1118.419344.65 1119.8119356.41 1119.6419373.44 1119.52   19392 1123.52
19396.21  1124.219414.44 1123.6919423.35 1123.3219457.46 1104.92 19459.3 1104.34
19465.43  1103.219478.29 1102.7119502.95  1101.119508.31 1100.6119520.09 1099.29
19534.74  1100.319561.92 1099.9919566.24 1099.9819579.98 1099.1319594.74 1100.04
19601.92    110019624.85 1101.1919633.23 1102.0319644.34 1102.0419679.09 1099.62
19718.32  1096.719722.87 1096.4919748.34  1095.819755.07 1095.0219785.83 1093.62
19805.29  1092.619835.21 1092.47 19858.9 1093.2619871.17 1093.8219898.88 1094.42
19903.64  1094.419955.08 1095.5920015.76 1097.41 20028.6 1097.5220053.19 1096.86
20096.73  1097.9 20112.7 1097.9920160.62 1102.6720177.69  1104.320185.65 1104.19
20231.67  1103.720255.62 1103.7320324.77 1103.8520340.48 1103.9520344.93 1104.06
20373.56  1104.5 20423.2 1105.2220458.01 1105.2220489.12 1119.9420495.39  1123.1
20526.71  1121.920546.88 1122.8320551.73 1122.9220575.75 1125.5320590.74 1123.37
20615.29  1124.320618.98 1124.3120712.77 1126.2620722.68 1126.42 20743.4 1126.07
 20762.2  1127.320768.52 1127.1720797.01 1127.1720837.27 1127.58

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17269.81    .03519423.35    .03520495.39    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19423.3520495.39              480  489.76  489.76             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17269.8119423.35 1123.3220495.3920837.27  1123.1

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.86

INPUT
Description:
Station Elevation Data    num=     171
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17078.98 1127.0417117.34  1126.617131.91 1126.7217144.52 1126.5317172.48 1126.55
17204.49 1126.5117221.97  1126.417304.37 1125.3617352.83 1125.3217367.66 1125.48
17411.95  1125.1 17436.4    112517508.42 1125.0217590.84 1125.1517616.69 1125.16
17630.56 1124.3517685.03  1124.117785.59 1123.5917806.54 1123.4717906.06 1122.75
17936.31 1120.9717943.18  1120.917953.79 1120.07 17954.8 1118.3817967.12 1117.68
18025.43 1118.2618041.07  1118.9 18057.5 1118.4518082.12 1117.9218101.97 1118.31
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18116.81  1118.518227.91  1118.718336.13 1118.1718346.49 1119.0518368.76 1119.01
18438.69 1119.0518469.08  1119.118483.98 1119.3318499.75 1122.3718501.49 1121.58
 18541.4 1104.5218551.36  1104.518573.43 1104.6518605.75 1104.7118623.04 1104.79
 18627.6 1104.7518659.96  1104.818660.85 1104.7618684.48 1116.9318693.71 1121.82
18696.44 1121.6318728.94  1117.818748.07 1117.69 18750.8 1117.6418782.11 1118.09
18823.37 1118.8618877.62  1119.818882.44    112018890.83 1119.9118957.44 1119.69
18998.75 1118.9319031.46  1118.1 19046.7 1117.9419060.05 1117.87 19070.2 1117.66
19085.41 1117.8519151.43  1117.219186.68  1118.919207.55 1119.1219307.48    1120
19373.63  1120.319381.44  1119.919403.68 1119.7419413.37 1122.0919416.58 1123.01
19437.06 1123.7819456.28  1123.219458.45 1122.6219462.82 1122.8919480.48 1121.89
19494.97 1115.9119522.47  1103.619564.08 1103.1219596.01 1103.38   19619 1103.74
19653.41 1104.6919666.21  1104.519676.03 1104.75 19701.3  1103.7 19726.7 1103.73
19734.12 1103.5119745.14  1102.219761.36 1100.1419825.98 1088.6519847.42  1088.6
19875.54 1088.8819884.18  1089.119899.82 1089.1819960.22 1092.6619992.54 1093.61
20002.61 1093.0320021.16    1093 20090.5  1093.120097.42 1093.0520133.52 1094.22
20163.22 1094.97 20169.4  1095.820205.62 1102.6120222.55 1102.7720273.85 1103.07
20306.43 1102.9220371.13  1103.120392.57 1102.9720410.69 1103.2720522.58 1103.94
20553.05 1121.7120583.17  1122.420601.67 1123.2820605.56 1123.31 20611.6 1123.86
20620.46 1123.6820636.41  1123.720653.03 1122.2220660.32 1122.9120684.42 1125.51
 20713.5 1125.4320806.16  1125.520839.53 1125.6220853.48 1126.5220864.06 1127.29
20898.25 1126.7220935.28  1127.4 20984.1 1126.4521010.78 1124.9421020.26 1124.46
21043.59 1124.2921090.25  1124.121109.74 1124.2321156.37 1124.3621174.01 1124.86
21207.33 1126.3221217.88  1126.721250.75 1127.8321284.09 1127.7821338.59 1127.88
21413.84  1127.421436.95    112721478.69 1126.2321507.42 1124.6821525.41 1123.67
21549.84 1123.3121583.05  1123.421640.05 1125.6421645.23 1125.7821650.27 1126.16
21656.45  1126.221740.28    112721808.21 1125.9921821.16 1125.6421841.85 1124.74
 21864.8 1123.9421904.39  1125.621994.14 1127.2522058.96 1127.9922079.42 1128.33
22139.44 1128.7922161.17  1128.722263.41 1129.8722295.96 1130.14 22396.5 1130.57
22411.39 1130.72

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17078.98    .03519437.06    .035 20611.6    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19437.06 20611.6              470  512.67     540              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17078.9819437.06 1123.78 20611.622411.39 1123.86

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.76

INPUT
Description:
Station Elevation Data    num=     105
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18696.26  1131.5 18704.4 1129.2418708.16 1126.5418723.72 1113.0418733.67 1113.04
18747.99  1112.818761.93 1118.7218768.63 1121.7118787.92    112118800.11 1120.45
18804.79  1121.718811.76 1123.2718842.98 1128.4218872.95 1131.3618874.31 1131.55
18898.39  1127.618914.36  1123.3 18942.8 1123.6518946.55 1123.7818977.23 1117.62
18985.07  1117.618988.68 1116.59 18996.3  1116.519048.98 1117.1519075.91 1117.36
19118.51  1114.319121.711114.19819125.71 1114.0719140.48 1114.46 19194.3  1115.7
19209.65 1116.2919251.27  1116.219260.11 1114.2619269.27 1113.8819287.02 1113.49
19302.34 1113.9719320.61  1114.7 19328.5 1115.3819416.97 1117.2419447.56 1116.72
19454.34 1116.8619460.63  1117.619468.83  1119.719475.55 1121.5819478.28 1121.66
19491.87 1122.61 19506.5  1122.819527.24 1121.9819532.35 1121.7119549.15 1114.56
19560.66 1109.5519566.72  1106.619595.17  1105.419607.57 1105.4719620.51 1105.24
19694.19  1103.619703.83  1103.519713.94 1103.6119716.38 1103.4419746.13 1103.55
19754.83 1103.65 19810.5  1103.919814.58 1102.3219822.14 1099.8719840.89 1093.64
19881.09 1093.8819929.82    109319952.35 1092.7119954.71  1092.520010.46 1092.19
20012.53 1092.3820048.72  1092.220135.92 1093.05 20155.3 1093.0520177.38 1092.54
20185.54 1093.4220204.39  1094.8 20219.2 1094.4720233.32 1095.0620239.91    1095
20262.89 1095.6120311.58  1098.320347.84 1101.5220357.92  1102.620392.73 1117.38
 20401.2 1121.1220415.35  1121.620425.11 1121.1720435.31 1121.14 20492.9 1121.13
20502.18 1121.1820533.15  1121.320548.06 1120.8820573.49 1120.81 20606.3 1120.63
20642.39 1120.9720658.83  1122.220679.17 1122.4720706.16  1122.920712.94 1122.71
20757.82 1123.6820875.26    112420913.28 1123.9920925.68 1124.0620967.17 1124.99

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
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18696.26 .03519532.35 .035 20401.2 .035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19532.35	20401.2	440	496.98	560	.1	.3

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.66

INPUT
Description:
Station Elevation Data num= 372

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13410.42	1123.11	3473.99	1122.91	13516.62	1131.13	13543.66	1137.51	13584.78	1134.64
13596.45	1133.9	13619.3	1136.49	13626.52	1135.68	13677.48	1130.67	13717.14	1128.34
13776.9	1126.81	3804.61	1126.17	13834.66	1126.13	13859.65	1126.91	13882.59	1127.2
13906.27	1122.3	13927	1115.95	13935.96	1115.93	13966.69	1123.99	13988.92	1124.03
14057.49	1124.11	4168.71	1123.97	14185.98	1122.63	14226.67	1131.88	14260.04	1138.88
14284.22	1139.21	4296.65	1139.37	14303.35	1133.83	14318.65	1123.16	14381.69	1123.02
14395.23	1123.91	4409.22	1123.68	14451.38	1122.85	14686.66	1123.41	4708.91	1123.48
14720.56	1123.51	4771.92	1123.71	4775.61	1124.07	14783.01	1124.31	14893.4	1124.41
15021.73	1124.31	5065.51	1124.29	15152.12	1124.42	15166.47	1125.45	15169.36	1124.47
15173.39	1122.31	5184.39	1125.31	15197.33	1121.85	15209.72	1122.09	15221.25	1122.1
15261.61	1122.21	5273.44	1122.15	15472.27	1121.85	15515.15	1121.74	15653.06	1122.36
15687.14	1122.61	5694.72	1120.45	15705.26	1120.58	15708.14	1120.49	15711.1	1119.23
15718.06	1115.71	5726.44	1112.14	15731.84	1114.88	15735.56	1116.32	15745.42	1119.87
15759.29	1120.61	5775.81	1121.05	15818.82	1120.61	5838.97	1120.58	15981.18	1120.58
16009.13	1120.5	16051.3	1120.96	16054.83	1120.94	16081.64	1121.14	16107.61	1121.52
16133.09	1121.5	16284	1121.31	16355.84	1121.47	16362.6	1121.45	16455.75	1121.69
16494.23	1121.61	6511.76	1121.68	16682.87	1121.64	16751.88	1121.71	6772.61	1122.1
16856.98	1122.4	16986.6	1122.75	16993.55	1119.98	16999.97	1117.01	17006.97	1119.86
17011.4	1121.41	7068.59	1121.62	17330.83	1122.88	17336.66	1122.77	17342.37	1122.23
17471.22	112	217523.38	1121.83	17537.29	1121.75	17706.17	1120.56	17757.42	1120.15
17772.44	1119.7	17797.8	1119.88	17843.85	1120.02	17846.29	1119.98	17904.52	1120.37
17932.13	112	017961.76	1119.52	18098.62	1117.04	18120.45	1117.26	18141.36	1114.53
18192.83	1115.81	8212.37	1116.35	18246.14	1114.99	18265.67	1115.81	8279.11	1116.7
18285.4	1116.71	8475.61	1115.97	18517.59	1115.78	18527.31	1115.35	18537.22	1115.4
18634.69	1115.11	8636.28	1115.05	18651.27	1115.71	18681.6	1115.65	18721.36	1115.23
18732.89	1119.51	8751.61	1125.92	18796.59	1124.72	18810.83	1124.41	18813.56	1123.32
18833.84	1114.51	8876.74	1113.93	18884.46	1118.02	18910.38	1113.76	18939.94	1113.73
18961.41	1113.41	9001.48	1113.11	19015.49	1112.68	19023.38	1112.78	19039.73	1113.98
19069.1	1116.31	9093.22	1116.41	9130.33	1116.14	19141.7	1115.91	9265.87	1121.29
19293.94	1124.6	19334.5	1124.33	19354.41	1124.15	19356.6	1123.79	19410.55	1114.35
19414.17	1113.81	9433.06	1111.53	19441.8	1111.53	19450.12	1115.02	19466.46	1122.48
19494.33	1122.11	9515.26	1121.81	19539.84	1121.16	19580.79	1107.88	19594.81	1102.95
19596.51	110	319600.29	1102.18	19636.62	1102.45	19670.06	1102.31	19693.25	1102.1
19724.56	110	219758.95	1102.33	19793.46	1101.81	9828.27	1101.19	19869.42	1094.53
19875.54	1093.41	9881.49	1093.38	19915.76	1092.34	19935.3	1092.31	20012.91	1091.97
20134.14	1090.12	0186.97	1089.45	20267.56	1088.38	20280.62	1088.14	20300.88	1088.56
20321.71	1088.62	0370.15	1100.82	0444.71	1101.97	20457.16	1102.06	20496.87	1102.77
20570.08	1102.42	0595.78	1113.72	0611.59	1120.91	20626.26	1120.97	20681.12	1121.2
20719.24	112	220730.66	1121.54	20748.21	1116.07	20772.6	1117.89	20794.31	1118.17
20806.14	1118.7	20820	1118.76	20835.7	1116.77	20852.57	1115.76	20859.93	1116.29
20897.72	1119.4	20914.2	1120.39	20936.74	1120.96	21040	1123.02	21080.02	1124.35
21118.54	1124.5	21153.4	1125.15	21172.76	1125.26	21190.21	1125.27	21198.03	1125.08
21227.59	1123.72	1237.84	1122.75	21258.59	1121.42	21286.08	1120.54	21298.81	1120.2
21344.09	112	121362.52	1121.25	21389.25	1121.97	21423.61	1122.97	21444.34	1123.69
21482.28	1124.92	1551.91	1124.97	21630.03	1125.49	21686.22	1123.85	21730.36	1122.5
21772.83	1120.82	1807.93	1118.98	21829.36	1119.92	1889.27	1123.89	21908.41	1124.61
21957.53	1125.3	22029	1124.72	2046.76	1124.12	22096.45	1122.28	22107.92	1122.52
22134.75	1123.22	2175.16	1123.92	22212.2	1124.67	22282.56	1124.52	22301.52	1124.52
22313.23	1124.42	2360.42	1123.96	22453.56	1124.11	22499.1	1123.77	22568.82	1122.85
22600.22	1123.22	2760.33	1123.52	22795.48	1123.29	22946.59	1124.81	22961.54	1124.91
22973.66	1113.42	2976.98	1110.83	23014.87	1111.7	23021.87	1111.8	23026.6	1112.23
23036.03	1113.32	3084.59	1113.55	23126.41	1112.74	23160.75	1112.56	23187.77	1115.1
23284.7	1112.72	3287.36	1112.66	23310.27	1111.31	23319.93	1113.09	23326.38	1112.41
23354.29	1111.22	3358.17	1111.15	23362.3	1110.83	23376.07	1110.71	23397.66	1111.46
23413.46	1111.92	3416.02	1124.82	23422.05	1128.81	23434.88	1127.22	3444.61	1131.45
23449.55	1130.12	3467.88	1126.65	23476.08	1124.73	23480.33	1123.95	23513.25	1123.77
23526.72	1123.12	3588.94	1122.31	23609.4	1122.32	23623.44	1121.57	23644.03	1121.11
23660.06	1121.12	3672.26	1120.87	23719.12	1121.12	3727.25	1120.93	23783.98	1120.19
23804.35	1120.52	3833.72	1120.43	23868.86	1120.21	23940.8	1119.44	24000.97	1119.45

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24011.32  1119.3 24030.5 1118.65 24034.9  1118.324049.97 1118.7424086.64 1119.71
24097.36  1120.524121.77 1123.0324250.12 1122.1624286.75 1122.0124299.77 1122.06
24318.71  1122.224326.95 1123.0124337.31 1124.3724362.95 1124.3924415.05 1124.63
24453.48  1124.924487.85 1125.1924508.31 1124.7424563.28 1123.7124611.54  1121.3
24670.84  1123.724744.16 1125.0424817.27 1124.2224851.05 1123.8124875.81 1123.72
24908.85    112324938.38 1122.2424984.44 1122.5524988.71 1122.5525017.47 1122.93
25071.65  1124.725147.19  1126.225219.12 1125.6125231.11 1125.1725271.87 1123.52
25310.51  1122.525363.56 1120.8525398.47 1119.6825417.31 1119.8325485.13 1120.47
25492.62    112125553.87 1121.3725595.25 1121.21 25608.8  1120.725616.61 1120.33
25621.07  1120.825635.19 1122.4225679.65    112225700.64 1121.3725714.87  1121.7
 25764.3  1122.225797.69 1122.27 25803.4 1122.7425840.75 1123.7525861.23 1122.27
25899.09    112125943.38 1121.1125965.86 1120.9225997.55 1121.0326027.88 1121.03
26193.91  1121.426231.58 1120.9526242.65 1120.6526261.99 1121.4226317.07 1123.54
26345.09  1123.826357.86 1124.05 26374.6 1124.5826383.03  1124.726400.99  1124.4
26432.91  1120.626436.28 1120.1826439.46 1120.2326507.57 1122.56 26523.1 1121.51
26559.65  1120.826568.23 1120.39

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13410.42    .03519539.84    .03520611.59    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19539.8420611.59              450  512.72     610             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13410.4219539.84 1121.1620611.5926568.23 1120.91

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.57

INPUT
Description:
Station Elevation Data    num=     105
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18013.92  1116.718030.44 1116.7718050.63  1116.618124.33 1115.87 18144.5 1115.64
18154.92 1114.41 18158.3 1113.7918171.62  1113.418200.22 1113.78 18249.2 1114.76
18266.95 1115.6818280.84 1114.7618429.88  1113.818454.55 1113.6218487.31 1113.66
 18545.3  1113.618565.51 1114.6918581.96  1116.618605.39 1116.2418683.97 1115.91
18713.94 1116.02   18721 1115.9518738.56  1115.918756.25 1116.1518765.47 1116.71
18771.16 1116.71 18776.2 1116.4518778.79    111618796.35 1115.0918813.36 1112.34
18835.01 1112.4318860.91 1113.1718921.01  1113.218979.66 1113.2419077.95 1113.09
19108.89 1113.09 19154.6 1113.6719331.07  1113.719363.04 1113.7319368.48 1110.99
19386.38 1116.4119390.31 1116.8619399.78  1121.319441.79 1120.26 19485.2 1119.25
19501.28 1119.4319517.83 1111.9619542.42  1100.819562.16 1100.5119573.71 1100.43
19641.56 1100.1519684.46 1100.2719701.88  1101.319744.82 1101.1519760.44 1103.05
19763.19 1103.2619765.82 1102.7519813.71    109519882.78 1093.9519949.38 1093.86
20056.13 1091.89 20072.3 1091.5120084.44  1091.620107.99 1091.6320116.34 1091.72
20137.39 1091.4320220.85 1090.84 20249.2  1089.9 20340.4 1092.3420349.92 1092.62
20392.31 1099.2520465.11 1099.3320495.23  1099.1 20519.8 1099.62 20539.7 1100.15
20581.07 1118.5420584.26 1120.0120585.96    112020610.43 1118.8520619.07 1118.72
20644.43 1117.9320682.45 1116.39 20683.6  1117.420692.98 1116.9220718.89 1119.63
20724.51 1119.6220786.53 1119.7120817.17  1119.320836.38 1118.9520871.36 1118.94
20876.01 1118.3620886.18  1118.120897.97  1117.120918.52 1117.4620923.93 1117.42
20943.41 1117.8820969.17 1118.4420995.25  1118.521016.21 1118.74 21157.2 1120.99
21158.67 1121.2221198.38 1122.37 21205.2  1122.521244.33 1123.0521283.18  1124.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18013.92    .03519501.28    .03520584.26    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19501.2820584.26              440  481.39     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18013.9219501.28 1119.4320584.2621283.18 1120.01

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.48

INPUT
Description:
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Station Elevation Data    num=      97
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18236.01 1115.0518272.78 1113.88 18299.5  1113.718461.95 1114.16 18582.8 1113.67
18624.01  1113.318715.24 1113.1718745.54  1112.918823.91 1112.7118846.96 1112.57
 18909.1 1111.9918953.02 1111.81 18967.9  1111.618979.02 1111.6419012.67 1112.25
19020.47 1112.4319161.51 1112.4619286.59  1112.819289.43 1110.5819291.33 1108.23
19313.73 1107.4919325.12 1107.5519339.03  1108.719355.96 1108.7919373.28 1114.84
19386.09 1119.4919400.18 1119.6219414.72  1119.519455.38 1100.6219458.49 1099.22
19474.03    1099 19563.4 1098.7819603.52  1097.319638.95 1096.9419660.85 1097.57
19768.13 1095.7419800.17 1095.22 19882.6  1094.219956.71 1092.9520030.08 1092.03
20076.99 1091.6520113.27 1091.2920220.52  1090.820232.88 1091.0220294.34 1092.46
20300.97 1093.0720325.41 1093.2520377.34  1093.820417.34 1093.7220445.53 1093.85
 20450.8 1093.7720491.19 1113.9120498.98  1117.720513.25 1118.4420542.36 1114.68
20544.57 1114.9820555.29 1118.0520575.97  1107.120599.36 1096.9320605.23 1097.02
20634.43 1096.6820651.66 1096.1520664.64  1096.520666.24 1096.6820691.83 1098.05
20706.82 1099.4620720.66 1099.4820742.45  1100.920758.79 1099.1920801.19 1096.79
20811.68 1096.4920830.24  1098.420839.88  1099.920864.97 1099.2920911.54 1095.31
20913.45 1095.2720932.99 1096.9120934.71  1097.920962.36 1103.8620964.19 1104.52
20985.71 1110.4620988.58 1110.8921014.49  1116.821030.88 1121.0321042.74 1121.04
21077.31 1121.44 21112.3 1121.0221119.26    112121131.41 1120.8121157.18 1122.19
21160.98 1122.5121216.92 1122.1821234.98  1122.321275.95 1122.9121296.32    1123
21355.12 1123.5421359.24 1123.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18236.01    .03519400.18    .03520513.25    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19400.1820513.25              440  502.74     570              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18236.0119400.18 1119.6220513.2521359.24 1118.44

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.38

INPUT
Description:
Station Elevation Data    num=      79
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18086.73 1112.0518126.89 1112.4218150.62 1112.0918201.77  1113.618220.17    1114
18237.96 1115.4118287.77 1111.6818344.46 1112.0718357.62  1112.118382.37  1112.5
18426.79 1112.6918439.52 1112.5618457.61 1112.6218702.97  1111.818907.87 1111.14
19011.51 1111.1219178.13 1111.6919301.14  1112.1 19317.4  1105.119320.63 1103.76
19335.04 1103.4319351.16 1103.2619358.14 1104.3519370.25  1107.219381.46 1110.01
19395.65 1115.6719402.86 1118.2919431.07 1118.7119439.66  1118.6 19442.3 1117.62
19484.06 1098.9519540.04 1097.3119613.99 1095.0519621.74  1092.719630.27 1093.05
19693.84 1095.3419708.66 1095.4819797.26 1095.4719890.58    109519950.72 1094.15
19986.47    109420001.92 1094.5520006.51 1094.3220014.34    109220017.76 1091.13
20122.42 1091.5820137.88 1091.5220199.08 1090.9920247.14  1090.720266.57 1090.72
20284.24 1090.8120369.63 1090.8320388.79 1091.0420435.65  1091.820464.45 1092.28
20482.16 1100.8120517.96 1118.4620522.43 1118.6820533.82  1119.820551.54 1116.77
20563.25 1114.9820578.85 1118.3520607.13 1116.8820613.72  1115.220625.52 1115.32
20699.29  1112.920784.31 1114.3320858.69 1114.5120942.13  1115.220971.88 1115.46
20986.64 1115.6220994.77  1115.821006.23 1115.7321029.87  1116.621038.75 1117.47
21069.36  1118.321124.54 1117.9121131.75 1118.2721141.23  1120.1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18086.73    .03519431.07    .03520533.82    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19431.0720533.82              480  491.58     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18086.7319431.07 1118.7120533.8221141.23  1119.8

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.29

INPUT
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Description:
Station Elevation Data     num=      116
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
17592.29  1111.717614.88  1111.817664.02 1111.7117752.58 1111.9117843.08 1112.08
17920.11 1112.0817944.56  1112.417982.64 1112.7218013.13 1111.9418087.65 1112.95
18090.45 1113.0618114.24  1114.4 18124.9 1111.85 18131.2 1112.1718155.06  1112.5
18189.89 1113.3218274.36  1112.518291.98 1112.2618333.14 1111.9118344.34 1111.11
18371.02 1111.3418421.76  1111.318427.34 1111.6718444.57 1113.1218462.13 1112.67
18497.57 1111.9918551.54    111218610.97 1111.6718621.63 1111.5818633.54 1110.94
18648.88 1110.4218657.86  1110.918672.68 1110.0218687.43 1109.4718708.66 1109.79
18717.04 1109.6618753.11  1109.718807.22 1110.0118812.62 1110.0718948.31 1110.02
19090.58  1111.119120.56    1111 19190.9  1111.319226.21 1097.4219258.62 1084.15
19290.38 1083.8519300.61  1083.519302.57 1083.0719307.96 1083.3919316.86 1084.69
19331.74 1084.2319344.83  1083.919422.26 1108.0519444.61 1115.2119452.65 1117.55
 19462.9 1117.95 19477.1  1118.319486.17 1118.8919496.87 1114.0719531.51 1096.62
19546.03 1097.3319548.73  1097.219558.04 1097.4819574.74 1097.6119591.87 1092.21
19597.05 1090.2919618.15  1091.219660.06 1091.8619673.55 1092.9319739.34 1094.67
 19756.1 1095.1719763.03  1095.319792.66  1095.1 19850.8 1094.9319903.19 1095.06
19913.69 1090.3619933.59  1091.9   19946 1092.6720049.21 1092.8420056.98 1092.83
20077.25  1092.420174.92  1090.520182.61 1090.5420238.41 1090.7420250.25 1090.69
20267.27 1090.3520365.21  1089.720386.55 1090.1120473.48 1091.0620479.07 1091.14
 20481.6 1092.4120527.91  1116.520544.71 1117.5820551.28 1116.7920580.82  1114.1
20586.62 1115.2220592.95  1116.1 20623.3 1115.9820635.89 1116.2520639.82 1116.07
20646.67 1116.0320655.38  1116.220712.57 1116.0320739.26    111620740.92 1116.07
20762.38 1115.2820774.06  1115.320779.97 1115.24 20786.6 1115.3420835.43 1116.46
20846.42 1121.5520850.12  1121.320857.54 1119.8720878.44 1116.5320941.72 1116.53
20982.95 1116.48

Manning's n Values         num=        3
     Sta   n Val      Sta   n Val      Sta   n Val
17592.29    .03519486.17    .03520544.71    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19486.1720544.71           511.81  511.81     520              .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17592.2919486.17 1118.8920544.7120982.95 1117.58

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 217.19

INPUT
Description:
Station Elevation Data     num=      131
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
17868.47    111317872.22 1112.96 17878.5 1112.4317906.06  1112.217937.27 1112.15
17948.67 1112.0117971.46  1111.8617986.85 1112.2418013.53  1112.218096.19 1111.12
18102.73 1111.2218134.04  1112.0518142.05  1112.118145.04  1111.718154.15 1111.25
18183.36 1110.51 18196.9  1110.3718225.44 1110.7418234.36  1110.518292.49 1110.84
18353.78 1110.15 18501.8  1109.9618642.55 1110.25 18712.4  1110.718716.06 1110.96
18719.43 1110.6818726.98  1110.4418788.74 1107.8718797.78  1107.618833.04 1108.51
18848.04 1109.0118870.09  1109.2518889.15 1109.5118904.84  1109.918911.41 1110.26
19029.77 1111.35 19032.7  1111.3919104.02 1081.9319114.16  1081.319134.01 1080.09
19183.28 1047.79 19188.4  1044.6119195.79 1044.5819307.62  1044.419372.04  1084.4
19396.15 1083.2919410.84  1087.7119457.52 1102.8619482.12    111019487.07 1112.23
19503.99 1117.8819535.55  1118.2319580.46    109619594.73  1095.619603.61 1093.85
19631.85 1087.47 19672.7  1087.1119678.04 1087.1619701.97  1087.919714.89 1090.68
19726.52 1092.7419728.93  1092.93 19733.6 1090.6819748.63  1092.319756.06 1090.27
19770.57 1086.4319789.83  1089.8619799.13 1091.7919815.12  1092.219846.41 1093.75
19880.57 1093.8319923.81  1093.8419958.55 1093.8119993.29  1094.120012.94    1094
20084.62 1093.9220119.46  1093.7620130.95 1093.4320162.91  1092.420224.37 1089.79
20233.29 1089.7620242.06  1089.3420265.26 1089.1420296.53  1088.620367.15 1089.11
20390.04 1089.2620427.85  1089.5620481.37 1090.5320522.87  1110.720530.53 1114.35
20543.32 1115.1420548.79  1115.5720580.16 1113.6320596.01  1112.520606.62 1115.42
20633.35 1115.8520642.78  1116.0720682.36 1115.6620749.89  1114.520800.98 1114.31
20808.82    111520811.14 1114.1220857.81 1114.0820970.04  1113.520977.08 1113.52
20981.42 1114.3220985.68  1114.7821028.25 1114.9621044.92  1114.621070.55 1115.24
21135.67 1115.8421210.52  1115.05 21233.2 1114.9421353.11  1114.921435.26 1115.53
 21438.1 1115.6421457.55  1115.6821487.41 1115.4821498.25  1115.421529.39 1114.78
21567.97 1115.1221595.46  1114.821620.49 1114.8621704.77  1115.321785.89 1115.77
21855.84 1116.9821950.96  1117.8421962.58 1117.5121980.48  1117.322033.04 1117.97
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22041.35 1118.12

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17868.47	.035	19535.55	.035	20548.79	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19535.55	20548.79	490	502.45	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17868.47	19535.55	1118.23	20548.79	22041.35	1115.57

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.10

INPUT
Description:
Station Elevation Data num= 138

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17600.59	1112.97	17620.68	1112.34	17646.86	1112.03	17688.41	1111.74	17704.24	1112.1
17719.14	1112.18	17741.7	1111.68	17756.4	1111.07	17848.24	1110.96	18074.7	1111.3
18124.9	1111.23	18130.99	1110.62	18263.83	1109.98	18349.69	1109.65	18551.23	1110
18587.18	1109.89	18617.17	1109.76	18679.02	1109.56	18790.59	1109.24	18799.21	1109.2
18826.91	1109.38	18858.24	1108.36	18865.89	1108.2	18871.8	1109.02	18888.69	1111.7
18924.73	1094.26	18950.29	1081.46	18981.7	1080.71	19039.03	1045.05	19290.6	1045.4
19355.94	1045.47	19360.51	1048.54	19414.92	1085.6	19438.51	1084.48	19442.09	1085.4
19479.15	1095.56	19513.38	1107.78	19519.12	1110.01	19523.16	1111.11	19527.72	1112
19543.34	1116.59	19557.04	1117.46	19576.88	1118.05	19625.46	1096.98	19630.49	1094.9
19636.74	1084.58	19656.27	1083.62	19664	1083.18	19707.71	1083.72	19719.1	1084.8
19752.09	1088.43	19764.19	1089.53	19778.39	1090.58	19819.8	1092.18	19851.38	1094
19859.54	1089.46	19866.15	1085.4	19901.3	1085.07	19960.76	1083.75	19990.62	1083
20044.95	1083.12	20059.64	1083.07	20069.32	1083.61	20085.24	1084.23	20093.93	1088.3
20100.95	1091.32	20119.63	1090.54	20142.57	1089.73	20157.78	1089.12	20182.35	1088.3
20238.55	1086.83	20252.74	1086.55	20296.58	1086.02	20303.64	1086.23	20311.45	1085.7
20323.94	1085.37	20342.66	1084.94	20355.06	1084.95	20378.95	1085.82	20390.46	1085.6
20408.3	1085.93	20431.7	1085.48	20467.32	1085.77	20478.03	1085.82	20495.77	1094.6
20534.13	1112.96	20539.41	1113.15	20545.86	1113.16	20551.73	1113.34	20608.55	1110.1
20612.3	1111.24	20622.42	1113.61	20630.42	1113.64	20660.12	1113.59	20683.8	1114.2
20797.02	1116.45	20802.59	1116.48	20819.36	1113.92	20973.36	1114.12	20993.05	1114.2
21007.1	1115.05	21015.63	1114.93	21024.21	1114.14	21047.61	1114.18	21063.7	1114.3
21091.99	1114.58	21217.52	1114.72	1282.21	1114.44	21373.52	1114.53	21392.21	1115
21426	1114.24	21435.77	1114.17	21463.99	1114.83	21517.28	1114.77	21539.61	1114.6
21542.9	1114.72	21602.03	1114.56	21650.05	1114.53	21747.34	1114.66	21788.15	1114.8
21843.92	1114.06	21877.29	1113.77	21888.46	1113.77	21906.58	1113.44	21918.44	1113.6
21977.61	1114.27	21997.78	1114.12	22002.26	1114.19	22004.64	1113.84	22112.68	1113.6
22115.58	1114.87	22134.58	1116.15	22165.7	1115.87	22209.46	1114.67	22245.06	1114.7
22272.55	1114.03	22349.62	1114.68	22409.32	1114.41				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17600.59	.035	19576.88	.035	20551.73	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19576.88	20551.73	481.37	481.37	481.37	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17600.59	19576.88	1118.05	20551.73	22409.32	1113.34

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.00

INPUT
Description:
Station Elevation Data num= 226

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14098.54	1120.5	14128.08	1120.14	14198.7	1120.01	14421.36	1119.28	14431.34	1119.84
14448.43	1119.3	14456.42	1119.34	14471.01	1119.06	14490.05	1118.88	14516.45	1119.53
14537.44	1119.7	14554.43	1119.58	14617.79	1119.9	14660.16	1119.65	14666.56	1119.38
14787.23	1118.9	14878.68	1119.78	14889.68	1118.87	14909.73	1119.6	14913.37	1119.56
14934.09	1120.1	15004.13	1120.02	15086.65	1120.83	15149.1	1119.72	15170.02	1119.89
15211.59	1120.4	15214.69	1119.08	15221	1117.13	15223.38	1117.41	15231.65	1119.09

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15369.53  1118.415529.51 1117.5815568.29 1117.6515589.35 1117.7315625.57 1117.19
15713.69  1117.215728.81 1117.3915756.29  1117.315778.83 1118.9915786.84 1118.99
15860.73  1118.615896.88 1118.3816022.87    111816123.06 1116.7216218.41 1116.25
16287.25  1115.816300.33 1117.7416307.46 1117.92 16312.8 1117.77   16334 1108.63
16334.91    110916352.76 1117.5716359.24 1117.5516368.86 1116.9516396.58 1116.92
16404.96  1116.616496.79 1115.5816509.53 1115.7416540.83 1115.53 16545.1 1115.56
16719.07  1116.616790.96 1116.5716831.51 1116.6116898.02 1116.8416936.04 1116.86
16953.66  1116.716979.21 1116.8817023.76 1117.6917046.68 1117.9317068.68 1118.12
17072.78  1118.217080.88 1114.1217095.31 1119.1417112.28 1118.8417122.51 1117.68
17124.11  1117.717151.42  1114.417210.52 1107.3317265.35  1109.617279.62 1110.22
17323.85  1110.717327.55 1110.7917339.24 1110.71 17455.2 1110.6817513.41 1110.58
17539.87  1110.517573.18 1111.0417591.05 1111.1917607.24 1110.6117633.85 1110.87
17658.39  1109.417668.45 1109.4717742.89 1109.7517841.92 1110.3517990.57 1110.29
18050.32  1110.4 18104.4 1110.8918111.39 1110.9118127.89 1110.7118160.16 1111.14
18166.69  1111.218319.16 1110.0118410.48 1109.9818426.92 1109.8118479.03 1109.33
18518.93  1109.618557.34 1109.9118562.47 1109.92 18596.5 1109.6718602.19 1109.68
18677.67  1109.218690.17 1108.9918715.41 1108.7918722.39 1109.3618734.94  1110.2
18740.09  1110.818780.12 1091.1618802.42 1080.9218813.26    108118834.72 1080.55
18889.72  1051.618903.97 1044.4119200.31 1045.2419354.64 1046.1319368.47 1046.18
19370.82  1047.819425.74 1084.1819443.19 1083.4919485.52 1094.1819493.29 1096.86
19532.95  1109.919544.05 1113.8219551.29 1116.2919560.29 1116.1219574.59 1116.78
19584.47  1117.519632.35 1094.7319637.36 1092.2819648.07 1092.4219657.88 1087.81
19670.13  1085.619677.79 1084.8919724.59 1082.9819785.99 1083.2319801.01 1083.06
19819.83  1083.219833.32 1083.2419843.23 1083.0619893.28 1081.9919914.53 1081.38
19934.85  1081.319942.34 1081.8319970.45 1082.8419973.18 1082.4320001.14 1083.03
20034.89  1084.820050.24 1084.7420065.58 1084.8320068.23 1084.6720103.24 1084.14
20131.69  1082.720143.96 1085.3620148.75 1088.5820176.06 1087.8620181.16 1087.84
20214.08  1088.220228.34 1087.66 20255.4 1087.7520266.51 1088.5420293.74 1088.64
20315.95  1088.920340.21 1088.8820357.96 1088.6820368.51 1088.3220383.76 1088.06
20393.33  1087.220428.08 1086.4620448.71 1086.9620485.81    108920518.72 1104.87
20535.78  1113.320540.04 1113.4420551.23 1113.1620580.83 1111.8420589.82 1112.24
20600.75  1111.620615.43 1110.4920646.56 1110.6620697.83 1109.93   20706 1110.67
20707.21  1110.120715.01 1115.9120728.15 1118.6320730.93 1120.6620743.72 1114.93
 20745.4  1114.420785.35 1114.9420789.93 1116.83 20809.4 1122.6520837.73 1122.07
20861.48  1114.420900.21 1114.2820939.63 1114.0120945.97 1113.7120974.02 1111.87
20982.49  1112.220990.46 1113.28   21006 1113.1521055.12 1113.8221160.88 1114.41
21227.71  1114.421317.97 1113.6521340.57 1113.6621367.07 1113.8321407.84 1113.83
21455.78  1113.421480.61 1113.5621489.69  1113.421551.01 1112.9521621.93 1112.61
21681.36  1112.821734.31 1112.6221813.77 1112.2721854.83 1112.1321976.67 1111.87
22006.05  1111.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14098.54    .03519584.47    .03520540.04    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19584.4720540.04              510  506.49  506.49             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14098.5419584.47  1117.520540.0422006.05 1113.44

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.91

INPUT
Description:
Station Elevation Data    num=     211
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 14099.2  1119.714559.42 1118.4814566.97 1118.5114578.11 1119.4614593.53 1119.09
14601.62  1118.814746.19 1119.1114854.73 1118.6814937.59 1118.4314951.24 1117.55
14966.68  1117.414990.32 1118.0815006.25 1118.3615033.56 1118.2715048.46 1118.25
15062.29    1118 15083.6 1120.4115093.56 1120.2915108.89 1119.7315234.76 1120.77
15337.22    111915374.11 1119.0815404.53 1118.8915474.81 1118.2915587.87 1117.53
15589.63  1117.615604.39 1118.9815646.54  1119.215679.98 1119.2915705.15 1118.52
15713.71  1118.515778.73 1119.0515798.21 1118.9915827.48 1118.25 15897.7 1117.91
15921.07  1117.415929.28 1116.6815931.21    111615949.88 1115.7615973.81 1115.71
15991.09  1116.816180.68 1115.7516274.57 1114.7516288.72 1114.6816314.26 1114.45
16402.38    111416429.73 1113.8516441.14 1116.6216451.87 1116.3316458.12 1113.19
16470.06    110716487.19 1115.0416491.62 1116.8116504.46  1116.916509.38 1115.83
16514.62  1115.516530.29 1115.9616543.87 1115.9316636.54 1115.9416757.34 1115.65
16760.46    111616771.55 1115.4916775.94  1115.216794.31 1115.4616813.69 1116.08
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16944.03  1115.416966.49 1115.1616976.03 1114.6616993.21 1113.9417023.17 1113.55
17058.98  1112.9 17099.6 1111.6617134.49 1109.16 17172.2 1109.0717315.71 1108.88
17381.63  1108.917422.97  1109.317426.29 1109.0517446.84 1107.8717498.83 1109.49
17518.15  1110.217530.75 1111.11 17545.5 1110.7817557.96 1110.9817596.95 1111.04
17620.83  1110.617686.59  1110.517707.19 1110.5417803.03 1110.4917862.12 1110.02
17903.23  1109.917956.17  1109.717992.63 1109.52 17999.6 1109.5318086.52 1109.38
18347.34    110918413.24 1108.9518479.03 1109.1118494.69 1107.9118513.77 1109.06
 18550.3  1108.218568.86 1109.2918573.12 1109.6118584.94 1109.9718629.91 1089.27
18649.22  1080.118674.53 1080.4318684.62 1075.7718751.76 1045.8119017.44 1045.16
19362.16  1045.519380.07  1057.119419.67 1083.2219469.66 1091.1819489.79 1094.18
19494.38  1095.719510.69 1101.6719550.02  1115.219570.88 1116.0919579.12 1116.14
19606.91  1102.319629.92 1090.4219637.51 1090.1219644.24 1089.6219646.83 1088.31
19648.97  1087.819689.66 1083.4619695.04 1083.1519721.45 1082.3219750.64 1084.27
19792.85  1084.519827.51  1083.419875.56 1083.4819883.38 1083.5219904.38 1083.27
19946.63  1083.119996.87 1082.7320001.81 1082.6820066.92 1084.5620106.23 1083.09
20115.87    108320146.21  1083.120171.89 1082.99 20203.8 1082.9620223.46 1082.77
20228.02  1086.320238.83 1092.6820243.18 1090.6420250.58 1090.2620284.19 1090.18
20308.83  1090.420319.78  1089.820333.36 1089.9120356.79 1088.9120391.15 1089.01
 20399.3  1089.220411.96 1089.6720446.41 1090.7920468.88 1091.5620484.39  1091.9
20494.43  1095.720506.88 1102.1620525.95 1111.0520542.47 1112.3520588.08 1111.82
20603.92  1111.920609.85 1113.3920614.96 1113.1520669.51 1112.0420688.84 1111.49
   20707  1111.220734.16 1111.2220793.21 1110.5820809.02 1110.3620829.83 1110.92
20852.41  1112.420876.38 1112.7520906.45 1112.82 20937.2 1113.4420983.26 1114.06
21016.37  1113.321024.58 1113.3321034.96 1113.1821053.76 1112.6321074.52 1111.84
21094.09  1111.6 21101.4 1111.1421111.91 1110.1321123.63 1110.3221142.99 1110.89
21181.47  1111.821203.41  1112.221254.24 1112.2121300.76 1111.1621318.07 1112.06
21404.77    111221588.54 1112.1321607.47 1111.7721651.58 1111.9721678.44 1112.06
 21691.4  1110.321706.27 1112.4521782.41 1112.0521815.83 1111.6121896.63 1111.46
21901.86  1111.521931.58 1112.3522003.66 1112.57 22039.7  1112.522465.13 1110.71
22514.01  1110.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14099.2    .03519579.12    .03520542.47    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19579.1220542.47           503.44  503.44  503.44              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14099.219579.12 1116.1420542.4722514.01 1112.35

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.81

INPUT
Description:
Station Elevation Data    num=     207
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14826.86  1117.315074.81 1117.3215121.98  1117.415234.89 1117.1615368.88 1116.83
15374.04  1117.815395.67 1122.3915417.92 1122.1115421.66    112215554.53 1118.45
15577.36  1119.315719.49  1114.915731.96 1113.8915742.84 1113.15 15776.7 1115.71
15945.17  1115.515966.24 1115.5416005.02 1115.42 16009.4 1116.7816018.59 1118.76
16025.55  1116.716031.99 1115.4816122.77 1115.6116131.04 1117.3216147.34  1120.1
16169.01  1114.616180.01 1114.5516219.77 1114.1616225.87 1114.1616240.21 1113.18
 16284.9  1113.716305.02 1113.7416452.71 1113.9316465.24 1115.2316478.67 1114.97
 16487.9  1109.416495.05 1105.6716508.62 1112.01 16516.7 1115.3916523.38  1115.3
16535.02  1115.716550.34 1115.3416563.07 1114.7416568.64 1114.7916577.33 1115.17
16611.89  1113.816622.88 1113.6416644.22 1113.6316652.51 1113.7216696.87 1113.95
16728.68  1113.916734.43 1114.1116808.69 1115.4416840.78 1115.6916894.19 1115.07
 16942.9    111516958.95 1114.9916986.36 1114.4116994.93 1114.3117000.64 1113.59
17007.03  1113.117010.39 1113.14 17020.3  1114.2 17069.5 1113.4417090.81 1113.43
17110.64    111317117.84 1112.2417147.92 1111.2617188.49    111117209.44 1110.53
17256.88  1109.817282.12 1109.9617305.71 1109.8417331.56 1109.6517372.28 1110.32
17373.99  1110.517384.34  1110.417469.49 1110.1417509.83 1109.2317519.01 1108.92
17551.66  1108.217578.56 1108.0517626.01 1108.6317667.54 1108.28   17898 1109.08
17920.34  1109.217956.23 1109.3118005.24 1109.0618161.61 1108.5818331.29 1108.01
18351.89  1108.918392.86 1107.6518423.28 1108.1918577.84 1107.6118586.22 1107.59
18602.22  1109.418613.37 1109.7518642.23 1099.7418702.44 1081.0718721.85 1081.29
18788.63    105518812.86  1045.3 18834.8 1045.1318883.55 1045.3218988.23 1044.74
19257.63  1044.9 19316.1 1044.9119372.68 1072.2519385.55  1080.419393.08 1080.33
19411.19  1080.519434.69 1086.4319442.05 1088.1319453.88 1091.5119464.06 1094.18
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19490.85  1104.819511.71 1113.6619532.66 1111.8219548.98 1112.1219557.65 1112.45
19562.91  1113.619565.56 1113.51 19577.4  1113.619622.58 1096.6819646.03 1087.62
19658.12  1087.219664.26 1085.5619691.93 1084.1419727.69 1082.1319753.37 1081.99
19779.03  1082.519789.25 1082.5419834.99 1080.0919890.35  1081.619933.18 1083.41
19935.92  1083.5 19961.9 1083.2719980.83 1083.0319995.55 1083.2320005.99 1082.91
20022.31  1082.620040.29 1082.2920080.75 1081.8120099.51 1082.1320130.96 1081.32
20144.15  1082.3   20145 1082.7820156.68  1086.520163.67  1089.320168.14 1090.38
20179.75  1091.820183.35 1090.7520194.66 1086.3120205.53  1082.320214.36  1082.3
20220.69  1083.720229.44 1087.3620251.13 1084.4920262.14 1085.0320271.54 1080.74
20280.37  1079.9 20287.7 1079.5520300.81 1084.4620358.85 1084.4220381.15  1084.2
20397.02  1084.520467.37  1086.120517.23 1110.4520533.96 1110.6820570.19 1110.64
20594.26  1110.320610.59  1110.420632.61 1110.2620674.67 1110.4320701.11 1110.57
21037.42    1111 21124.1 1110.9621136.91 1111.1321179.36  1111.321182.02 1111.27
21202.46  1110.721219.63 1112.6321221.91 1112.6221258.72 1111.6121333.79 1109.91
21340.19  1109.721388.49 1109.6721725.44 1110.1321891.54 1110.3221894.05 1110.29
21912.43  1109.621938.45 1109.3921983.98 1109.2722000.48 1108.5122023.47 1109.89
22041.79    111022072.76 1109.9722184.77 1110.12 22202.1  1110.222227.52 1110.66
22237.06  1110.822260.98 1110.56 22301.5 1110.59 22873.9 1109.0722942.44 1108.51
22955.28  1107.322990.05 1107.36

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14826.86    .035 19577.4    .03520517.23    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19577.420517.23           498.18  498.18  498.18             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14826.86 19577.4  1113.620517.2322990.05 1110.45

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.72

INPUT
Description:
Station Elevation Data    num=     166
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
15417.47  1116.115474.29 1115.9515547.94 1116.2115569.22 1116.2215709.49 1115.31
15721.83  1115.2 15778.3 1121.8115787.24 1122.3515809.79 1123.5615819.12 1123.39
15850.98  1123.815869.71 1122.7415892.68 1118.94 15909.8 1119.1615995.41 1116.79
16017.62  1116.116022.65 1116.4416051.43 1117.7516149.15 1115.0316186.44 1113.96
16270.13  1124.9 16273.2 1125.3816279.29 1125.4516347.32 1125.7816403.26 1121.94
 16454.9  1115.916501.53 1111.1116536.68 1113.09 16550.6  1113.616579.09 1113.04
16613.89    110716634.61  1103.516695.61 1103.5116721.07 1103.5716737.76 1106.35
16753.95  1108.216757.65 1113.5816777.91 1117.7116820.39 1126.6916841.31 1129.83
16928.63  1127.616931.47 1127.5816943.11 1124.8316992.13 1113.5417010.85 1113.65
17025.38  1113.617038.21 1111.6817047.17 1110.4417055.95 1110.4517114.12 1110.28
17234.89  1109.817512.57 1108.1917553.86 1107.8217598.86 1107.5717670.56 1107.36
17804.97    110717971.68 1106.5318088.71 1106.0418104.41 1106.0218131.14 1106.19
18186.07  1106.818226.13 1106.54 18254.5  1106.418266.22 1106.9418292.31 1106.98
18329.34  1106.718362.99 1106.63 18447.6 1106.7618532.58 1106.9618584.51 1107.09
18595.09  1107.318662.68 1107.7118794.66 1107.9818892.55 1108.0818911.03 1107.96
18975.29  1107.919003.02 1107.8519134.52 1107.7819170.42 1107.9619188.23 1107.95
19344.38  1108.519404.19 1108.5419546.41 1108.8719550.04 1108.8519559.44 1111.18
19569.21  1112.119622.28 1093.27 19646.4 1084.6219714.35 1083.7619737.49 1083.74
19767.27  1082.7   19787 1082.1119845.37 1080.6519898.93 1080.3319903.45  1080.5
19973.17  1082.719976.11 1082.7420043.38 1081.0420055.06 1080.7920118.31 1080.17
20136.87  1080.420206.06 1080.49 20212.4 1080.78 20218.2  1082.120260.96 1080.89
20269.28  1080.620271.57 1080.9620312.74 1085.7320378.18 1082.5720456.41 1085.24
20460.07  1085.320509.38 1109.4320523.78 1110.5820530.13 1110.5120589.99 1108.84
20604.23  1108.920617.71 1109.5220684.05 1109.3420695.96 1109.2720804.74 1109.46
20942.06  1109.821026.78 1109.8321215.57 1110.1621268.95 1110.4621380.55 1110.76
21406.78    111121446.98 1110.7921469.18 1109.9921509.85 1109.9521547.67 1110.01
21601.77  1109.821625.14 1109.8521630.48 1109.8121645.52  1108.521701.95 1107.87
21919.77  1107.221953.35 1107.2321977.46  1107.222192.68 1107.3122212.18 1106.98
22273.96  1107.422285.04 1106.6422291.96 1106.0422333.53 1106.4722352.34 1106.74
22365.19    1107 22371.8 1107.0422376.74 1107.2722381.57 1107.7622404.63 1108.01
 22415.5  1108.622426.85 1109.0922439.42  1109.122503.13 1109.2322771.44  1108.9
22782.52  1108.922824.21  1108.722825.73 1108.1422838.66 1104.7422874.12 1104.65
22891.81  1104.7 22901.3 1104.54   22905 1105.9222919.78 1109.4522988.94 1109.12
 23211.3  1107.9
```

```
Manning's n Values         num=        3
     Sta   n Val     Sta   n Val     Sta   n Val
15417.47    .03519569.21    .03520523.78    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19569.2120523.78              500  508.39     520             .1        .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
15417.4719569.21  1112.120523.78 23211.3 1110.58

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.62

INPUT
Description:
Station Elevation Data    num=     128
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 17142.5  1115.817184.69 1109.7717189.53 1109.3217259.99 1108.4217304.26 1107.66
17319.68  1105.717329.73 1104.3117375.77 1098.1517385.87 1097.9817407.25 1098.07
17460.95  1106.617479.37 1109.4717507.52 1109.84   17512 1109.3917534.88 1107.69
 17543.2  1106.717614.91 1106.4717685.22 1106.1917854.67 1105.9117959.61 1105.83
 18032.1    110618093.53 1106.0318105.57  1105.618236.52 1106.0318340.33 1105.88
 18462.7  1105.518594.48 1105.5918709.29 1105.6718762.77 1105.7618765.56 1105.67
18934.43  1106.318943.81 1106.3618965.82  1107.918972.63 1108.6219018.75 1109.19
19055.14    110919116.38 1108.7919165.03 1111.2719184.54 1111.1419250.11 1110.58
19257.95  1109.6 19289.7 1106.5819307.87 1107.3119324.83 1107.8519342.73 1103.51
19352.54    110119369.09  1100.919452.78 1106.87 19464.6 1108.5919499.01 1108.85
19522.86  1108.819525.52 1108.6219538.92 1108.5819547.37 1108.6819548.15 1108.84
19553.43  1111.219564.56 1111.0519584.87 1103.8919632.28 1086.6219639.92  1083.9
19641.78    108419679.02 1083.9919738.88 1083.1819788.98 1083.3219815.96 1082.59
19863.35  1081.719910.35 1081.0119945.76 1080.6619965.57 1080.6320021.96 1081.11
20032.29  1081.220047.02 1081.91 20104.6 1084.2620150.01 1082.9220158.64 1082.78
20177.75  1084.220227.23 1078.6920234.38 1078.9120239.96 1079.2320257.65 1079.48
20264.91  1079.520285.15 1080.28 20290.2  1079.720299.23 1078.3320302.46 1078.39
20306.78  1079.220322.87 1082.9420358.89 1083.36 20360.7 1083.5120396.11 1087.98
20423.78  1088.3 20458.1 1088.5520465.44 1090.3820499.35 1099.5320505.64 1101.28
20513.86  1101.420540.01 1101.4120577.65 1101.7620608.55 1102.2920649.81 1101.57
20650.06  1104.320671.03 1104.2620754.59 1103.7720804.75 1105.4320840.84 1106.33
20844.54  1106.5   20876 1108.9220900.25  1108.320930.29 1108.0720960.84 1108.07
21408.47  1109.321426.76 1109.2621613.71    110921660.45 1108.6121671.94 1107.77
21675.14  1107.421683.28 1109.4221699.37  1108.9 21726.2 1108.4421746.45 1108.84
21896.19  1108.621910.62 1108.0321920.67 1107.8421941.45 1107.8722118.94 1108.49
22492.85  1107.622533.76 1108.34 22583.5 1108.99

Manning's n Values         num=        3
     Sta   n Val     Sta   n Val     Sta   n Val
 17142.5    .03519564.56    .035   20876    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19564.56   20876              470  499.71     570             .1        .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 17142.519564.56 1111.05   20876 22583.5 1108.92

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.52

INPUT
Description: Upstream face of I-10 bridge


Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02 1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
```

```
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18100     .0419487.53    .03520561.59     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19487.5320561.59            256.5   256.5   256.5             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

BRIDGE                  RIVER: Salt River
REACH: Reach 4            RS: 216.505

INPUT
Description: I-10 Bridge
Distance from Upstream XS =    23.5
Deck/Roadway Width        =     210
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      12
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18100    1120    112019233.73    1124    112419487.43 1123.08 1123.08
19487.53 1123.08    1116 19618.9 1123.42 1116.3419753.06 1123.48  1116.4
19887.31 1123.53 1116.4520027.54 1123.49 1116.41 20161.8 1123.26 1116.19
20296.05 1123.02 1115.9320430.31 1122.69  1115.620561.59 1122.45 1115.37

Upstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02  1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18100     .0419487.53    .03520561.59     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19487.5320561.59             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

Downstream  Deck/Roadway Coordinates
    num=      12
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18100    1120    112019233.73    1124    112419487.43 1123.08 1123.08
19487.53 1123.08    1116 19618.9 1123.42 1116.3419753.06 1123.48  1116.4
19887.31 1123.53 1116.4520027.54 1123.49 1116.41 20161.8 1123.26 1116.19
20296.05 1123.02 1115.9320430.31 1122.69  1115.620561.59 1122.45 1115.37

Downstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02  1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
```

```
   18100     .0419487.53    .03520561.59     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19487.5320561.59             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  7

Pier Data
Pier Station     Upstream=   19620    Downstream=   19620
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   19755    Downstream=   19755
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   19890    Downstream=   19890
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20025    Downstream=   20025
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20160    Downstream=   20160
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20295    Downstream=   20295
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
```

```
Pier Data
Pier Station     Upstream=   20430    Downstream=   20430
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.49

INPUT
Description: Downstream face of I-10 bridge



Station Elevation Data    num=      34
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02  1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18100     .0419487.53    .03520561.59     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19487.5320561.59            23.25   23.25   23.25             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.42

INPUT
Description:
Station Elevation Data    num=      72
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
 15777.7  1112.1 15814.7  1111.7 15831.8  1110.6 15875.7  1110.6 15885.9  1111.3
 15893.7  1110.9 16065.1  1110.8 16181.6  1110.4 16240.1  1110.4 16387.1  1109.3
 16549.8  1108.9 16759.7  1109.7 16884.3  1111.2 16896.3  1107.6 16901.6  1105.5
 16913.6     1111 16927.7  1110.7 16938.6  1109.3 17091.4  1109.6 17141.3  1105.7
   17272  1104.7 17353.3  1106.1   17450  1106.2   17489  1105.9 17502.3  1107.2
 17504.8  1107.2 17515.4  1105.7 17645.7  1105.4 17957.8  1104.6 18072.2  1104.6
 18179.4  1104.8 18216.5    1105 18243.2  1104.5   18287  1102.9   18295  1103.8
   18318  1105.2 18344.5  1103.3 18351.5    1102 18404.5  1102.5 18478.9  1099.8
```

18570.3	1099.5	18605.7	1098.9	18636.3	1099	18687.6	1107.9	18696.7	1107.4
18726.1	1101.6	18730.1	1100.6	18787.2	1100.9	18803.2	1100.4	18861.6	1100.1
18886.8	1100.3	18910.6	1099.7	18933	1098.7	18949.5	1098.8	18971.8	1098.2
19069.8	1100	19105.6	1101.7	19140.3	1102.6	19190.3	1106.6	19238.1	1106.5
19263.1	1102.7	19282	1099.5	19320.5	1099.6	19503	1099	19535.3	1098.8
19593	1082.7	20065.5	1082.3	20416.4	1082	20517.4	1107.9	20540.4	1108.4
21279.3	1108.4	21332.3	1117.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
15777.7	.04	19535.3	.035	20517.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19535.3	20517.4	510	488.7	410	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
15777.7	19238.1	1106.6	20517.4	21332.3	1107.9

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.33

INPUT
Description:
Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16758.3	1108.5	16790.3	1107.7	16915.7	1107.5	16918.4	1107.9	16967.4	1107.4
17088.3	1107.2	17177.1	1106.2	17230.7	1104.1	17307.8	1103.2	17334.2	1104.9
17463	1103.9	17551.9	1102.8	17622.5	1102.7	17630	1102.1	17648.2	1103
17795.3	1103.3	17860	1103.2	17891.3	1102.2	17916.7	1102.4	17965.2	1101.9
18006.5	1101	18033.6	1102.9	18180.2	1102.5	18367.3	1102	18378.1	1101.3
18378.9	1101.5	18394.8	1101.2	18436.8	1101.5	18455.1	1100.2	18456.6	1099.1
18460.2	1098.5	18515.1	1096.6	18522	1099.8	18679.4	1098.3	18698.7	1105.3
18708.3	1106	18720.5	1103.8	18776.6	1098.7	18854.4	1098	18903.5	1095.3
18944.6	1095.5	19011.4	1101.4	19047.5	1101.5	19084.2	1098.3	19216.8	1097.9
19269.7	1097.9	19277.9	1097.7	19340.8	1106.5	19365.5	1107.1	19449.3	1085.8
19464.7	1082.2	19617.8	1081.5	19658.8	1081.1	20011.3	1080.8	20067.2	1081
20260.4	1081.5	20350	1081.5	20372.7	1082.2	20453.9	1106.7	20475	1107.5
21204.4	1107.5	21217.8	1103.3	21250.9	1104.2	21299.5	1103.3	21362.4	1102.8
21472.6	1102.9	21493.1	1102.9	21553.9	1103.7	21577.9	1103.5	21604.5	1102.4
21612.7	1101.6	21638.7	1101.3	21661.9	1095.5	21751.1	1112.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16758.3	.04	19365.5	.035	20453.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19365.5	20453.9	600	490.24	380	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16758.3	19365.5	1107.1	20453.9	21751.1	1106.7

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.23

INPUT
Description:
Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16307.2	1106.8	16347.4	1106.3	16584.4	1106.6	16655.9	1106.7	16722.9	1105
16805.1	1104.8	16843.8	1105.4	16940.7	1105.1	17025.5	1103.7	17072.4	1104.3
17106.6	1103.9	17271.4	1105.1	17286.3	1105.2	17300.1	1103	17309.7	1103.1
17479.7	1103.3	17486.2	1103.3	17748.9	1103.1	17792.4	1103	17807.8	1101.8
17964.2	1101.2	18041.5	1100.9	18063.2	1101.5	18221.3	1101.1	18316.7	1097.6
18393.9	1100.2	18494.3	1099.7	18526.6	1100.5	18534.7	1099.9	18548.2	1097
18576.9	1100.1	18638.8	1099.4	18676.7	1096.6	18856.1	1094.3	18888.6	1092.6
18923.6	1105.7	18937.2	1105.4	18965.6	1093.9	18973.7	1091.2	18983.9	1091.1
19024.1	1096.2	19175.7	1097.7	19329.5	1097.3	19356.4	1093	19372.4	1091.7
19394.5	1090.9	19443.1	1084.8	19458.8	1083.8	19477	1083.8	19514.7	1080.5
19554.9	1078.5	19707.6	1078.8	19807	1078.7	19970	1078.7	20101	1079.1
20257.8	1079.2	20360.8	1079.3	20429.8	1103.9	20444.5	1103.8	21274.9	1103.8
21292.4	1106.1	21298.1	1106.3	21304.5	1103.8	21313.9	1101.7	21457.4	1101.4

21690	1101.2	21797.9	1101.7	21816.8	1103.7	21840.4	1102.2	21943.8	1102.1
21957.3	1102.8	21973.7	1101.5	22038.8	1101	22065.3	1102.4	22088.6	1101
22106	1098	22140.9	1104.1	22146.7	1104.5	22197.5	1114		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16307.2	.04	19329.5	.035	20429.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19329.5	20429.8	590	517.61	450	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16307.2	19329.5	1105	20429.8	22197.5	1105

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.13

INPUT
Description:
Station Elevation Data num= 67

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16426.6	1105.9	16587.5	1104.7	16635.7	1102.6	16819.4	1103.3	16993.1	1102.9
17098.1	1102.8	17115.4	1100.5	17132.4	1100.6	17142	1102.8	17188.2	1102.3
17212.9	1103.3	17259.7	1102.7	17444	1103	17594.1	1102.7	17626.7	1102.3
17648.9	1100.8	17726.6	1100.8	17763	1102.2	17831.1	1102.1	17922.1	1103.5
17930.8	1101.9	17948.1	1103.8	17970.1	1100.9	18007	1100.9	18014.4	1095.7
18705.2	1095.7	18812.9	1096.6	18825.4	1095.8	18974.2	1096.9	19012	1096.6
19022.3	1098.1	19071.7	1097.7	19097.3	1098.8	19117.4	1098.8	19143.8	1101.1
19154.2	1103.6	19166	1103.6	19179.4	1099.6	19318.1	1099.4	19345.1	1091.3
19390.3	1087	19444.1	1082.8	19458.1	1083	19534.5	1080	19580.9	1082.3
19595.2	1078.2	19849.2	1078.4	19937.8	1078.2	20155.1	1078	20385	1078.6
20445.7	1100.3	21392	1100.3	21412.6	1104.5	21436	1098.6	21594.6	1099.3
21748.3	1100.3	21786.3	1099.8	21807.4	1098.6	21868.2	1100	21940	1100.5
22096.1	1101.4	22142.8	1101.3	22335.7	1100	22363.4	1098.9	22490.9	1100.4
22516.1	1096.7	22597.4	1115.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16426.6	.04	19318.1	.035	20445.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19318.1	20445.7	550	500.46	390	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16426.6	19318.1	1099.4	20445.7	22597.4	1100.3

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.04

INPUT
Description:
Station Elevation Data num= 63

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17056.9	1104.8	17064.5	1104.7	17069.2	1099.8	17072	1101.9	17078.9	1105
17149.1	1103.4	17162.9	1101.9	17281	1100	17549.7	1099.4	17599.6	1100.8
17818.3	1099.8	17961.6	1101.8	18091.7	1101.7	18098	1099.8	18798.9	1099.8
18807.5	1094.8	18960.8	1094.8	19054.4	1094.7	19081.9	1095.5	19098	1093.5
19151.6	1094.3	19175.6	1095	19188.4	1098.5	19201	1100	19214.9	1098.4
19219.3	1099.1	19227.7	1103.2	19386.1	1101.6	19417.8	1089	19500.7	1080.6
19516.7	1080.2	19531.5	1078.4	19608.3	1077.5	19724.9	1081.7	19739.1	1080.4
19758.6	1081.1	19770	1077.8	19800	1077.8	20231.5	1078.4	20418.1	1078.3
20424.4	1078.2	20473.4	1099.4	20478	1099	21487.5	1099	21501.9	1098.9
21528.7	1104.2	21544.2	1099.7	21573.3	1099.2	21582.6	1100.4	21586.2	1102.2
21768	1099.8	21775.2	1099	21961	1098.7	21988.6	1099.7	22183.1	1099.4
22224.8	1100.5	22465.8	1100	22481.3	1098.4	22530.7	1098.7	22555.3	1100.8
22840.9	1100.4	22866.7	1097.9	22941.8	1117.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17056.9	.04	19386.1	.035	20473.4	.04

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19386.1 20473.4              540  507.78     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 17056.9 19386.1  1101.6 20473.4 22941.8  1099.4

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 215.94

INPUT
Description:
Station Elevation Data    num=      65
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 17234.9  1103.6 17416.5  1099.3 17481.8  1099.6 17669.1  1098.4   17750  1099.1
 17946.3  1099.3 18106.7  1099.8 18125.7  1102.5 18151.3  1094.6 18167.9  1094.6
   18209  1090.7 18234.4  1099.1 18274.9  1092.7 18296.5  1092.5 18324.6  1096.4
 18363.1    1100   18415  1106.7 18417.8  1107.8 18426.6  1103.4 19038.8  1103.4
 19077.4  1103.5 19085.3  1101.4 19097.5  1104.1 19147.9  1103.4 19268.7  1104.6
 19306.1  1104.5 19526.4  1107.5 19620.3  1079.3 19632.6  1079.5 19650.2  1077.8
 19673.9  1077.8   20074  1078.4   20226  1078.4 20242.2  1082.6 20312.6  1082.8
 20361.4  1085.9 20380.6  1089.1   20408  1090.1   20426  1093.3 20477.9  1093.4
 20496.8  1098.5 20512.7    1098 20521.3  1094.3 20544.4  1094.2 20552.5  1096.4
 21573.5  1096.4 21577.1  1100.2 21638.8  1099.7 21664.8  1103.7 21680.7  1100.4
 21856.5  1099.3   22065  1098.8 22070.7  1098.8 22073.1  1097.8 22355.6  1099.5
 22366.6  1099.8 22599.5  1099.2 22620.8  1098.1 22669.8    1098 22679.1  1099.5
 22906.4  1098.8 23101.2  1100.9 23111.4  1099.5 23139.6  1106.3 23179.1  1117.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 17234.9     .04 19526.4    .035 20496.8     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19526.4 20496.8              560  540.02     520              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 17234.9 19526.4  1107.5 20496.8 23179.1  1098.5

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 215.84

INPUT
Description:
Station Elevation Data    num=      55
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 17657.2  1101.6 17764.4  1101.1 17778.7  1099.6 17915.7  1096.1   18947  1096.1
 18949.6  1098.8   18966  1095.8 19012.5  1096.3 19065.4  1099.6 19087.3  1099.8
 19091.9  1097.4 19117.9    1099 19128.4  1100.8 19135.6  1097.9 19142.8  1097.9
 19299.1  1098.5 19370.8  1098.4 19556.3  1100.9 19597.1    1077 19685.5  1077.2
 19875.2  1077.5   19951  1077.7 19963.2  1080.6 19989.6  1080.1 19999.6  1077.7
 20186.5  1077.9 20315.6  1078.3 20324.3  1075.8   20340    1076 20351.9  1079.6
 20416.4    1079 20443.6  1092.1 20461.6  1098.2 20612.7  1096.8 20680.5  1097.4
   21713  1097.4 21721.9    1098 21747.8  1102.3 21761.3  1098.5 21898.1  1098.1
 22152.1  1097.3 22203.5  1096.9 22219.4  1097.9   22403  1099.1 22420.2  1097.7
 22434.6  1098.7 22545.4  1098.4   22704  1099.2 22777.7  1097.8 22788.5  1100.1
 22799.7  1097.6 22986.5  1097.8   23064  1099.6 23323.1  1098.4 23377.2  1117.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 17657.2     .04 19556.3    .035 20461.6     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19556.3 20461.6              120  123.82     130              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 17657.2 19556.3  1100.9 20461.6 23377.2  1098.2

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 215.82

INPUT
Description: Upstream Face of 24th St. Bridge
```

```
Station Elevation Data     num=       15
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
   18260     1096   18620   1094.7   19170     1096 19549.9 1097.71    19550   1094.5
 19550.1   1088.1 19553.1   1088.1 19587.4     1076 20384.4     1076 20407.9   1085.7
 20410.9   1085.7 20410.9   1094.7   20411   1097.8   21080   1097.4   21490     1100

Manning's n Values         num=        3
     Sta    n Val     Sta    n Val     Sta    n Val
   18260      .04   19550     .035 20410.9      .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         19550 20410.9           115.96  115.96  115.96              .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7

BRIDGE                   RIVER: Salt River
REACH: Reach 4             RS: 215.815

INPUT
Description: 24th Street
Distance from Upstream XS =    25.98
Deck/Roadway Width        =       64
Weir Coefficient          =      2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19550 1097.71 1094.54 19618.9 1098.05 1094.87 19690.9 1098.45 1095.27
 19762.9 1098.66 1095.48 19837.9 1098.67  1095.5 19906.9 1098.93 1095.76
 19978.9 1098.93 1095.76 20053.9 1098.94 1095.77 20125.9 1098.83 1095.66
 20197.9 1098.69 1095.51 20269.9 1098.47  1095.3 20341.9 1098.19 1095.01
 20410.9 1097.85 1094.68

Upstream Bridge Cross Section Data
Station Elevation Data     num=       15
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
   18260     1096   18620   1094.7   19170     1096 19549.9 1097.71    19550   1094.5
 19550.1   1088.1 19553.1   1088.1 19587.4     1076 20384.4     1076 20407.9   1085.7
 20410.9   1085.7 20410.9   1094.7   20411   1097.8   21080   1097.4   21490     1100

Manning's n Values         num=        3
     Sta    n Val     Sta    n Val     Sta    n Val
   18260      .04   19550     .035 20410.9      .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
         19550 20410.9              .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7

Downstream  Deck/Roadway Coordinates
    num=       13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19550 1097.71 1094.54 19618.9 1098.05 1094.87 19690.9 1098.45 1095.27
 19762.9 1098.66 1095.48 19837.9 1098.67  1095.5 19906.9 1098.93 1095.76
 19978.9 1098.93 1095.76 20053.9 1098.94 1095.77 20125.9 1098.83 1095.66
 20197.9 1098.69 1095.51 20269.9 1098.47  1095.3 20341.9 1098.19 1095.01
 20410.9 1097.85 1094.68

Downstream Bridge Cross Section Data
Station Elevation Data     num=       15
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
   18260     1096   18620   1094.7   19170     1096 19549.9 1097.71    19550   1094.5
 19550.1   1088.1 19553.1   1088.1 19587.4     1076 20384.4     1076 20407.9   1085.7
 20410.9   1085.7 20410.9   1094.7   20411   1097.8   21080   1097.4   21490     1100

Manning's n Values         num=        3
     Sta    n Val     Sta    n Val     Sta    n Val
   18260      .04   19550     .035 20410.9      .04
```

```
Bank Sta: Left   Right    Coeff Contr.   Expan.
         19550 20410.9             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  11

Pier Data
Pier Station     Upstream= 19620.4    Downstream= 19620.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1094.8
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1094.8

Pier Data
Pier Station     Upstream= 19692.4    Downstream= 19692.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3 1095.27
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3 1095.27

Pier Data
Pier Station     Upstream= 19764.4    Downstream= 19764.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3 1095.48
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3 1095.48

Pier Data
Pier Station     Upstream= 19836.4    Downstream= 19836.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5

Pier Data
Pier Station     Upstream= 19908.4    Downstream= 19908.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
Pier Station     Upstream= 19980.4    Downstream= 19980.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
```

```
Pier Station     Upstream= 20052.4    Downstream= 20052.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
Pier Station     Upstream= 20124.4    Downstream= 20124.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.6
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.6

Pier Data
Pier Station     Upstream= 20196.4    Downstream= 20196.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5

Pier Data
Pier Station     Upstream= 20268.4    Downstream= 20268.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.3
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.3

Pier Data
Pier Station     Upstream= 20340.4    Downstream= 20340.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3    1095
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3    1095

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION          RIVER: Salt River
REACH: Reach 4             RS: 215.81

INPUT
Description: Downstream Face of 24th St. Bridge
Station Elevation Data    num=      15
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
   18260     1096   18620   1094.7   19170     1096 19549.9 1097.71   19550   1094.5
 19550.1   1088.1 19553.1   1088.1 19587.4     1076 20384.4    1076 20407.9   1085.7
```

20410.9	1085.7	20410.9	1094.7	20411	1097.8	21080	1097.4	21490	1100

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18260	.04	19550	.035	20410.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19550	20410.9	300	264.36	230	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18260	19550	1094.5	20410.9	21490	1085.7

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.75

INPUT
Description:
Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17125.3	1100.1	17248.5	1099.8	17267.3	1100.8	17468.2	1100.1	17719.4	1099.7
17947.7	1097.8	18060.6	1099.3	18081.3	1096.7	18136.4	1097.4	19508	1097.7
19508.1	1097.6	19524	1097.4	19542.9	1095.1	19551.7	1095.7	19565.8	1090.9
19639.9	1074.2	19781.5	1073.6	19800.3	1075	20035.2	1074.5	20197.2	1075.1
20278.8	1076.8	20300	1074.7	20349.4	1079.3	20362	1082.9	20390.2	1083.6
20417.4	1087.3	20492.6	1093.4	20522.5	1094.6	21418.5	1094.6	21459.6	1096.1
21491.5	1096.3	21500.1	1097.2	21614.1	1094.5	21671.6	1098.1	21725.1	1102
21736.3	1098.2	21746.9	1098.3	21761.2	1095.9	21937.7	1095.8	22101	1095.7
22107.9	1097.1	22124.7	1093.9	22195.8	1094.6	22429.3	1094.9	22460.5	1094.9
22651.2	1094.2	22731.5	1094.6	22743.8	1096.2	22841.4	1095.8	22852.4	1097.3
23039.9	1097.6	23152.1	1097.4	23353.9	1096.6	23520.2	1097.5	23562	1097.4
23577.6	1110.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17125.3	.04	19508.1	.035	20522.5	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19508.1	20522.5	520	500.69	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17125.3	19508.1	1097.6	20522.5	23577.6	1094.6

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.65

INPUT
Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17237.9	1100	17294.9	1096.4	17506.5	1098	17570	1097.1	17577.1	1095.1
17602.5	1096.9	17605.7	1096.1	17674.7	1096.1	17931.2	1097.4	17961.2	1099.7
18192.8	1099.1	18200.6	1096.9	18232.2	1096.2	18235	1095.4	19571.5	1095.4
19624.9	1079.1	19666.3	1071.3	19745.1	1071	19765.3	1069.6	19937	1074.4
19947.9	1074.8	19985.2	1069.8	20174.6	1072.1	20310.4	1071.3	20317.9	1069.1
20354.5	1069.6	20364.9	1068.3	20392.2	1069.1	20433.1	1070.7	20501.7	1094
20596.4	1094.2	20609.1	1096.1	21422	1096.1	21423.7	1096.4	21575	1098
21679	1097.1	21682	1100.7	21704.4	1100.7	21722.1	1093.9	21744.5	1094.6
21842.9	1093.7	22013.6	1093.5	22043.6	1093.5	22083.7	1091.8	22095.5	1090.2
22108.8	1092.3	22174.7	1093.2	22431	1094.3	22454	1092.8	22649.2	1092.4
22655.2	1091.7	22737.1	1093.4	22922.4	1093.5	23042.9	1093.2	23072.9	1091.9
23243.1	1091.8	23338.1	1092	23510.7	1093.7	23552.2	1093.6	23611.8	1095.2
23634.8	1117.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17237.9	.04	19571.5	.035	20501.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19571.5	20501.7	500	495.44	490	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev

17237.9 19571.5 1095.4 20501.7 23634.8 1094

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.56

INPUT
Description:
Station Elevation Data num= 59

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17244.5	1098.1	17272.8	1096	17490.4	1096.7	17563.5	1095.2	17636	1095.1
17908.7	1094.9	17949.5	1094.8	18148.7	1095.2	18255.9	1095.3	18329.2	1093.3
18342.1	1093.5	18349	1091.5	19576.8	1091.5	19646	1068.5	19758.9	1068.7
19783.4	1070.3	19891.8	1071.1	19918.1	1069.5	19960.4	1066.1	19980	1066.1
20229.6	1066.6	20268.2	1066.9	20299.5	1068.6	20316.3	1068.8	20323.7	1066.5
20361	1067.1	20366.3	1068.2	20406.8	1070.9	20445.6	1071.5	20469	1079.6
20510	1092.7	20617	1091.5	20632.4	1095.1	21437.6	1095.1	21444	1099.4
21597.8	1096.9	21664.2	1096.1	21674.8	1099.6	21689.5	1099.9	21706.3	1092.8
21832.1	1092.2	22077.5	1091.9	22106.9	1090.7	22148.1	1091.8	22286.4	1092
22419.1	1092.6	22464.2	1091.4	22630.1	1091.1	22636.8	1090.6	22754	1091.4
22759.4	1092.2	22832.1	1091.7	22984	1091.4	23017.5	1091.4	23054.9	1093
23104	1092.4	23477.4	1092.3	23608.9	1093.9	23646	1111.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17244.5	.04	19576.8	.035	20510	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19576.8	20510	500	498.23	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17244.5	19576.8	1091.5	20510	23646	1092.7

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.46

INPUT
Description:
Station Elevation Data num= 64

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17157.6	1097	17197.5	1096.6	17218.9	1095.4	17367.9	1095.7	17545.9	1094.6
17740.4	1094.3	17965.1	1094.4	18148.7	1093.9	18153.7	1093.7	18356.5	1094.4
18485.3	1095.5	18487.7	1094.7	18549.4	1094.8	18565.7	1098.7	18592.7	1095.4
18606.4	1087.7	18625.8	1094.7	18648.9	1093.4	18656.9	1091.5	18657.5	1090.8
19591	1090.8	19645.5	1070	19690.6	1068.5	19884.9	1068	19970.8	1067.7
20003.1	1064.6	20025.6	1064.6	20257.6	1065.1	20338.3	1065.3	20360.8	1069
20415.1	1068.3	20460.8	1066.1	20521.1	1089.5	20665.6	1090.6	20667	1089
21339.6	1089	21437	1088.7	21480.8	1089.5	21632.1	1087.7	21658.8	1098.3
21669	1098.1	21686	1091.3	21692.6	1092.4	21873.1	1090.1	21942.8	1090.1
21975.7	1091.4	22045.5	1090.4	22054.9	1090.9	22073.1	1090	22126.3	1089.8
22139.4	1091.2	22375.5	1090	22396.5	1089.8	22591.1	1088.8	22602.5	1088.7
22603.9	1089.5	22794	1090.1	22983.8	1090.8	23032.5	1092.7	23062.2	1092.6
23377	1091.1	23496.3	1091.1	23528.4	1091.9	23621.3	1105.3		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17157.6	.04	19591	.035	20521.1	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19591	20521.1	510	519.75	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17157.6	19591	1090.8	20521.1	23621.3	1089.5

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.36

INPUT
Description:
Station Elevation Data num= 64

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17106.4	1095.4	17213.1	1093.4	17305.8	1093	17386.4	1093.9	17614.5	1092.9

17741.1	1093.2	17826.6	1091.9	17953.5	1092.2	17968	1091.5	17977.8	1092.7
18139.6	1091.8	18170.3	1091.2	18258.3	1093.1	18362.4	1091.3	18522.8	1092.1
18599.4	1092.9	18641.9	1094.1	18654.3	1087.1	19618	1087.1	19693.8	1066.8
19739.6	1066.6	19764.2	1064.8	19975	1063.2	20080.9	1063	20309.6	1064
20382.2	1064.8	20413.8	1065.9	20478.9	1065.5	20537	1086.8	21350.7	1086.8
21356.2	1089.5	21442.6	1086.9	21548.9	1086	21595	1088.3	21621.4	1088.7
21647.6	1094.8	21684.8	1088.3	21717.1	1090.1	21875.2	1088.9	21917	1089.2
22096.8	1089.1	22215.6	1086.1	22360.8	1085.8	22395.8	1085.8	22542	1086.6
22595.4	1085.7	22650.1	1086.5	22655.9	1087.2	22804.8	1086.6	22841.4	1086.7
22875	1086.4	22885	1088.1	22968.8	1087.7	23111.1	1087.6	23285.5	1087.4
23328.3	1087.9	23371.5	1087.5	23577	1087.6	23593.2	1090.2	23609.1	1088.9
23648.3	1097.3	23658.9	1096	23675.8	1090.6	23715.5	1101.6		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17106.4	.04	19618	.035	20537	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19618	20537	500	489.19	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17106.4	19618	1100	20537	23715.5	1100

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.27

INPUT
Description:
Station Elevation Data num= 77

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17090.5	1092.5	17125.9	1091.8	17271.2	1091	17438.5	1089.2	17533.4	1088.9
17640	1089.9	17664.2	1089.2	17876.8	1089	17899.3	1089.2	18048.7	1090.8
18192.2	1092.2	18319.4	1092.6	18358.5	1091.5	18364.6	1092	18578.6	1091.7
18646.5	1091.7	18655.9	1091.3	18680.5	1096.9	18688.1	1094.3	18692.1	1091.9
18696.3	1090.6	18744.7	1089	18753.3	1083.4	19610.6	1083.4	19638.3	1081.9
19658.6	1082	19664.5	1078.4	19689.8	1074.5	19734.4	1072.4	19788.6	1068.1
19800.7	1064.5	19816.1	1063.5	19988.7	1063.7	20291.3	1064	20359.1	1064.8
20485.4	1064	20492.7	1064.5	20543.3	1084.9	20553.9	1085.3	20674.7	1084.1
20741.1	1082.7	20810.5	1083.9	20988.4	1084.7	21096.9	1085.3	21291.5	1086.3
21372.9	1086.6	21433.7	1087.4	21444.6	1088.4	21500.3	1090	21568.4	1090
21595.8	1088	21615.4	1088.1	21621.3	1086.5	21640.8	1086.3	21657.4	1087.6
21816	1087.7	21877.8	1087.7	22012.9	1086.8	22120.8	1086.1	22257	1086.3
22398.5	1085.7	22567.9	1085.3	22633.4	1085.1	22673	1086	22821.6	1086.1
22954.1	1086.7	22955.4	1086.7	23113.9	1086.3	23261	1086.3	23311.5	1086.2
23360.5	1088.2	23492.9	1089	23595.2	1089.4	23637	1094.2	23668.2	1090
23685.9	1088.4	23765.1	1104.7						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17090.5	.04	19610.6	.035	20553.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19610.6	20553.9	550	493.27	420	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17090.5	19610.6	1100	20553.9	23765.1	1100

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.18

INPUT
Description:
Station Elevation Data num= 82

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17264.2	1090.8	17267.2	1089.3	17273	1087.3	17291.3	1090.2	17304	1090.3
17325	1088.7	17458.3	1088	17486.9	1086.8	17535	1086.4	17628.8	1087.9
17696.9	1090.1	17830.5	1089.7	17979.7	1089.7	18157.5	1090.9	18287.9	1091.3
18300.1	1090.7	18347.7	1091.3	18585.6	1090.1	18646.8	1090.3	18667.5	1089.9
18679.9	1092.5	18692.8	1096.2	18714.9	1089.4	18737.9	1089.2	18743.1	1085.6
19632.1	1085.6	19675.5	1084.4	19680.3	1082.6	19742.5	1067.1	19752.8	1067.2
19761.7	1067.9	19783.3	1067.4	19806.4	1062.2	19944.1	1062.7	20163.9	1063.5

20177.3	1063.5	20291.4	1084.5	20332.7	1088.4	20361.5	1080.3	20367.6	1077.9
20376.7	1078.6	20417.9	1079.6	20435.7	1084.6	20442.6	1085.5	20492.9	1084.1
20569.6	1084.3	20749.1	1084.6	20914.6	1084.5	21029.5	1083.7	21215.8	1083.6
21233.3	1083.6	21261.9	1088.4	21398.3	1089.8	21450.7	1091.6	21475.8	1079.6
21498.2	1082.4	21659.9	1084.5	21881.6	1084.7	22049.7	1085.2	22106.3	1085.4
22138.4	1086	22270.3	1086.2	22336.5	1086.7	22396.7	1085.4	22535.4	1085.6
22591.4	1086	22633	1087	22652.7	1088.3	22794.6	1088.5	23004.1	1088.8
23096.1	1088.2	23105.4	1089.3	23217.9	1088.7	23251.2	1087.2	23262.6	1087.5
23297	1086.7	23345.6	1087.8	23359.3	1088.6	23512.7	1088.2	23575.8	1087.7
23635.4	1088.2	23708.6	1103.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17264.2	.04	19632.1	.035	20332.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19632.1	20332.7	560	481.96	420	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17264.2	19632.1	1085.6	20332.7	23708.6	1088.4

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.09

INPUT
Description:
Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17408.5	1090.9	17416.6	1088.2	17421.3	1086	17442.5	1089.1	17476.3	1089.2
17546	1088.1	17558.7	1086.5	17572.7	1085.3	17703.3	1086	17806.6	1085.5
17909.6	1086.8	17924.4	1087.8	17983.8	1088.9	18162.6	1089.2	18175.2	1089.2
18515.9	1088.2	18545.9	1088.1	18607.3	1088.6	18713.9	1088.5	18807.7	1087.4
18955	1087.1	18958.8	1087.1	18981.5	1088.6	18992.5	1088.9	19625.7	1088.9
19652.2	1090.1	19661.5	1090.9	19663	1088.6	19671.4	1082.4	19701.2	1068.5
19706.6	1065.2	19710.4	1063.8	19728.4	1062.2	19740	1061.7	19850.6	1061.7
20037.2	1062.4	20199.1	1063	20266.5	1063.2	20300.4	1085.9	20376.8	1085
20573.3	1084.2	20754.5	1084.4	20797.5	1084.5	20844	1088.4	20895.9	1096.6
20944	1100	20968.9	1099.8	21092.4	1085.1	21164.6	1085.1	21295.4	1085.8
21349.7	1087.3	21430.1	1089	21447.6	1082.9	21471.4	1082.9	21513.2	1084.1
21561.7	1084	21748.6	1085.6	21846.1	1086.5	22044.7	1085.1	22068.2	1085.1
22104.8	1086.2	22198.3	1085.4	22331	1086.6	22392.4	1085.5	22427.1	1085.7
22569.2	1086.2	22579.3	1086.1	22596.4	1086.5	22617.4	1086.4	22634.7	1087.5
22750	1087.9	22789.2	1087.3	22835.4	1087.8	22986	1087.7	23133.3	1088.2
23240.2	1087.3	23275.3	1086.4	23337	1086.7	23342.5	1087.3	23353.1	1087.8
23397.8	1087.8	23559.8	1086.9	23602	1086.8	23694.4	1090.1	23776.7	1107.1

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17408.5	.04	19661.5	.035	20300.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19661.5	20300.4	510	506.22	510	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17408.5	19661.5	1090.9	20300.4	23776.7	1085.9

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.99

INPUT
Description:
Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17407.8	1089.5	17423.9	1089.2	17429.3	1087.9	17485.8	1086.4	17505.6	1086.4
17523	1085.7	17609.3	1085.7	17618.9	1085.4	17743	1084.6	17878.9	1086.3
18005.4	1087.2	18122.3	1087.5	18136.6	1087.3	18144.6	1088.4	18167.8	1087.2
18307.7	1087.4	18356.8	1087.4	18518.3	1087.2	18532.6	1087.2	18670.1	1087.4
18800.7	1087	18814.1	1087.3	18841.1	1087	18876.6	1088.6	19535	1088.6
19537.3	1089.4	19576.5	1090	19647.7	1061.3	19774.3	1061.6	19811	1063.5
19862.3	1062.3	19880.7	1061.4	20041	1063.2	20098.1	1067.8	20122.6	1070.7
20129.8	1067.6	20144.8	1063.2	20173.6	1063.1	20299.7	1063	20317	1072.8

20339.8	1086.2	20525.1	1086.2	20650.8	1085.7	20674.7	1085.6	20699.2	1086.5
20716.1	1086.6	20846.1	1088.1	20861.2	1088.3	20978.5	1087.6	21008	1084.2
21091.3	1083.5	21285.7	1083.9	21419.6	1084.3	21479.2	1084.8	21650.3	1085.6
22046	1085.5	22169.3	1084.9	22233.7	1085.5	22353.8	1085.3	22372.2	1085.3
22392.8	1084.4	22402.3	1085	22421.9	1084.9	22433.5	1085.2	22439.7	1085.8
22461.8	1085.4	22651.2	1085.4	22691.6	1085.5	22821.4	1086.1	22866.5	1086.4
22987.8	1086.7	23105.7	1086.9	23132.5	1085	23156.1	1084.5	23177.8	1087
23227.7	1086.3	23297	1086	23335.6	1086.6	23474.8	1086.3	23490.7	1088.5
23517.5	1088.2	23570.5	1089.8	23652.7	1107.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17407.8	.04	19576.5	.035	20339.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19576.5	20339.8	480	505.18	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17407.8	19576.5	1090	20339.8	23652.7	1086.2

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.9

INPUT
Description:
Station Elevation Data num= 90

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17273.7	1090.9	17286.3	1084.9	17295.6	1086.7	17304.6	1089	17343.3	1087.2
17361	1086.8	17420	1086.8	17464	1086.4	17476.4	1085.5	17563.2	1085.1
17570.1	1085.5	17695.7	1085.2	17812.7	1085.2	17858	1085.6	18002.1	1086.5
18035.5	1086.6	18055.5	1087.1	18135.4	1086.5	18262.5	1086	18362.4	1086
18497.3	1086.1	18624.5	1086.1	18665	1086.1	18714.4	1086.8	19289	1086.8
19292	1088	19353.9	1088.5	19494.2	1088.1	19537.4	1088	19609.3	1061.2
19764.9	1061.4	19806	1062.4	19829	1061.4	20013.5	1062.6	20062.9	1062.8
20089.1	1068.5	20158.2	1066.8	20297.6	1062.8	20315.9	1062.4	20373.4	1077.9
20419	1088.6	20423.3	1089	20466.5	1103.6	20501.8	1104.2	20532.8	1102.4
20550.3	1104.7	20579.1	1099.4	20585.2	1096.6	20607.1	1084.9	20640.5	1084.3
20667.3	1083	20680.5	1078.6	20687.2	1078	20808.2	1077.9	20840	1082.7
20852.6	1085.5	20855.2	1084.5	20889.3	1084.2	20907.9	1083.6	20920.2	1082.1
20931.6	1081.2	21060.7	1081.2	21142.3	1081.4	21160.5	1082.7	21218.3	1083.3
21443.8	1084.2	21688.5	1083.8	21722.5	1083.8	21848.4	1083.6	21865.2	1084.2
22041	1084.3	22200.7	1085.2	22219.2	1085	22278.4	1086	22363	1085
22451.4	1085.4	22567.2	1086.6	22662.3	1086.2	22753.5	1086.2	22924.8	1085
22954.2	1085.1	22991.2	1084.4	22997.7	1085.1	23004.4	1086.9	23029.6	1086.4
23200.8	1088.7	23354.3	1090.2	23416.1	1090.1	23433.4	1089.7	23466.2	1098.9

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17273.7	.04	19537.4	.035	20466.5	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19537.4	20466.5	340	568.44	730	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17273.7	19537.4	1088	20466.5	23466.2	1103.6

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.79

INPUT
Description: Upstream Face of 16th St. Bridge
Station Elevation Data num= 44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18602	1086.5	19189.33	1088	19457.59	1093.05	19457.68	1080.34	19457.78	1078.84
19460.58	1078.8	19510.81	1060.85	19571.38	1058.8	19576.21	1059	19603.16	1059
19676.68	1059	19690.2	1059	19695.03	1057.6	19728.16	1059.9	19809.02	1058.85
19813.85	1059	19875	1059.6	19927.64	1060.3	19932.47	1060.3	19991.88	1060.7
20046.65	1059.85	20051.48	1059.85	20100.07	1060.6	20148.37	1059	20165.47	1062.5
20170.3	1062.5	20230.48	1063.45	20284.29	1062.95	20289.12	1062.95	20312.59	1063.7
20346.4	1064.15	20403.11	1063.9	20407.94	1063.95	20471.98	1064.2	20518.83	1078.6
20521.63	1078.6	20521.73	1080.12	20521.83	1092.83	20590.03	1088	20744.59	1084

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20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19457.6820521.73           116.34  116.34  116.34             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

BRIDGE                  RIVER: Salt River
REACH: Reach 4            RS: 214.785

INPUT
Description: 16th Street
Distance from Upstream XS =   26.17
Deck/Roadway Width        =      64
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18602  1086.5  1086.519189.33    1088    108819457.59 1093.05 1093.05
19457.68 1093.05 1080.3419571.38 1095.18 1082.43 19690.2 1096.76 1084.02
19809.02 1097.88 1085.1519927.64 1098.32 1085.6320051.48 1098.32  1085.6
 20170.3  1097.7 1085.0320289.12 1096.59 1083.8620407.94 1094.99 1082.24
20521.73  1092.8 1080.12

Upstream Bridge Cross Section Data
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03  1057.619728.16  1059.919809.02 1058.85
19813.85    1059   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19457.6820521.73             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

Downstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18602  1086.5  1086.519189.33    1088    108819457.59 1093.05 1093.05
19457.68 1093.05 1080.3419571.38 1095.18 1082.43 19690.2 1096.76 1084.02
19809.02 1097.88 1085.1519927.64 1098.32 1085.6320051.48 1098.32  1085.6
 20170.3  1097.7 1085.0320289.12 1096.59 1083.8620407.94 1094.99 1082.24
20521.73  1092.8 1080.12

Downstream Bridge Cross Section Data
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03    105919728.16  1059.919809.02 1058.85
19813.85 1058.85   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
```

```
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19457.6820521.73             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station     Upstream= 19574.1    Downstream= 19574.1
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1058.8    4.83 1082.51
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1058.8    4.83 1082.51

Pier Data
Pier Station     Upstream= 19692.8    Downstream= 19692.8
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1057.6    4.83  1084.1
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1057.6    4.83  1084.1

Pier Data
Pier Station     Upstream= 19811.6    Downstream= 19811.6
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1058.85    4.83  1085.2
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1058.85    4.83  1085.2

Pier Data
Pier Station     Upstream= 19930.5    Downstream= 19930.5
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1060.3    4.83  1085.6
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1060.3    4.83  1085.6

Pier Data
Pier Station     Upstream= 20049.5    Downstream= 20049.5
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1059.85    4.83  1085.6
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1059.85    4.83  1085.6

Pier Data
Pier Station     Upstream= 20167.6    Downstream= 20167.6
```

```
Upstream      num=        2
    Width   Elev    Width   Elev
    4.83  1062.5    4.83  1085.1
Downstream      num=        2
    Width   Elev    Width   Elev
    4.83  1062.5    4.83  1085.1

Pier Data
Pier Station      Upstream= 20286.4    Downstream= 20286.4
Upstream      num=        2
    Width   Elev    Width   Elev
    4.83 1062.95    4.83  1083.9
Downstream      num=        2
    Width   Elev    Width   Elev
    4.83 1062.95    4.83  1083.9

Pier Data
Pier Station      Upstream= 20405.8    Downstream= 20405.8
Upstream      num=        2
    Width   Elev    Width   Elev
    4.83  1063.9    4.83  1082.3
Downstream      num=        2
    Width   Elev    Width   Elev
    4.83  1063.9    4.83  1082.3

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

CROSS SECTION           RIVER: Salt River
REACH: Reach 4             RS: 214.78

INPUT
Description: Downstream Face of 16th St. Bridge
Station Elevation Data     num=      44
     Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev      Sta     Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68     1059 19690.2    105919695.03    105919728.16  1059.919809.02 1058.85
19813.85 1058.85   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values         num=       3
     Sta   n Val      Sta   n Val      Sta   n Val
   18602      .0419457.68    .03520521.73      .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19457.6820521.73              520  310.05      80              .1       .3
Ineffective Flow      num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

CROSS SECTION           RIVER: Salt River
```

REACH: Reach 4 RS: 214.71

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16537.2	1088.3	16558.9	1085.9	16592.9	1085.9	16763.8	1086.2	16859.7	1086.5
16868.8	1087	17046.9	1087.1	17161.4	1088.2	17171.7	1082.1	17181.2	1086.1
17183.9	1086.7	17186.7	1087.9	17200.4	1088.1	17218.3	1086.4	17227.2	1087.1
17278.8	1086.7	17455.3	1086.4	17496.2	1085.4	17655	1084.9	17741.4	1083.4
17806.6	1083.9	18000.9	1084.3	18157.7	1083.7	18217.1	1085.5	18338.5	1084.8
18351.8	1084.1	18406.2	1083.5	18423.6	1082.7	18570.8	1083.4	18631.7	1082.3
18689.9	1082.2	18730.4	1083	18877.7	1084.3	18897.5	1084.2	18913.9	1085.7
19052.5	1085.8	19136.3	1086.3	19280	1085.5	19302.7	1085.3	19375.5	1086.5
19516.2	1085.3	19591.2	1085.2	19613	1086.9	19679.3	1064	19710.2	1055.3
19776.6	1057.1	19789.2	1055.6	19878.5	1055.1	19950.4	1058.1	19985.7	1058.8
20217.6	1058.8	20282.8	1058.4	20409.7	1059.5	20459.9	1062.1	20501.3	1063.5
20513.5	1067.4	20556	1082.5	20564.1	1082	20574.4	1082.3	20578.1	1079.7
20580.1	1079.2	20718.7	1080.6	20735	1083.7	20810.9	1083.1	21042.8	1082.6
21165.2	1083.1	21184.4	1080.5	21197	1079.9	21225.3	1082.8	21322.8	1082.6
21486.4	1082.2	21544.2	1082	21551.3	1081.1	21570.6	1084.8	21585.1	1084.6
21759.9	1083.1	21812.7	1083.8	21931.7	1084.3	22062.2	1085.4	22077.8	1085.4
22114.7	1086.6	22227.5	1086.1	22315.6	1086.8	22453.6	1087.2	22491.4	1087.2
22621.3	1087.6	22727.1	1088.5	22765.4	1088.2	22839.8	1088.5	23019.9	1089.1
23040.6	1089.4	23089.5	1088	23154	1089.2	23157.8	1090.1	23161.9	1089.9
23206.9	1107.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16537.2	.04	19613	.035	20556	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19613	20556	500	508.55	450	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16537.2	19613	1086.9	20556	23206.9	1082.5

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.61

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19556.5	1090.7	19575.8	1083.7	19604	1083	19610.6	1082.9	19612.9	1082.9
19644.9	1083.1	19651.7	1083.5	19652	1083.3	19667.4	1082.4	19671.3	1082.1
19705.3	1070.2	19734.4	1059.9	19741.4	1059.3	19748	1058.8	19778	1052.1
19779.3	1051.9	19816.2	1051.8	20190.1	1050.7	20241.7	1050.4	20265.2	1051.1
20282.3	1051.7	20311.7	1051.9	20401.7	1053.1	20478.1	1077.4	20490.2	1081.3
20493	1081.2	20569.1	1081.3	20872.2	1081.7	21019.6	1081.8	21020.5	1080.9
21033.8	1081.6	21035.8	1081.5	21050.2	1081.5	21050.8	1082.2	21072	1081.6
21073.4	1082	21087.1	1081.8	21155	1081.6	21337.9	1081	21391.3	1080.8
21411.1	1080.4	21430.2	1082	21430.6	1082	21445.5	1082.7	21446.6	1082.9
21449.3	1082.9	21454.5	1082.8	21492.8	1083.2	21525.4	1083.8	21540.7	1083.8
21548.1	1083.8	21644.1	1084.5	21661.2	1084.7	21670.8	1084.7	21686.1	1084.9
21694.5	1085.5	21699.7	1086	21770.9	1085.7	21773.6	1085.7	21783.8	1085.6
21878	1085.1	21882	1085.2	21936.8	1086.2	21960.9	1085.7	21970.7	1085.5
21971.9	1085.8	21979.1	1086	21982.1	1086.2	21983.3	1086.4	22095.3	1085.7
22108.3	1085.5	22121.6	1085.5	22244.5	1085.6	22270	1085.6	22368.7	1085.5
22494.6	1085.6	22513.4	1085.6	22576.4	1085.9	22577.8	1085.9	22583	1086.1
22584.3	1086.1	22587.2	1086.2	22590.7	1086.2	22623.8	1086.6	22635.7	1086.6
22658.8	1086.7	22665.4	1086.7	22764.4	1087	22889.6	1087.5	22950.3	1086.7
22951.2	1086.5	22992.3	1087.4	22996.7	1087.5	22998	1087.5	23025.3	1087.8
23027	1089.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19556.5	.04	19651.7	.035	20490.2	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19651.7	20490.2	480	493.82	490	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19556.5	19651.7	1083.5	20490.2	23027	1081.3

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.52

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18720.8	1088.9	18742	1088.8	18817.1	1087.2	18852.5	1085.6	18880.5	1085.2
18899.4	1085	18968.6	1084.4	18992.4	1084.1	19069.7	1083.1	19080.7	1083.1
19124.1	1083.4	19129.6	1083.4	19171.3	1083.5	19252.9	1082.9	19307.3	1082.4
19347.5	1082.2	19395	1080	19410	1078.6	19468.6	1078.3	19471.7	1078.3
19472.1	1078.4	19502.5	1082.1	19512.6	1081.9	19530.4	1075.5	19587.6	1058.3
19588.4	1058.2	19631.6	1049.1	19632.2	1049	19654.8	1048.9	20209.9	1048
20236.1	1049	20250.8	1050	20271.2	1049.9	20335.4	1050.8	20343.6	1050.6
20369.5	1059.1	20388.5	1060.2	20436.1	1072.8	20461.7	1079.5	20551.8	1079.4
20611.2	1079.6	20954.9	1080	20964	1080	20970.6	1080.1	20974.1	1080.7
20989.2	1081.9	20999.7	1081.1	21003	1080.5	21009.8	1081	21042.5	1081.5
21050.5	1081.8	21079.1	1083.3	21085.5	1083.5	21116.9	1082.1	21130.4	1081.5
21219.7	1082.4	21240.1	1082.6	21282.6	1084.4	21286	1083.5	21288.4	1082.3
21332.6	1082.1	21387.4	1082.6	21392.5	1082.4	21406.8	1081.5	21439.6	1083.8
21439.8	1083.8	21481	1083	21531.4	1083.5	21564.3	1083.6	21583	1083.6
21641	1083.6	21706.4	1084	21785.5	1084.9	21787.2	1084.8	21792.9	1084.7
21803.4	1084.8	21839.8	1084.4	21972.1	1084.1	21979.9	1084.1	22043.3	1084.2
22124	1084.1	22153.7	1084.1	22249.3	1084.2	22303.8	1084.1	22323.8	1084.2
22426.9	1084.1	22443.4	1085	22456.6	1085.2	22483.5	1085.4	22648.6	1085.7
22681.1	1085.7	22718.5	1085.6	22853.3	1085.1	22877.5	1085.6	22879.9	1087.3
22883.2	1089.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18720.8	.04	19502.5	.035	20461.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19502.5	20461.7	470	500.39	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18720.8	19502.5	1082.1	20461.7	22883.2	1079.5

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.42

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18493.5	1089	18623	1088.7	18649.2	1088.3	18719.9	1086.7	18729.4	1086.4
18866.3	1084.6	18902.2	1083.9	18965.6	1081.6	19017.4	1081.3	19068.3	1081.3
19082.8	1081.1	19105.8	1080.5	19165.7	1079.2	19179.2	1079.1	19277.4	1079.4
19283.5	1079.5	19328.1	1079.3	19378	1077.9	19379.9	1078	19421	1065.1
19464.1	1052.5	19491.1	1052.2	19495.8	1051.2	19508.9	1049.2	20099.7	1048.5
20317.7	1048.3	20325.7	1048.2	20347.5	1054.7	20431.8	1079.7	20447.5	1078.7
20725.9	1079.2	20806.7	1079.3	20820.7	1074	20847.2	1077.8	20868.3	1075.7
20885.3	1074.7	20896.5	1075.4	20920.2	1076.4	20930.8	1076.7	20963.3	1076.8
20975	1077.5	21027	1078.5	21053	1078.5	21067.1	1078.7	21145.4	1078.8
21171.1	1078.5	21208	1078.9	21230.1	1079	21334.3	1080.4	21478.9	1080.2
21530.4	1080.1	21531.4	1080.2	21535.5	1080.2	21625.6	1081.4	21660.4	1081.5
21692.6	1081.9	21702.4	1082.4	21711.2	1083.1	21729.2	1083	21737.7	1083.2
21758.6	1083.2	21952.1	1083.8	22040.6	1083.1	22131.3	1083.1	22152.7	1083.7
22160.1	1082.9	22166.5	1082.7	22236.9	1082.7	22242.2	1082.8	22242.8	1082.7
22252.8	1083.3	22275.5	1084.3	22277.6	1083.8	22282.4	1082.9	22284.3	1082.9
22289.4	1082.5	22385	1082.7	22412	1082.8	22425.6	1083.3	22522.2	1083.2
22566.8	1083.5	22586.5	1083.4	22620.8	1084	22647.4	1084.9	22647.5	1085
22651.3	1085	22655.3	1084.8	22666.5	1085.2	22711.9	1084.8	22728.7	1084.5
22764.2	1084.3	22785.3	1084	22798.5	1084.7	22805.8	1085.4	22828.6	1085.6
22834	1088.8								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18493.5	.04	19379.9	.035	20431.8	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

19379.9	20431.8	510	496.64	480	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18493.5	19379.9	1078	20431.8	22834	1079.7

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.33

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19133.3	1085.2	19150.1	1084.8	19166.8	1082.9	19183.1	1081.7	19209.9	1081.3
19301.3	1080.3	19344.7	1079.4	19434.1	1078.7	19465.4	1078.4	19483.8	1078.5
19487.4	1078.4	19523.4	1066.7	19566.6	1052.5	19603.1	1051.4	19616.9	1048.8
19618.9	1048.5	20162.4	1048.5	20297.1	1048.6	20328.4	1057.9	20398	1078.8
20412.3	1077.8	20446.7	1077.9	20657.5	1078.6	20676	1070.3	20677.2	1069.9
20699.8	1076	20737.1	1074.4	20751.7	1072.8	20760.5	1073.4	20805.9	1074.8
20836.7	1075.5	20869.8	1076.4	20918.3	1076.8	20949.1	1076.9	20987.3	1076.4
21007.5	1076	21018.5	1076.4	21020.1	1076.7	21036.8	1076.9	21114	1077.6
21129.5	1077.8	21152.8	1078.4	21167.5	1078.9	21188.3	1079	21274.4	1079
21283.2	1078.8	21287.2	1078.8	21339.5	1078.5	21371.1	1077.7	21383.5	1077.2
21417.4	1077.4	21422	1077.5	21453	1077.4	21457.4	1077.6	21484.4	1078.1
21507	1079	21536.8	1078.7	21546.2	1078.5	21548.8	1079	21562.6	1082.6
21570.5	1082.2	21584.1	1078.7	21599.4	1080.2	21608.1	1081.8	21609	1081.8
21686.1	1081.7	21711.3	1081.7	21759	1082.3	21794	1082.3	21961.8	1081.9
22070.5	1082.3	22107.7	1082.5	22117.3	1082.5	22139.1	1084.1	22245.2	1081.7
22259.2	1081.5	22311.2	1081.5	22328.9	1082.2	22367.6	1082.5	22412.4	1083
22434.9	1083.7	22480	1083.4	22488.3	1083.5	22501.1	1083.3	22505.8	1083.9
22523	1083.8	22534.2	1083.9	22540.3	1083.8	22556.6	1083.2	22675.7	1082.9
22714.1	1082.9	22740.7	1084.5	22763.1	1084.9	22765.9	1084.7	22770.5	1087.7
22776.7	1088								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19133.3	.04	19483.8	.035	20398	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

19483.8	20398	440	507.15	560	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19133.3	19483.8	1078.5	20398	22776.7	1078.8

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.23

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18784.1	1083	18804.5	1082.7	18829.1	1082.8	18859.6	1082.2	18872.7	1082.1
18901.7	1080.8	18937.2	1079.1	18949.3	1078.7	18993.6	1076.9	19014.1	1076.2
19019.1	1076	19059.1	1075.3	19071.7	1075.2	19140.8	1074.8	19164.5	1074.3
19204	1074	19250.8	1076.3	19289.1	1078.8	19308.2	1079.3	19327.2	1079.4
19383.2	1079.8	19398.8	1080.2	19482.4	1079.4	19525.9	1078.7	19586	1078.4
19602.4	1078	19608.5	1078	19627.1	1071.4	19679	1054.8	19716.3	1049.1
19735.4	1049.5	19750.3	1050.1	19754.7	1049.9	19765.5	1049.7	19776.3	1048.7
19795	1048.7	20005.3	1048.9	20084.2	1049	20254.8	1049.1	20264.9	1051.9
20361.7	1078.5	20382.3	1076.8	20444.8	1077.5	20517.6	1077.1	20541.3	1077.2
20594	1077	20670.3	1076.8	20683.5	1076.6	20732.6	1075.7	20741.7	1076
20744	1076	20815.4	1076.1	20831.3	1076.5	20866.2	1076.8	20912.2	1077.1
20978	1077.2	20998.8	1076.9	21008.6	1077	21025.7	1076.4	21089	1076.5
21093.4	1076.5	21125.9	1078.5	21149.4	1077.2	21195.1	1075.3	21231.1	1074.6
21239	1074.6	21282.1	1075.3	21304.7	1075.4	21378.1	1077	21396.4	1078.6
21405.7	1079.3	21416.4	1077.7	21418.8	1077.6	21492.6	1079.6	21526.7	1079.8
21540.8	1080.1	21640.2	1080.5	21651.2	1077.8	21654.9	1076.6	21672.5	1076.5
21682.8	1076.7	21695	1077.7	21718.3	1079.8	21746.9	1079.9	21771.5	1079.8

21876.1	1080.4	21901.8	1080.5	21957.9	1080.4	22021.8	1080.6	22062.3	1081.1
22115.9	1081.6	22173.3	1082.2	22270.7	1082.8	22330.2	1082.8	22335	1083.1
22345.5	1083.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18784.1	.04	19608.5	.035	20361.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19608.5	20361.7	495	494.49	495	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18784.1	19608.5	1078	20361.7	22345.5	1078.5

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.14

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18555.4	1082.6	18577.7	1082.5	18586.5	1082.5	18650.6	1082	18678.8	1082.1
18707.4	1081.7	18729.5	1082	18771.6	1082.1	18793.7	1081.8	18836	1080.9
18859.7	1080.3	18935.6	1078.9	19050.6	1077.2	19056.7	1077.2	19059.9	1077.1
19062.9	1076.9	19063.3	1077	19067.8	1077.1	19071.9	1077.1	19078.2	1077.1
19188.3	1078.1	19249.7	1079.4	19290.2	1080.1	19298.1	1080.2	19313.1	1080.4
19327.5	1080.7	19358.6	1080.6	19391.6	1080.5	19412.8	1080.3	19520.8	1077.9
19554.8	1077.5	19580.2	1077.3	19610.8	1076.5	19651.9	1076.7	19697.7	1058.7
19715.9	1051.7	19732.8	1050.2	19750.7	1048.7	20032.7	1049	20292.3	1049.2
20350.9	1065.9	20388.3	1077.5	20405.5	1075.6	20406	1075.6	20439.7	1075.6
20637.3	1075.5	20899.6	1075.4	20920.6	1075.5	20941.8	1075.4	20947.4	1075.5
20962	1075.5	20980	1075.4	20989.9	1075.4	21074.1	1075.4	21119.6	1075.7
21168.7	1076.8	21222	1076.6	21326.8	1076.2	21327.4	1076.2	21342.2	1075
21390.6	1075	21428.8	1075	21455.3	1075.3	21502.1	1076.4	21502.4	1076.2
21505.4	1076.4	21551.9	1077.5	21591.8	1077.6	21726.3	1078.4	21759.2	1078.5
21766.3	1078.3	21792.4	1078.4	21884.6	1078.9	22013	1079.1	22034.3	1079.5
22101.6	1079.7	22156.1	1080.1	22201.4	1080	22204.6	1079.9	22217.3	1080.5
22235	1081.3	22238.1	1081.3	22264.5	1081	22267.7	1080.9	22269.4	1080.7
22269.9	1080.6	22272.4	1080.4	22280.3	1079.8	22341.9	1080.2	22431	1080.6
22501.3	1081.2	22591.2	1081.8	22602.9	1082	22619.7	1083	22686.6	1082.9
22710.3	1082.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18555.4	.04	19651.9	.035	20388.3	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19651.9	20388.3	475	510.51	570	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18555.4	19651.9	1076.7	20388.3	22710.3	1077.5

SUMMARY OF MANNING'S N VALUES

River:Salt River

Reach	River Sta.	n1	n2	n3
Reach 4	225.30	.025	.03	.03
Reach 4	225.19	.025	.03	.031
Reach 4	225.11	.025	.03	.03
Reach 4	225	.025	.03	.031
Reach 4	224.90	.025	.03	.031
Reach 4	224.82	.05	.035	.05
Reach 4	224.71	.05	.035	.05
Reach 4	224.62	.05	.035	.05
Reach 4	224.52	.05	.035	.05
Reach 4	224.42	.05	.035	.05
Reach 4	224.31	.05	.035	.05

Reach 4	224.22	.05	.035	.05
Reach 4	224.21	Bridge		
Reach 4	224.20	.05	.035	.05
Reach 4	224.19	.05	.035	.05
Reach 4	224.175	Bridge		
Reach 4	224.16	.05	.035	.05
Reach 4	224.14	.05	.035	.05
Reach 4	224.13	Bridge		
Reach 4	224.12	.05	.035	.05
Reach 4	224.06	.05	.035	.05
Reach 4	223.96	.05	.03	.05
Reach 4	223.86	.05	.03	.05
Reach 4	223.77	.05	.03	.05
Reach 4	223.67	.05	.035	.05
Reach 4	223.58	.05	.035	.05
Reach 4	223.48	.05	.035	.05
Reach 4	223.38	.05	.035	.05
Reach 4	223.29	.05	.035	.05
Reach 4	223.19	.05	.035	.05
Reach 4	223.09	.05	.035	.05
Reach 4	223.085	Bridge		
Reach 4	223.08	.05	.035	.05
Reach 4	223.02	.05	.035	.05
Reach 4	222.93	.05	.035	.05
Reach 4	222.83	.05	.035	.05
Reach 4	222.74	.05	.035	.05
Reach 4	222.65	.05	.035	.05
Reach 4	222.55	.04	.03	.04
Reach 4	222.45	.04	.03	.04
Reach 4	222.36	.04	.03	.04
Reach 4	222.27	.04	.03	.04
Reach 4	222.17	.04	.03	.04
Reach 4	222.09	.04	.03	.04
Reach 4	222.085	Bridge		
Reach 4	222.08	.04	.03	.04
Reach 4	221.99	.04	.03	.04
Reach 4	221.89	.04	.03	.04
Reach 4	221.80	.04	.03	.04
Reach 4	221.70	.04	.03	.04
Reach 4	221.61	.04	.03	.04
Reach 4	221.50	.04	.03	.04
Reach 4	221.40	.05	.035	.05
Reach 4	221.31	.05	.035	.05
Reach 4	221.26	.05	.035	.05
Reach 4	221.25	Bridge		
Reach 4	221.24	.05	.035	.05
Reach 4	221.2	.05	.035	.05
Reach 4	221.195	Bridge		
Reach 4	221.19	.05	.035	.05
Reach 4	221.06	.05	.035	.05
Reach 4	221.055	Bridge		
Reach 4	221.05	.035	.035	.035
Reach 4	221.02	.035	.035	.035
Reach 4	220.92	.035	.035	.035
Reach 4	220.82	.035	.035	.035
Reach 4	220.73	.035	.035	.035
Reach 4	220.63	.035	.035	.035
Reach 4	220.54	.035	.035	.035
Reach 4	220.45	.035	.035	.035
Reach 4	220.35	.035	.035	.035
Reach 4	220.25	.035	.035	.035
Reach 4	220.16	.035	.035	.035
Reach 4	220.06	.035	.035	.035
Reach 4	220.05	Bridge		
Reach 4	220.03	.035	.035	.035
Reach 4	219.88	.035	.035	.035
Reach 4	219.79	.035	.035	.035
Reach 4	219.70	.035	.035	.035
Reach 4	219.61	.035	.035	.035
Reach 4	219.51	.035	.035	.035
Reach 4	219.42	.035	.035	.035

Reach 4	219.33	.035	.035	.035
Reach 4	219.24	.035	.035	.035
Reach 4	219.14	.05	.035	.05
Reach 4	219.03	.05	.035	.05
Reach 4	219.02	Bridge		
Reach 4	219.01	.05	.035	.05
Reach 4	218.97	.05	.035	.05
Reach 4	218.965	Bridge		
Reach 4	218.96	.05	.035	.05
Reach 4	218.80	.05	.035	.05
Reach 4	218.71	.05	.035	.05
Reach 4	218.61	.05	.035	.05
Reach 4	218.52	.05	.035	.05
Reach 4	218.42	.05	.035	.05
Reach 4	218.33	.05	.035	.05
Reach 4	218.24	.05	.035	.05
Reach 4	218.14	.05	.035	.05
Reach 4	218.04	.035	.035	.035
Reach 4	217.95	.035	.035	.035
Reach 4	217.86	.035	.035	.035
Reach 4	217.76	.035	.035	.035
Reach 4	217.66	.035	.035	.035
Reach 4	217.57	.035	.035	.035
Reach 4	217.48	.035	.035	.035
Reach 4	217.38	.035	.035	.035
Reach 4	217.29	.035	.035	.035
Reach 4	217.19	.035	.035	.035
Reach 4	217.10	.035	.035	.035
Reach 4	217.00	.035	.035	.035
Reach 4	216.91	.035	.035	.035
Reach 4	216.81	.035	.035	.035
Reach 4	216.72	.035	.035	.035
Reach 4	216.62	.035	.035	.035
Reach 4	216.52	.04	.035	.04
Reach 4	216.505	Bridge		
Reach 4	216.49	.04	.035	.04
Reach 4	216.42	.04	.035	.04
Reach 4	216.33	.04	.035	.04
Reach 4	216.23	.04	.035	.04
Reach 4	216.13	.04	.035	.04
Reach 4	216.04	.04	.035	.04
Reach 4	215.94	.04	.035	.04
Reach 4	215.84	.04	.035	.04
Reach 4	215.82	.04	.035	.04
Reach 4	215.815	Bridge		
Reach 4	215.81	.04	.035	.04
Reach 4	215.75	.04	.035	.04
Reach 4	215.65	.04	.035	.04
Reach 4	215.56	.04	.035	.04
Reach 4	215.46	.04	.035	.04
Reach 4	215.36	.04	.035	.04
Reach 4	215.27	.04	.035	.04
Reach 4	215.18	.04	.035	.04
Reach 4	215.09	.04	.035	.04
Reach 4	214.99	.04	.035	.04
Reach 4	214.9	.04	.035	.04
Reach 4	214.79	.04	.035	.04
Reach 4	214.785	Bridge		
Reach 4	214.78	.04	.035	.04
Reach 4	214.71	.04	.035	.04
Reach 4	214.61	.04	.035	.04
Reach 4	214.52	.04	.035	.04
Reach 4	214.42	.04	.035	.04
Reach 4	214.33	.04	.035	.04
Reach 4	214.23	.04	.035	.04
Reach 4	214.14	.04	.035	.04

SUMMARY OF REACH LENGTHS

River: Salt River

Reach	River Sta.	Left	Channel	Right
Reach 4	225.30	567.06	567.06	567.06
Reach 4	225.19	439.53	439.53	439.53
Reach 4	225.11	577.62	577.62	577.62
Reach 4	225	526.43	526.43	526.43
Reach 4	224.90	433.65	433.65	433.65
Reach 4	224.82	599.67	599.67	599.67
Reach 4	224.71	483.86	483.86	483.86
Reach 4	224.62	529.95	529.95	529.95
Reach 4	224.52	503.1	503.1	503.1
Reach 4	224.42	599.2	599.2	599.2
Reach 4	224.31	106	477.07	507
Reach 4	224.22	404	110	67
Reach 4	224.21	Bridge		
Reach 4	224.20	208	77	57
Reach 4	224.19	171	172.54	177
Reach 4	224.175	Bridge		
Reach 4	224.16	143	110	83
Reach 4	224.14	312	86	56
Reach 4	224.13	Bridge		
Reach 4	224.12	54	337	429
Reach 4	224.06	526	528	522
Reach 4	223.96	523	540	537
Reach 4	223.86	485	483.1	485
Reach 4	223.77	500	500	500
Reach 4	223.67	500.21	500.21	500.21
Reach 4	223.58	490	501.3	510
Reach 4	223.48	450	527.75	610
Reach 4	223.38	480.81	480.81	480.81
Reach 4	223.29	521.09	521.09	521.09
Reach 4	223.19	620	514.62	430
Reach 4	223.09	139.09	139.09	139.09
Reach 4	223.085	Bridge		
Reach 4	223.08	170	268.54	370
Reach 4	223.02	500	494.97	480
Reach 4	222.93	470	502.27	520
Reach 4	222.83	497.11	497.11	497.11
Reach 4	222.74	482.71	482.71	482.71
Reach 4	222.65	525	522.87	470
Reach 4	222.55	530	514.6	510
Reach 4	222.45	420	480.98	550
Reach 4	222.36	630	487.06	380
Reach 4	222.27	580	492.86	420
Reach 4	222.17	410	381.57	360
Reach 4	222.09	154.01	154.01	154.01
Reach 4	222.085	Bridge		
Reach 4	222.08	580	440.56	330
Reach 4	221.99	560	510.5	470
Reach 4	221.89	520	490.84	460
Reach 4	221.80	520	512.31	500
Reach 4	221.70	480	491.61	500
Reach 4	221.61	420	571.5	760
Reach 4	221.50	510	506.96	520
Reach 4	221.40	460	504.7	540
Reach 4	221.31	220	262.31	780
Reach 4	221.26	101.04	101.04	101.04
Reach 4	221.25	Bridge		
Reach 4	221.24	185.11	185.11	185.11
Reach 4	221.2	91.95	91.95	91.95
Reach 4	221.195	Bridge		
Reach 4	221.19	790	650.87	300
Reach 4	221.06	84.74	84.74	84.74
Reach 4	221.055	Bridge		
Reach 4	221.05	210	167.68	80
Reach 4	221.02	530	503.55	450
Reach 4	220.92	560	518.52	450
Reach 4	220.82	500	494.93	490

Reach 4	220.73	510	501.55	490
Reach 4	220.63	490	501.08	510
Reach 4	220.54	470	492.46	510
Reach 4	220.45	500	506.77	520
Reach 4	220.35	490	500.81	520
Reach 4	220.25	500	500.83	490
Reach 4	220.16	480	495.84	550
Reach 4	220.06	176.4	176.4	176.4
Reach 4	220.05	Bridge		
Reach 4	220.03	840	799.9	720
Reach 4	219.88	460	484.7	520
Reach 4	219.79	420	490.52	550
Reach 4	219.70	460	477.05	540
Reach 4	219.61	470	499.49	550
Reach 4	219.51	450	497.52	570
Reach 4	219.42	410	470.96	560
Reach 4	219.33	380	467.92	590
Reach 4	219.24	510	511.34	500
Reach 4	219.14	760	550.34	260
Reach 4	219.03	190.12	190.12	190.12
Reach 4	219.02	Bridge		
Reach 4	219.01	111.97	111.97	111.97
Reach 4	218.97	138.88	138.88	138.88
Reach 4	218.965	Bridge		
Reach 4	218.96	570	812.27	860
Reach 4	218.80	480	483.7	500
Reach 4	218.71	508.24	508.24	508.24
Reach 4	218.61	510	503.43	503.43
Reach 4	218.52	520	496.02	460
Reach 4	218.42	520	502.97	490
Reach 4	218.33	540	490.24	430
Reach 4	218.24	530	499.8	460
Reach 4	218.14	570	508.89	460
Reach 4	218.04	540	508.91	460
Reach 4	217.95	480	489.76	489.76
Reach 4	217.86	470	512.67	540
Reach 4	217.76	440	496.98	560
Reach 4	217.66	450	512.72	610
Reach 4	217.57	440	481.39	550
Reach 4	217.48	440	502.74	570
Reach 4	217.38	480	491.58	500
Reach 4	217.29	511.81	511.81	520
Reach 4	217.19	490	502.45	520
Reach 4	217.10	481.37	481.37	481.37
Reach 4	217.00	510	506.49	506.49
Reach 4	216.91	503.44	503.44	503.44
Reach 4	216.81	498.18	498.18	498.18
Reach 4	216.72	500	508.39	520
Reach 4	216.62	470	499.71	570
Reach 4	216.52	256.5	256.5	256.5
Reach 4	216.505	Bridge		
Reach 4	216.49	23.25	23.25	23.25
Reach 4	216.42	510	488.7	410
Reach 4	216.33	600	490.24	380
Reach 4	216.23	590	517.61	450
Reach 4	216.13	550	500.46	390
Reach 4	216.04	540	507.78	500
Reach 4	215.94	560	540.02	520
Reach 4	215.84	120	123.82	130
Reach 4	215.82	115.96	115.96	115.96
Reach 4	215.815	Bridge		
Reach 4	215.81	300	264.36	230
Reach 4	215.75	520	500.69	470
Reach 4	215.65	500	495.44	490
Reach 4	215.56	500	498.23	500
Reach 4	215.46	510	519.75	530
Reach 4	215.36	500	489.19	470
Reach 4	215.27	550	493.27	420
Reach 4	215.18	560	481.96	420
Reach 4	215.09	510	506.22	510
Reach 4	214.99	480	505.18	530

Reach 4	214.9	340	568.44	730
Reach 4	214.79	116.34	116.34	116.34
Reach 4	214.785	Bridge		
Reach 4	214.78	520	310.05	80
Reach 4	214.71	500	508.55	450
Reach 4	214.61	480	493.82	490
Reach 4	214.52	470	500.39	530
Reach 4	214.42	510	496.64	480
Reach 4	214.33	440	507.15	560
Reach 4	214.23	495	494.49	495
Reach 4	214.14	475	510.51	570

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Salt River

Reach	River Sta.	Contr.	Expan.
Reach 4	225.30	.1	.3
Reach 4	225.19	.1	.3
Reach 4	225.11	.1	.3
Reach 4	225	.1	.3
Reach 4	224.90	.1	.3
Reach 4	224.82	.1	.3
Reach 4	224.71	.1	.3
Reach 4	224.62	.1	.3
Reach 4	224.52	.1	.3
Reach 4	224.42	.1	.3
Reach 4	224.31	.1	.3
Reach 4	224.22	.1	.3
Reach 4	224.21	Bridge	
Reach 4	224.20	.1	.3
Reach 4	224.19	.1	.3
Reach 4	224.175	Bridge	
Reach 4	224.16	.1	.3
Reach 4	224.14	.1	.3
Reach 4	224.13	Bridge	
Reach 4	224.12	.1	.3
Reach 4	224.06	.1	.3
Reach 4	223.96	.1	.3
Reach 4	223.86	.1	.3
Reach 4	223.77	.1	.3
Reach 4	223.67	.1	.3
Reach 4	223.58	.1	.3
Reach 4	223.48	.1	.3
Reach 4	223.38	.1	.3
Reach 4	223.29	.1	.3
Reach 4	223.19	.1	.3
Reach 4	223.09	.1	.3
Reach 4	223.085	Bridge	
Reach 4	223.08	.1	.3
Reach 4	223.02	.1	.3
Reach 4	222.93	.1	.3
Reach 4	222.83	.1	.3
Reach 4	222.74	.1	.3
Reach 4	222.65	.1	.3
Reach 4	222.55	.1	.3
Reach 4	222.45	.1	.3
Reach 4	222.36	.1	.3
Reach 4	222.27	.1	.3
Reach 4	222.17	.1	.3
Reach 4	222.09	.1	.3
Reach 4	222.085	Bridge	
Reach 4	222.08	.1	.3
Reach 4	221.99	.1	.3
Reach 4	221.89	.1	.3
Reach 4	221.80	.1	.3
Reach 4	221.70	.1	.3

Reach 4	221.61		.1	.3
Reach 4	221.50		.1	.3
Reach 4	221.40		.1	.3
Reach 4	221.31		.1	.3
Reach 4	221.26		.1	.3
Reach 4	221.25	Bridge		
Reach 4	221.24		.1	.3
Reach 4	221.2		.1	.3
Reach 4	221.195	Bridge		
Reach 4	221.19		.1	.3
Reach 4	221.06		.1	.3
Reach 4	221.055	Bridge		
Reach 4	221.05		.1	.3
Reach 4	221.02		.1	.3
Reach 4	220.92		.1	.3
Reach 4	220.82		.1	.3
Reach 4	220.73		.1	.3
Reach 4	220.63		.1	.3
Reach 4	220.54		.1	.3
Reach 4	220.45		.1	.3
Reach 4	220.35		.1	.3
Reach 4	220.25		.1	.3
Reach 4	220.16		.1	.3
Reach 4	220.06		.1	.3
Reach 4	220.05	Bridge		
Reach 4	220.03		.1	.3
Reach 4	219.88		.1	.3
Reach 4	219.79		.1	.3
Reach 4	219.70		.1	.3
Reach 4	219.61		.1	.3
Reach 4	219.51		.1	.3
Reach 4	219.42		.1	.3
Reach 4	219.33		.1	.3
Reach 4	219.24		.1	.3
Reach 4	219.14		.1	.3
Reach 4	219.03		.1	.3
Reach 4	219.02	Bridge		
Reach 4	219.01		.1	.3
Reach 4	218.97		.1	.3
Reach 4	218.965	Bridge		
Reach 4	218.96		.1	.3
Reach 4	218.80		.1	.3
Reach 4	218.71		.1	.3
Reach 4	218.61		.1	.3
Reach 4	218.52		.1	.3
Reach 4	218.42		.1	.3
Reach 4	218.33		.1	.3
Reach 4	218.24		.1	.3
Reach 4	218.14		.1	.3
Reach 4	218.04		.1	.3
Reach 4	217.95		.1	.3
Reach 4	217.86		.1	.3
Reach 4	217.76		.1	.3
Reach 4	217.66		.1	.3
Reach 4	217.57		.1	.3
Reach 4	217.48		.1	.3
Reach 4	217.38		.1	.3
Reach 4	217.29		.1	.3
Reach 4	217.19		.1	.3
Reach 4	217.10		.1	.3
Reach 4	217.00		.1	.3
Reach 4	216.91		.1	.3
Reach 4	216.81		.1	.3
Reach 4	216.72		.1	.3
Reach 4	216.62		.1	.3
Reach 4	216.52		.1	.3
Reach 4	216.505	Bridge		
Reach 4	216.49		.1	.3
Reach 4	216.42		.1	.3
Reach 4	216.33		.1	.3
Reach 4	216.23		.1	.3

Reach 4	216.13		.1	.3
Reach 4	216.04		.1	.3
Reach 4	215.94		.1	.3
Reach 4	215.84		.1	.3
Reach 4	215.82		.1	.3
Reach 4	215.815	Bridge		
Reach 4	215.81		.1	.3
Reach 4	215.75		.1	.3
Reach 4	215.65		.1	.3
Reach 4	215.56		.1	.3
Reach 4	215.46		.1	.3
Reach 4	215.36		.1	.3
Reach 4	215.27		.1	.3
Reach 4	215.18		.1	.3
Reach 4	215.09		.1	.3
Reach 4	214.99		.1	.3
Reach 4	214.9		.1	.3
Reach 4	214.79		.1	.3
Reach 4	214.785	Bridge		
Reach 4	214.78		.1	.3
Reach 4	214.71		.1	.3
Reach 4	214.61		.1	.3
Reach 4	214.52		.1	.3
Reach 4	214.42		.1	.3
Reach 4	214.33		.1	.3
Reach 4	214.23		.1	.3
Reach 4	214.14		.1	.3

Profile Output Table - Standard Table 1

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach 4	214.14	169000.00	1048.70	1075.49	1062.63	1076.99	0.000805	9.84	17171.67	1257.06	0.36
Reach 4	214.14	169000.00	1048.70	1075.50	1062.66	1077.00	0.000804	9.84	17178.94	726.84	0.36
Reach 4	214.23	169000.00	1048.70	1075.93	1062.84	1077.39	0.000784	9.71	17406.42	1126.00	0.35
Reach 4	214.23	169000.00	1048.70	1075.94	1062.84	1077.40	0.000783	9.71	17413.27	738.00	0.35
Reach 4	214.33	169000.00	1048.50	1076.88	1060.42	1077.73	0.000413	7.40	22823.58	1266.50	0.26
Reach 4	214.33	169000.00	1048.50	1076.89	1060.42	1077.74	0.000413	7.40	22830.94	899.54	0.26
Reach 4	214.42	169000.00	1048.20	1077.32	1059.39	1077.93	0.000288	6.27	26966.97	1193.48	0.22
Reach 4	214.42	169000.00	1048.20	1077.33	1059.39	1077.93	0.000287	6.27	26975.11	1041.69	0.22
Reach 4	214.52	169000.00	1048.00	1077.35	1060.59	1078.15	0.000391	7.19	23492.53	928.22	0.25
Reach 4	214.52	169000.00	1048.00	1077.36	1060.59	1078.16	0.000390	7.19	23499.67	928.22	0.25
Reach 4	214.61	169000.00	1050.40	1077.25	1064.26	1078.56	0.000723	9.21	18346.45	792.44	0.34
Reach 4	214.61	169000.00	1050.40	1077.25	1064.26	1078.57	0.000722	9.21	18352.64	792.44	0.34
Reach 4	214.71	169000.00	1055.10	1077.48	1069.29	1079.15	0.001272	10.38	16287.19	901.57	0.43
Reach 4	214.71	169000.00	1055.10	1077.48	1069.29	1079.15	0.001270	10.37	16294.01	901.57	0.43
Reach 4	214.78	169000.00	1058.80	1078.06	1070.73	1079.56	0.001306	9.83	17192.07	1054.44	0.43
Reach 4	214.78	169000.00	1058.80	1078.07	1070.73	1079.57	0.001304	9.83	17199.27	1054.44	0.43
Reach 4	214.785	Bridge									
Reach 4	214.79	169000.00	1057.60	1078.39	1070.68	1079.83	0.001221	9.63	17557.55	1056.41	0.42
Reach 4	214.79	169000.00	1057.60	1078.40	1070.68	1079.83	0.001219	9.62	17564.39	1056.41	0.42
Reach 4	214.9	169000.00	1061.20	1078.13	1074.91	1081.52	0.003589	14.78	11434.89	934.49	0.69
Reach 4	214.9	169000.00	1061.20	1078.14	1074.91	1081.53	0.003584	14.77	11439.94	810.50	0.69
Reach 4	214.99	169000.00	1061.30	1079.91	1075.58	1083.17	0.002926	14.48	11672.67	727.58	0.64
Reach 4	214.99	169000.00	1061.30	1079.92	1075.58	1083.17	0.002925	14.48	11674.45	727.58	0.64
Reach 4	215.09	169000.00	1061.70	1081.09	1076.37	1084.77	0.002894	15.38	10986.08	619.02	0.64
Reach 4	215.09	169000.00	1061.70	1081.10	1076.37	1084.77	0.002893	15.38	10987.06	619.02	0.64
Reach 4	215.18	169000.00	1062.20	1081.87	1079.42	1086.91	0.004584	18.01	9382.04	686.90	0.80
Reach 4	215.18	169000.00	1062.20	1081.87	1079.42	1086.91	0.004582	18.01	9382.77	593.90	0.80
Reach 4	215.27	169000.00	1063.50	1086.84	1076.00	1088.10	0.000846	9.02	18736.49	3991.40	0.36
Reach 4	215.27	169000.00	1063.50	1086.85	1076.00	1088.11	0.000852	9.02	18740.87	943.30	0.36
Reach 4	215.36	169000.00	1063.00	1087.34	1075.36	1088.49	0.000701	8.61	19624.04	3559.77	0.33
Reach 4	215.36	169000.00	1063.00	1087.35	1075.36	1088.50	0.000701	8.61	19629.43	919.00	0.33
Reach 4	215.46	169000.00	1064.60	1087.61	1077.65	1088.97	0.000932	9.38	18009.56	916.86	0.37
Reach 4	215.46	169000.00	1064.60	1087.61	1077.65	1088.98	0.000931	9.38	18015.04	916.85	0.37
Reach 4	215.56	169000.00	1066.10	1087.99	1079.15	1089.55	0.001145	10.02	16859.61	907.87	0.41

Reach 4	215.56	169000.00	1066.10	1087.99	1079.15	1089.55	0.001144	10.02	16864.71	907.88	0.41
Reach 4	215.65	169000.00	1068.30	1088.27	1082.38	1090.46	0.001959	11.87	14232.62	890.00	0.52
Reach 4	215.65	169000.00	1068.30	1088.28	1082.38	1090.47	0.001957	11.87	14237.18	890.00	0.52
Reach 4	215.75	169000.00	1073.60	1088.44	1086.81	1092.56	0.005283	16.27	10385.16	854.81	0.82
Reach 4	215.75	169000.00	1073.60	1088.45	1086.81	1092.56	0.005277	16.27	10389.02	854.81	0.82
Reach 4	215.81	169000.00	1076.00	1090.81	1087.03	1093.71	0.003024	13.67	12363.67	860.84	0.64
Reach 4	215.81	169000.00	1076.00	1090.81	1087.03	1093.71	0.003023	13.67	12364.51	860.84	0.64
Reach 4	215.815	Bridge									
Reach 4	215.82	169000.00	1076.00	1091.84	1087.02	1094.37	0.002409	12.76	13249.11	860.86	0.57
Reach 4	215.82	169000.00	1076.00	1091.85	1087.02	1094.37	0.002405	12.75	13254.68	860.86	0.57
Reach 4	215.84	169000.00	1075.80	1091.71	1088.70	1094.94	0.003651	14.42	11719.46	870.81	0.69
Reach 4	215.84	169000.00	1075.80	1091.72	1088.70	1094.94	0.003644	14.41	11725.41	870.81	0.69
Reach 4	215.94	169000.00	1077.80	1093.70	1090.81	1097.08	0.004117	14.74	11461.59	983.97	0.73
Reach 4	215.94	169000.00	1077.80	1093.70	1090.81	1097.08	0.004113	14.74	11464.57	906.67	0.73
Reach 4	216.04	169000.00	1077.50	1096.93	1088.52	1098.22	0.001041	9.13	18515.97	1448.65	0.39
Reach 4	216.04	169000.00	1077.50	1096.93	1088.52	1098.22	0.001041	9.13	18517.14	1069.84	0.39
Reach 4	216.13	169000.00	1078.00	1097.54	1088.70	1098.73	0.000954	8.75	19303.70	2129.80	0.37
Reach 4	216.13	169000.00	1078.00	1097.54	1088.70	1098.73	0.000954	8.75	19304.79	1113.68	0.37
Reach 4	216.23	169000.00	1078.50	1097.99	1089.39	1099.28	0.001058	9.13	18502.08	1738.50	0.39
Reach 4	216.23	169000.00	1078.50	1097.99	1089.39	1099.28	0.001059	9.13	18503.28	1083.71	0.39
Reach 4	216.33	169000.00	1080.80	1098.35	1091.37	1099.99	0.001446	10.25	16489.69	1473.62	0.45
Reach 4	216.33	169000.00	1080.80	1098.36	1091.37	1099.99	0.001445	10.25	16490.95	1026.33	0.45
Reach 4	216.42	169000.00	1082.00	1098.86	1093.10	1100.93	0.001943	11.57	14613.30	1034.14	0.52
Reach 4	216.42	169000.00	1082.00	1098.86	1093.10	1100.93	0.001943	11.56	14614.20	946.84	0.52
Reach 4	216.49	169000.00	1083.20	1098.53	1094.27	1101.15	0.002871	12.99	13010.51	949.03	0.62
Reach 4	216.49	169000.00	1083.20	1098.53	1094.27	1101.15	0.002870	12.99	13011.78	949.02	0.62
Reach 4	216.505	Bridge									
Reach 4	216.52	169000.00	1083.20	1100.20	1094.26	1102.27	0.002072	11.53	14652.61	999.71	0.53
Reach 4	216.52	169000.00	1083.20	1100.20	1094.26	1102.27	0.002072	11.53	14653.22	999.72	0.53
Reach 4	216.62	169000.00	1078.33	1101.44	1093.62	1103.15	0.001429	10.52	16067.80	1054.35	0.45
Reach 4	216.62	169000.00	1078.33	1101.44	1093.62	1103.15	0.001429	10.52	16066.40	951.16	0.45
Reach 4	216.72	169000.00	1080.17	1102.29	1093.15	1103.80	0.001078	9.88	17099.27	897.91	0.40
Reach 4	216.72	169000.00	1080.17	1102.29	1093.15	1103.80	0.001078	9.88	17098.18	897.91	0.40
Reach 4	216.81	169000.00	1079.55	1102.78	1094.35	1104.41	0.001230	10.27	16455.12	1747.47	0.42
Reach 4	216.81	169000.00	1079.55	1102.77	1094.37	1104.41	0.001231	10.27	16454.13	895.20	0.42
Reach 4	216.91	169000.00	1082.32	1103.31	1096.30	1105.17	0.001545	10.97	15408.17	1820.47	0.47
Reach 4	216.91	169000.00	1082.32	1103.30	1096.31	1105.17	0.001545	10.97	15407.28	904.44	0.47

Reach 4	217.00	169000.00	1081.30	1104.25	1096.14	1105.90	0.001261	10.32	16376.45	1667.39	0.43
Reach 4	217.00	169000.00	1081.30	1104.25	1096.12	1105.90	0.001261	10.32	16375.79	905.09	0.43
Reach 4	217.10	169000.00	1083.00	1104.84	1097.07	1106.55	0.001360	10.50	16093.27	1512.06	0.44
Reach 4	217.10	169000.00	1083.00	1104.83	1097.08	1106.55	0.001360	10.50	16092.72	909.80	0.44
Reach 4	217.19	169000.00	1086.43	1105.11	1101.53	1107.84	0.003099	13.26	12740.54	1366.69	0.64
Reach 4	217.19	169000.00	1086.43	1105.11	1101.53	1107.84	0.003099	13.26	12740.54	949.31	0.64
Reach 4	217.29	169000.00	1089.70	1107.06	1102.31	1109.25	0.002291	11.87	14234.06	1216.42	0.55
Reach 4	217.29	169000.00	1089.70	1107.06	1102.31	1109.25	0.002291	11.87	14234.06	998.99	0.55
Reach 4	217.38	169000.00	1090.70	1108.36	1103.09	1110.33	0.002000	11.25	15019.71	1099.53	0.52
Reach 4	217.38	169000.00	1090.70	1108.36	1103.08	1110.33	0.002001	11.25	15018.44	1034.46	0.52
Reach 4	217.48	169000.00	1090.80	1109.42	1103.96	1111.32	0.001901	11.04	15312.30	1523.56	0.51
Reach 4	217.48	169000.00	1090.80	1109.42	1103.96	1111.31	0.001902	11.04	15311.27	1045.77	0.51
Reach 4	217.57	169000.00	1089.90	1110.29	1105.33	1112.33	0.002135	11.45	14759.05	1041.01	0.54
Reach 4	217.57	169000.00	1089.90	1110.29	1105.33	1112.33	0.002136	11.45	14758.29	1041.00	0.54
Reach 4	217.66	169000.00	1088.14	1111.41	1106.01	1113.39	0.001973	11.27	14996.01	1096.23	0.52
Reach 4	217.66	169000.00	1088.14	1111.41	1106.01	1113.39	0.001973	11.27	14995.52	1020.69	0.52
Reach 4	217.76	169000.00	1092.19	1111.71		1115.14	0.003729	14.86	11373.31	823.68	0.70
Reach 4	217.76	169000.00	1092.19	1111.71		1115.14	0.003729	14.86	11373.01	823.68	0.70
Reach 4	217.86	169000.00	1088.60	1114.82	1108.27	1116.48	0.001533	10.35	16329.44	1206.90	0.46
Reach 4	217.86	169000.00	1088.60	1114.82	1108.27	1116.48	0.001533	10.35	16329.32	1043.82	0.46
Reach 4	217.95	169000.00	1092.47	1115.56	1109.16	1117.24	0.001556	10.41	16240.07	1042.14	0.46
Reach 4	217.95	169000.00	1092.47	1115.56	1109.16	1117.24	0.001556	10.41	16240.07	1042.14	0.46
Reach 4	218.04	169000.00	1095.51	1116.27	1110.88	1118.20	0.001946	11.15	15159.76	1038.69	0.51
Reach 4	218.04	169000.00	1095.51	1116.27	1110.88	1118.20	0.001946	11.15	15159.63	1038.69	0.51
Reach 4	218.14	169000.00	1096.58	1117.25	1111.91	1119.21	0.001977	11.23	15052.31	1392.06	0.52
Reach 4	218.14	169000.00	1096.58	1117.25	1111.91	1119.21	0.001977	11.23	15052.18	1032.39	0.52
Reach 4	218.24	169000.00	1097.97	1118.20	1113.34	1120.30	0.002218	11.62	14549.39	1209.33	0.55
Reach 4	218.24	169000.00	1097.97	1118.20	1113.34	1120.29	0.002218	11.62	14549.26	1034.85	0.55
Reach 4	218.33	169000.00	1099.30	1119.49	1113.65	1121.29	0.001773	10.78	15672.82	1051.45	0.49
Reach 4	218.33	169000.00	1099.30	1119.49	1113.65	1121.29	0.001773	10.78	15672.70	1051.45	0.49
Reach 4	218.42	169000.00	1101.56	1120.20	1115.71	1122.48	0.002468	12.11	13954.61	1630.02	0.57
Reach 4	218.42	169000.00	1101.56	1120.20	1115.71	1122.48	0.002468	12.11	13954.61	1007.80	0.57
Reach 4	218.52	169000.00	1101.37	1121.59	1116.20	1123.62	0.002038	11.43	14789.69	2019.27	0.53
Reach 4	218.52	169000.00	1101.37	1121.59	1116.20	1123.62	0.002039	11.43	14788.33	1008.12	0.53
Reach 4	218.61	169000.00	1101.91	1122.61	1117.10	1124.63	0.001987	11.40	14827.63	3020.79	0.52
Reach 4	218.61	169000.00	1101.91	1122.61	1117.08	1124.63	0.001988	11.40	14824.96	994.24	0.52
Reach 4	218.71	169000.00	1105.38	1123.63	1118.10	1125.63	0.001939	11.35	14891.65	3165.42	0.51

Reach 4	218.71	169000.00	1105.38	1123.63	1118.10	1125.63	0.001939	11.35	14889.72	986.76	0.51
Reach 4	218.80	169000.00	1105.70	1124.77	1118.20	1126.50	0.001572	10.55	16024.96	2479.19	0.47
Reach 4	218.80	169000.00	1105.70	1124.77	1118.22	1126.50	0.001573	10.55	16023.35	1011.73	0.47
Reach 4	218.96	169000.00	1106.31	1126.03	1120.64	1128.02	0.002010	11.32	14931.02	1096.74	0.52
Reach 4	218.96	169000.00	1106.31	1126.03	1120.67	1128.02	0.002011	11.32	14930.15	1020.44	0.52
Reach 4	218.965	Bridge									
Reach 4	218.97	169000.00	1106.45	1126.74	1120.31	1128.50	0.001620	10.65	15870.60	1056.96	0.47
Reach 4	218.97	169000.00	1106.45	1126.74	1120.31	1128.50	0.001620	10.65	15869.73	1009.80	0.47
Reach 4	219.01	169000.00	1112.90	1126.36	1123.16	1129.03	0.003271	13.10	12899.76	1022.15	0.65
Reach 4	219.01	169000.00	1112.90	1126.36	1123.16	1129.03	0.003272	13.10	12898.88	1022.15	0.65
Reach 4	219.02	Bridge									
Reach 4	219.03	169000.00	1112.90	1127.80	1123.15	1129.94	0.002299	11.76	14369.09	1026.67	0.55
Reach 4	219.03	169000.00	1112.90	1127.79	1123.15	1129.94	0.002300	11.76	14367.08	1026.66	0.55
Reach 4	219.14	169000.00	1110.40	1129.20	1123.56	1131.11	0.001887	11.10	15229.76	2551.49	0.51
Reach 4	219.14	169000.00	1110.40	1129.20	1123.56	1131.11	0.001888	11.10	15228.51	1023.27	0.51
Reach 4	219.24	169000.00	1112.10	1130.16	1124.65	1132.12	0.001989	11.23	15051.38	2682.75	0.52
Reach 4	219.24	169000.00	1112.10	1130.16	1124.65	1132.12	0.001989	11.23	15050.38	1032.44	0.52
Reach 4	219.33	169000.00	1113.40	1131.10	1125.53	1133.03	0.001929	11.17	15131.52	2726.06	0.51
Reach 4	219.33	169000.00	1113.40	1131.10	1125.53	1133.03	0.001929	11.17	15130.65	1024.85	0.51
Reach 4	219.42	169000.00	1111.83	1132.00	1126.37	1133.94	0.001898	11.18	15121.63	2400.89	0.51
Reach 4	219.42	169000.00	1111.83	1132.00	1126.37	1133.94	0.001898	11.18	15120.89	1010.17	0.51
Reach 4	219.51	169000.00	1111.64	1132.93	1127.37	1134.90	0.001942	11.27	14993.73	1910.40	0.51
Reach 4	219.51	169000.00	1111.64	1132.93	1127.37	1134.90	0.001943	11.27	14993.11	1006.15	0.51
Reach 4	219.61	169000.00	1112.39	1133.86	1128.49	1135.93	0.002051	11.54	14649.74	2912.62	0.53
Reach 4	219.61	169000.00	1112.39	1133.86	1128.49	1135.93	0.002051	11.54	14649.25	988.76	0.53
Reach 4	219.70	169000.00	1115.81	1134.63	1130.64	1137.22	0.002805	12.91	13091.68	2045.78	0.61
Reach 4	219.70	169000.00	1115.81	1134.63	1130.64	1137.22	0.002806	12.91	13091.33	945.15	0.61
Reach 4	219.79	169000.00	1119.30	1135.96	1132.24	1138.69	0.003008	13.26	12747.50	2039.42	0.63
Reach 4	219.79	169000.00	1119.30	1135.96	1132.24	1138.69	0.003008	13.26	12747.28	931.90	0.63
Reach 4	219.88	169000.00	1119.50	1137.44	1133.46	1140.11	0.002850	13.11	12889.63	2003.65	0.62
Reach 4	219.88	169000.00	1119.50	1137.44	1133.46	1140.11	0.002850	13.11	12889.52	918.51	0.62
Reach 4	220.03	169000.00	1122.90	1139.74	1135.39	1142.32	0.002656	12.90	13097.09	906.62	0.60
Reach 4	220.03	169000.00	1122.90	1139.73	1135.39	1142.32	0.002656	12.90	13096.98	906.62	0.60
Reach 4	220.05	Bridge									
Reach 4	220.06	169000.00	1122.90	1140.72	1135.39	1142.99	0.002141	12.08	13992.87	909.54	0.54
Reach 4	220.06	169000.00	1122.90	1140.72	1135.39	1142.99	0.002142	12.08	13991.64	909.53	0.54

Reach 4	220.16	169000.00	1124.58	1141.74	1136.90	1144.14	0.002357	12.43	13591.57	1469.89	0.57
Reach 4	220.16	169000.00	1124.58	1141.74	1136.90	1144.14	0.002358	12.44	13590.57	912.67	0.57
Reach 4	220.25	169000.00	1124.01	1143.14	1137.06	1145.23	0.001890	11.59	14576.74	1743.60	0.51
Reach 4	220.25	169000.00	1124.01	1143.14	1137.06	1145.23	0.001890	11.59	14576.18	919.65	0.51
Reach 4	220.35	169000.00	1123.99	1144.24	1137.09	1146.10	0.001554	10.95	15436.37	1375.54	0.47
Reach 4	220.35	169000.00	1123.99	1144.24	1137.09	1146.10	0.001554	10.95	15435.92	915.58	0.47
Reach 4	220.45	169000.00	1125.43	1144.97	1138.52	1146.99	0.001759	11.39	14836.82	1293.58	0.50
Reach 4	220.45	169000.00	1125.43	1144.97	1138.52	1146.99	0.001759	11.39	14836.49	908.82	0.50
Reach 4	220.54	169000.00	1127.32	1145.84	1139.51	1147.86	0.001789	11.42	14796.15	1107.01	0.50
Reach 4	220.54	169000.00	1127.32	1145.84	1139.51	1147.86	0.001790	11.42	14795.70	915.24	0.50
Reach 4	220.63	169000.00	1127.10	1146.74	1140.24	1148.75	0.001734	11.37	14857.16	981.94	0.49
Reach 4	220.63	169000.00	1127.10	1146.74	1140.24	1148.75	0.001735	11.38	14856.83	903.29	0.49
Reach 4	220.73	169000.00	1127.69	1147.59	1141.05	1149.62	0.001715	11.43	14782.77	1018.38	0.49
Reach 4	220.73	169000.00	1127.69	1147.59	1141.05	1149.62	0.001716	11.43	14782.43	884.55	0.49
Reach 4	220.82	169000.00	1129.56	1148.53	1141.72	1150.47	0.001688	11.19	15100.60	1082.87	0.49
Reach 4	220.82	169000.00	1129.56	1148.53	1141.72	1150.47	0.001688	11.19	15100.27	920.30	0.49
Reach 4	220.92	169000.00	1129.16	1149.39	1142.46	1151.35	0.001666	11.22	15058.51	1072.33	0.49
Reach 4	220.92	169000.00	1129.16	1149.39	1142.46	1151.34	0.001666	11.22	15058.18	906.20	0.49
Reach 4	221.02	169000.00	1130.06	1150.36	1142.60	1152.13	0.001403	10.69	15806.92	1161.10	0.45
Reach 4	221.02	169000.00	1130.06	1150.36	1142.60	1152.13	0.001403	10.69	15806.59	900.19	0.45
Reach 4	221.05	169000.00	1126.00	1150.84	1140.99	1152.36	0.001100	9.90	17070.64	1318.35	0.40
Reach 4	221.05	169000.00	1126.00	1150.84	1140.99	1152.36	0.001100	9.90	17070.31	908.64	0.40
Reach 4	221.055	Bridge									
Reach 4	221.06	169000.00	1126.00	1151.07	1140.98	1152.56	0.001076	9.78	17282.71	1351.93	0.40
Reach 4	221.06	169000.00	1126.00	1151.07	1140.98	1152.56	0.001076	9.78	17282.38	921.95	0.40
Reach 4	221.19	169000.00	1128.00	1151.80	1142.33	1153.28	0.001134	9.75	17340.64	1048.37	0.41
Reach 4	221.19	169000.00	1128.00	1151.80	1142.33	1153.28	0.001134	9.75	17340.17	968.91	0.41
Reach 4	221.195	Bridge									
Reach 4	221.2	169000.00	1128.00	1152.17	1142.32	1153.59	0.001065	9.55	17696.37	1104.28	0.39
Reach 4	221.2	169000.00	1128.00	1152.17	1142.32	1153.59	0.001065	9.55	17695.89	972.60	0.39
Reach 4	221.24	169000.00	1124.29	1152.39	1142.62	1153.78	0.001018	9.46	17860.54	1070.97	0.39
Reach 4	221.24	169000.00	1124.29	1152.39	1142.62	1153.78	0.001018	9.46	17860.07	954.93	0.39
Reach 4	221.25	Bridge									
Reach 4	221.26	169000.00	1124.29	1152.72	1142.61	1154.06	0.000962	9.30	18173.49	1085.78	0.38
Reach 4	221.26	169000.00	1124.29	1152.72	1142.61	1154.06	0.000962	9.30	18176.06	956.14	0.38
Reach 4	221.31	172000.00	1131.43	1152.32	1146.78	1154.78	0.002394	12.59	13661.73	1150.50	0.57
Reach 4	221.31	172000.00	1131.43	1152.32	1146.78	1154.78	0.002392	12.59	13664.72	910.15	0.57

Reach 4	221.40	172000.00	1133.21	1153.68	1147.84	1155.96	0.002238	12.12	14189.97	1061.05	0.55
Reach 4	221.40	172000.00	1133.21	1153.69	1147.84	1155.97	0.002237	12.12	14191.94	949.01	0.55
Reach 4	221.50	172000.00	1134.08	1154.59	1149.15	1157.00	0.001741	12.45	13820.51	1331.98	0.57
Reach 4	221.50	172000.00	1134.08	1154.59	1149.15	1157.00	0.001740	12.44	13821.88	928.67	0.57
Reach 4	221.61	172000.00	1133.98	1155.68	1149.68	1157.96	0.001596	12.13	14181.40	1387.28	0.55
Reach 4	221.61	172000.00	1133.98	1155.68	1149.68	1157.96	0.001596	12.13	14182.31	926.14	0.55
Reach 4	221.70	172000.00	1134.30	1156.71	1149.59	1158.69	0.001284	11.30	15216.32	1465.08	0.50
Reach 4	221.70	172000.00	1134.30	1156.71	1149.59	1158.70	0.001284	11.30	15216.89	939.68	0.49
Reach 4	221.80	172000.00	1136.35	1157.35	1150.58	1159.37	0.001319	11.41	15076.04	1212.13	0.50
Reach 4	221.80	172000.00	1136.35	1157.35	1150.58	1159.37	0.001319	11.41	15076.50	935.46	0.50
Reach 4	221.89	172000.00	1136.20	1158.07	1151.65	1160.03	0.001351	11.24	15299.77	1151.07	0.50
Reach 4	221.89	172000.00	1136.20	1158.07	1151.65	1160.03	0.001351	11.24	15300.13	986.38	0.50
Reach 4	221.99	172000.00	1138.14	1158.99	1151.29	1160.68	0.001084	10.44	16480.58	1183.84	0.46
Reach 4	221.99	172000.00	1138.14	1158.99	1151.29	1160.68	0.001084	10.44	16480.82	1012.33	0.46
Reach 4	222.08	172000.00	1136.00	1159.93	1148.80	1161.08	0.000588	8.59	20013.41	1231.13	0.35
Reach 4	222.08	172000.00	1136.00	1159.93	1148.80	1161.08	0.000588	8.59	20013.66	1039.29	0.35
Reach 4	222.085	Bridge									
Reach 4	222.09	172000.00	1136.00	1160.14	1148.79	1161.26	0.000568	8.50	20234.87	1233.92	0.34
Reach 4	222.09	172000.00	1136.00	1160.14	1148.79	1161.26	0.000568	8.50	20235.13	1041.23	0.34
Reach 4	222.17	172000.00	1137.16	1160.20	1151.21	1161.60	0.000794	9.52	18072.05	1227.36	0.40
Reach 4	222.17	172000.00	1137.16	1160.20	1151.21	1161.60	0.000794	9.52	18072.42	1009.91	0.40
Reach 4	222.27	172000.00	1139.19	1160.64	1152.19	1162.01	0.000822	9.37	18354.18	1214.10	0.40
Reach 4	222.27	172000.00	1139.19	1160.64	1152.19	1162.01	0.000822	9.37	18354.31	1077.23	0.40
Reach 4	222.36	172000.00	1138.87	1161.29	1151.87	1162.39	0.000648	8.41	20461.32	1414.74	0.36
Reach 4	222.36	172000.00	1138.87	1161.29	1151.87	1162.39	0.000648	8.41	20461.46	1182.81	0.36
Reach 4	222.45	172000.00	1139.54	1161.93	1151.04	1162.67	0.000416	6.90	24914.87	1643.65	0.29
Reach 4	222.45	172000.00	1139.54	1161.93	1151.04	1162.67	0.000416	6.90	24915.03	1388.01	0.29
Reach 4	222.55	172000.00	1139.60	1162.10	1151.35	1162.91	0.000433	7.24	23760.71	1818.05	0.29
Reach 4	222.55	172000.00	1139.60	1162.10	1151.35	1162.91	0.000443	7.24	23764.13	1270.54	0.29
Reach 4	222.65	172000.00	1138.75	1162.23	1151.59	1163.26	0.000706	8.15	21092.08	2093.67	0.33
Reach 4	222.65	172000.00	1140.14	1162.24	1151.59	1163.27	0.000722	8.15	21102.36	1079.50	0.32
Reach 4	222.74	172000.00	1134.16	1162.59	1150.45	1163.59	0.000642	8.03	21415.29	2043.47	0.31
Reach 4	222.74	172000.00	1134.16	1162.60	1150.47	1163.60	0.000640	8.03	21428.72	1038.09	0.31
Reach 4	222.83	172000.00	1127.92	1162.90	1149.43	1163.89	0.000578	8.01	21474.69	2187.54	0.30
Reach 4	222.83	172000.00	1127.92	1162.91	1149.43	1163.90	0.000577	8.01	21486.45	963.41	0.30
Reach 4	222.93	172000.00	1137.70	1163.05	1152.09	1164.32	0.000836	9.04	19035.72	2119.92	0.35
Reach 4	222.93	172000.00	1137.70	1163.06	1152.09	1164.33	0.000834	9.03	19046.92	945.76	0.35

Reach 4	223.02	172000.00	1140.00	1163.55	1154.20	1164.76	0.000943	8.86	19418.38	1524.43	0.37
Reach 4	223.02	172000.00	1140.00	1163.56	1154.21	1164.77	0.000941	8.85	19430.52	1092.69	0.37
Reach 4	223.08	172000.00	1146.30	1163.07	1163.07	1167.91	0.008376	17.64	9747.96	1001.37	1.00
Reach 4	223.08	172000.00	1146.30	1163.07	1163.07	1167.91	0.008389	17.65	9742.82	1001.24	1.00
Reach 4	223.085	Bridge									
Reach 4	223.09	172000.00	1146.30	1167.01	1163.00	1169.40	0.002884	12.39	13879.31	1222.95	0.61
Reach 4	223.09	172000.00	1146.30	1166.91	1163.00	1169.33	0.002957	12.49	13768.21	1086.64	0.62
Reach 4	223.19	172000.00	1141.00	1169.29	1155.62	1170.15	0.000631	7.44	23106.09	2091.50	0.27
Reach 4	223.19	172000.00	1141.00	1169.24	1155.62	1170.10	0.000636	7.46	23048.99	1010.22	0.28
Reach 4	223.29	172000.00	1139.90	1169.35	1157.37	1170.74	0.001114	9.48	18141.91	2258.16	0.35
Reach 4	223.29	172000.00	1139.90	1169.29	1157.37	1170.69	0.001122	9.50	18098.18	792.41	0.35
Reach 4	223.38	172000.00	1134.62	1169.83	1157.04	1171.31	0.001141	9.78	17589.90	1665.59	0.35
Reach 4	223.38	172000.00	1134.62	1169.77	1157.04	1171.27	0.001148	9.80	17552.78	724.09	0.35
Reach 4	223.48	172000.00	1135.70	1170.24	1158.21	1172.13	0.001547	11.02	15601.74	933.29	0.39
Reach 4	223.48	172000.00	1135.70	1170.19	1158.21	1172.09	0.001556	11.05	15570.91	642.46	0.40
Reach 4	223.58	172000.00	1144.05	1170.70	1162.04	1173.31	0.002451	12.96	13275.04	990.19	0.49
Reach 4	223.58	172000.00	1144.05	1170.66	1162.04	1173.27	0.002465	12.98	13248.56	609.38	0.49
Reach 4	223.67	172000.00	1138.26	1172.51	1159.87	1174.34	0.001519	10.85	15846.36	946.38	0.38
Reach 4	223.67	172000.00	1138.26	1172.47	1159.87	1174.31	0.001524	10.87	15825.40	638.26	0.38
Reach 4	223.77	172000.00	1139.19	1173.52	1158.27	1174.85	0.000640	9.28	18530.30	1291.23	0.31
Reach 4	223.77	172000.00	1139.19	1173.49	1158.27	1174.83	0.000642	9.29	18510.45	682.96	0.31
Reach 4	223.86	172000.00	1140.96	1174.11	1157.82	1175.13	0.000414	8.13	21156.92	1139.08	0.28
Reach 4	223.86	172000.00	1140.96	1174.08	1157.82	1175.11	0.000416	8.14	21134.38	817.04	0.28
Reach 4	223.96	172000.00	1142.30	1174.54	1157.63	1175.33	0.000268	7.16	24009.47	1815.64	0.24
Reach 4	223.96	172000.00	1142.30	1174.51	1157.63	1175.31	0.000269	7.17	23985.99	894.59	0.24
Reach 4	224.06	172000.00	1145.60	1174.59	1160.26	1175.58	0.000512	8.00	21511.44	1372.95	0.28
Reach 4	224.06	172000.00	1145.60	1174.56	1160.26	1175.56	0.000513	8.00	21488.60	877.88	0.29
Reach 4	224.12	172000.00	1145.41	1175.20		1175.75	0.000272	5.95	28897.96	1152.55	0.21
Reach 4	224.12	172000.00	1145.41	1175.17		1175.73	0.000273	5.96	28869.81	1152.18	0.21
Reach 4	224.13	Bridge									
Reach 4	224.14	172000.00	1145.90	1175.20	1159.62	1175.89	0.000355	6.65	25867.16	1064.06	0.24
Reach 4	224.14	172000.00	1145.90	1175.18	1159.62	1175.86	0.000356	6.66	25841.30	1063.83	0.24
Reach 4	224.16	172000.00	1148.43	1175.21		1175.94	0.000392	6.87	25041.44	1057.53	0.25
Reach 4	224.16	172000.00	1148.43	1175.19		1175.92	0.000393	6.88	25015.85	1057.13	0.25
Reach 4	224.175	Bridge									
Reach 4	224.19	172000.00	1149.14	1175.31	1160.99	1176.06	0.000411	6.96	24727.28	1061.96	0.25

Reach 4	224.19	172000.00	1149.14	1175.29	1160.99	1176.04	0.000412	6.96	24701.87	1061.62	0.25
Reach 4	224.20	172000.00	1148.94	1175.36		1176.09	0.000413	6.90	24934.34	1087.87	0.25
Reach 4	224.20	172000.00	1148.94	1175.33		1176.07	0.000414	6.91	24908.57	1087.64	0.25
Reach 4	224.21	Bridge									
Reach 4	224.22	172000.00	1148.68	1175.65	1160.24	1176.23	0.000321	6.15	27962.63	1204.03	0.22
Reach 4	224.22	172000.00	1148.68	1175.62	1160.24	1176.21	0.000322	6.16	27935.14	1203.73	0.23
Reach 4	224.31	172000.00	1145.60	1175.80	1160.06	1176.38	0.000307	6.13	28044.01	2559.04	0.22
Reach 4	224.31	172000.00	1145.60	1175.78	1160.06	1176.36	0.000308	6.14	28018.02	1169.62	0.22
Reach 4	224.42	172000.00	1146.82	1176.24	1158.33	1176.54	0.000146	4.35	39497.94	2946.36	0.15
Reach 4	224.42	172000.00	1146.82	1176.22	1158.33	1176.52	0.000150	4.36	39466.68	1589.98	0.15
Reach 4	224.52	172000.00	1147.48	1176.39	1158.39	1176.61	0.000118	3.79	45382.25	3145.37	0.14
Reach 4	224.52	172000.00	1147.48	1176.37	1158.39	1176.59	0.000120	3.79	45347.56	1906.34	0.14
Reach 4	224.62	172000.00	1143.01	1176.45	1159.96	1176.68	0.000135	3.77	45603.91	3107.99	0.14
Reach 4	224.62	172000.00	1143.01	1176.44	1159.96	1176.66	0.000138	3.77	45567.60	2139.42	0.14
Reach 4	224.71	172000.00	1141.77	1176.55	1158.72	1176.74	0.000112	3.51	49035.13	3514.05	0.13
Reach 4	224.71	172000.00	1141.77	1176.53	1158.72	1176.72	0.000113	3.51	48999.60	2221.35	0.13
Reach 4	224.82	172000.00	1149.27	1176.55	1162.82	1176.87	0.000235	4.53	37945.18	2818.97	0.19
Reach 4	224.82	172000.00	1149.27	1176.54	1162.82	1176.85	0.000236	4.54	37913.58	2034.86	0.19
Reach 4	224.90	172000.00	1147.76	1176.59	1163.77	1177.00	0.000239	5.13	33543.39	3005.65	0.22
Reach 4	224.90	172000.00	1147.76	1176.58	1163.77	1176.99	0.000243	5.13	33515.42	1909.91	0.22
Reach 4	225	172000.00	1138.36	1176.86	1160.02	1177.10	0.000106	3.91	44037.26	2462.91	0.15
Reach 4	225	172000.00	1138.36	1176.85	1160.02	1177.08	0.000107	3.91	44010.50	2047.16	0.15
Reach 4	225.11	172000.00	1148.16	1176.71	1163.67	1177.30	0.000279	6.15	27953.32	1609.77	0.24
Reach 4	225.11	172000.00	1148.16	1176.70	1163.67	1177.28	0.000285	6.16	27937.39	1344.52	0.24
Reach 4	225.19	172000.00	1150.45	1176.66	1165.67	1177.55	0.000493	7.56	22737.94	1212.90	0.31
Reach 4	225.19	172000.00	1150.45	1176.65	1165.67	1177.54	0.000494	7.57	22726.27	1209.91	0.31
Reach 4	225.30	172000.00	1146.46	1177.35	1162.72	1177.76	0.000188	5.15	33420.95	1883.44	0.20
Reach 4	225.30	172000.00	1146.46	1177.34	1162.72	1177.75	0.000191	5.15	33409.21	1576.66	0.20

Profile Output Table - Standard Table 2

Reach	River Sta	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
Reach 4	214.14	1076.99	1075.49	1.50				169000.00		1257.06
Reach 4	214.14	1077.00	1075.50	1.50				169000.00		726.84
Reach 4	214.23	1077.39	1075.93	1.46	0.39	0.00		169000.00		1126.00
Reach 4	214.23	1077.40	1075.94	1.46	0.39	0.00		169000.00		738.00
Reach 4	214.33	1077.73	1076.88	0.85	0.28	0.06		169000.00		1266.50

Reach 4	214.33	1077.74	1076.89	0.85	0.28	0.06	169000.00	899.54
Reach 4	214.42	1077.93	1077.32	0.61	0.17	0.02	169000.00	1193.48
Reach 4	214.42	1077.93	1077.33	0.61	0.17	0.02	169000.00	1041.69
Reach 4	214.52	1078.15	1077.35	0.80	0.17	0.06	169000.00	928.22
Reach 4	214.52	1078.16	1077.36	0.80	0.17	0.06	169000.00	928.22
Reach 4	214.61	1078.56	1077.25	1.32	0.26	0.15	169000.00	792.44
Reach 4	214.61	1078.57	1077.25	1.32	0.26	0.15	169000.00	792.44
Reach 4	214.71	1079.15	1077.48	1.67	0.48	0.11	169000.00	901.57
Reach 4	214.71	1079.15	1077.48	1.67	0.48	0.11	169000.00	901.57
Reach 4	214.78	1079.56	1078.06	1.50	0.40	0.02	169000.00	1054.44
Reach 4	214.78	1079.57	1078.07	1.50	0.40	0.02	169000.00	1054.44
Reach 4	214.785	Bridge						
Reach 4	214.79	1079.83	1078.39	1.44	0.04	0.02	169000.00	1056.41
Reach 4	214.79	1079.83	1078.40	1.44	0.04	0.02	169000.00	1056.41
Reach 4	214.9	1081.52	1078.13	3.39	1.11	0.59	169000.00	934.49
Reach 4	214.9	1081.53	1078.14	3.39	1.11	0.58	169000.00	810.50
Reach 4	214.99	1083.17	1079.91	3.25	1.63	0.01	169000.00	727.58
Reach 4	214.99	1083.17	1079.92	3.25	1.63	0.01	169000.00	727.58
Reach 4	215.09	1084.77	1081.09	3.67	1.47	0.13	169000.00	619.02
Reach 4	215.09	1084.77	1081.10	3.67	1.47	0.13	169000.00	619.02
Reach 4	215.18	1086.91	1081.87	5.04	1.73	0.41	169000.00	686.90
Reach 4	215.18	1086.91	1081.87	5.04	1.73	0.41	169000.00	593.90
Reach 4	215.27	1088.10	1086.84	1.26	0.82	0.38	169000.00	3991.40
Reach 4	215.27	1088.11	1086.85	1.26	0.82	0.38	169000.00	943.30
Reach 4	215.36	1088.49	1087.34	1.15	0.38	0.01	169000.00	3559.77
Reach 4	215.36	1088.50	1087.35	1.15	0.38	0.01	169000.00	919.00
Reach 4	215.46	1088.97	1087.61	1.37	0.42	0.06	169000.00	916.86
Reach 4	215.46	1088.98	1087.61	1.37	0.42	0.06	169000.00	916.85
Reach 4	215.56	1089.55	1087.99	1.56	0.51	0.06	169000.00	907.87
Reach 4	215.56	1089.55	1087.99	1.56	0.51	0.06	169000.00	907.88
Reach 4	215.65	1090.46	1088.27	2.19	0.73	0.19	169000.00	890.00
Reach 4	215.65	1090.47	1088.28	2.19	0.73	0.19	169000.00	890.00
Reach 4	215.75	1092.56	1088.44	4.11	1.52	0.58	169000.00	854.81
Reach 4	215.75	1092.56	1088.45	4.11	1.51	0.58	169000.00	854.81
Reach 4	215.81	1093.71	1090.81	2.90	1.04	0.12	169000.00	860.84
Reach 4	215.81	1093.71	1090.81	2.90	1.04	0.12	169000.00	860.84
Reach 4	215.815	Bridge						

Reach 4	215.82	1094.37	1091.84	2.53	0.08	0.04		169000.00	860.86
Reach 4	215.82	1094.37	1091.85	2.52	0.08	0.04		169000.00	860.86
Reach 4	215.84	1094.94	1091.71	3.23	0.36	0.21		169000.00	870.81
Reach 4	215.84	1094.94	1091.72	3.23	0.36	0.21		169000.00	870.81
Reach 4	215.94	1097.08	1093.70	3.38	2.09	0.04		169000.00	983.97
Reach 4	215.94	1097.08	1093.70	3.37	2.09	0.04		169000.00	906.67
Reach 4	216.04	1098.22	1096.93	1.29	0.94	0.21		169000.00	1448.65
Reach 4	216.04	1098.22	1096.93	1.29	0.94	0.21		169000.00	1069.84
Reach 4	216.13	1098.73	1097.54	1.19	0.50	0.01		169000.00	2129.80
Reach 4	216.13	1098.73	1097.54	1.19	0.50	0.01		169000.00	1113.68
Reach 4	216.23	1099.28	1097.99	1.30	0.52	0.03		169000.00	1738.50
Reach 4	216.23	1099.28	1097.99	1.30	0.52	0.03		169000.00	1083.71
Reach 4	216.33	1099.99	1098.35	1.63	0.60	0.10		169000.00	1473.62
Reach 4	216.33	1099.99	1098.36	1.63	0.60	0.10		169000.00	1026.33
Reach 4	216.42	1100.93	1098.86	2.08	0.81	0.13	0.04	168999.95	1034.14
Reach 4	216.42	1100.93	1098.86	2.08	0.81	0.13		169000.00	946.84
Reach 4	216.49	1101.15	1098.53	2.62	0.05	0.16		169000.00	949.03
Reach 4	216.49	1101.15	1098.53	2.62	0.05	0.16		169000.00	949.02
Reach 4	216.505	Bridge							
Reach 4	216.52	1102.27	1100.20	2.07	0.06	0.04		169000.00	999.71
Reach 4	216.52	1102.27	1100.20	2.07	0.06	0.04		169000.00	999.72
Reach 4	216.62	1103.15	1101.44	1.72	0.85	0.03		169000.00	1054.35
Reach 4	216.62	1103.15	1101.44	1.72	0.85	0.03		169000.00	951.16
Reach 4	216.72	1103.80	1102.29	1.52	0.63	0.02		169000.00	897.91
Reach 4	216.72	1103.80	1102.29	1.52	0.63	0.02		169000.00	897.91
Reach 4	216.81	1104.41	1102.78	1.64	0.57	0.04		169000.00	1747.47
Reach 4	216.81	1104.41	1102.77	1.64	0.57	0.04		169000.00	895.20
Reach 4	216.91	1105.17	1103.31	1.87	0.69	0.07		169000.00	1820.47
Reach 4	216.91	1105.17	1103.30	1.87	0.69	0.07		169000.00	904.44
Reach 4	217.00	1105.90	1104.25	1.65	0.71	0.02		169000.00	1667.39
Reach 4	217.00	1105.90	1104.25	1.65	0.71	0.02		169000.00	905.09
Reach 4	217.10	1106.55	1104.84	1.71	0.63	0.02		169000.00	1512.06
Reach 4	217.10	1106.55	1104.83	1.71	0.63	0.02		169000.00	909.80
Reach 4	217.19	1107.84	1105.11	2.73	0.99	0.31		169000.00	1366.69
Reach 4	217.19	1107.84	1105.11	2.73	0.99	0.31		169000.00	949.31
Reach 4	217.29	1109.25	1107.06	2.19	1.36	0.05		169000.00	1216.42
Reach 4	217.29	1109.25	1107.06	2.19	1.36	0.05		169000.00	998.99

Reach 4	217.38	1110.33	1108.36	1.97	1.05	0.02	169000.00	1099.53
Reach 4	217.38	1110.33	1108.36	1.97	1.05	0.02	169000.00	1034.46
Reach 4	217.48	1111.32	1109.42	1.89	0.98	0.01	169000.00	1523.56
Reach 4	217.48	1111.31	1109.42	1.89	0.98	0.01	169000.00	1045.77
Reach 4	217.57	1112.33	1110.29	2.04	0.97	0.04	169000.00	1041.01
Reach 4	217.57	1112.33	1110.29	2.04	0.97	0.04	169000.00	1041.00
Reach 4	217.66	1113.39	1111.41	1.97	1.05	0.01	169000.00	1096.23
Reach 4	217.66	1113.39	1111.41	1.97	1.05	0.01	169000.00	1020.69
Reach 4	217.76	1115.14	1111.71	3.43	1.31	0.44	169000.00	823.68
Reach 4	217.76	1115.14	1111.71	3.43	1.31	0.44	169000.00	823.68
Reach 4	217.86	1116.48	1114.82	1.66	1.17	0.18	169000.00	1206.90
Reach 4	217.86	1116.48	1114.82	1.66	1.17	0.18	169000.00	1043.82
Reach 4	217.95	1117.24	1115.56	1.68	0.76	0.01	169000.00	1042.14
Reach 4	217.95	1117.24	1115.56	1.68	0.76	0.01	169000.00	1042.14
Reach 4	218.04	1118.20	1116.27	1.93	0.88	0.07	169000.00	1038.69
Reach 4	218.04	1118.20	1116.27	1.93	0.88	0.07	169000.00	1038.69
Reach 4	218.14	1119.21	1117.25	1.96	1.00	0.01	169000.00	1392.06
Reach 4	218.14	1119.21	1117.25	1.96	1.00	0.01	169000.00	1032.39
Reach 4	218.24	1120.30	1118.20	2.10	1.05	0.04	169000.00	1209.33
Reach 4	218.24	1120.29	1118.20	2.10	1.05	0.04	169000.00	1034.85
Reach 4	218.33	1121.29	1119.49	1.81	0.97	0.03	169000.00	1051.45
Reach 4	218.33	1121.29	1119.49	1.81	0.97	0.03	169000.00	1051.45
Reach 4	218.42	1122.48	1120.20	2.28	1.05	0.14	169000.00	1630.02
Reach 4	218.42	1122.48	1120.20	2.28	1.05	0.14	169000.00	1007.80
Reach 4	218.52	1123.62	1121.59	2.03	1.11	0.03	169000.00	2019.27
Reach 4	218.52	1123.62	1121.59	2.03	1.11	0.02	169000.00	1008.12
Reach 4	218.61	1124.63	1122.61	2.02	1.01	0.00	169000.00	3020.79
Reach 4	218.61	1124.63	1122.61	2.02	1.01	0.00	169000.00	994.24
Reach 4	218.71	1125.63	1123.63	2.00	1.00	0.00	169000.00	3165.42
Reach 4	218.71	1125.63	1123.63	2.00	1.00	0.00	169000.00	986.76
Reach 4	218.80	1126.50	1124.77	1.73	0.84	0.03	169000.00	2479.19
Reach 4	218.80	1126.50	1124.77	1.73	0.84	0.03	169000.00	1011.73
Reach 4	218.96	1128.02	1126.03	1.99	1.44	0.08	169000.00	1096.74
Reach 4	218.96	1128.02	1126.03	1.99	1.44	0.08	169000.00	1020.44
Reach 4	218.965	Bridge						
Reach 4	218.97	1128.50	1126.74	1.76	0.02	0.03	169000.00	1056.96
Reach 4	218.97	1128.50	1126.74	1.76	0.02	0.03	169000.00	1009.80

Reach 4	219.01	1129.03	1126.36	2.67	0.25	0.27	169000.00	1022.15
Reach 4	219.01	1129.03	1126.36	2.67	0.25	0.27	169000.00	1022.15
Reach 4	219.02	Bridge						
Reach 4	219.03	1129.94	1127.80	2.15	0.09	0.04	169000.00	1026.67
Reach 4	219.03	1129.94	1127.79	2.15	0.09	0.04	169000.00	1026.66
Reach 4	219.14	1131.11	1129.20	1.91	1.14	0.02	169000.00	2551.49
Reach 4	219.14	1131.11	1129.20	1.91	1.14	0.02	169000.00	1023.27
Reach 4	219.24	1132.12	1130.16	1.96	0.99	0.01	169000.00	2682.75
Reach 4	219.24	1132.12	1130.16	1.96	0.99	0.01	169000.00	1032.44
Reach 4	219.33	1133.03	1131.10	1.94	0.92	0.00	169000.00	2726.06
Reach 4	219.33	1133.03	1131.10	1.94	0.92	0.00	169000.00	1024.85
Reach 4	219.42	1133.94	1132.00	1.94	0.90	0.00	169000.00	2400.89
Reach 4	219.42	1133.94	1132.00	1.94	0.90	0.00	169000.00	1010.17
Reach 4	219.51	1134.90	1132.93	1.97	0.95	0.01	169000.00	1910.40
Reach 4	219.51	1134.90	1132.93	1.97	0.95	0.01	169000.00	1006.15
Reach 4	219.61	1135.93	1133.86	2.07	1.00	0.03	169000.00	2912.62
Reach 4	219.61	1135.93	1133.86	2.07	1.00	0.03	169000.00	988.76
Reach 4	219.70	1137.22	1134.63	2.59	1.14	0.16	169000.00	2045.78
Reach 4	219.70	1137.22	1134.63	2.59	1.14	0.16	169000.00	945.15
Reach 4	219.79	1138.69	1135.96	2.73	1.43	0.04	169000.00	2039.42
Reach 4	219.79	1138.69	1135.96	2.73	1.43	0.04	169000.00	931.90
Reach 4	219.88	1140.11	1137.44	2.67	1.42	0.01	169000.00	2003.65
Reach 4	219.88	1140.11	1137.44	2.67	1.42	0.01	169000.00	918.51
Reach 4	220.03	1142.32	1139.74	2.59	2.20	0.01	169000.00	906.62
Reach 4	220.03	1142.32	1139.73	2.59	2.20	0.01	169000.00	906.62
Reach 4	220.05	Bridge						
Reach 4	220.06	1142.99	1140.72	2.27	0.00	0.02	169000.00	909.54
Reach 4	220.06	1142.99	1140.72	2.27	0.00	0.02	169000.00	909.53
Reach 4	220.16	1144.14	1141.74	2.40	1.11	0.04	169000.00	1469.89
Reach 4	220.16	1144.14	1141.74	2.40	1.11	0.04	169000.00	912.67
Reach 4	220.25	1145.23	1143.14	2.09	1.05	0.03	169000.00	1743.60
Reach 4	220.25	1145.23	1143.14	2.09	1.05	0.03	169000.00	919.65
Reach 4	220.35	1146.10	1144.24	1.86	0.86	0.02	169000.00	1375.54
Reach 4	220.35	1146.10	1144.24	1.86	0.86	0.02	169000.00	915.58
Reach 4	220.45	1146.99	1144.97	2.01	0.84	0.05	169000.00	1293.58
Reach 4	220.45	1146.99	1144.97	2.01	0.84	0.05	169000.00	908.82

Reach 4	220.54	1147.86	1145.84	2.03	0.87	0.00	169000.00	1107.01
Reach 4	220.54	1147.86	1145.84	2.03	0.87	0.00	169000.00	915.24
Reach 4	220.63	1148.75	1146.74	2.01	0.88	0.00	169000.00	981.94
Reach 4	220.63	1148.75	1146.74	2.01	0.88	0.00	169000.00	903.29
Reach 4	220.73	1149.62	1147.59	2.03	0.87	0.01	169000.00	1018.38
Reach 4	220.73	1149.62	1147.59	2.03	0.87	0.01	169000.00	884.55
Reach 4	220.82	1150.47	1148.53	1.94	0.84	0.01	169000.00	1082.87
Reach 4	220.82	1150.47	1148.53	1.94	0.84	0.01	169000.00	920.30
Reach 4	220.92	1151.35	1149.39	1.96	0.87	0.00	169000.00	1072.33
Reach 4	220.92	1151.34	1149.39	1.96	0.87	0.00	169000.00	906.20
Reach 4	221.02	1152.13	1150.36	1.77	0.77	0.02	169000.00	1161.10
Reach 4	221.02	1152.13	1150.36	1.78	0.77	0.02	169000.00	900.19
Reach 4	221.05	1152.36	1150.84	1.52	0.21	0.03	169000.00	1318.35
Reach 4	221.05	1152.36	1150.84	1.52	0.21	0.03	169000.00	908.64
Reach 4	221.055	Bridge						
Reach 4	221.06	1152.56	1151.07	1.48	0.04	0.02	169000.00	1351.93
Reach 4	221.06	1152.56	1151.07	1.48	0.04	0.02	169000.00	921.95
Reach 4	221.19	1153.28	1151.80	1.47	0.72	0.00	169000.00	1048.37
Reach 4	221.19	1153.28	1151.80	1.47	0.72	0.00	169000.00	968.91
Reach 4	221.195	Bridge						
Reach 4	221.2	1153.59	1152.17	1.42	0.03	0.04	169000.00	1104.28
Reach 4	221.2	1153.59	1152.17	1.42	0.03	0.04	169000.00	972.60
Reach 4	221.24	1153.78	1152.39	1.39	0.19	0.00	169000.00	1070.97
Reach 4	221.24	1153.78	1152.39	1.39	0.19	0.00	169000.00	954.93
Reach 4	221.25	Bridge						
Reach 4	221.26	1154.06	1152.72	1.34			169000.00	1085.78
Reach 4	221.26	1154.06	1152.72	1.34			169000.00	956.14
Reach 4	221.31	1154.78	1152.32	2.46	0.38	0.33	172000.00	1150.50
Reach 4	221.31	1154.78	1152.32	2.46	0.38	0.33	172000.00	910.15
Reach 4	221.40	1155.96	1153.68	2.28	1.17	0.02	172000.00	1061.05
Reach 4	221.40	1155.97	1153.69	2.28	1.17	0.02	172000.00	949.01
Reach 4	221.50	1157.00	1154.59	2.41	1.00	0.04	172000.00	1331.98
Reach 4	221.50	1157.00	1154.59	2.40	1.00	0.04	172000.00	928.67
Reach 4	221.61	1157.96	1155.68	2.28	0.95	0.01	172000.00	1387.28
Reach 4	221.61	1157.96	1155.68	2.28	0.95	0.01	172000.00	926.14
Reach 4	221.70	1158.69	1156.71	1.98	0.70	0.03	172000.00	1465.08
Reach 4	221.70	1158.70	1156.71	1.98	0.70	0.03	172000.00	939.68

Reach 4	221.80	1159.37	1157.35	2.02	0.67	0.01	172000.00	1212.13
Reach 4	221.80	1159.37	1157.35	2.02	0.67	0.01	172000.00	935.46
Reach 4	221.89	1160.03	1158.07	1.96	0.66	0.01	172000.00	1151.07
Reach 4	221.89	1160.03	1158.07	1.96	0.66	0.01	172000.00	986.38
Reach 4	221.99	1160.68	1158.99	1.69	0.62	0.03	172000.00	1183.84
Reach 4	221.99	1160.68	1158.99	1.69	0.62	0.03	172000.00	1012.33
Reach 4	222.08	1161.08	1159.93	1.15	0.34	0.05	172000.00	1231.13
Reach 4	222.08	1161.08	1159.93	1.15	0.34	0.05	172000.00	1039.29
Reach 4	222.085	Bridge						
Reach 4	222.09	1161.26	1160.14	1.12	0.02	0.01	172000.00	1233.92
Reach 4	222.09	1161.26	1160.14	1.12	0.02	0.01	172000.00	1041.23
Reach 4	222.17	1161.60	1160.20	1.41	0.25	0.09	172000.00	1227.36
Reach 4	222.17	1161.60	1160.20	1.41	0.25	0.09	172000.00	1009.91
Reach 4	222.27	1162.01	1160.64	1.36	0.40	0.00	172000.00	1214.10
Reach 4	222.27	1162.01	1160.64	1.36	0.40	0.00	172000.00	1077.23
Reach 4	222.36	1162.39	1161.29	1.10	0.35	0.03	172000.00	1414.74
Reach 4	222.36	1162.39	1161.29	1.10	0.35	0.03	172000.00	1182.81
Reach 4	222.45	1162.67	1161.93	0.74	0.25	0.04	172000.00	1643.65
Reach 4	222.45	1162.67	1161.93	0.74	0.25	0.04	172000.00	1388.01
Reach 4	222.55	1162.91	1162.10	0.81	0.22	0.02	172000.00	1818.05
Reach 4	222.55	1162.91	1162.10	0.81	0.22	0.02	172000.00	1270.54
Reach 4	222.65	1163.26	1162.23	1.03	0.28	0.07	172000.00	2093.67
Reach 4	222.65	1163.27	1162.24	1.03	0.29	0.07	172000.00	1079.50
Reach 4	222.74	1163.59	1162.59	1.00	0.32	0.00	172000.00	2043.47
Reach 4	222.74	1163.60	1162.60	1.00	0.33	0.00	172000.00	1038.09
Reach 4	222.83	1163.89	1162.90	1.00	0.30	0.00	172000.00	2187.54
Reach 4	222.83	1163.90	1162.91	1.00	0.30	0.00	172000.00	963.41
Reach 4	222.93	1164.32	1163.05	1.27	0.35	0.08	172000.00	2119.92
Reach 4	222.93	1164.33	1163.06	1.27	0.35	0.08	172000.00	945.76
Reach 4	223.02	1164.76	1163.55	1.22	0.44	0.00	172000.00	1524.43
Reach 4	223.02	1164.77	1163.56	1.22	0.44	0.00	172000.00	1092.69
Reach 4	223.08	1167.91	1163.07	4.83	0.57	1.08	172000.00	1001.37
Reach 4	223.08	1167.91	1163.07	4.84	0.57	1.09	172000.00	1001.24
Reach 4	223.085	Bridge						
Reach 4	223.09	1169.40	1167.01	2.38	0.11	0.06	172000.00	1222.95
Reach 4	223.09	1169.33	1166.91	2.42			172000.00	1086.64

Reach 4	223.19	1170.15	1169.29	0.86	0.60	0.15	172000.00	2091.50
Reach 4	223.19	1170.10	1169.24	0.86	0.61	0.16	172000.00	1010.22
Reach 4	223.29	1170.74	1169.35	1.40	0.43	0.16	172000.00	2258.16
Reach 4	223.29	1170.69	1169.29	1.40	0.43	0.16	172000.00	792.41
Reach 4	223.38	1171.31	1169.83	1.48	0.54	0.03	172000.00	1665.59
Reach 4	223.38	1171.27	1169.77	1.49	0.55	0.03	172000.00	724.09
Reach 4	223.48	1172.13	1170.24	1.89	0.70	0.12	172000.00	933.29
Reach 4	223.48	1172.09	1170.19	1.89	0.70	0.12	172000.00	642.46
Reach 4	223.58	1173.31	1170.70	2.61	0.96	0.22	172000.00	990.19
Reach 4	223.58	1173.27	1170.66	2.62	0.97	0.22	172000.00	609.38
Reach 4	223.67	1174.34	1172.51	1.83	0.95	0.08	172000.00	946.38
Reach 4	223.67	1174.31	1172.47	1.83	0.96	0.08	172000.00	638.26
Reach 4	223.77	1174.85	1173.52	1.34	0.47	0.05	172000.00	1291.23
Reach 4	223.77	1174.83	1173.49	1.34	0.47	0.05	172000.00	682.96
Reach 4	223.86	1175.13	1174.11	1.03	0.25	0.03	172000.00	1139.08
Reach 4	223.86	1175.11	1174.08	1.03	0.25	0.03	172000.00	817.04
Reach 4	223.96	1175.33	1174.54	0.80	0.18	0.02	172000.00	1815.64
Reach 4	223.96	1175.31	1174.51	0.80	0.18	0.02	172000.00	894.59
Reach 4	224.06	1175.58	1174.59	0.99	0.19	0.06	172000.00	1372.95
Reach 4	224.06	1175.56	1174.56	0.99	0.19	0.06	172000.00	877.88
Reach 4	224.12	1175.75	1175.20	0.55	0.12	0.04	172000.00	1152.55
Reach 4	224.12	1175.73	1175.17	0.55	0.12	0.04	172000.00	1152.18
Reach 4	224.13	Bridge						
Reach 4	224.14	1175.89	1175.20	0.69	0.00	0.01	172000.00	1064.06
Reach 4	224.14	1175.86	1175.18	0.69	0.00	0.01	172000.00	1063.83
Reach 4	224.16	1175.94	1175.21	0.73	0.04	0.01	172000.00	1057.53
Reach 4	224.16	1175.92	1175.19	0.73	0.04	0.01	172000.00	1057.13
Reach 4	224.175	Bridge						
Reach 4	224.19	1176.06	1175.31	0.75	0.04	0.00	172000.00	1061.96
Reach 4	224.19	1176.04	1175.29	0.75	0.04	0.00	172000.00	1061.62
Reach 4	224.20	1176.09	1175.36	0.74	0.03	0.00	172000.00	1087.87
Reach 4	224.20	1176.07	1175.33	0.74	0.03	0.00	172000.00	1087.64
Reach 4	224.21	Bridge						
Reach 4	224.22	1176.23	1175.65	0.59	0.00	0.01	172000.00	1204.03
Reach 4	224.22	1176.21	1175.62	0.59	0.00	0.01	172000.00	1203.73
Reach 4	224.31	1176.38	1175.80	0.58	0.15	0.00	172000.00	2559.04
Reach 4	224.31	1176.36	1175.78	0.59	0.15	0.00	172000.00	1169.62

Reach 4	224.42	1176.54	1176.24	0.29	0.12	0.03	172000.00	2946.36
Reach 4	224.42	1176.52	1176.22	0.29	0.12	0.03	172000.00	1589.98
Reach 4	224.52	1176.61	1176.39	0.22	0.07	0.01	172000.00	3145.37
Reach 4	224.52	1176.59	1176.37	0.22	0.07	0.01	172000.00	1906.34
Reach 4	224.62	1176.68	1176.45	0.22	0.07	0.00	172000.00	3107.99
Reach 4	224.62	1176.66	1176.44	0.22	0.07	0.00	172000.00	2139.42
Reach 4	224.71	1176.74	1176.55	0.19	0.06	0.00	172000.00	3514.05
Reach 4	224.71	1176.72	1176.53	0.19	0.06	0.00	172000.00	2221.35
Reach 4	224.82	1176.87	1176.55	0.32	0.09	0.04	172000.00	2818.97
Reach 4	224.82	1176.85	1176.54	0.32	0.09	0.04	172000.00	2034.86
Reach 4	224.90	1177.00	1176.59	0.41	0.10	0.03	172000.00	3005.65
Reach 4	224.90	1176.99	1176.58	0.41	0.10	0.03	172000.00	1909.91
Reach 4	225	1177.10	1176.86	0.24	0.08	0.02	172000.00	2462.91
Reach 4	225	1177.08	1176.85	0.24	0.08	0.02	172000.00	2047.16
Reach 4	225.11	1177.30	1176.71	0.59	0.09	0.11	172000.00	1609.77
Reach 4	225.11	1177.28	1176.70	0.59	0.10	0.11	172000.00	1344.52
Reach 4	225.19	1177.55	1176.66	0.89	0.16	0.09	172000.00	1212.90
Reach 4	225.19	1177.54	1176.65	0.89	0.16	0.09	172000.00	1209.91
Reach 4	225.30	1177.76	1177.35	0.41	0.16	0.05	172000.00	1883.44
Reach 4	225.30	1177.75	1177.34	0.41	0.16	0.05	172000.00	1576.66

Profile Output Table - Bridge Only

Reach	River Sta	E.G. US. (ft)	Min El Prs (ft)	BR Open Area (sq ft)	Prs O WS (ft)	Q Total (cfs)	Min Top Rd (ft)	Q Weir (cfs)	Delta EG (ft)
Reach 4	214.785	1079.83	1085.63	22419.11		169000.00	1080.12		0.26
Reach 4	214.785	1079.83	1085.63	22402.95		169000.00	1092.89		0.26
Reach 4	215.815	1094.37	1095.77	15655.29		169000.00	1094.50		0.65
Reach 4	215.815	1094.37	1095.77	15655.29		169000.00	1094.50		0.66
Reach 4	216.505	1102.27	1116.45	29744.80		169000.00	1115.30		1.12
Reach 4	216.505	1102.27	1116.45	29744.80		169000.00	1115.30		1.11
Reach 4	218.965	1128.50	1144.63	32826.68		169000.00	1133.39		0.49
Reach 4	218.965	1128.50	1144.63	32826.68		169000.00	1133.39		0.49
Reach 4	219.02	1129.94	1144.30	25161.30		169000.00	1137.00		0.92
Reach 4	219.02	1129.94	1144.30	24873.54		169000.00	1144.34		0.92
Reach 4	220.05	1142.99	1158.25	25521.96		169000.00	1148.55		0.67
Reach 4	220.05	1142.99	1158.25	25091.80		169000.00	1156.28		0.67
Reach 4	221.055	1152.56	1166.53	33186.61		169000.00	1164.70		0.19

Reach 4	221.055	1152.56	1166.53	25997.88	169000.00	1167.45	0.19
Reach 4	221.195	1153.59	1175.00	26765.37	169000.00	1159.00	0.31
Reach 4	221.195	1153.59	1175.00	23287.79	169000.00	1175.00	0.31
Reach 4	221.25	1154.06	1172.52	35810.05	169000.00	1160.19	0.28
Reach 4	221.25	1154.06	1172.52	30549.84	169000.00	1175.11	0.28
Reach 4	222.085	1161.26	1172.44	32088.49	172000.00	1165.10	0.19
Reach 4	222.085	1161.26	1172.44	32088.49	172000.00	1165.10	0.19
Reach 4	223.085	1169.40	1180.70	25100.39	172000.00	1172.00	1.49
Reach 4	223.085	1169.33	1180.70	24217.82	172000.00	1181.47	1.43
Reach 4	224.13	1175.89	1212.40	55339.68	172000.00	1202.34	0.14
Reach 4	224.13	1175.86	1212.40	55339.68	172000.00	1202.34	0.14
Reach 4	224.175	1176.06	1198.34	41074.07	172000.00	1197.44	0.12
Reach 4	224.175	1176.04	1198.34	41074.07	172000.00	1197.44	0.12
Reach 4	224.21	1176.23	1186.40	33371.63	172000.00	1190.90	0.14
Reach 4	224.21	1176.21	1186.40	33371.63	172000.00	1190.90	0.14

ERRORS WARNINGS AND NOTES
Errors Warnings and Notes for Plan : Method 1 FW

River: Salt River Reach: Reach 4 RS: 225.30 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 225.30 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 225.19 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 225.19 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 225.11 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 225.11 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 225 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 225 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 224.90 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 224.82 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 224.82 Profile: PF#2
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 224.71 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
River: Salt River Reach: Reach 4 RS: 224.71 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 224.62 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 224.52 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 224.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 224.42 Profile: PF#2
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 224.31 Profile: PF#1
Warning:Divided flow computed for this cross-section.

River: Salt River Reach: Reach 4 RS: 224.06 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.96 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.86 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.86 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.77 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.77 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.67 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.67 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.58 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.58 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.48 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.48 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.38 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.38 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 223.29 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.29 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.19 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.19 Profile: PF#2
Warning:Divided flow computed for this cross-section.

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.09 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.09 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.085 Profile: PF#1
Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum
answer has been disregarded.
River: Salt River Reach: Reach 4 RS: 223.085 Profile: PF#1 Upstream
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.085 Profile: PF#1 Downstream
Warning:The energy equation could not be balanced within the specified number of iterations. The program selected the water
surface that had the least amount of error between computed and assumed values.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Salt River Reach: Reach 4 RS: 223.085 Profile: PF#2
Warning:The flow regime calculated by the momentum equation shows class B flow. For the best solution, this profile should
be run as a mixed flow problem.
River: Salt River Reach: Reach 4 RS: 223.085 Profile: PF#2 Upstream
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 223.085 Profile: PF#2 Downstream
Warning:The energy equation could not be balanced within the specified number of iterations. The program selected the water
surface that had the least amount of error between computed and assumed values.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Salt River Reach: Reach 4 RS: 223.08 Profile: PF#1
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated

water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Salt River Reach: Reach 4 RS: 223.08 Profile: PF#2
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.
River: Salt River Reach: Reach 4 RS: 223.02 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.93 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.83 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.74 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.65 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.55 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.45 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.36 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.27 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.17 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.09 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.08 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 222.08 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.99 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.89 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.80 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.70 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.61 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.50 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.50 Profile: PF#2

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.40 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.40 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.31 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.31 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.26 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.24 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.2 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.19 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.06 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.05 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.02 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.92 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.82 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.73 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.63 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.63 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.54 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.45 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.45 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.35 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.35 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.25 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.25 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.16 Profile: PF#1
Warning:Divided flow computed for this cross-section.

Warning:The cross-section end points had to be extended vertically for the computed water surface.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.16 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.03 Profile: PF#1
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.03 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.88 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.88 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.79 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.79 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.70 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.70 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.61 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.61 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.51 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 219.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 219.33 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 219.24 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.24 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Salt River Reach: Reach 4 RS: 219.14 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.14 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.01 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.01 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.97 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
River: Salt River Reach: Reach 4 RS: 218.965 Profile: PF#1
Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum
answer has been disregarded.
River: Salt River Reach: Reach 4 RS: 218.965 Profile: PF#2
Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum
answer has been disregarded.
River: Salt River Reach: Reach 4 RS: 218.96 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.96 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.80 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 218.71 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 218.61 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.61 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.52 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.52 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.42 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.24 Profile: PF#1
Warning:Divided flow computed for this cross-section.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.24 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.14 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.14 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.86 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.86 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.76 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.76 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.66 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.66 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.57 Profile: PF#1
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.57 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.48 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 217.38 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Salt River Reach: Reach 4 RS: 217.38 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.29 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.29 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.19 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.19 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.10 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 217.00 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.91 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.81 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.62 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.505 Profile: PF#1 Upstream
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.505 Profile: PF#2 Upstream
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.49 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.49 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.33 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.23 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.13 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.04 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.04 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.94 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.94 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.84 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.84 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.81 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.81 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.75 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.75 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.65 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.65 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.36 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 215.27 Profile: PF#1
Warning:Divided flow computed for this cross-section.

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.27 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.18 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.18 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.09 Profile: PF#1
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.09 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.99 Profile: PF#1
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.99 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.9 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.9 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.61 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.61 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

```
River: Salt River  Reach: Reach 4     RS: 214.42     Profile: PF#1
     Warning:Divided flow computed for this cross-section.
River: Salt River  Reach: Reach 4     RS: 214.33     Profile: PF#1
     Warning:Divided flow computed for this cross-section.
     Warning:The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
additional cross sections.
River: Salt River  Reach: Reach 4     RS: 214.33     Profile: PF#2
     Warning:The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
additional cross sections.
River: Salt River  Reach: Reach 4     RS: 214.23     Profile: PF#1
     Warning:Divided flow computed for this cross-section.
River: Salt River  Reach: Reach 4     RS: 214.14     Profile: PF#1
     Warning:Divided flow computed for this cross-section.
```

Print-Out for HEC-RAS Model Reach4b.prj (Revised Effective Model)

HEC-RAS September 1998 Version 2.2
U.S. Army Corp of Engineers
Hydrologic Engineering Center
609 Second Street, Suite D
Davis, California 95616-4687
(916) 756-1104

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Revised Effective (MCFCD) Model
Project File : reach4b.prj
Run Date and Time: 2/19/99 8:36:56 AM

Project in English units

PLAN DATA

Plan Title: Method 1 FW
Plan File : C:\TEMPE\soclomr\final\reach4b.p05

Geometry Title: Reach 4
Geometry File : C:\TEMPE\soclomr\final\reach4b.g01

Flow Title : Imported Flow 02
Flow File : C:\TEMPE\soclomr\final\reach4b.f02

Plan Summary Information:
Number of: Cross Sections = 106 Mulitple Openings = 0
Culverts = 0 Inline Weirs = 0
Bridges = 10

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculaton tolerance = 0.01
Maximum number of interations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

Encroachment Data
Equal Conveyance = True
Left Offset = 0
Right Offset = 0

River = Salt River Reach = Reach 4

RS	Profile	Method	Value1	Value2
225.30	PF#2		119248.16	20840
225.19	PF#2		119367.98	20920
225.11	PF#2		1 19340.4	21225
225	PF#2		1 19351.9	21445
224.90	PF#2		119459.96	21370
224.82	PF#2		119456.89	21492.7

224.71	PF#2	119459.54 21720
224.62	PF#2	119460.45 21600
224.52	PF#2	119463.53 21370
224.42	PF#2	119474.88 21065
224.31	PF#2	119483.3320653.26
224.22	PF#2	119346.9820551.01
224.20	PF#2	119456.8820544.75
224.19	PF#2	1 19466.220528.16
224.16	PF#2	119479.8620537.39
224.14	PF#2	1 19476.420540.46
224.12	PF#2	119386.0220538.58
224.06	PF#2	119506.0520384.04
223.96	PF#2	119511.45 20406.1
223.86	PF#2	1 19552.420396.33
223.77	PF#2	119592.8820311.51
223.67	PF#2	119562.2720245.13
223.58	PF#2	119527.5820181.59
223.48	PF#2	1 19492.120178.39
223.38	PF#2	1 19481.120241.02
223.29	PF#2	119501.2920338.45
223.19	PF#2	119360.21 20415.2
223.09	PF#2	119292.3820380.68
223.08	PF#2	1 19332 20356
223.02	PF#2	119353.6420446.33
222.93	PF#2	119406.4520352.21
222.83	PF#2	119479.7420443.15
222.74	PF#2	1 19531.420569.49
222.65	PF#2	119561.2520640.75
222.55	PF#2	119524.46 20795
222.45	PF#2	119472.8520860.86
222.36	PF#2	119466.8820649.69
222.27	PF#2	119515.3620592.59
222.17	PF#2	119489.0420498.95
222.09	PF#2	119483.2820524.52
222.08	PF#2	119484.5320523.82
221.99	PF#2	119415.5620427.89
221.89	PF#2	119381.2820367.67
221.80	PF#2	119421.7120357.17
221.70	PF#2	119451.4920391.17
221.61	PF#2	119473.0320399.17
221.50	PF#2	119527.6120456.28
221.40	PF#2	119511.7320460.74
221.31	PF#2	119574.9820485.13
221.26	PF#2	119495.66 20451.8
221.25	PF#2	119495.6620450.59
221.24	PF#2	119495.6620450.59
221.2	PF#2	119419.2620391.86
221.195	PF#2	119421.9220390.84
221.19	PF#2	119421.9220390.84
221.06	PF#2	119517.35 20439.3
221.055	PF#2	119529.5620438.24
221.05	PF#2	119529.5620438.24
221.02	PF#2	1 19520.720420.89
220.92	PF#2	119547.9120454.12
220.82	PF#2	1 19510 20430.3
220.73	PF#2	1 19535.620420.15
220.63	PF#2	119531.1820437.64
220.54	PF#2	119531.3720446.62
220.45	PF#2	119539.67 20451.8
220.35	PF#2	119544.1320460.75
220.25	PF#2	119549.1220468.77
220.16	PF#2	119561.2420473.91
220.06	PF#2	119565.9120475.44
220.05	PF#2	119567.2120473.83
220.03	PF#2	119567.2120473.83
219.88	PF#2	119562.9620481.47
219.79	PF#2	119514.2320446.13
219.70	PF#2	119566.9120512.06
219.61	PF#2	119564.3220553.08
219.51	PF#2	119541.3920547.55
219.42	PF#2	119488.9720499.14

219.33	PF#2	119430.3720455.23
219.24	PF#2	119468.0920500.54
219.14	PF#2	119481.8420505.11
219.03	PF#2	119340.4520367.12
219.02	PF#2	119342.4120364.57
219.01	PF#2	119342.4120364.57
218.97	PF#2	119490.0620499.86
218.96	PF#2	119477.8720498.31
218.80	PF#2	119492.0120503.75
218.71	PF#2	119509.9120496.68
218.61	PF#2	119503.38 20500.7
218.52	PF#2	119500.4720508.59
218.42	PF#2	119506.7820514.58
218.33	PF#2	119490.0520541.51
218.24	PF#2	119418.1720453.03
218.14	PF#2	119389.5120421.91
218.04	PF#2	119390.1220428.81
217.95	PF#2	119437.7320479.87
217.86	PF#2	119497.4120541.23
217.76	PF#2	1 19555.720379.38
217.66	PF#2	119569.8920590.58
217.57	PF#2	119521.5120562.51
217.48	PF#2	119436.4220482.19
217.38	PF#2	119463.0120497.48
217.29	PF#2	119510.7820509.77
217.19	PF#2	119562.0520511.37
217.10	PF#2	119607.3520517.16
217.00	PF#2	119612.3420517.43
216.91	PF#2	119604.8920509.34
216.81	PF#2	1 19606.320501.51
216.72	PF#2	119596.8720494.78
216.62	PF#2	1 19591.620542.92
216.52	PF#2	1 19519.920519.62
216.49	PF#2	119567.4420516.46
216.42	PF#2	1 19535.320482.14
216.33	PF#2	119399.9120426.24
216.23	PF#2	1 19329.520413.21
216.13	PF#2	1 19324.320437.98
216.04	PF#2	119397.8520467.69
215.94	PF#2	119572.3520479.02
215.84	PF#2	119571.9820442.79
215.82	PF#2	119550.04 20410.9
215.81	PF#2	119550.06 20410.9
215.75	PF#2	1 19576.720431.51
215.65	PF#2	119594.8420484.84
215.56	PF#2	119587.3720495.25
215.46	PF#2	119599.3720516.22
215.36	PF#2	1 19618 20537
215.27	PF#2	1 19610.6 20553.9
215.18	PF#2	119683.2220277.12
215.09	PF#2	1 19674.220293.22
214.99	PF#2	119601.52 20329.1
214.9	PF#2	119563.8820374.38
214.79	PF#2	119461.7320518.14
214.785	PF#2	119462.6420517.08
214.78	PF#2	119462.6420517.08
214.71	PF#2	119640.2920541.86
214.61	PF#2	119685.1720477.61
214.52	PF#2	119525.2620453.48
214.42	PF#2	119382.0820423.77
214.33	PF#2	119492.0720391.61
214.23	PF#2	119614.3420352.34
214.14	PF#2	119654.9820381.82

FLOW DATA

Flow Title: Imported Flow 02
Flow File : C:\TEMPE\soclomr\final\reach4b.f02

Flow Data (cfs)

River	Reach	RS	PF#1	PF#2
Salt River	Reach 4	223.08	172000	172000
Salt River	Reach 4	221.26	169000	169000

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Salt River	Reach 4	PF#1		Known WS = 1075.49
Salt River	Reach 4	PF#2		Known WS = 1075.5

GEOMETRY DATA

Geometry Title: Reach 4
Geometry File : C:\TEMPE\soclomr\final\reach4b.g01

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 223.08

INPUT
Description: Downstream face of McClintock bridge

Station Elevation Data num= 40

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18410	1166.318	957.34	1171.819	060.89	117219	241.27	1180.719	241.37	1172
19241.46	117219	348.67	1161.519	354.58	1161.519	408.63	1149.519	465.04	1148
19470.96	114819	527.96	1165.719	581.41	1155.119	587.33	1155.119	651.04	1146.3
19697.78	1151.5	19703.7	1151.5	19767.7	1151.919	814.15	115219	820.07	1152
19929.73	115219	936.44	115220	000.94	115220	046.89	115220	052.81	1152
20111.49	115220	163.27	1153.120	169.18	1153.120	226.78	1156.420	279.64	1156.2
20285.56	1156.220	306.86	1156.420	363.17	1164.120	394.43	1169.320	394.53	1173.82
20394.63	1180.720	648.67	117420	914.95	1166.421	053.02	1168.421	565.84	1170.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18410	.05	19241.37	.03	20394.53	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19241.37	20394.53	170	268.54	370	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev
18410	19241.37	1180

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1167.91	Element			
Vel Head (ft)	4.83	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.07	Reach Len. (ft)	170.00	268.54	370.00
Crit W.S. (ft)	1163.07	Flow Area (sq ft)		9747.96	
E.G. Slope (ft/ft)	0.008376	Area (sq ft)		9747.96	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1001.37	Top Width (ft)		1001.37	
Vel Total (ft/s)	17.64	Avg. Vel. (ft/s)		17.64	
Max Chl Dpth (ft)	16.77	Hydr. Depth (ft)		9.73	
Conv. Total (cfs)	1879353.6	Conv. (cfs)		1879353.6	
Length Wtd. (ft)	268.54	Wetted Per. (ft)		1007.31	
Min Ch El (ft)	1146.30	Shear (lb/sq ft)		5.06	
Alpha	1.00	Stream Power (lb/ft s)		89.29	
Frctn Loss (ft)	0.57	Cum Volume (acre-ft)	2914.48	17316.76	1354.46
C & E Loss (ft)	1.08	Cum SA (acres)	278.02	1042.55	261.80

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1167.91	Element	Left OB	Channel	Right OB
Vel Head (ft)	4.83	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.07	Reach Len. (ft)	170.00	268.54	370.00
Crit W.S. (ft)	1163.07	Flow Area (sq ft)		9747.96	
E.G. Slope (ft/ft)	0.008376	Area (sq ft)		9747.96	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1001.37	Top Width (ft)		1001.37	
Vel Total (ft/s)	17.64	Avg. Vel. (ft/s)		17.64	
Max Chl Dpth (ft)	16.77	Hydr. Depth (ft)		9.73	
Conv. Total (cfs)	1879353.6	Conv. (cfs)		1879353.6	
Length Wtd. (ft)	268.54	Wetted Per. (ft)		1007.31	
Min Ch El (ft)	1146.30	Shear (lb/sq ft)		5.06	
Alpha	1.00	Stream Power (lb/ft s)		89.29	
Frctn Loss (ft)	0.57	Cum Volume (acre-ft)		17182.23	2.14
C & E Loss (ft)	1.09	Cum SA (acres)		1034.12	0.71

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 223.02

INPUT
Description:
Station Elevation Data num= 168

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17971.69	1171.41	7974.78	1171.53	18010.57	1170.24	18044.22	1168.51	8064.14	1167.67
18117.68	1167.71	8156.47	1167.75	18175.38	1167.36	18188.46	1167.89	18215.48	1168.55
18228.44	1168.71	8240.95	1168.79	18256.37	1169.11	18274.54	1168.74	18301.38	1169.89
18315.99	1171.71	8333.85	1173.01	18341.31	1172.33	18347.67	1171.54	18366.61	1169.89
18371.85	1169.21	8375.45	1168.56	18412.76	1169.88	18439.92	1170.35	18447.07	1169.88
18465.53	1168.51	8484.53	1166.94	18497	1167.81	18511.43	1167.28	18522.44	1167.45
18523.02	1167.31	8528.81	1168.41	8559.96	1167.48	18569.11	1167.34	18590.71	1166.71
18612.75	1165.91	8633.07	1163.46	18644.79	1162.92	18665.56	1162.68	18699.39	1162.56
18713.58	1162.91	8754.75	1162.95	18762.54	1163.37	18767.23	1162.96	18771.67	1163.35
18781.15	1163.61	8823.15	1163.75	18836.52	1163.87	18854.62	1163.78	18858.39	1164.47
18889.29	1165	18899.81	1166.4	18906.1	1167.42	18924.93	1163.41	8926.38	1162.97
18967.55	1163	19008.72	1162.91	19114.49	1162.91	19116.9	1163.33	19120.76	1163.4
19129.15	1163.21	9165.22	1162.44	19183.62	1162.42	19185.96	1162.58	19204.6	1163.18
19228.85	1165.11	9254.14	1167.38	19267.45	1166.78	19280.62	1166.27	19289.14	1167.6
19307.19	1170.91	9329.31	1172.97	19341.36	1168.35	19389.13	1149.67	19412.4	1148.34

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19418.76  1148.119445.72 1147.9619454.69 1147.6719514.54  1147.119556.29 1146.76
19592.78  1146.8 19612.2 1146.3619666.81 1145.3819701.26 1145.06 19723.7  1144.6
19765.05  1143.819775.01 1143.1619791.43 1142.6419821.12 1140.0619834.25  1140.2
19839.35    114019849.98 1140.1519925.51 1141.5719940.87 1140.8719972.41 1141.21
19982.15  1141.2 20026.2 1141.7520050.74 1142.1520062.44 1142.2920115.32  1142.8
20138.82  1142.720209.03 1143.1320260.66 1144.1620276.37 1145.8420306.63  1146.7
20313.92  1147.420324.74 1147.3620401.47 1157.9220438.92  1162.6 20513.5 1172.12
 20538.9  1176.620545.23 1177.3220556.91  1177.520567.11 1177.5120588.99 1179.51
20606.17    117920612.09 1179.0920623.35 1181.2420638.78 1185.3320642.52 1186.06
20655.98  1186.6 20662.2 1186.5520689.46 1180.9820704.25 1178.1320714.55 1174.88
20730.77  1169.620741.14  1167.720748.35 1165.2520751.64 1163.7120761.41 1165.54
20766.25  1165.620816.03 1166.2420831.05 1166.3320909.51 1166.1820963.96 1166.38
21009.27  1166.721081.39 1167.3121099.05 1167.4221158.92 1167.5821181.89 1167.61
21196.89  1167.721236.98  1167.921249.56  1168.121284.25 1167.8221288.35 1167.89
21321.62  1168.121331.66 1168.0521361.53 1168.3521377.75 1168.3721399.11  1168.2
21407.41  1168.121438.42  1168.421470.92    116921541.91 1168.7721656.73 1168.69
 21674.4  1168.921749.08 1169.8621815.71 1170.0621880.09  1170.221923.59 1170.87
21933.59  1170.8 21941.3 1171.3621971.17 1171.9521984.85    117222018.46 1174.38
22045.18  1174.922071.91 1174.3522094.13 1172.35

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17971.69     .0519329.31    .035 20513.5     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19329.31 20513.5              500  494.97     480             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17971.6919329.31 1172.97 20513.522094.13 1172.12

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1164.76   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.22   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1163.54   Reach Len. (ft)           500.00     494.97     480.00
  Crit W.S. (ft)            1154.21   Flow Area (sq ft)                  19413.85
  E.G. Slope (ft/ft)       0.000944   Area (sq ft)              275.97   19413.85
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)            1524.13   Top Width (ft)            431.48    1092.65
  Vel Total (ft/s)             8.86   Avg. Vel. (ft/s)                      8.86
  Max Chl Dpth (ft)           23.54   Hydr. Depth (ft)                     17.77
  Conv. Total (cfs)       5598108.0   Conv. (cfs)                       5598108.0
  Length Wtd. (ft)           494.97   Wetted Per. (ft)                   1096.75
  Min Ch El (ft)            1140.00   Shear (lb/sq ft)                      1.04
  Alpha                        1.00   Stream Power (lb/ft s)                9.24
  Frctn Loss (ft)              0.44   Cum Volume (acre-ft)     2913.94   17226.88    1354.46
  C & E Loss (ft)              0.00   Cum SA (acres)            277.18    1036.09     261.80


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1164.77   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.22   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1163.55   Reach Len. (ft)           500.00     494.97     480.00
  Crit W.S. (ft)            1154.21   Flow Area (sq ft)                  19425.71
  E.G. Slope (ft/ft)       0.000942   Area (sq ft)                       19425.71
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)            1092.69   Top Width (ft)                     1092.69
  Vel Total (ft/s)             8.85   Avg. Vel. (ft/s)                      8.85
  Max Chl Dpth (ft)           23.55   Hydr. Depth (ft)                     17.78
  Conv. Total (cfs)       5603618.5   Conv. (cfs)                       5603618.5
  Length Wtd. (ft)           494.97   Wetted Per. (ft)                   1096.81
  Min Ch El (ft)            1140.00   Shear (lb/sq ft)                      1.04
  Alpha                        1.00   Stream Power (lb/ft s)                9.22
  Frctn Loss (ft)              0.44   Cum Volume (acre-ft)              17092.30       2.14
  C & E Loss (ft)              0.00   Cum SA (acres)                     1027.67       0.71


CROSS SECTION          RIVER: Salt River
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REACH: Reach 4 RS: 222.93

INPUT
Description:
Station Elevation Data num= 194

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18044.81	1170.318	059.54	1170.08	18082.34	1171.84	18085.02	1170.83	18112.24	1167.63
18113.9	1167.218	124.59	1162.91	18127.16	1162.29	18130.08	1161.99	18135.27	1162.21
18172.95	1160.6	18181.4	1160.56	18188.17	1159.96	18203.15	1159.35	18206.38	1159.06
18221.12	115	918234.64	1158.86	18250.81	1158.84	18258.55	1159.01	18270.09	1159.07
18289.38	1159.718	302.61	1159.92	18311.85	1159.42	18323.82	1159.58	18333.46	1158.91
18349.35	1158.118	374.85	1152.51	8386.38	1150.79	18392.15	1149.56	18410.64	1144.97
18415.62	1144.618	434.07	1143.97	18463.53	1143.62	18486.43	1143.11	8515.51	1142.98
18525.12	1142.318	542.97	1142.23	18577.36	1141.49	18587.91	1141.55	18619.96	1142.75
18644.69	114	418653.36	1144.18	18666.31	1144.95	18693.59	1147.21	18698.21	1147.82
18709.45	1149.918	719.21	1152.24	18725.67	1153.13	18738.09	1155.02	18743.38	1156
18748.91	1158.118	756.46	1158.08	18770	1157.01	18787.62	1156.87	18791.91	1157.25
18813.17	1156.318	841.62	1154.66	18858.76	115	618881.49	1158.02	18897.61	1159.83
18907.73	1161.618	909.57	1161.22	18921.66	1160.53	18925.78	1160.08	18936.53	1160.16
18944.94	115	818951.65	1157.84	18969.72	1157.21	8987.28	1156.44	18997.79	1156.43
19026.88	1157.9	19036.5	1157.89	19047.12	1157.66	19058.92	1157.59	19099.8	1158.02
19108.79	1158.619	147.63	1165.07	19162.91	1165.11	19177.51	1164.69	19182.74	1164.85
19226.65	1158.519	240.77	1157.47	19252.37	1157.08	19268.47	1157.31	19289.85	1157.28
19305.64	1155.8	19315.5	1154.61	9327.75	1157.38	19348.09	1162.91	9351.76	1161.42
19354.63	1160.619	361.43	1165.5	19371.1	1172.11	19387.15	1171.47	19415.35	1159.17
19419.6	1157	19427.4	1156.46	19448.81	1147.05	19451.67	1145.84	19453.7	1145.59
19465.43	1145.919	470.76	1143.85	19475.04	1143.46	19484.7	1142.08	19505.7	1138.91
19533.01	1138.519	591.33	1137.71	9639.73	1142.14	19644.95	1142.57	19647.95	1142.49
19700.44	1142.119	806.44	1140.17	19818.97	114	019871.09	1139.54	19936.2	1140.13
19958.66	1140.120	036.35	1140.82	0049.41	1140.84	20133.62	1142.21	20146.15	1142.34
20182.57	1142.620	225.98	1142.62	20260.54	1143.97	20280.58	1149.62	20311.81	1158.03
20316.46	1157.720	329.75	1157.05	20377.76	1169.88	20403.92	1170.72	0412.11	1171.64
20443.67	1176.420	455.16	1176.33	20541.87	1191.42	20595.84	1199.65	20620.14	1198.6
20626.95	1198.220	640.27	1196.88	20653.4	1196.49	20663.01	1196.69	20672.83	1196.69
20685.41	1194.6	20691.5	1193.87	20704.53	1189.73	20740.62	1178.12	20759.66	1171.95
20775.41	116	720783.88	1166.34	20787.5	1166.11	20791.24	1165.37	20793.55	1164.63
20801.17	1163.120	802.77	1165.41	20807.08	1165.44	20811.98	1165.17	20812.34	1166.76
20813.33	1165.3	20817	1166.67	20827.62	1166.56	20840.67	1164.81	20874.4	1164.69
20892.67	1165.120	934.23	1165.22	0939.07	1165.25	20976.51	1169.73	20985.15	1166.37
21017.72	1166.921	088.07	1167.97	21131.31	1168.58	21159.63	1168.56	21210.47	1169.22
21255.35	1169.821	264.52	1169.94	21268.88	1170.01	21318.21	1172.22	1357.38	1170.99
21473.22	1172.221	515.36	1172.51	21548.08	1172.92	21704.73	1174.14	21756.14	1174.3
21889.34	117	521937.15	1175.26	22053.19	1175.76	22078.57	1175.52	22104.77	1176.51
22117.89	1176.922	127.78	1177.06	22139.5	1176.87	22174.8	1177.13	22183.4	1176.84
22201.98	1177.122	206.83	1177.28	22210.88	1176.49	22214.67	1176.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18044.81	.05	19371.1	.035	20412.11	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19371.1	20412.11	470	502.27	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18044.81	19371.1	1172.11	20412.11	22214.67	1171.64

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1164.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.27	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.05	Reach Len. (ft)	470.00	502.27	520.00
Crit W.S. (ft)	1152.09	Flow Area (sq ft)		19031.57	
E.G. Slope (ft/ft)	0.000836	Area (sq ft)	10403.88	19031.57	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	2119.81	Top Width (ft)	1174.08	945.74	
Vel Total (ft/s)	9.04	Avg. Vel. (ft/s)		9.04	
Max Chl Dpth (ft)	25.35	Hydr. Depth (ft)		20.12	
Conv. Total (cfs)	5947055.0	Conv. (cfs)		5947055.0	
Length Wtd. (ft)	502.27	Wetted Per. (ft)		953.07	
Min Ch El (ft)	1137.70	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.42	

Frctn Loss (ft)	0.35	Cum Volume (acre-ft)	2852.65	17008.45	1354.46
C & E Loss (ft)	0.08	Cum SA (acres)	267.96	1024.51	261.80

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1164.33	Element			
Vel Head (ft)	1.27	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.06	Reach Len. (ft)	470.00	502.27	520.00
Crit W.S. (ft)	1152.09	Flow Area (sq ft)		19042.54	
E.G. Slope (ft/ft)	0.000835	Area (sq ft)		19042.54	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	945.76	Top Width (ft)		945.76	
Vel Total (ft/s)	9.03	Avg. Vel. (ft/s)		9.03	
Max Chl Dpth (ft)	25.36	Hydr. Depth (ft)		20.13	
Conv. Total (cfs)	5952593.5	Conv. (cfs)		5952593.5	
Length Wtd. (ft)	502.27	Wetted Per. (ft)		953.11	
Min Ch El (ft)	1137.70	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.41	
Frctn Loss (ft)	0.35	Cum Volume (acre-ft)		16873.75	2.14
C & E Loss (ft)	0.08	Cum SA (acres)		1016.09	0.71

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.83

INPUT
Description:
Station Elevation Data num= 207

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17961.21	1167.41	7965.29	1167.52	17987.09	1167.58	18016.31	1168.35	18040.57	1169.48
18053.27	1169.81	8089.71	1170.39	18126.28		117018156.09	1168.54	18167.04	1167.63
18184.34	1171.61	8186.48	1172.05	18190.33	1167.59	18199.7	1166.17	18221.05	1165.01
18241.73	1162.91	8253.01	1160.72	18263.42	1158.09	18272.82	1155.91	8277.84	1154
18292.96	1152.51	8294.53	1150.19	18295.7	1149.94	18308.08	1149.93	18322.22	1151.36
18337.36	1152.51	8345.61	1155.01	18380.53	1155.01	18393.59	1155.71	8410.52	1155.78
18435.11	1158.11	8479.88	1158.07	18495.4	1160.39	18515.38	1160.65	18532.28	1159.17
18538.83	1159.11	8555.97	1159.18	18562.6	1159.57	18579.85	1162.83	18588.81	1162.83
18605.21		116118618.77	1158.06	18626.76	1155.65	18628.35	1154.99	18639.46	1153.77
18647.65	1152.5	18657.1	1152.1	18666.6	1152.51	8686.41	1152.51	8700.37	1154.08
18709.28		115518722.91	1155.66	18741.07	1156.14	18775.85	1156.87	18780	1156.86
18789.49	1157.31	8814.28	1158.05	18831.01	1162.15	18842.81	1162.92	18853.6	1162.92
18905.71	1169.21	8910.16	1169.14	18924.78	1170.06	18934.46	1170.16	18936.54	1169.63
18959.52	1162.91	8971.38	1162.59	18975.93	1162.32	19001.94	1161.21	9037.07	1161.69
19059.59	1161.71	9094.58	1162.28	19115.59	1162.91	9122.44	1165.64	19126.84	1167.22
19129.27	1165.61	9134.29	1162.91	9144.01	1158.71	9145.23	1157.93	19202.96	1157.93
19225.71	1158.71	9235.33	1158.8	19252	1158.47	19266.38	1157.92	19299.83	1155.09
19334.93	1153.91	9365.14	1154.07	19380.63	1156.55	19394.72	1157.15	19409.5	1157.99
19412.49	1158.11	9414.28	1157.42	19419.84	1158.41	9427.45	1161.36	19450.79	1169.94
19465.83	1170.1	19478.7	1163.45	19491.02	1156.91	9505.27	1156.44	19516.1	1150.04
19549.08	1128.41	9573.13	1128.39	19583.62	1127.92	19586.27	1128.41	19598.27	1129.07
19619.16	1130.41	9643.43	1135.88	19649.42	1137.54	19659.21	1137.72	19711.71	1140.3
19717.47	1141	19755.3	1140.56	19854.38	1140.27	19898.28	1140.02	19981.21	1139.71
19989.54	1139.62	0009.71	1139.67	20095.91	1139.63	20129.9	1139.52	20175.64	1139.06
20247.52	1138.42	0271.76	1138.25	20345.97	1140.31	20363.76	1146.07	20370.31	1148.11
20401.04	1156.52	0419.29	1156.53	20461.53	1167.82	0466.01	1169.04	20477.75	1170.03
20509.81	1177.32	0549.27	1185.18	20554.87	1186.39	20557.9	1186.3	20575	1186.24
20609.25		118720613.63	1186.93	20631.69	1187.73	20662.3	1189.66	20676.58	1188.95
20684.69	1188.52	0698.98	1188.44	20708.31	1188.55	20744.71	1187.77	20760.91	1187.78
20790.04	1189.22	0803.44	1185.59	20833.92	1177.48	20865.39	1167.16	20866.62	1167.15
20901.79	1165.72	0913.97	1164.62	20923.87	1164.44	20936.75	1166.84	20944.23	1166.96
21041.84	1172.6	21060.9	1172.04	21077.54	1171.95	21146.04	1170.48	21231.63	1170.86
21288.53		117221290.92	1171.56	21309.06	1171.54	21320.45	1172.45	21339.54	1171.72
21345.9	1169.72	1363.31	1166.58	21373.76	1166.44	21399.93	1166.67	21408.61	1169.34
21416.67	1172	21433.8	1172.01	21461.03	1171.91	21465.67	1172.02	21467.08	1171.64
21505.24	1164.42	1510.85	1164.36	21522.52	1165.71	21538.01	1165.26	21590.57	1165.64
21602.98	1163.22	1619.14	1159.19	21627.31	1158.43	21649.11	1159.42	21673.25	1158.82
21704.37		115821712.13	1157.87	21751.87	1158.57	21787.6	1165.41	21817.59	1163.77
21841.71	1163.52	1855.88	1163.74	21924.9	1164.47	21939.97	1164.41	21947.94	1164.52

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22001.19  1163.922058.68 1165.7922101.69 1171.9122109.78 1173.1822111.55 1173.13
22121.15    117422125.94 1172.6722132.03 1171.3122144.69 1171.9522165.48 1171.51
22179.43  1171.222216.33 1170.96

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17961.21     .0519465.83    .03520477.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19465.8320477.75           497.11  497.11  497.11              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17961.2119465.83  1170.120477.7522216.33 1170.03

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1163.89   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.00   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1162.89   Reach Len. (ft)             497.11     497.11     497.11
  Crit W.S. (ft)            1149.43   Flow Area (sq ft)                    21470.34
  E.G. Slope (ft/ft)       0.000579   Area (sq ft)               5554.60   21470.34     651.37
  Q Total (cfs)           172000.00   Flow (cfs)                          172000.00
  Top Width (ft)            2187.03   Top Width (ft)             1053.42     963.38     170.23
  Vel Total (ft/s)             8.01   Avg. Vel. (ft/s)                        8.01
  Max Chl Dpth (ft)           34.97   Hydr. Depth (ft)                       22.29
  Conv. Total (cfs)       7149643.5   Conv. (cfs)                         7149643.5
  Length Wtd. (ft)           497.11   Wetted Per. (ft)                      977.38
  Min Ch El (ft)            1127.92   Shear (lb/sq ft)                        0.79
  Alpha                        1.00   Stream Power (lb/ft s)                  6.36
  Frctn Loss (ft)              0.30   Cum Volume (acre-ft)       2766.55   16774.95    1350.57
  C & E Loss (ft)              0.00   Cum SA (acres)              255.95    1013.51     260.79


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1163.90   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.00   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1162.90   Reach Len. (ft)             497.11     497.11     497.11
  Crit W.S. (ft)            1149.43   Flow Area (sq ft)                    21481.87
  E.G. Slope (ft/ft)       0.000578   Area (sq ft)                         21481.87
  Q Total (cfs)           172000.00   Flow (cfs)                          172000.00
  Top Width (ft)             963.41   Top Width (ft)                         963.41
  Vel Total (ft/s)             8.01   Avg. Vel. (ft/s)                        8.01
  Max Chl Dpth (ft)           34.98   Hydr. Depth (ft)                       22.30
  Conv. Total (cfs)       7155837.5   Conv. (cfs)                         7155837.5
  Length Wtd. (ft)           497.11   Wetted Per. (ft)                      977.42
  Min Ch El (ft)            1127.92   Shear (lb/sq ft)                        0.79
  Alpha                        1.00   Stream Power (lb/ft s)                  6.35
  Frctn Loss (ft)              0.30   Cum Volume (acre-ft)               16640.11       2.14
  C & E Loss (ft)              0.00   Cum SA (acres)                      1005.08       0.71


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.74

INPUT
Description:
Station Elevation Data    num=     161
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17982.09  1170.817992.53 1169.9617996.32 1169.8618032.69 1167.4518053.23 1168.73
18067.98  1172.7 18074.2 1171.33 18096.5 1177.1318098.56 1176.8218122.76 1171.53
18132.05    117018158.62  1168.518174.89 1167.3818208.93  1167.218216.61 1167.33
18232.17  1167.418267.41 1167.7518317.51 1168.8618334.53 1169.2118358.54 1170.24
18373.22  1168.218411.05 1162.7418436.87 1163.4118463.27 1164.0218480.46 1167.03
18508.28  1172.718515.09 1173.8818533.45 1172.14 18583.6 1166.2918588.28 1165.63
18605.22  1165.118653.94 1163.22 18673.1 1167.1918710.22 1173.45 18720.1 1174.09
18730.18  1170.318745.53 1167.3318755.93 1167.6618773.24 1166.6818779.21 1166.25
18799.28  1166.818826.98 1173.5218847.47 1178.5118872.64 1172.5318901.41 1166.37
18909.22  1166.818942.54 1167.8218959.71 1167.7718964.66 1169.7318972.24 1170.59
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18980.05  1169.618988.04 1168.9319017.16 1173.3919090.23 1158.9919099.73 1158.44
19164.68    115619180.85 1155.0919200.88 1154.0519220.13  1153.119233.74 1153.84
19241.42  1153.8 19245.8 1154.3219257.91 1151.9919276.54 1155.7819292.29 1156.72
19301.43  1157.819319.12 1160.7419322.64 1161.5719341.09 1154.4719364.63 1145.65
19395.57  1144.519411.84 1144.8219474.07 1165.07 19487.8 1169.3919506.54 1171.93
19522.71  1165.919549.67 1155.6219563.25 1156.0219596.55 1136.4419598.23 1135.69
19629.09  1135.119639.29 1134.16 19653.9 1137.4219659.49  1138.119700.97 1138.67
19764.93  1139.319836.78 1140.5119894.72 1141.7119925.21 1140.4420018.05 1140.13
20037.37  1140.420062.45 1140.51 20167.3 1140.7420257.17 1140.8420313.38 1140.87
20371.73    114120391.45 1140.8620450.23 1139.7720455.53 1139.7120466.88 1141.52
20477.89  1143.520491.97    1145 20500.5 1149.8220505.97 1152.6120520.94 1152.55
20531.04  1156.820535.25 1156.83 20546.8 1156.5420591.55 1168.4720603.24 1168.78
20618.71    116920672.42 1173.0820694.37 1174.0620708.79 1175.5620722.38 1177.07
20727.88  1177.6 20764.4 1181.2920774.47  1182.520786.38 1183.7720818.82 1183.97
20847.26    1184 20877.3  1183.220881.97  1183.220885.59  1182.520892.04 1183.45
20900.03  1180.520903.33 1177.6720951.64 1161.29 20972.4 1162.0121006.74 1157.56
21022.81  1157.321045.77 1157.2221073.73 1157.6321119.61 1157.9821142.99 1158.06
21210.54  1157.421242.07 1156.91 21264.3 1156.46 21271.2 1156.4621311.68 1156.11
21335.69    115621344.52  1156.321396.55 1156.8421419.85 1157.2921471.72 1157.82
21481.43  1157.921517.63 1158.2921527.65 1158.3221541.52 1159.0321547.73 1159.45
21551.84  1160.621587.19  1170.8 21595.8 1169.7621601.57 1169.38   21616 1166.14
21620.18  1164.621633.88 1165.5621667.59 1167.3121681.23 1168.8721731.75 1169.61
21738.87  1169.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17982.09     .0519506.54    .03520603.24     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19506.5420603.24           482.71  482.71  482.71             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17982.0919506.54 1171.9320603.2421738.87 1168.78

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1163.58   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.00   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1162.58   Reach Len. (ft)            482.71     482.71     482.71
  Crit W.S. (ft)            1150.45   Flow Area (sq ft)                   21410.34
  E.G. Slope (ft/ft)       0.000642   Area (sq ft)              3279.49   21410.34    2979.50
  Q Total (cfs)           172000.00   Flow (cfs)                         172000.00
  Top Width (ft)            2043.37   Top Width (ft)             394.43    1038.06     610.88
  Vel Total (ft/s)             8.03   Avg. Vel. (ft/s)                      8.03
  Max Chl Dpth (ft)           28.42   Hydr. Depth (ft)                     20.63
  Conv. Total (cfs)       6787142.0   Conv. (cfs)                        6787142.0
  Length Wtd. (ft)           482.71   Wetted Per. (ft)                    1049.35
  Min Ch El (ft)            1134.16   Shear (lb/sq ft)                       0.82
  Alpha                        1.00   Stream Power (lb/ft s)                 6.57
  Frctn Loss (ft)              0.32   Cum Volume (acre-ft)      2716.15   16530.27    1329.85
  C & E Loss (ft)              0.00   Cum SA (acres)             247.68    1002.09     256.33


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1163.60   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.00   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1162.60   Reach Len. (ft)            482.71     482.71     482.71
  Crit W.S. (ft)            1150.47   Flow Area (sq ft)                   21423.52
  E.G. Slope (ft/ft)       0.000641   Area (sq ft)                        21423.52
  Q Total (cfs)           172000.00   Flow (cfs)                         172000.00
  Top Width (ft)            1038.09   Top Width (ft)                      1038.09
  Vel Total (ft/s)             8.03   Avg. Vel. (ft/s)                      8.03
  Max Chl Dpth (ft)           28.44   Hydr. Depth (ft)                     20.64
  Conv. Total (cfs)       6793896.0   Conv. (cfs)                        6793896.0
  Length Wtd. (ft)           482.71   Wetted Per. (ft)                    1049.40
  Min Ch El (ft)            1134.16   Shear (lb/sq ft)                       0.82
  Alpha                        1.00   Stream Power (lb/ft s)                 6.56
  Frctn Loss (ft)              0.33   Cum Volume (acre-ft)               16395.29       2.14
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C & E Loss (ft)	0.00	Cum SA (acres)	993.66	0.71	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.65

INPUT
Description:
Station Elevation Data num= 155

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17404.99	1171.717	455.15	1171.35	17594.58	1170.59	17610.45	1172.77	17630.6	1178.06
17638.11	1176.917	712.52	1163.47	17721.07	1165.12	17728.33	1166.28	17752.53	1167.31
17771.9	1166.817	779.32	1167.51	17803.99	1167.69	17814.02	1166.82	17816.45	1166.34
17824.79	1165.317	834.91	1163.46	17861.4	1159.34	17873.47	1161.25	17930.08	1172.25
17936.15	1171.717	941.52	1171.76	17965.96	1171.21	17984.66	1169.67	18000.74	1167.89
18014.08	1167.418	065.91	1162.05	18071.71	1161.34	18101.15	1164.63	18108.42	1165.55
18123.61	1167.118	134.43	1167.55	18155.83	1167.73	18233.81	1168.21	18246.71	1168.88
18272.02	1170.118	285.58	1171.06	18324.19	1172.13	18330.8	1170.44	18373.38	1166.99
18419	1167.618	428.86	1167.66	18485.85	1168.31	18500.56	1170.06	18513.19	1168.65
18535.63	1165.5	18556	1163.11	18580.9	1163.74	18595.32	1164.03	18603.14	1165.8
18637.29	1174.118	661.17	1167.18	18678.19	1161.93	18682.19	1162.05	18707.41	1163.23
18713.37	116	418740.98	1166.61	8748.05	1165.92	18762.86	1163.95	18780.67	1162.7
18809.79	116	518837.54	1169.27	18852.87	1169.77	18873.86	1171.36	18881.29	1170.69
18926.37	1163.818	934.97	1163.76	18985.26	1163.68	18991.65	1164.46	19036.98	1171.26
19041.3	1171.619	060.89	1169.15	19075.83	1164.35	19108.82	1163.17	19143.06	1161.62
19162.71	1156.519	197.45	1154.58	19213.69	1153.45	19241.35	1154.58	19286.86	1154.2
19320.75	1152.919	351.72	1153.09	19400.99	1151.71	19440.57	1151.66	19449.53	1151.38
19485.79	1163.119	496.37	1164.32	19518.27	1171.04	19534.96	1170.89	19551.91	1165.46
19581.29	1155.319	594.59	1155.45	19603.69	1151.01	19624.13	1141.58	19658.7	1141.45
19665.28	1141.519	673.04	1144.54	19673.96	1144.21	9688.76	1140.18	19698.97	1141.24
19764	1142.5	19808.2	1143.35	19938.09	1141.32	19942.81	1141.19	20064.62	1140.14
20179.57	1141.220	212.29	1141.25	20266.54	1142.48	20341.2	1144.32	20378.62	1143.45
20399.95	1142.720	414.25	1142.32	20445.28	1142.09	20453.86	1141.62	20485.29	1141.76
20511.56	1141.620	521.79	1141.38	20543.11	1143.73	20548.38	1143.62	20567.92	1143.82
20575.16	1143.720	588.35	1143.39	20613.27	1143.25	20632.9	1143	20668.5	1143.04
20713.81	1142.220	780.36	1141.75	20805.06	1141.32	0883.73	1139.35	20935.22	1138.75
21003.81	1160.421	126.11	1163.68	21192.48	1143.63	21221.17	1143.72	21231.48	1143.84
21245.6	1144.3	21256.9	1148.82	21270.39	1155.48	21279.83	1154.46	21291.04	1153.78
21301.04	1162.8	21310.2	1169.13	21321.95	1168.48	21323.69	1168.04	21347.73	1165.04
21353.28	1164.921	374.94	1165.53	21404.93	1166.72	1441.38	1168.37	21454.58	1169.63
21464.01	1169.821	488.71	1169.52	21502.48	1169.24	21543.81	1168.72	1549.79	1168.8

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17404.99	.05	19518.27	.03	521126.11	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19518.27	21126.11	525	522.87	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17404.99	19518.27	1171.04	20640.75	21549.79	1168

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1163.26	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.22	Reach Len. (ft)	525.00	522.87	470.00
Crit W.S. (ft)	1151.59	Flow Area (sq ft)		21086.55	
E.G. Slope (ft/ft)	0.000707	Area (sq ft)	2834.48	28211.92	2062.98
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	2093.03	Top Width (ft)	413.02	1510.54	169.47
Vel Total (ft/s)	8.16	Avg. Vel. (ft/s)		8.16	
Max Chl Dpth (ft)	23.47	Hydr. Depth (ft)		19.53	
Conv. Total (cfs)	6470235.5	Conv. (cfs)		6470235.5	
Length Wtd. (ft)	522.87	Wetted Per. (ft)		1085.24	
Min Ch El (ft)	1138.75	Shear (lb/sq ft)		0.86	
Alpha	1.00	Stream Power (lb/ft s)		6.99	
Frctn Loss (ft)	0.29	Cum Volume (acre-ft)	2682.27	16255.32	1301.91
C & E Loss (ft)	0.07	Cum SA (acres)	243.21	987.96	252.01

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1163.27	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.23	Reach Len. (ft)	525.00	522.87	470.00
Crit W.S. (ft)	1151.59	Flow Area (sq ft)		21096.56	
E.G. Slope (ft/ft)	0.000722	Area (sq ft)		21096.56	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1079.50	Top Width (ft)		1079.50	
Vel Total (ft/s)	8.15	Avg. Vel. (ft/s)		8.15	
Max Chl Dpth (ft)	22.09	Hydr. Depth (ft)		19.54	
Conv. Total (cfs)	6399912.5	Conv. (cfs)		6399912.5	
Length Wtd. (ft)	522.87	Wetted Per. (ft)		1104.48	
Min Ch El (ft)	1140.14	Shear (lb/sq ft)		0.86	
Alpha	1.00	Stream Power (lb/ft s)		7.02	
Frctn Loss (ft)	0.29	Cum Volume (acre-ft)		16159.70	2.14
C & E Loss (ft)	0.07	Cum SA (acres)		981.93	0.71

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.55

INPUT
Description:
Station Elevation Data num= 116

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17744.06	1173.817	756.47	1173.151	7762.55	1172.981	7806.58	1172.661	7834.02	1172.37
17897.72	1171.517	912.67	1171.421	7936.16	1172.211	7971.06	1177.081	8016.62	1169.19
18043.32	1170.818	075.87	1171.83	18095.2	1170.011	8100.43	1170.821	8121.15	1171.17
18122.99	1171.4	18128.9	1175.841	8143.27	1173.571	8171.07	1168.871	8204.45	1169.61
18211.64	1170.11	8243.71	1176.16	18293.5	1170.141	8308.83	1168.781	8326.93	1167.37
18356.47	1166.21	8528.14	1168.031	8566.48	1168.471	8595.99	1169.92	18646.3	1170.82
18668.09	1170.91	8678.44	1170.91	18698.5	1167.11	8705.62	1166.511	8755.44	1164.83
18759.49	1165.71	8768.93	1166.081	8777.73	1165.841	8801.44	1165.591	8860.97	1164.39
19004.58	1164.11	9009.16	1164.241	9013.63	1164.031	9062.68	1163.531	9076.86	1164.4
19103.91	1164.5	19151.9	1164.991	9161.32	1164.921	9209.63	1165.311	9216.64	1165.2
19241.21	1159.61	9298.08	1147.671	9394.55	1147.281	9419.11	1147.311	9448.19	1156.85
19489.95	1170.91	9493.48	1170.421	9501.76	1169.741	9533.66	1159	19546.5	1154.48
19566.54	1155.51	9569.57	1156.321	9572.55	1154.461	9585.14	1145.741	9593.28	1144.58
19627.97	1145.41	9680.55	1145.571	9710.26	1145.91	9719.38	1147.751	9726.64	1148.8
19742.6	1143.81	9747.24	1142.721	9752.29	1143.881	9769.32	1147.471	9781.32	1145.45
19790.31	1145.41	9861.96	1145.141	9905.92	1144.281	9999.24	1141.62	0018.77	1141.24
20134.34	1140.52	0140.11	1140.672	0204.62	1143.022	0265.64	1144	20342.6	1143.15
20404.82	1142.72	0491.58	1142.572	0531.64	1142.25	20539.7	1142.282	0651.51	1140.19
20679.09	1139.62	0708.14	1139.712	0819.91	1140.092	0839.79	1140.692	0881.49	1142.31
20944.38	1143.82	0948.55	1143.72	20963.9	1142.882	0996.56	1149.242	1031.97	1155.32
21042.88	1157.52	1063.95	1155.632	1069.25	1157.242	1091.25	1164.762	1110.23	1170.12
21117.13	1169.22	1127.04	1167.032	1154.97	1157.042	1158.21	1157.472	1163.21	1157.1
21174.3	1174.72	1180.73	1177.32	1182.91	1177.662	1220.99	1166.852	1236.18	1173.93
21239.44	1174.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17744.06	.04	19489.95	.03	21110.23	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19489.95	21110.23	530	514.6	510	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17744.06	19489.95	1170.9	20795	21239.44	1170

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1162.91	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.81	Wt. n-Val.		0.030	
W.S. Elev (ft)	1162.09	Reach Len. (ft)	530.00	514.60	510.00
Crit W.S. (ft)	1151.35	Flow Area (sq ft)		23754.05	
E.G. Slope (ft/ft)	0.000434	Area (sq ft)	2599.98	28269.26	83.23
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	

Top Width (ft)	1817.97	Top Width (ft)	233.49	1558.97	25.51
Vel Total (ft/s)	7.24	Avg. Vel. (ft/s)		7.24	
Max Chl Dpth (ft)	22.49	Hydr. Depth (ft)		18.70	
Conv. Total (cfs)	8258826.0	Conv. (cfs)		8258826.0	
Length Wtd. (ft)	514.60	Wetted Per. (ft)		1277.25	
Min Ch El (ft)	1139.60	Shear (lb/sq ft)		0.50	
Alpha	1.00	Stream Power (lb/ft s)		3.65	
Frctn Loss (ft)	0.22	Cum Volume (acre-ft)	2649.52	15916.34	1290.33
C & E Loss (ft)	0.02	Cum SA (acres)	239.31	969.54	250.96

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1162.91	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.81	Wt. n-Val.		0.030	
W.S. Elev (ft)	1162.09	Reach Len. (ft)	530.00	514.60	510.00
Crit W.S. (ft)	1151.35	Flow Area (sq ft)		23757.15	
E.G. Slope (ft/ft)	0.000444	Area (sq ft)		23757.15	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1270.53	Top Width (ft)		1270.53	
Vel Total (ft/s)	7.24	Avg. Vel. (ft/s)		7.24	
Max Chl Dpth (ft)	22.49	Hydr. Depth (ft)		18.70	
Conv. Total (cfs)	8166707.0	Conv. (cfs)		8166707.0	
Length Wtd. (ft)	514.60	Wetted Per. (ft)		1299.35	
Min Ch El (ft)	1139.60	Shear (lb/sq ft)		0.51	
Alpha	1.00	Stream Power (lb/ft s)		3.67	
Frctn Loss (ft)	0.22	Cum Volume (acre-ft)		15890.50	2.14
C & E Loss (ft)	0.02	Cum SA (acres)		967.82	0.71

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.45

INPUT
Description:
Station Elevation Data num= 130

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17826.14	1166.11	7847.35	1165.83	17867.83	1165.71	17896.5	1165.81	7909.57	1166.58
17929.22	1167	17933.44	1166.61	7945.88	1166.54	17964.38	1166.38	18000.7	1166.35
18014.83	1166.61	8040.52	1166.57	18066.47	1166.65	18080.29	1166.73	18123.92	1167.09
18131.62	1167.41	8134.38	1168.08	18154	1167.21	8212.81	1167.96	18217.63	1168.17
18231.89	1169.91	8236.14	1167.11	8313.15	1166.84	18357.54	1167.01	18365.31	1167.61
18405.52	1168.81	8432.68	1169.38	18458.94	1174.25	18467.92	1175.33	18491.25	1168.94
18506.43	1165.61	8562.53	1166.51	8570.92	1166.69	18593.26	1167.46	18623.09	1171.06
18651.32	1179.51	8666.72	1172.85	18692.67	1169.59	18721.79	1167.81	18740.05	1168.35
18748.81	1168.51	8764.51	1169.22	18770.88	1168.66	18786.1	1167.02	18853.5	1167.63
18866.83	1168	18869.66	1167.51	8875.57	1166.15	18880.81	1164.61	8907.18	1158.03
18921.75	1161.71	8935.89	1165.41	8956.79	1166.34	18982.03	1172.31	9015.99	1169.97
19048.41	1170.41	9075.35	1171.83	19087.5	1171.43	19130.27	1170.78	19142.75	1166.75
19154.41	1162.81	9163.56	1164	19175.09	1163.51	9201.66	1158.04	19213.04	1156.88
19233.35	1153.6	19253	1150.81	9268.39	1150.96	19365.44	1151.25	19368.91	1148.97
19388.71	1155.71	9435.01	1171.24	19444.85	1169.76	19461.47	1164.91	19477.62	1160.68
19495.51	1155.41	9502.85	1155.34	19515.29	1155.57	19527.51	1149.71	19535.78	1145.59
19536.81	1145.61	9644.25	1143.03	19648.81	1142.95	19707.18	1143.44	19783.36	1144.02
19789.94	1143.41	9797.04	1145.66	19802.38	1147.15	19813.62	1144.81	9828.92	1141.14
19844.54	1143.11	9893.28	1142.11	19913.38	1141.43	19993.19	1139.61	20050.51	1139.54
20076.37	1141.32	0156.81	1143.66	20186.3	1143.57	20259.79	1142.42	20320.2	1141.63
20357.92	1141.42	0420.64	1142.17	20455.71	1142.47	20504.95	1142.45	20589.88	1142.33
20612.55	1142.52	0668.97	1143.15	20725.94	1143.71	20759.88	1144.45	20809.08	1155.95
20816.37	1157.62	0823.32	1157.45	20847.23	1157.11	20863.63	1162.91	20877.99	1163.67
20879.89	1163.92	0893.74	1169.14	20896.64	1170.08	20908.16	1169.35	20922.96	1165.23
20941.89	1165.82	0980.46	1167.05	21028.71	1166.84	21064.77	1166.66	21080.34	1166.69
21162.91	1167	21209.22	1166.82	21232.13	1166.52	1248.59	1166.73	21260.16	1166.65

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17826.14	.04	19435.01	.03	20896.64	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

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     19435.0120896.64              420  480.98     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17826.1419435.01 1171.2420896.6421260.16 1170.08
```

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1162.66	Element			
Vel Head (ft)	0.74	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.92	Reach Len. (ft)	420.00	480.98	550.00
Crit W.S. (ft)	1151.04	Flow Area (sq ft)		24907.24	
E.G. Slope (ft/ft)	0.000417	Area (sq ft)	1983.50	24907.24	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1643.53	Top Width (ft)	255.56	1387.97	
Vel Total (ft/s)	6.91	Avg. Vel. (ft/s)		6.91	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		17.95	
Conv. Total (cfs)	8426997.0	Conv. (cfs)		8426997.0	
Length Wtd. (ft)	480.98	Wetted Per. (ft)		1395.13	
Min Ch El (ft)	1139.54	Shear (lb/sq ft)		0.46	
Alpha	1.00	Stream Power (lb/ft s)		3.21	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)	2621.64	15602.23	1289.85
C & E Loss (ft)	0.04	Cum SA (acres)	236.34	952.13	250.81

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1162.66	Element			
Vel Head (ft)	0.74	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.92	Reach Len. (ft)	420.00	480.98	550.00
Crit W.S. (ft)	1151.04	Flow Area (sq ft)		24907.07	
E.G. Slope (ft/ft)	0.000417	Area (sq ft)		24907.07	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1387.97	Top Width (ft)		1387.97	
Vel Total (ft/s)	6.91	Avg. Vel. (ft/s)		6.91	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		17.94	
Conv. Total (cfs)	8426902.0	Conv. (cfs)		8426902.0	
Length Wtd. (ft)	480.98	Wetted Per. (ft)		1395.13	
Min Ch El (ft)	1139.54	Shear (lb/sq ft)		0.46	
Alpha	1.00	Stream Power (lb/ft s)		3.21	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)		15603.05	2.14
C & E Loss (ft)	0.04	Cum SA (acres)		952.12	0.71

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.36

INPUT
Description:
Station Elevation Data num= 113

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17829.74	1165.617	834.64	1166.451	7859.39	1168.06	17874.8	1167.851	7883.61	1166.44
17891.32	116617	905.68	1166.717	910.66	1166.85	17931.6	1166.651	7963.15	1169.29
17976.79	1170.118	020.15	1178.951	8025.61	1179.871	8030.98	1181.171	8059.18	1173.76
18085.25	1171.318	126.63	1168.318	145.23	1167.811	8183.43	1166.891	8206.06	1168.14
18216.67	1168.518	225.99	1167.341	8227.08	1166.841	8279.16	1166.921	8386.63	1167.36
18397.83	1167.318	401.63	1167.411	8496.65	1169.131	8505.92	1167.211	8516.61	1167.44
18531.18	1166.518	559.17	1173.471	8574.35	1178.251	8597.15	1175.831	8610.09	1170.58
18625.22	1169.118	658.09	1168.461	8725.52	1165.371	8730.59	1166.061	8743.89	1167.52
18764.11	1170	18779.5	1169.118	793.72	1168.441	8798.51	1167.51	8801.48	1167.39
18877.88	1165.518	888.14	1165.518	925.88	1165.031	8973.11	1165.631	8993.98	1165.86
19007.51	1166.219	014.24	1165.071	9037.42	1159.221	9048.71	1156.31	9055.17	1158.31
19074.18	1164.519	172.16	1164.271	9211.16	1163.981	9222.42	1164.721	9247.58	1157.64
19271.77	1151.119	306.63	1151.031	9368.58	1151.061	9434.45	1169.551	9443.83	1168.82
19449.19	116719	486.22	1155.051	9507.55	1155.541	9520.37	1155.571	9541.32	1150.7
19563.69	1145.619	661.39	1144.761	9678.04	1144.711	9753.28	1142.071	9759.31	1141.88
19766.05	1143.5	19782	1138.871	9785.96	1139.51	9802.48	1141.81	9806.33	1140.93
19809.02	114019	818.13	1140.811	9874.46	1142.111	9940.87	1143.561	9953.56	1143.82
20023.18	1142.220	089.25	1140.612	0110.35	1140.732	0205.36	1141.67	20230.2	1141.43
20341.82	1141.320	370.04	1141.42	0462.13	1141.152	0507.39	1140.932	0520.17	1141.92

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20552.46    114320589.84 1151.2920612.04  1156.220628.64 1156.4720643.46 1159.87
20682.64  1168.820693.89 1169.3120706.91  1164.320710.69 1164.3320728.15 1164.12
20754.56    116120763.64 1159.4820765.36    116020778.51 1161.2920813.26 1163.38
20835.33  1163.720851.05 1162.9520893.86 1163.81

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17829.74     .0419434.45     .0320693.89     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19434.4520693.89              630  487.06     380             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17829.7419434.45 1169.5520693.8920893.86 1169.31

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1162.38   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.10   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1161.28   Reach Len. (ft)           630.00     487.06     380.00
  Crit W.S. (ft)            1151.87   Flow Area (sq ft)                  20453.24
  E.G. Slope (ft/ft)       0.000649   Area (sq ft)             1454.97   20453.24      20.86
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)            1414.46   Top Width (ft)            205.42    1182.76      26.28
  Vel Total (ft/s)             8.41   Avg. Vel. (ft/s)                      8.41
  Max Chl Dpth (ft)           22.41   Hydr. Depth (ft)                     17.29
  Conv. Total (cfs)       6753067.0   Conv. (cfs)                       6753067.0
  Length Wtd. (ft)           487.06   Wetted Per. (ft)                   1188.40
  Min Ch El (ft)            1138.87   Shear (lb/sq ft)                      0.70
  Alpha                        1.00   Stream Power (lb/ft s)                5.86
  Frctn Loss (ft)              0.35   Cum Volume (acre-ft)     2605.06   15351.80    1289.72
  C & E Loss (ft)              0.03   Cum SA (acres)            234.12     937.94     250.64


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1162.38   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.10   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1161.28   Reach Len. (ft)           630.00     487.06     380.00
  Crit W.S. (ft)            1151.87   Flow Area (sq ft)                  20453.09
  E.G. Slope (ft/ft)       0.000649   Area (sq ft)                       20453.09
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)            1182.76   Top Width (ft)                     1182.76
  Vel Total (ft/s)             8.41   Avg. Vel. (ft/s)                      8.41
  Max Chl Dpth (ft)           22.41   Hydr. Depth (ft)                     17.29
  Conv. Total (cfs)       6752988.5   Conv. (cfs)                       6752988.5
  Length Wtd. (ft)           487.06   Wetted Per. (ft)                   1188.40
  Min Ch El (ft)            1138.87   Shear (lb/sq ft)                      0.70
  Alpha                        1.00   Stream Power (lb/ft s)                5.86
  Frctn Loss (ft)              0.35   Cum Volume (acre-ft)              15352.62       2.14
  C & E Loss (ft)              0.03   Cum SA (acres)                      937.93       0.71


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.27

INPUT
Description:
Station Elevation Data    num=     131
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18229.32  1166.118250.05 1166.7518278.94 1167.5818285.44 1167.1418297.52 1168.12
18329.34  1169.818330.87 1169.7618339.83  1170.518364.66 1170.43   18371 1171.75
18375.68  1170.918417.64 1164.1618452.44 1163.9818464.69 1164.1518471.17  1164.1
18538.67  1164.518554.41 1164.4818587.27 1164.4318589.89 1164.6318615.02 1165.44
18625.91  1165.4 18650.9 1164.1518657.49 1164.0518668.84 1165.5918673.08 1165.44
 18717.3  1164.8 18741.7 1164.1318764.17 1164.9718767.26 1164.8918812.34 1163.32
18834.79    116318851.48 1162.4718861.98 1163.4518904.93 1165.0718912.29 1164.97
18927.38  1164.518950.33 1164.2418972.81 1163.3118980.73 1164.2718986.42 1165.36
19008.46  1169.819012.93 1169.2319029.55 1168.0919075.71 1163.6819120.33 1161.85
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19137.67  1160.3 19201.2 1163.0819216.26 1164.6319218.15 1164.6519257.26 1163.95
19328.26  1165.9 19358.6 1166.3919374.56 1166.11 19385.2 1165.64 19399.5 1166.09
19430.27    116719454.16 1164.5819474.54 1169.6819486.26 1168.1219517.16 1160.18
19533.88  1155.719554.39 1153.1819588.86  1146.319597.05 1144.7619600.22 1144.02
19651.54  1142.919713.94 1142.41 19735.4 1142.3319787.27 1141.4519800.41 1145.55
19820.21  1140.419825.33 1139.1919845.23  1141.919852.13 1140.9419867.25 1141.67
19999.63  1141.420113.28 1142.6420129.11 1142.7920164.57 1142.0820258.07 1140.03
20342.57  1140.820392.03 1141.39 20476.1 1142.52 20488.7 1142.7520507.64 1146.74
20554.17  1155.820568.05 1156.1820577.97  1156.620605.05 1164.0920624.27 1169.12
20636.35  1168.9 20655.6 1164.0320690.53 1162.2620715.35 1160.3420740.17 1158.79
20753.58  1158.720785.62 1158.8620816.23 1159.19   20824 1159.4620842.81 1161.22
20855.55  1162.520868.51 1162.1420883.38 1163.0920895.84 1162.9920931.13 1163.95
21041.27  1165.921067.94 1165.8521130.05 1165.7421136.02 1165.8421184.06 1165.94
21195.48  1165.921255.31 1165.8221260.95 1165.7421313.65 1166.0421421.15 1165.43
21464.35  1165.421495.94 1171.4121510.65 1171.6421536.01 1172.2521550.81 1175.26
21574.05  1179.721595.71 1180.7421599.29 1180.8521685.97 1184.0821687.38 1183.98
21734.88  1179.821743.24 1176.77 21756.8 1171.0421769.18 1168.2521771.73  1168.4
21818.53  1171.7

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18229.32     .0419474.54     .0320624.27     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19474.5420624.27              580  492.86     420              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18229.3219474.54 1169.6820624.2721818.53 1169.12

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1162.00   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.36   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1160.63   Reach Len. (ft)           580.00     492.86     420.00
  Crit W.S. (ft)            1152.19   Flow Area (sq ft)                  18345.77
  E.G. Slope (ft/ft)       0.000823   Area (sq ft)                1.91   18345.77     178.73
  Q Total (cfs)           172000.00   Flow (cfs)                       172000.00
  Top Width (ft)            1213.59   Top Width (ft)             11.40    1077.17     125.02
  Vel Total (ft/s)             9.38   Avg. Vel. (ft/s)                      9.38
  Max Chl Dpth (ft)           21.44   Hydr. Depth (ft)                     17.03
  Conv. Total (cfs)       5995366.5   Conv. (cfs)                    5995366.5
  Length Wtd. (ft)           492.86   Wetted Per. (ft)                  1082.50
  Min Ch El (ft)            1139.19   Shear (lb/sq ft)                      0.87
  Alpha                        1.00   Stream Power (lb/ft s)                8.16
  Frctn Loss (ft)              0.40   Cum Volume (acre-ft)      2594.52   15134.89    1288.84
  C & E Loss (ft)              0.00   Cum SA (acres)             232.55     925.31     249.98


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1162.00   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.36   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1160.63   Reach Len. (ft)           580.00     492.86     420.00
  Crit W.S. (ft)            1152.19   Flow Area (sq ft)                  18345.63
  E.G. Slope (ft/ft)       0.000823   Area (sq ft)                       18345.63
  Q Total (cfs)           172000.00   Flow (cfs)                       172000.00
  Top Width (ft)            1077.17   Top Width (ft)                    1077.17
  Vel Total (ft/s)             9.38   Avg. Vel. (ft/s)                      9.38
  Max Chl Dpth (ft)           21.44   Hydr. Depth (ft)                     17.03
  Conv. Total (cfs)       5995294.0   Conv. (cfs)                    5995294.0
  Length Wtd. (ft)           492.86   Wetted Per. (ft)                  1082.50
  Min Ch El (ft)            1139.19   Shear (lb/sq ft)                      0.87
  Alpha                        1.00   Stream Power (lb/ft s)                8.16
  Frctn Loss (ft)              0.40   Cum Volume (acre-ft)              15135.71       2.14
  C & E Loss (ft)              0.00   Cum SA (acres)                     925.29       0.71


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.17
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INPUT
Description:
Station Elevation Data num= 231

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16001.28	1173.216	010.24	1172.96	16032.2	1172.6	216044.46	1172.7	416072.51	1173.58
16077.13	1173.816	081.42	1173.4	216085.11	1173.5	516102.83	1172.3	816202.06	1169.35
16236.12	1169.116	281.24	1169.316	375.72	1169.5	916406.04	1169.0	316421.21	1168.99
16455.41	1168.516	471.91	1168.3	416489.06	1167.9	916504.99	1166.9	216518.22	1166.52
16523.56	1165.916	529.35	1166.0	816581.29	1167.86	16593	1168.2	316595.27	1167.94
16606.1	1167.9	16637.2	1166.9	616661.28	1167.1	716722.46	1167.0	116768.48	1166.99
16797.65	1166.216	858.29	1166.21	16905.4	1167.52	16963.1	1167.7	816968.54	1167.39
16979.96	1167.617	062.68	1167.42	17168	1167.0	217184.94	1166.1	317202.21	1164.72
17215.82	1164.817	241.17	1164.99	17254.1	1164.3	717271.04		116417305.87	1164.04
17427.69	1163.417	492.61	1163.2	717565.11	1163.2	817704.21	1163.27	17771.8	1163.04
17801.01		116417904.68	1163.9	117988.14	1163.5	318058.06	1162.9	218197.72	1162.68
18243.48	1162.518	253.17	1162.6	918287.07	1163.7	118315.46	1164.6	318341.15	1163.04
18367.15	1163.518	377.33	1163.9	818386.58	1168.4	518398.81	1173.3	518402.08	1174.3
18404.07	1174.318	449.38	1168.48	18475.7	1163.7	418505.44	1161.5	618520.42	1160.36
18528.89	1160.718	554.16	1160.6	918559.77	1160.7	718579.21	1160.5	618623.02	1160.19
18690.01	1172.8	18697.1	1173.8	18744.97	1164.34	18791.4	1166.4	818805.54	1165.03
18818.85	1165	18868.9	1165.3	18908.37	1164.7	618934.23	1164.2	218949.94	1163.61
18964.81	1163.918	985.69	1163.8	619046.21	1163.0	419063.07	1163.7	219072.52	1163.62
19091.14	1163.919	152.99	1164.1	119189.83	1164.1	19253.84	1162.6	719285.42	1161.92
19297.98	1161.819	313.24	1162.0	419363.42	1163.0	219379.89	1155.4	619381.52	1154.82
19388.63	1155.919	408.47	1157.1	19420.26	1160.5	319436.44	1166.8	519443.16	1169.64
19461.81	1167.819	499.77	1157.2	19509.91	1154.53	19529.3	1152.7	319570.72	1143.58
19641.21	1141.919	649.85	1141.6	419696.84	1139.5	119716.44	1139.1	19786.79	1138.18
19811.5	1139.519	819.37	1140.9	519834.32	1137.1	619843.55	1138.8	819905.75	1140.12
19917.22	1140.319	949.02	1140.1	320048.18	1139.4	920083.29	1139.8	120176.26	1140.46
20216.1	1140.520	303.83	1140.69	20341.8	1141.4	720409.23	1142.98	20457.3	1153.58
20483.6	1156.420	519.65	1165.3	220529.27	1167.7	320541.18		116920556.34	1163.19
20598.89	1161.120	612.54	1160.1	720659.27	1156.8	520687.65	1156.8	120732.69	1158.03
20775.8		116020806.38	1161.8	220818.05	1161.0	420822.41	1162.9	320838.59	1164.49
20840.87	1164.5	20852	1167.2	720871.21	1171.6	120891.26	1170.5	920977.83	1170.8
20998.33		117121023.94	1170.7	621097.19	1170.8	221115.39	1170.4	521133.64	1165.82
21147.36	1162.621	177.14	1162.9	21179.91	1162.8	621213.22	1163.11	21250	1161.44
21259.45	1163.721	274.23	1167.4	921297.37	1165.7	621362.64	1165.2	921368.24	1165.41
21391.63	1166.121	412.38		116721432.43	1166.4	921488.36	1164.9	321512.65	1166.08
21558.53	1165.721	608.54	1183.1	421613.67	1184.1	721627.01	1186.0	321673.59	1186.66
21700.29	1186.621	715.78	1186.2	121747.01	1184.71	21759.1	1180.3	921769.12	1172.95
21779.93	1168.4	21788.9	1166.3	621797.62	1164.23	21808.8	1163.7	321825.05	1163.92
21856.54	1163.721	864.78		116221873.76	1160.8	21886.62	1163.2	921926.57	1163.46
21986	1165.621	987.67	1165.6	322058.41	1165.7	222082.99	1165.8	822150.65	1164.38
22157.49	1164.322	190.04	1164.83	22237.4	1164.83	22269.6	1165.0	222339.21	1165.01
22414.64	1163.622	484.43	1163.5	922534.23	1163.4	722604.52	1163.0	822624.87	1162.71
22673.28	1162.622	727.45	1162.8	122784.46	1165.9	122800.58	1166.5	22818.56	1166.73
22879.81	1167.822	900.34	1168.2	922918.49	1168.9	622970.85	1170.4	223041.65	1171.11
23054.92	1171.423	065.88	1171.5	323088.44	1171.9	323135.78	1172.4	123169.17	1173.16
23181.67	1172.923	198.65	1173.03	23265.1	1173.7	623291.59	1174.0	323297.34	1174.22
23306.8	1174.323	381.41	1174.9	923408.83	1175.24	23411.3	1175.13	23431.3	1173.63
23439.11	1173.8								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16001.28	.04	19443.16	.03	20541.18	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19443.16	20541.18		410	381.57	360	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16001.28	19443.16	1169.6	20541.18	23439.11	1169

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1161.60	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.41	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.19	Reach Len. (ft)	410.00	381.57	360.00
Crit W.S. (ft)	1151.21	Flow Area (sq ft)		18063.67	
E.G. Slope (ft/ft)	0.000795	Area (sq ft)	156.52	18063.67	349.43
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	

Top Width (ft)	1226.07	Top Width (ft)	49.50	1009.85	166.72
Vel Total (ft/s)	9.52	Avg. Vel. (ft/s)		9.52	
Max Chl Dpth (ft)	23.03	Hydr. Depth (ft)		17.89	
Conv. Total (cfs)	6101215.0	Conv. (cfs)		6101215.0	
Length Wtd. (ft)	381.57	Wetted Per. (ft)		1014.38	
Min Ch El (ft)	1137.16	Shear (lb/sq ft)		0.88	
Alpha	1.00	Stream Power (lb/ft s)		8.41	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)	2593.47	14928.91	1286.30
C & E Loss (ft)	0.09	Cum SA (acres)	232.14	913.50	248.57

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1161.60	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.41	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.19	Reach Len. (ft)	410.00	381.57	360.00
Crit W.S. (ft)	1151.21	Flow Area (sq ft)		18063.54	
E.G. Slope (ft/ft)	0.000795	Area (sq ft)		18063.54	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1009.85	Top Width (ft)		1009.85	
Vel Total (ft/s)	9.52	Avg. Vel. (ft/s)		9.52	
Max Chl Dpth (ft)	23.03	Hydr. Depth (ft)		17.89	
Conv. Total (cfs)	6101160.0	Conv. (cfs)		6101160.0	
Length Wtd. (ft)	381.57	Wetted Per. (ft)		1014.38	
Min Ch El (ft)	1137.16	Shear (lb/sq ft)		0.88	
Alpha	1.00	Stream Power (lb/ft s)		8.41	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)		14929.73	2.14
C & E Loss (ft)	0.09	Cum SA (acres)		913.49	0.71

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.09

INPUT
Description: Upstream face of Rural Road Bridge

Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19571.9	1151.6	19577.9	1151.6
19580.9	1148.1	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4	19736.9	1136
19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7	19819.9	1136.7
19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137	19934.9	1137.1
19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9	20092.9	1137.6
20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138	20176.9	1138
20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139	20361.4	1139.4
20418.9	1140.8	20424.9	1140.8	20448.4	1141.1	20477.9	1152.8	20515.9	1157.5
20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3
20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4
20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168
21220	1164								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19457.3	20545.9	154.01	154.01	154.01	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1161.26	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.12	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.13	Reach Len. (ft)	30.00	30.00	30.00

Crit W.S. (ft)	1148.79	Flow Area (sq ft)		20225.98	
E.G. Slope (ft/ft)	0.000569	Area (sq ft)		20225.98	709.04
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1233.80	Top Width (ft)		1041.15	192.65
Vel Total (ft/s)	8.50	Avg. Vel. (ft/s)		8.50	
Max Chl Dpth (ft)	24.13	Hydr. Depth (ft)		19.43	
Conv. Total (cfs)	7212123.0	Conv. (cfs)		7212123.0	
Length Wtd. (ft)	30.00	Wetted Per. (ft)		1047.10	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.69	
Alpha	1.00	Stream Power (lb/ft s)		5.83	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	2592.73	14761.21	1281.92
C & E Loss (ft)	0.01	Cum SA (acres)	231.91	904.52	247.09

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1161.26	Element			
Vel Head (ft)	1.12	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.13	Reach Len. (ft)	30.00	30.00	30.00
Crit W.S. (ft)	1148.79	Flow Area (sq ft)		20225.98	
E.G. Slope (ft/ft)	0.000569	Area (sq ft)		20225.98	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1041.15	Top Width (ft)		1041.15	
Vel Total (ft/s)	8.50	Avg. Vel. (ft/s)		8.50	
Max Chl Dpth (ft)	24.13	Hydr. Depth (ft)		19.43	
Conv. Total (cfs)	7212123.0	Conv. (cfs)		7212123.0	
Length Wtd. (ft)	30.00	Wetted Per. (ft)		1047.10	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.69	
Alpha	1.00	Stream Power (lb/ft s)		5.83	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)		14762.03	2.14
C & E Loss (ft)	0.01	Cum SA (acres)		904.50	0.71

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 222.085

INPUT
Description: Rural Road
Distance from Upstream XS = 30
Deck/Roadway Width = 94
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 15

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19030	1164	1164	19200	1168	1168	19457.2	1171.8	1171.8
19457.3	1171.81	1165.1	19571.9	1174.22	1167.6	19692.9	1176.2	1169.53
19813.9	1177.62	1170.95	19934.9	1178.62	1171.95	20055.9	1179.06	1172.39
20176.9	1179.11	1172.44	20297.9	1178.63	1172	20418.9	1177.57	1170.9
20539.9	1176.12	1169.45	20660.9	1174.15	1167.5	20781.6	1171.74	1165.07

Upstream Bridge Cross Section Data
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19571.9	1151.6	19577.9	1151.6
19580.9	1148.1	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4	19736.9	1136
19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7	19819.9	1136.7
19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137	19934.9	1137.1
19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9	20092.9	1137.6
20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138	20176.9	1138
20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139	20361.4	1139.4
20418.9	1140.8	20424.9	1140.8	20448.4	1141.1	20477.9	1152.8	20515.9	1157.5
20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3
20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4
20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168
21220	1164								

Manning's n Values num= 3

```
     Sta   n Val     Sta   n Val     Sta   n Val
   18210     .04 19457.3     .03 20545.9     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
       19457.3 20545.9             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18210 19457.3  1165.1 20545.9   21220  1166.7

Downstream  Deck/Roadway Coordinates
    num=      15
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19030    1164    1164   19200    1168    1168 19457.2  1171.8  1171.8
 19457.3 1171.81  1165.1 19571.9 1174.22  1167.6 19692.9  1176.2 1169.53
 19813.9 1177.62 1170.95 19934.9 1178.62 1171.95 20055.9 1179.06 1172.39
 20176.9 1179.11 1172.44 20297.9 1178.63    1172 20418.9 1177.57  1170.9
 20539.9 1176.12 1169.45 20660.9 1174.15  1167.5 20781.6 1171.74 1165.07

Downstream Bridge Cross Section Data
Station Elevation Data    num=      61
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18210    1164   19030    1164   19200    1168 19457.2  1171.8 19457.3  1165.1
 19457.3  1164.6 19498.1  1157.6 19551.1    1152 19571.9  1151.6 19577.9  1151.6
 19580.9  1148.1 19635.4  1138.8 19692.9  1136.4 19698.9  1136.4 19736.9    1136
 19745.9    1136 19764.9  1136.2 19792.4    1137 19813.9  1136.7 19819.9  1136.7
 19839.9  1136.2 19859.9  1136.2 19890.9  1136.7 19913.4    1137 19934.9  1137.1
 19940.9  1137.1 19998.4  1137.1 20055.9  1136.9 20061.9  1136.9 20092.9  1137.6
 20102.9  1137.8 20106.9  1137.8 20131.9    1138 20146.9    1138 20176.9    1138
 20182.9    1138 20240.4  1138.9 20297.9    1139 20303.9    1139 20361.4  1139.4
 20418.9  1140.8 20424.9  1140.8 20448.4  1141.1 20477.9  1152.8 20515.9  1157.5
 20530.9  1162.1 20539.9  1166.7 20545.9  1166.7 20564.4  1165.4 20580.4  1162.3
 20601.4    1157 20660.9    1156 20666.9    1156 20669.9    1156 20728.9  1156.4
 20769.9  1155.9 20781.6  1157.4 20781.7    1165 20781.8  1171.7   21050    1168
   21220    1164

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18210     .04 19457.3     .03 20545.9     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
       19457.3 20545.9             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18210 19457.3  1165.1 20545.9   21220  1166.7

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  10

Pier Data
Pier Station     Upstream= 19574.9    Downstream= 19574.9
Upstream     num=       2
    Width   Elev    Width   Elev
        6  1151.6       6  1167.6
Downstream     num=       2
    Width   Elev    Width   Elev
        6  1151.6       6  1167.6

Pier Data
Pier Station     Upstream= 19695.9    Downstream= 19695.9
Upstream     num=       2
    Width   Elev    Width   Elev
        6  1136.4       6 1169.53
Downstream     num=       2
    Width   Elev    Width   Elev
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       6  1136.4       6 1169.53

 Pier Data
 Pier Station     Upstream= 19816.9    Downstream= 19816.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6  1136.7       6    1171
 Downstream     num=       2
     Width   Elev    Width   Elev
        6  1136.7       6    1171

 Pier Data
 Pier Station     Upstream= 19937.9    Downstream= 19937.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6  1137.1       6 1171.95
 Downstream     num=       2
     Width   Elev    Width   Elev
        6  1137.1       6 1171.95

 Pier Data
 Pier Station     Upstream= 20058.9    Downstream= 20058.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6  1136.9       6 1172.39
 Downstream     num=       2
     Width   Elev    Width   Elev
        6  1136.9       6 1172.39

 Pier Data
 Pier Station     Upstream= 20179.9    Downstream= 20179.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6    1138       6  1172.4
 Downstream     num=       2
     Width   Elev    Width   Elev
        6    1138       6  1172.4

 Pier Data
 Pier Station     Upstream= 20300.9    Downstream= 20300.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6    1139       6    1172
 Downstream     num=       2
     Width   Elev    Width   Elev
        6    1139       6    1172

 Pier Data
 Pier Station     Upstream= 20421.9    Downstream= 20421.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6  1140.8       6  1170.9
 Downstream     num=       2
     Width   Elev    Width   Elev
        6  1140.8       6  1170.9

 Pier Data
 Pier Station     Upstream= 20542.9    Downstream= 20542.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6  1166.7       6  1169.5
 Downstream     num=       2
     Width   Elev    Width   Elev
        6  1166.7       6  1169.5

 Pier Data
 Pier Station     Upstream= 20663.9    Downstream= 20663.9
 Upstream     num=       2
     Width   Elev    Width   Elev
        6    1156       6  1167.5
 Downstream     num=       2
```

Width	Elev	Width	Elev
6	1156	6	1167.5

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
Energy
Momentum Cd = 1.2
Yarnell KVal = 1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1161.26	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1160.13	E.G. Elev (ft)	1161.22	1161.13
Q Total (cfs)	172000.00	W.S. Elev (ft)	1159.96	1159.85
Q Bridge (cfs)	172000.00	Crit W.S. (ft)	1149.18	1149.17
Q Weir (cfs)		Max Chl Dpth (ft)	23.96	23.85
Weir Sta Lft (ft)		Vel Total (ft/s)	9.02	9.07
Weir Sta Rgt (ft)		Flow Area (sq ft)	19062.92	18958.88
Weir Submerg		Froude # Chl	0.36	0.37
Weir Max Depth (ft)		Specif Force (cu ft)	250821.52	249090.23
Min Top Rd (ft)	1165.10	Hydr Depth (ft)	19.23	19.14
Min El Prs (ft)	1172.44	W.P. Total (ft)	1323.76	1321.10
Delta EG (ft)	0.19	Conv. Total (cfs)	5588789.0	5545468.0
Delta WS (ft)	0.21	Top Width (ft)	1177.46	1176.09
BR Open Area (sq ft)	32088.49	Frctn Loss (ft)	0.09	0.02
BR Open Vel (ft/s)	9.07	C & E Loss (ft)	0.00	0.04
Coef of Q		Shear Total (lb/sq ft)	0.85	0.86
Br Sel Method	Energy only	Power Total (lb/ft s)	7.68	7.82

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1161.26	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1160.13	E.G. Elev (ft)	1161.22	1161.13
Q Total (cfs)	172000.00	W.S. Elev (ft)	1159.96	1159.85
Q Bridge (cfs)	172000.00	Crit W.S. (ft)	1149.18	1149.17
Q Weir (cfs)		Max Chl Dpth (ft)	23.96	23.85
Weir Sta Lft (ft)		Vel Total (ft/s)	9.02	9.07
Weir Sta Rgt (ft)		Flow Area (sq ft)	19062.92	18958.88
Weir Submerg		Froude # Chl	0.36	0.37
Weir Max Depth (ft)		Specif Force (cu ft)	250821.52	249090.23
Min Top Rd (ft)	1165.10	Hydr Depth (ft)	19.23	19.14
Min El Prs (ft)	1172.44	W.P. Total (ft)	1323.76	1321.10
Delta EG (ft)	0.19	Conv. Total (cfs)	5588789.0	5545468.0
Delta WS (ft)	0.21	Top Width (ft)	1177.46	1176.09
BR Open Area (sq ft)	32088.49	Frctn Loss (ft)	0.09	0.02
BR Open Vel (ft/s)	9.07	C & E Loss (ft)	0.00	0.04
Coef of Q		Shear Total (lb/sq ft)	0.85	0.86
Br Sel Method	Energy only	Power Total (lb/ft s)	7.68	7.82

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.08

INPUT
Description: Downstream face of Rural Road Bridge

Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19571.9	1151.6	19577.9	1151.6
19580.9	1148.1	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4	19736.9	1136
19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7	19819.9	1136.7
19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137	19934.9	1137.1
19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9	20092.9	1137.6
20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138	20176.9	1138
20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139	20361.4	1139.4
20418.9	1140.8	20424.9	1140.8	20448.4	1141.1	20477.9	1152.8	20515.9	1157.5
20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3
20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4
20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168
21220	1164								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19457.3	20545.9	580	440.56	330	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1161.07	Element			
Vel Head (ft)	1.15	Wt. n-Val.		0.030	
W.S. Elev (ft)	1159.92	Reach Len. (ft)	580.00	440.56	330.00
Crit W.S. (ft)	1148.80	Flow Area (sq ft)		20004.27	
E.G. Slope (ft/ft)	0.000589	Area (sq ft)		20004.27	668.06
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1231.02	Top Width (ft)		1039.22	191.80
Vel Total (ft/s)	8.60	Avg. Vel. (ft/s)		8.60	
Max Chl Dpth (ft)	23.92	Hydr. Depth (ft)		19.25	
Conv. Total (cfs)	7089823.0	Conv. (cfs)		7089823.0	
Length Wtd. (ft)	440.56	Wetted Per. (ft)		1045.12	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.70	
Alpha	1.00	Stream Power (lb/ft s)		6.05	
Frctn Loss (ft)	0.34	Cum Volume (acre-ft)	2592.73	14693.24	1279.62
C & E Loss (ft)	0.05	Cum SA (acres)	231.91	900.98	246.43

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1161.07	Element			
Vel Head (ft)	1.15	Wt. n-Val.		0.030	
W.S. Elev (ft)	1159.92	Reach Len. (ft)	580.00	440.56	330.00
Crit W.S. (ft)	1148.80	Flow Area (sq ft)		20004.27	
E.G. Slope (ft/ft)	0.000589	Area (sq ft)		20004.27	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1039.22	Top Width (ft)		1039.22	
Vel Total (ft/s)	8.60	Avg. Vel. (ft/s)		8.60	
Max Chl Dpth (ft)	23.92	Hydr. Depth (ft)		19.25	
Conv. Total (cfs)	7089823.0	Conv. (cfs)		7089823.0	
Length Wtd. (ft)	440.56	Wetted Per. (ft)		1045.12	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.70	

Alpha	1.00	Stream Power (lb/ft s)	6.05	
Frctn Loss (ft)	0.34	Cum Volume (acre-ft)	14694.06	0.32
C & E Loss (ft)	0.05	Cum SA (acres)	900.97	0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.99

INPUT
Description:
Station Elevation Data num= 200

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17228.1	1167.317	258.96	1166.117	291.63	1169.221	7293.52	1169.291	7354.45	1166.5
17358.04	1166.517	386.91	1165.941	7430.53	1165.451	7465.42	1164.771	7504.19	1164.11
17517.7	1163.817	557.37	1163.117	568.46	1162.991	7596.15	1163.231	7646.22	1163.04
17664.33	1162.917	731.94	1162.771	7764.84	1162.531	7842.88	1162.381	7895.13	1162.14
17950	1161.817	992.32	1161.618	008.74	1161.471	8042.78	1161.318	085.64	1161.18
18095.78	1161.218	181.67	1161.618	206.63	1161.581	8296.43	1161.391	8335.79	1161.37
18389.47	1161.418	419.45	1161.321	8459.39	1161.051	8508.93	1160.991	8618.73	1161.02
18725.56	1160.9	18734.5	1160.861	8810.21	1161.351	8837.68	1161.38	18936.6	1161.27
18955.95	1161.3	19027.2	1161.591	9072.68	1161.651	9091.72	1161.781	9107.22	1161.43
19117.15	116	119125.19	1161.431	9167.72	1161.181	9170.23	1161.22	19204.7	1160.86
19214.48	1160.41	9272.73	1160.3	19280.4	1159.861	9312.77	1158.41	9334.57	1157.04
19362.41	116	519375.13	1168.781	9387.53	1170.49	19423.3	1155.811	9424.11	1155.59
19444.1	1156.81	9466.76	1156.061	9473.13	1155.671	9487.21	1154.341	9498.52	1154.09
19508.31	1154.71	9522.21	1145.731	9526.03	1145.91	9542.04	1145.981	9548.13	1143.76
19549.74	1142.81	9578.31	1142.721	9608.92	1142.31	9622.35	1142.55	19625.8	1142.43
19629.95	1141.91	9662.92	1140.93	19757.8	1138.141	9790.37	1138.341	9889.34	1139.22
20013.16	1138.7	20021.4	1138.682	0046.59	1139.272	0150.57	1141.482	0168.42	1141.41
20279.22	1139.72	0311.82	1140.852	0339.33	1142.082	0380.39	1150.36	20395.1	1153.35
20408.91	115	520451.75	116	420464.34	1166.74	20474.1	1168.582	0520.34	1161.8
20524.22	1161.5	20551.1	1161.72	20569	1158.542	0579.56	1158.192	0581.69	1157.82
20619.68	1158.12	0624.32	1158.272	0636.26	1158.242	0682.65	1158.222	0708.27	1159.65
20747.43	1165.12	0810.38	1169.092	0865.53	1168.612	0878.38	1168.592	0925.02	1169.04
20977.87	1168.52	0990.49	1168.512	1017.94	1163.912	1020.96	1162.222	1027.69	1160.11
21041.39	1160.22	1048.88	1164.462	1051.31	1164.732	1103.84	1164.332	1113.72	1164.2
21167.12	1164.32	1199.72	1164.332	1238.15	1164.72	1244.69	1165.512	1250.07	1165.47
21255.82	1165.12	1263.75	1162.592	1273.81	1162.532	1441.29	1161.922	1461.92	1162.62
21468.87	1162.72	1483.54	1163.622	1530.74	1164.782	1532.64	1165.612	1578.49	1184.47
21580.42	1185.3	21583.3	1185.152	1603.14	1184.67	21614.3	1183.992	1640.68	1182.58
21655.09	1182.32	1667.69	1183.072	1684.27	1183.812	1707.08	1185.462	1717.84	1185.84
21729.19	1185.72	1758.49	1174.32	1786.72	1161.732	1788.91	1161.412	1814.08	1161.25
21824.13	1161.62	1829.11	1162.382	1843.37	1161.532	1858.77	1161.612	1885.49	1161.81
21909.83	1161.92	1920.48	1162.572	1936.69	1162.972	1976.35	1162.162	2029.88	1162.27
22120.51	1161.82	2128.67	1161.812	2133.27	1161.72	2196.18	1161.72	2222.92	1162.51
22230.32	1162.32	2238.27	1161.412	2269.18	1161.322	2332.41	1161.212	2339.87	1161.48
22350.41	1161.22	2441.19	1161.62	22490	1162.062	2504.47	1163.38	22519.1	1163.04
22613.27	1163.22	2638.03	1163.152	2664.13	1163.022	2668.84	1163.152	2699.98	1163.56
22742.99	1164.12	2775.57	1163.962	2823.75	1164.122	2840.56	1164.362	2888.81	1164.88
22942.19	1167.3	22960.9	1168.082	2991.37	1168.892	3023.13	1170.192	3043.49	1170.56
23080.41	1171.5	23092.3	1171.882	3129.53	1172.752	3168.04	1173.242	3174.01	1173.4
23188.8	1174.12	3254.98	1175.052	3286.26	1175.362	3307.91	1175.312	3338.46	1175.78

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17228.1	.041	9387.53	.03	20474.1	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19387.53	20474.1	560	510.5	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17228.1	19387.53	1170.49	20474.1	23338.46	1168.58

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1160.67	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.69	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.98	Reach Len. (ft)	560.00	510.50	470.00

Crit W.S. (ft)	1151.29	Flow Area (sq ft)		16469.70	
E.G. Slope (ft/ft)	0.001087	Area (sq ft)	37.61	16469.70	99.66
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1183.24	Top Width (ft)	41.34	1012.25	129.65
Vel Total (ft/s)	10.44	Avg. Vel. (ft/s)		10.44	
Max Chl Dpth (ft)	20.84	Hydr. Depth (ft)		16.27	
Conv. Total (cfs)	5217541.0	Conv. (cfs)		5217541.0	
Length Wtd. (ft)	510.50	Wetted Per. (ft)		1018.18	
Min Ch El (ft)	1138.14	Shear (lb/sq ft)		1.10	
Alpha	1.00	Stream Power (lb/ft s)		11.46	
Frctn Loss (ft)	0.62	Cum Volume (acre-ft)	2592.48	14508.79	1276.72
C & E Loss (ft)	0.03	Cum SA (acres)	231.64	890.61	245.21

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1160.67	Element			
Vel Head (ft)	1.69	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.98	Reach Len. (ft)	560.00	510.50	470.00
Crit W.S. (ft)	1151.29	Flow Area (sq ft)		16469.70	
E.G. Slope (ft/ft)	0.001087	Area (sq ft)		16469.70	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1012.25	Top Width (ft)		1012.25	
Vel Total (ft/s)	10.44	Avg. Vel. (ft/s)		10.44	
Max Chl Dpth (ft)	20.84	Hydr. Depth (ft)		16.27	
Conv. Total (cfs)	5217541.0	Conv. (cfs)		5217541.0	
Length Wtd. (ft)	510.50	Wetted Per. (ft)		1018.18	
Min Ch El (ft)	1138.14	Shear (lb/sq ft)		1.10	
Alpha	1.00	Stream Power (lb/ft s)		11.46	
Frctn Loss (ft)	0.62	Cum Volume (acre-ft)		14509.61	0.32
C & E Loss (ft)	0.03	Cum SA (acres)		890.59	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.89

INPUT
Description:
Station Elevation Data num= 169

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18161.32	118918182.36	1186.318272.19	1173.418277.68	1174.3718296.84	1174.62				
18327.04	1175.418351.63	1176.5318365.81	1176.4718388.58	1173.4518404.71	1171.92				
18446.03	1166.118461.79	1165.9918502.06	1164.7218528.23	1163.6618553.47	1163.24				
18598.41	1161.818644.49	1161.0318701.92	1161.2718748.85	1160.9118822.97	1160.98				
18837.4	1160.818915.81	1159.6318968.45	1158.7418983.15	1158.6718996.08	1157.52				
19009.62	1160.319015.83	1160.0819057.14	1158.8119066.94	1159.5119089.99	1160.29				
19119.06	1159.219179.93	1157.8919232.08	1150.4919251.46	1147.819253.61	1147.74				
19274.36	1149.419275.56	1149.6919289.33	1154.4219294.75	1154.7619323.57	1162.64				
19337.79	1166.819346.18	1170.3319348.98	1171.3219356.76	1167.87 19392.1	1153.75				
19419.99	115419429.76	115419442.34	1151.9919445.01	1151.3119459.64	1155.29				
19467.67	1155.219471.52	1155.2919483.77	1143.0219487.24	1139.7219528.76	1138.45				
19558.85	1136.219601.29	1140.0819609.97	1140.8919619.19	1141.219633.53	1141.98				
19640.82	1141.419722.43	1138.7719766.05	1141.1319851.35	1141.2319899.11	1141.41				
19971.6	1141.820028.47	1142.120089.74	1140.2420162.05	1138.7520164.13	1138.79				
20287.09	1142.320291.34	1143.12 20307.8	1146.8120329.94	1151.3720348.08	1151.72				
20368.68	1158.420396.08	1167.7520399.15	1167.0620418.06	1166.1520493.63	1157.15				
20555.01	1161.620570.26	1159.6820578.82	1159.4920608.46	1159.2220621.68	1159.42				
20638.74	1159.620651.79	1161.3820659.22	1161.8620698.49	1161.6220728.25	1161.37				
20744.67	1160.920770.67	1161.38 20785	1161.5120804.72	1162.2620819.52	1162.09				
20838.48	1161.420858.28	1161.1520886.14	1161.6320893.59	1161.6620905.54	1163.3				
20935.3	1163.721015.06	1163.9621093.11	1165.0121110.98	1164.8221127.65	1165.42				
21134.25	1164.621296.92	1164.5921311.66	1164.5421316.66	1164.72 21334.9	1164.56				
21355.48	1175.621391.39	1177.2321394.96	1177.2821400.07	1178.5621427.55	1188.09				
21450.73	1186.821483.68	1187.721495.96	1188.6621508.88	1189.3621573.43	1189.89				
21580.3	1189.821592.27	1188.121680.11	1173.1221681.99	1169.9721688.73	1162.25				
21708.44	1162.321714.52	1160.2821755.73	1161.1921799.28	1163.7121812.85	1164.18				
21862.85	1163.621920.72	1164.5221934.83	1164.5521954.46	1164.7422023.38	1165.15				
22048.76	1165.322090.36	1165.2922124.89	1164.7122171.39	1164.9422212.98	1165.03				
22233.83	1164.122262.05	1162.5922302.38	1163.9522321.75	1164.4222378.71	1165.58				

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22439.74  1166.422445.13 1166.3922478.45 1167.1722486.73  1167.2 22585.5 1167.34
22634.36  1167.422668.78 1167.2822679.97    116722713.73  1166.422753.65 1173.52
22759.09  1173.5 22832.7 1173.2523002.71 1173.8423015.32 1173.7923050.61 1173.31
23077.36  1174.223124.52 1175.3623128.21  1175.623147.58  1177.823156.31 1178.95
23182.18  1179.223220.56 1178.5423281.93 1178.4623334.21 1178.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18161.32     .0419348.98     .0320396.08     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19348.9820396.08              520  490.84     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18161.3219348.98 1171.3220396.0823334.21 1167.75
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CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1160.02	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.97	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.06	Reach Len. (ft)	520.00	490.84	460.00
Crit W.S. (ft)	1151.65	Flow Area (sq ft)		15286.40	
E.G. Slope (ft/ft)	0.001355	Area (sq ft)	727.98	15286.40	9.14
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1149.80	Top Width (ft)	143.35	986.31	20.14
Vel Total (ft/s)	11.25	Avg. Vel. (ft/s)		11.25	
Max Chl Dpth (ft)	21.86	Hydr. Depth (ft)		15.50	
Conv. Total (cfs)	4673368.5	Conv. (cfs)		4673368.5	
Length Wtd. (ft)	490.84	Wetted Per. (ft)		996.85	
Min Ch El (ft)	1136.20	Shear (lb/sq ft)		1.30	
Alpha	1.00	Stream Power (lb/ft s)		14.59	
Frctn Loss (ft)	0.66	Cum Volume (acre-ft)	2587.56	14322.71	1276.13
C & E Loss (ft)	0.01	Cum SA (acres)	230.45	878.89	244.40

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1160.02	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.97	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.06	Reach Len. (ft)	520.00	490.84	460.00
Crit W.S. (ft)	1151.65	Flow Area (sq ft)		15286.40	
E.G. Slope (ft/ft)	0.001355	Area (sq ft)		15286.40	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	986.31	Top Width (ft)		986.31	
Vel Total (ft/s)	11.25	Avg. Vel. (ft/s)		11.25	
Max Chl Dpth (ft)	21.86	Hydr. Depth (ft)		15.50	
Conv. Total (cfs)	4673368.5	Conv. (cfs)		4673368.5	
Length Wtd. (ft)	490.84	Wetted Per. (ft)		996.85	
Min Ch El (ft)	1136.20	Shear (lb/sq ft)		1.30	
Alpha	1.00	Stream Power (lb/ft s)		14.59	
Frctn Loss (ft)	0.66	Cum Volume (acre-ft)		14323.53	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		878.88	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.80

INPUT
Description:
Station Elevation Data num= 188

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     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18195.87  1210.618206.33 1210.0618268.65  1207.718276.94 1206.4918283.96 1202.79
18294.72  1196.1   18328  1195.6 18348.1 1194.8518356.04 1193.3918362.14  1191.1
18363.55  1190.418376.79 1190.8918403.03 1190.6118417.69 1191.3818420.16 1190.98
18433.12  1187.718482.24 1174.0618510.47 1165.9118531.57 1164.6418556.08 1164.03
18589.61  1163.318608.83 1162.9318655.29 1161.9618713.56  1162.2 18738.5 1162.31
 18742.4  1162.318799.21 1161.8518835.11 1161.9618846.72 1157.9818857.05  1160.4
18899.99  1159.618937.49 1161.0518945.96 1158.9318992.28 1157.1618998.83 1156.99
19066.83  1148.419070.07 1148.4619150.04 1151.3119165.16 1159.1819179.04 1164.33
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19192.16  1166.319195.49 1166.4219232.95 1150.4219238.01 1148.57 19280.9 1149.18
 19284.1  1149.219286.96 1149.8819309.57 1154.62 19343.5 1164.43   19350 1166.39
19358.97  1169.619377.34 1161.6319390.65 1162.2319400.98 1162.0819440.36  1153.1
19442.53  1152.619470.25 1155.0719483.92 1153.7119502.11 1140.4419505.02 1138.54
 19552.6  1138.419570.23 1136.3519606.09  1141.819612.72 1142.8419636.74 1140.36
19648.42  1139.419749.09 1138.8419776.44 1138.3319782.55 1138.4319887.19 1138.83
19912.95    113920001.53 1137.4320047.61 1136.6720132.52 1139.6820179.34 1141.16
 20233.4  1141.520271.09 1141.6720287.08 1145.2820323.83 1152.9520330.37  1152.9
20343.75  1152.320373.84 1163.6320381.57 1166.2920391.18 1165.1620399.13 1164.63
20408.31  1165.320429.06 1164.8320451.18 1164.1920458.79 1162.2720470.36 1159.85
20477.35  1159.820491.93 1160.07 20518.7 1160.9620526.46 1161.0320538.42 1161.44
 20552.5  1161.820568.77 1161.75 20595.3 1161.5320629.76 1161.6620662.92 1161.53
20708.54  1161.520747.81 1161.5320775.58 1161.73 20798.6 1161.5520821.58 1161.65
20884.34  1161.320914.55 1161.0420959.94 1159.8621031.24 1160.4221040.75 1160.45
21059.65  1160.321087.69 1159.5921099.74  1159.821116.21 1161.7621127.28 1162.66
21137.95    116321140.46 1163.6321200.32 1166.2921210.81 1167.1421271.48 1170.41
21287.77  1171.821295.81 1172.3821342.69 1174.3721350.38 1174.6321426.93 1178.54
21434.63  1178.5 21457.9 1171.0921479.51 1164.5221490.56 1163.8421503.06 1162.78
21513.46  1162.721527.74 1162.0521536.21 1161.2321562.56 1160.8921573.78    1161
 21584.6  1161.721591.93 1162.0521606.96 1162.16 21640.1 1163.16 21656.9 1163.53
21703.98  1163.921707.22 1164.0321726.09 1163.98 21805.8    116321849.97 1162.23
21891.14  1161.821947.27 1161.3421979.38 1161.2621998.69 1160.9922060.89 1162.34
22079.78  1162.422113.99 1163.1622118.49 1161.5122131.71  1162.422155.67  1162.8
22201.25  1163.722220.21 1164.2622245.94 1164.9722262.29 1166.2322281.29 1165.81
22306.73  1166.222343.14 1166.6422360.44 1166.5522371.75 1165.9922383.67 1165.02
22420.14  1165.822446.45 1166.5522468.98 1166.7222538.97 1167.4122578.44 1167.76
 22579.7  1168.1 22607.9 1172.3422616.63 1172.59 22677.7 1173.5722730.96 1173.31
   22777  1173.722794.36 1173.9222872.47 1174.3122927.16 1174.42 22933.6  1174.9
23008.51  1175.123039.74 1174.8823081.93  1176.123090.79  1176.523108.08 1178.43
23114.74    117923130.35 1178.9223148.09 1179.07

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18195.87     .0419358.97     .0320381.57     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19358.9720381.57               520  512.31     500             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18195.8719358.97  1169.620381.5723148.09 1166.29

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1159.36   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1157.34   Reach Len. (ft)           520.00     512.31     500.00
  Crit W.S. (ft)            1150.59   Flow Area (sq ft)                  15060.97
  E.G. Slope (ft/ft)       0.001324   Area (sq ft)             1611.89   15060.97
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)            1211.48   Top Width (ft)            276.14     935.34
  Vel Total (ft/s)            11.42   Avg. Vel. (ft/s)                     11.42
  Max Chl Dpth (ft)           20.99   Hydr. Depth (ft)                     16.10
  Conv. Total (cfs)       4727836.5   Conv. (cfs)                       4727836.5
  Length Wtd. (ft)           512.31   Wetted Per. (ft)                    943.95
  Min Ch El (ft)            1136.35   Shear (lb/sq ft)                     1.32
  Alpha                        1.00   Stream Power (lb/ft s)               15.06
  Frctn Loss (ft)              0.67   Cum Volume (acre-ft)     2573.60   14151.73    1276.08
  C & E Loss (ft)              0.01   Cum SA (acres)            227.94     868.07     244.30


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1159.36   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1157.34   Reach Len. (ft)           520.00     512.31     500.00
  Crit W.S. (ft)            1150.59   Flow Area (sq ft)                  15060.97
  E.G. Slope (ft/ft)       0.001324   Area (sq ft)                       15060.97
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)             935.34   Top Width (ft)                       935.34
```

Vel Total (ft/s)	11.42	Avg. Vel. (ft/s)	11.42	
Max Chl Dpth (ft)	20.99	Hydr. Depth (ft)	16.10	
Conv. Total (cfs)	4727836.5	Conv. (cfs)	4727836.5	
Length Wtd. (ft)	512.31	Wetted Per. (ft)	943.95	
Min Ch El (ft)	1136.35	Shear (lb/sq ft)	1.32	
Alpha	1.00	Stream Power (lb/ft s)	15.06	
Frctn Loss (ft)	0.67	Cum Volume (acre-ft)	14152.55	0.32
C & E Loss (ft)	0.01	Cum SA (acres)	868.05	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.70

INPUT
Description:
Station Elevation Data num= 177

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18313.4	1207.718	331.21	1190.5	518353.07	1178.8	18357.74	1176.4	918383.22	1173.02
18388.14	1172.318	425.75	1170.5	818484.17	1168.7	218551.42	1167.0	518573.43	1166.72
18584.11	1166.418	612.02	1166.1	18666.45	1165.1	418709.95	1164.5	718726.98	1164.56
18729.96	1164.218	733.93	1163.2	518741.54	1162.5	318742.43	1162.1	818754.36	1163.08
18794.42	1162.618	812.28	1162.6	918870.65	1154.7	118917.38	1147.9	218947.73	1148.51
18977.47	1147.618	991.82	1147.9	819043.31	1149.0	519071.02	1149.34	19075.1	1149.34
19218.77	1147.519	309.85	1147.1	419357.44	1148.89	19370.6	1153.0	119374.03	1154.48
19383.37	1157.319	409.57	1165.8	719416.32	1167.3	919421.68	1168.7	419441.88	1160.62
19459.38	1153.519	474.54	1154.2	519485.11	1154.6	919494.75	1154.6	919501.02	1152.62
19518.83	1152.919	535.86	1153.5	819541.98	1153.519	565.71	1139.8	519619.86	1137.57
19624.35	1137.419	634.06	1138.1	619660.31	1140.4	219662.96	1140.1	519791.68	1137.6
19926.34	1134.319	979.53	1136.7	20001.72	1137.3	420058.56	1139.0	320103.44	1138.63
20193.46	1137.320	218.21	1137.9	220297.42	1140.9	920315.77	1140.8	320327.65	1141.87
20331.56	1143.420	336.16	1143.5	320357.62	1149.4	220366.55	1151.7	520376.48	1153.55
20406.45	116	020424.35	1163.9	820429.66	1164.0	320438.47	1163.4	820446.38	1162.45
20476.02	115	920483.23	1158.6	20515.8	1158.9	820530.06	1159.9	620558.19	1161.28
20591.52	1160.420	616.24	1159.9	120664.46	1158.5	620680.13	1158.6	420702.62	1158.97
20737.58	115	920784.83	1158.7	320829.13	1157.4	720912.47	1159.31	20933.1	1159.79
20954.93	1168.120	977.63	1177.37	20995.9	1178.3	420999.53	1178.6	321081.63	1178.23
21083.63	1178.321	093.55	1179.7	221128.13	1178.7	621190.62	1177.2	721209.18	1169.86
21229.58	1162.821	237.19	1161.4	921239.52	1160.521	268.55	1159.9	721291.89	1164.94
21301.26	1164.621	306.68	1160.4	621324.48	1162.9	221348.89	1164.3	721402.27	1165.51
21434.96	1171.321	449.56	1172.6	21463.69	1174.8	121490.56	1175.2	421526.24	1176.75
21542.59	1176.9	21555.5	1177.5	721594.85	1177.4	521622.38	1182.0	421629.26	1182.57
21641.43	1185.221	667.39	1189.6	221680.98	1193.8	521697.93	1199.2	921733.38	1207.61
21756.81	1212.3	21768.5	120	821815.78	1183.421	825.94	1181.6	921855.64	1176.17
21869.96	1173.421	875.52	1172.6	721880.58	1172.5	221930.63	1170.1	321938.76	1170.01
22003.3	1170.822	072.34	1170.32	22089.3	1170.2	822143.78	1170.4	722201.32	1171.17
22221.23	1171.122	291.67	1171.4	622308.03	1171.6	122363.53	1171.5	22371.52	1171.81
22441.39	1173.922	459.63	1172.9	122477.06	1172.7	122511.23	1172.4	22515.43	1172.41
22546.13	1171.8	22567.5	1171.8	222627.63	1172.7	922675.51	1172.3	122686.47	1172.26
22704.37	1171.522	733.97	1171.2	722742.09	1170.6	222760.68	1176.4	922765.21	1177.15
22771.49	117	722794.55	1175.7	22832.55	1176.3	922848.45	1175.4	222869.41	1174.44
22880.16	1176.522	885.04	1177.5	922896.93	1177.4	722930.49	1176.9	222938.35	1177.12
22981.95	1177.623	029.34	1178.5	123071.34	1179.2	223088.16	1179.47	23096.5	1179.4
23160.94	1179.423	225.52	1179.55						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18313.4	.041	9421.68	.032	0429.66	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19421.68	20429.66	480	491.61	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18313.41	9421.68	1168.74	20429.66	23225.52	1164.03

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1158.68	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.99	Wt. n-Val.		0.030	
W.S. Elev (ft)	1156.69	Reach Len. (ft)	480.00	491.61	500.00
Crit W.S. (ft)	1149.59	Flow Area (sq ft)		15198.66	
E.G. Slope (ft/ft)	0.001289	Area (sq ft)	4115.11	15198.66	

Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1464.75	Top Width (ft)	525.20	939.54	
Vel Total (ft/s)	11.32	Avg. Vel. (ft/s)		11.32	
Max Chl Dpth (ft)	22.39	Hydr. Depth (ft)		16.18	
Conv. Total (cfs)	4791329.0	Conv. (cfs)		4791329.0	
Length Wtd. (ft)	491.61	Wetted Per. (ft)		946.54	
Min Ch El (ft)	1134.30	Shear (lb/sq ft)		1.29	
Alpha	1.00	Stream Power (lb/ft s)		14.62	
Frctn Loss (ft)	0.70	Cum Volume (acre-ft)	2539.41	13973.79	1276.08
C & E Loss (ft)	0.03	Cum SA (acres)	223.16	857.04	244.30

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1158.68	Element			
Vel Head (ft)	1.99	Wt. n-Val.		0.030	
W.S. Elev (ft)	1156.69	Reach Len. (ft)	480.00	491.61	500.00
Crit W.S. (ft)	1149.59	Flow Area (sq ft)		15198.66	
E.G. Slope (ft/ft)	0.001289	Area (sq ft)		15198.66	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	939.54	Top Width (ft)		939.54	
Vel Total (ft/s)	11.32	Avg. Vel. (ft/s)		11.32	
Max Chl Dpth (ft)	22.39	Hydr. Depth (ft)		16.18	
Conv. Total (cfs)	4791329.0	Conv. (cfs)		4791329.0	
Length Wtd. (ft)	491.61	Wetted Per. (ft)		946.54	
Min Ch El (ft)	1134.30	Shear (lb/sq ft)		1.29	
Alpha	1.00	Stream Power (lb/ft s)		14.62	
Frctn Loss (ft)	0.70	Cum Volume (acre-ft)		13974.61	0.32
C & E Loss (ft)	0.03	Cum SA (acres)		857.03	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.61

INPUT
Description:
Station Elevation Data num= 191

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18678.5	1212.418	683.01	1211.031	8689.82	1208.651	8703.07	1203.751	8715.48	1197.08
18718.55	1195.818	720.66	1195.51	8744.02	1195.451	8748.36	1194.651	8750.08	1194.6
18759.03	1190.218	792.02	1157.91	8804.93	1145.341	8829.12	1143.271	8856.12	1158.13
18869.54	1164.718	908.36	1164.211	8915.11	1164.051	8951.93	1163.481	8960.49	1163.42
18973.47	1163.718	982.88	1159.431	9016.44	1146.211	9049.87	1145.771	9063.08	1145.72
19079.13	1146.11	9082.86	1146.021	9107.73	1144.891	9133.21	1145.241	9143.93	1145.87
19188.53	1147.31	9247.86	1145.481	9284.38	1143.851	9314.17	1148.441	9314.76	1148.92
19372.29	1147.9	19392.3	1154.35	19397.5	1156.131	9421.34	1162.451	9434.25	1166.14
19434.8	1165.41	9438.93	1168.421	9443.22	1166.791	9476.46	1154.41	9486.31	1154.09
19501.93	1153.41	9519.36	11541	9529.18	1153.911	9533.42	1152.29	19542.7	1151.89
19551.94	1152.41	9558.35	1151.981	9564.25	1151.981	9583.11	1139.931	9591.56	1134.39
19648.21	1136.71	9677.11	1137.811	9809.86	1133.981	9916.35	1134.791	9935.06	1134.9
19990.46	1139	20010.96	1140.742	0062.96	1140.82	0076.44	1140.7	20137.2	1140.74
20205.46	1141.5	20305.7	1140.732	0341.53	1140.222	0343.81	1140.662	0353.78	1143.7
20380.41	1152	20388.69	1152.72	0419.66	1161.52	0433.82	1165.462	0447.28	1164.42
20458.72	1163.62	0475.45	1161.072	0499.06	1157.272	0531.49	1159.46	20545.4	1157.98
20571.87	1157.52	0578.81	1157.432	0606.24	1157.442	0616.16	1157.322	0640.05	1157.8
20691.04	1159.22	0694.58	1159.392	0702.31	1160.672	0707.85	1161.262	0714.52	1162.18
20723.12	1167.32	0734.57	1173.62	0755.69	1173.742	0780.53	1173.752	0796.22	1174.01
20840.73	1174.2	20850.6	1174.092	0857.79	1173.892	0868.54	1174.312	0895.56	1174.78
20907.19	1172.42	0920.14	1169.14	20926.2	1169.752	0939.07	1165.522	0960.36	1163.32
20975.48	1163.42	0989.85	1161.32	1006.64	1160.32	1028.57	1158.06	21060.5	1158.44
21092.06	1158.42	1120.46	1158.39	21145.3	1158.32	1150.14	1158.442	1173.57	1162.29
21204.33	1166.62	1232.66	1165.132	1234.44	1163.82	1241.62	1161.22	1250.13	1163.07
21260.5	1164.12	1290.65	1165.092	1299.98	1165.732	1315.94	1168.172	1326.38	1170.72
21348.18	1174	21409.65	1182.72	1454.08	1187.772	1464.71	1188.72	1505.76	1190.37
21573.42	1179.92	1596.51	1181.6	21602.4	1181.932	1622.23	1184.822	1655.45	1189.32
21671.98	1191.62	1711.23	1194.45	21728.2	1197.132	1777.27	1203.832	1788.71	1204.26
21819.26	1205.62	1841.15	1206.032	1867.01	1203.192	1903.18	1197.41	21932.3	1194.88
21945.8	1193	21985.87	1185.722	2004.02	1184.45	22027	1184.142	2057.67	1187.79
22075.1	1189.92	2085.84	1188.562	2113.34	1185.452	2115.25	1184.12	2125.69	1182.83

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22154.69  1179.7 22155.4 1179.7422176.65 1181.88   22200 1182.5622220.51 1182.03
22230.57  1181.222264.92 1177.4222278.13 1178.0922302.74 1178.9722350.33 1177.43
22381.18  1175.522383.12 1176.0522397.28 1175.3622403.14 1174.6822437.65 1172.38
22439.41  1172.422472.76 1174.72 22494.1 1175.0622505.84 1175.9322516.42 1175.14
22553.24  1180.522562.01 1180.8922577.08 1180.9622612.44  1183.222617.73 1183.38
22632.53    118522658.81 1185.2322669.56 1185.0522713.55 1181.8422715.82 1182.17
22718.59  1183.922723.52 1182.7522735.39 1183.0422743.11 1182.4122776.65 1180.99
22777.91    1181

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 18678.5     .0419438.93     .0320433.82     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19438.9320433.82              420   571.5     760              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 18678.519438.93 1168.4220433.8222777.91 1165.46

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1157.94   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.29   Wt. n-Val.                            0.030
  W.S. Elev (ft)            1155.65   Reach Len. (ft)            420.00     571.50     760.00
  Crit W.S. (ft)            1149.68   Flow Area (sq ft)                   14158.12
  E.G. Slope (ft/ft)       0.001604   Area (sq ft)              4011.79   14158.12
  Q Total (cfs)           172000.00   Flow (cfs)                         172000.00
  Top Width (ft)            1386.91   Top Width (ft)             460.93     925.98
  Vel Total (ft/s)            12.15   Avg. Vel. (ft/s)                       12.15
  Max Chl Dpth (ft)           21.67   Hydr. Depth (ft)                       15.29
  Conv. Total (cfs)       4294258.5   Conv. (cfs)                        4294258.5
  Length Wtd. (ft)           571.50   Wetted Per. (ft)                      934.31
  Min Ch El (ft)            1133.98   Shear (lb/sq ft)                        1.52
  Alpha                        1.00   Stream Power (lb/ft s)                 18.44
  Frctn Loss (ft)              0.96   Cum Volume (acre-ft)      2494.64   13808.13    1276.08
  C & E Loss (ft)              0.01   Cum SA (acres)             217.73     846.52     244.30


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1157.94   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.29   Wt. n-Val.                            0.030
  W.S. Elev (ft)            1155.65   Reach Len. (ft)            420.00     571.50     760.00
  Crit W.S. (ft)            1149.68   Flow Area (sq ft)                   14158.23
  E.G. Slope (ft/ft)       0.001604   Area (sq ft)                        14158.23
  Q Total (cfs)           172000.00   Flow (cfs)                         172000.00
  Top Width (ft)             925.98   Top Width (ft)                        925.98
  Vel Total (ft/s)            12.15   Avg. Vel. (ft/s)                       12.15
  Max Chl Dpth (ft)           21.67   Hydr. Depth (ft)                       15.29
  Conv. Total (cfs)       4294315.0   Conv. (cfs)                        4294315.0
  Length Wtd. (ft)           571.50   Wetted Per. (ft)                      934.31
  Min Ch El (ft)            1133.98   Shear (lb/sq ft)                        1.52
  Alpha                        1.00   Stream Power (lb/ft s)                 18.44
  Frctn Loss (ft)              0.96   Cum Volume (acre-ft)               13808.95       0.32
  C & E Loss (ft)              0.01   Cum SA (acres)                       846.50       0.18


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.50

INPUT
Description:
Station Elevation Data    num=      99
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
18724.69  1224.318736.78 1219.5918740.72 1217.9418746.27 1217.0418762.15 1207.06
18762.87  1206.718779.35 1201.5318780.37 1201.4418804.96 1196.5818807.77 1195.77
 18813.4  1193.418835.21  1186.218863.88 1163.3718883.84 1146.59 18910.1 1145.79
18943.52  1162.218976.58 1161.2319025.23 1159.8119050.06 1159.0519062.67 1155.45
19088.81  1148.419103.99 1147.8719122.88 1146.9819152.74 1146.2419167.01 1146.34
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19212.01    114619222.05  1145.919247.66 1143.7919287.05 1144.0419295.73 1144.26
19308.12    114519350.49 1146.95 19384.7 1147.3819388.07 1147.3819414.13 1154.24
19421.77  1156.319446.99 1162.6919452.98 1164.4319460.46 1168.1319464.91  1166.3
19478.02  1160.419495.41 1160.5219508.22 1160.4419514.49 1158.7319535.89 1151.98
19549.16  1150.819564.95 1151.31 19579.7 1152.1919590.95 1145.0219596.41 1141.22
19623.73  1140.819639.47 1140.6119660.34 1139.6819721.27 1136.87 19768.9 1134.08
19897.56  1136.119971.91 1135.1120028.81 1134.2520038.11  1134.620049.15 1134.86
20117.01  1139.220150.41 1141.0120157.19 1142.5520260.17 1138.9820290.02 1138.35
20365.62  1141.320376.07  1141.720405.82 1151.5420446.21 1151.9420448.54 1152.35
20489.79  1164.320506.63 1164.7320509.77 1164.73 20520.6 1162.9220538.53 1168.66
20542.37  1169.820552.68 1169.0720605.25 1166.0920627.64 1167.6620657.69 1167.36
20681.46  1166.720690.88 1166.4620703.82 1164.0120710.31 1162.1920726.22 1162.62
 20744.7  1162.720753.41 1160.0420774.01 1167.2820778.57 1169.3120780.54 1169.82
20811.33  1168.3 20827.3 1167.9420859.08 1166.6320875.49  1164.420883.33 1165.77
20891.67  1168.620906.56 1171.6420926.89 1172.5320993.81 1186.59

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18724.69     .0419460.46     .0320506.63     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19460.4620506.63              510  506.96     520              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18724.6919460.46 1168.1320506.6320993.81 1164.73
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1156.97	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.42	Wt. n-Val.		0.030	
W.S. Elev (ft)	1154.56	Reach Len. (ft)	510.00	506.96	520.00
Crit W.S. (ft)	1149.15	Flow Area (sq ft)		13787.19	
E.G. Slope (ft/ft)	0.001754	Area (sq ft)	3077.23	13787.19	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1331.36	Top Width (ft)	402.92	928.44	
Vel Total (ft/s)	12.48	Avg. Vel. (ft/s)		12.48	
Max Chl Dpth (ft)	20.48	Hydr. Depth (ft)		14.85	
Conv. Total (cfs)	4106831.8	Conv. (cfs)		4106831.8	
Length Wtd. (ft)	506.96	Wetted Per. (ft)		934.85	
Min Ch El (ft)	1134.08	Shear (lb/sq ft)		1.61	
Alpha	1.00	Stream Power (lb/ft s)		20.15	
Frctn Loss (ft)	1.01	Cum Volume (acre-ft)	2460.46	13624.81	1276.08
C & E Loss (ft)	0.04	Cum SA (acres)	213.56	834.35	244.30

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1156.97	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.42	Wt. n-Val.		0.030	
W.S. Elev (ft)	1154.56	Reach Len. (ft)	510.00	506.96	520.00
Crit W.S. (ft)	1149.15	Flow Area (sq ft)		13787.42	
E.G. Slope (ft/ft)	0.001754	Area (sq ft)		13787.42	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	928.44	Top Width (ft)		928.44	
Vel Total (ft/s)	12.48	Avg. Vel. (ft/s)		12.48	
Max Chl Dpth (ft)	20.48	Hydr. Depth (ft)		14.85	
Conv. Total (cfs)	4106938.3	Conv. (cfs)		4106938.3	
Length Wtd. (ft)	506.96	Wetted Per. (ft)		934.85	
Min Ch El (ft)	1134.08	Shear (lb/sq ft)		1.61	
Alpha	1.00	Stream Power (lb/ft s)		20.15	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)		13625.63	0.32
C & E Loss (ft)	0.04	Cum SA (acres)		834.34	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.40

INPUT
Description:
Station Elevation Data num= 257

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18652.1	120	518671.59	1200.55	18699.2	1192.2	318707.99	1189.4	118714.68	1186.79
18723.36	118	518763.39	1171.9	318779.65	1168.3	18828.27	1168.4	118858.97	1168.65
18906.14	1168.7	18911.84	1168.8	18935.5	1168.3	18948.16	1164.5	318978.02	1157.09
18991.43	1153.9	18993.58	1154.1	419033.37	1154.6	919043.37	1154.2	719048.94	1154.21
19058.77	1155.4	19061	1155.4	319072.37	1156.3	719083.23	1155.7	119097.13	1154.73
19138.46	1157.5	19155.07	1158.69	19166.8	1160.4	819213.05	1159.5	419241.37	1159.48
19249.06	1159.7	19254.05	1160.3	219283.37	1155.5	219311.47	1150.07	19324	1147.37
19346.26	114	319354.28	1142.1	619356.11	1143.0	319383.67	1149.5	519407.07	1154.11
19408.59	1154.5	19441.58	1164.73	19445	1164.1	819449.43	1164.8	919456.36	1167
19480.62	1155.8	19493.16	1155.2	619503.91	1155.0	919516.58	1152.8	119532.23	1150.2
19549.14	1149.4	19559.75	1150.4	919570.58	1151.7	319577.91	1151.2	619582.95	1144.43
19585.63	1141.6	19594.37	1142.4	919600.79	1143.5	19607.14	1144.8	319609.31	1143.89
19614.57	1142.9	19642.3	1142.5	519646.34	1142.3	119655.98	1142.2	319677.03	1141.26
19785.47	1136.2	19807.92	1135.8	319895.92	1136.1	519914.19	1136.14	20045.5	1133.76
20050.59	1133.8	20171.35	1133.2	120255.63	1134.7	920306.82	1135.7	920337.14	1138.04
20387.05	1141.8	20396.05	1145.8	720408.08	1150.7	920422.65	1151.3	220452.05	1152.87
20470.54	1154.6	20487.47	1155.9	20500.27	1157.3	720515.11	1158.7	220540.48	1158.55
20565.02	1164.5	20574.62	1165.2	420584.25	1172.1	720634.72	1172.0	620641.89	1172.43
20707.14	1172.3	20716.33	1172.3	720721.03	1172.3	20750.05	1170.1	20764.44	1169.4
20772.33	1167.6	20776.01	1167.4	420794.23	1162.0	120800.86	1161.7	20810.3	1161.98
20838.2	1163.3	20845.54	1160.1	720866.66	1166.5	920871.05	1167.99	20875.8	1166.2
20899.66	1165.7	20912.01	1164.9	220916.66	1164.9	320938.55	1165.6	820948.58	1166.45
20975.14	1171.2	21020.84	1175.8	221052.25	1177.7	721102.75	1181.2	521116.56	1182.68
21155.53	1188.3	21201.77	1195.6	521207.52	1195.9	721276.43	1202.8	821289.39	1204.13
21317.85	1200.1	21330.02	1198.3	121339.16	1199.1	121370.97	1200.8	721397.84	1202.14
21460.04	1212.6	21461.59	1212.93	21511.7	1221.68	21546.9	1227.7	821568.77	1231.32
21596.38	1236.7	21640.13	1248.9	921665.43	1254.4	621692.78	1259.56	21697.2	1261.03
21707.51	1262.8	21716.32	1264.1	421791.55	1258.9	721850.25	1252.0	221857.65	1251.19
21863.4	1250.9	21873.08	1249.5	221962.35	1236.3	21967.51	1234.8	822016.88	1223.25
22023.23	122	122031.27	1218.5	822051.75	1221.3	922060.31	1222.41	22065.8	1221.88
22075.24	1221.8	22110.52	1220.6	22144.58	1217.8	22155.42	1217.2	122158.53	1218.51
22163.19	1217.9	22183.22	1217.3	822190.13	1217.5	522193.29	1217.3	122226.28	1216.97
22232.43	1216.4	22242.46	1216.5	22284.81	1216.1	322320.94	1222.5	322333.23	1223.12
22342.68	1222.8	22351.29	1224.6	722382.67	1218.2	622390.51	1216.7	722398.53	1216.19
22438.98	121	222481.19	1205.9	622485.17	1205.8	422495.98	1207.0	122527.13	1211.09
22538.15	1210.5	22559.76	1210.6	422596.84	1207.2	322607.16	1206.6	422631.18	1207.75
22642.13	1208.9	22661.99	1211.4	922692.22	1215.9	622711.98	1218.9	922736.36	1222.44
22759.23	1226.6	22790.77	1230.6	122805.91	1232.9	622825.04	1233.1	522836.73	1232.68
22882.49	1227	22887	1226.6	22917.78	1225.0	722938.05	1223.2	122955.82	1221.49
22986.03	1220.1	22992.72	1219.9	423006.88	1220.1	423022.46	1219.8	223026.55	1219.54
23080.52	1217.3	23088.12	1216.7	923104.31	1216.5	723143.27	1215.0	623148.76	1213.09
23210.02	1216.3	23269.57	1218.8	923283.38	1221.5	23289.05	1222.3	223321.66	1224.79
23339.03	1223.9	23382.95	1229.7	323387.74	1229.7	423463.23	1228.7	23483.01	1229.12
23493.93	1229.1	23502.63	1230.1	723505.14	1230.0	323546.35	1228.46	23548.8	1228.39
23564.58	1228.6	23601.96	1229.2	423609.11	1229.5	323678.59	1231.4	823685.07	1231
23726.3	1231.6	23727.36	1231.35	23756.2	1229.7	323766.62	1230.4	923771.63	1230.44
23785.18	1231.5	23801.99	1230.46	23826.7	1232.6	923886.44	1237.0	223911.27	1238.22
23924.45	1235.9	23934.49	1236.5	723940.75	1237.1	523973.91	1242.3	323982.18	1242.1
24021.62	124	224040.01	1246.7	524072.75	1251.9	524101.71	1252.04	24161.4	1253.55
24168.61	1253.7	24171.81	1255.3	924181.98	1263.1	424201.38	1262.6	24227.48	1260.64
24240.14	1254.9	24260.47	1254.1	824287.05	1247.7	624294.26	1248.0	924294.86	1247.75
24296.66	1255.9	24312.7	1255.49						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18652.1	.05	19456.36	.03	20584.25	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19456.3	20584.25	460	504.7	540	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18652.1	19456.36	1167	20584.25	24312.7	1172.17

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1155.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.30	Wt. n-Val.		0.035	
W.S. Elev (ft)	1153.64	Reach Len. (ft)	460.00	504.70	540.00
Crit W.S. (ft)	1147.84	Flow Area (sq ft)		14146.43	
E.G. Slope (ft/ft)	0.002259	Area (sq ft)	636.80	14146.43	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1059.83	Top Width (ft)	111.57	948.27	
Vel Total (ft/s)	12.16	Avg. Vel. (ft/s)		12.16	
Max Chl Dpth (ft)	20.43	Hydr. Depth (ft)		14.92	
Conv. Total (cfs)	3619201.5	Conv. (cfs)		3619201.5	
Length Wtd. (ft)	504.70	Wetted Per. (ft)		956.29	
Min Ch El (ft)	1133.21	Shear (lb/sq ft)		2.09	
Alpha	1.00	Stream Power (lb/ft s)		25.36	
Frctn Loss (ft)	1.18	Cum Volume (acre-ft)	2438.72	13462.26	1276.08
C & E Loss (ft)	0.02	Cum SA (acres)	210.55	823.43	244.30

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1155.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.30	Wt. n-Val.		0.035	
W.S. Elev (ft)	1153.64	Reach Len. (ft)	460.00	504.70	540.00
Crit W.S. (ft)	1147.84	Flow Area (sq ft)		14146.66	
E.G. Slope (ft/ft)	0.002258	Area (sq ft)		14146.66	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	948.27	Top Width (ft)		948.27	
Vel Total (ft/s)	12.16	Avg. Vel. (ft/s)		12.16	
Max Chl Dpth (ft)	20.43	Hydr. Depth (ft)		14.92	
Conv. Total (cfs)	3619289.3	Conv. (cfs)		3619289.3	
Length Wtd. (ft)	504.70	Wetted Per. (ft)		956.29	
Min Ch El (ft)	1133.21	Shear (lb/sq ft)		2.09	
Alpha	1.00	Stream Power (lb/ft s)		25.36	
Frctn Loss (ft)	1.18	Cum Volume (acre-ft)		13463.08	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		823.42	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.31

INPUT
Description:
Station Elevation Data num= 360

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14992.66	116815	026.77	1165.5815	030.91	1165.4315	037.28	1165.7915	069.86	1165.82
15070.88	1165.415	076.04	1166.05	15112.2	1165.5615	117.18	1165.4215	176.25	1165.01
15268.31	1164.915	278.91	1164.6415	310.35	1164.4715	385.32	1164.7515	490.94	1165.08
15609.05	1165.415	625.53	1165.2915	743.82	1165.4515	753.35	1165.4515	780.48	1165.01
15782.39	116515	782.71	1165.6115	787.31	1165.615	811.68	1165.0215	873.21	1164.99
15876.97	1165.215	893.61	1165.5815	958.36	1166.1215	987.66	1165.4815	998.23	1165.4
16040.32	1164.616	069.32	1164.2116	070.86	1164.116	186.62	1164.716	236.42	1164.9
16259.59	1165.216	271.17	1164.7416	276.84	1164.6116	297.25	1164.4116	321.85	1164.32
16329.32	1164.416	345.93	1164.9116	406.44	1165.3116	457.25	1164.3716	498.72	1164.04
16502.17	1164.416	544.29	1164.36	16621.4	1164.5616	666.91	1163.616	685.69	1163.52
16694.4	1163.816	717.07	1164.3616	743.19	1164.8116	765.72	1164.1516	823.31	1163.91
16851.5	1163.816	935.43	1163.8416	940.48	1163.7917	003.31	1163.5117	032.32	1163.48
17077.17	1163.317	096.38	1163.1517	107.31	1163.3917	112.64	1163.2117	125.84	1163.24
17161.34	1163.517	169.83	1163.4217	179.29	1163.5617	207.69	1163.2117	221.38	1162.96
17239.25	1163.117	363.03	1164.3317	429.76	1164.3517	603.57	1163.9817	646.95	1164.09
17662.19	1163.417	722.37	1164.3217	801.03	1165.3117	825.03	1166.6117	856.64	1166.07
17901.38	1165.317	920.15	1165.317	958.22	1165.9118	003.49	1166.1918	024.75	1170.8
18038.49	1173.918	053.57	1174.2818	097.69	1178.8118	109.61	1179.78	18124.8	1180.63
18152.51	1181.818	164.97	1181.25	18180.7	1181.3718	206.05	1183.77	18213.6	1183.47
18219.9	1182.118	233.66	1176.7818	241.03	1176.418	270.87	1176.4518	283.06	1176.9

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18335.33  1176.818373.63 1176.5118418.06 1176.2318454.07 1175.5818466.72 1174.93
18495.09  1174.418504.69 1173.4118523.54 1171.2718563.58 1165.3718572.61 1163.79
18588.35  1162.818593.96 1161.4218608.67 1160.4218622.35 1160.4518651.41 1161.09
18709.57  1159.218728.59 1158.67 18749.8 1157.6618796.71 1157.2618803.75 1157.23
18846.73  1156.118868.26 1155.6818901.47 1155.89   18906 1156.0818912.34 1155.78
18948.25  1154.718955.06 1155.9418961.51 1156.8218967.74 1155.5618980.99 1153.68
19023.11  1154.319073.86 1154.52   19114 1153.94 19122.7 1153.8519156.14 1152.27
19180.43  1151.519195.14 1153.55 19209.9 1154.8619219.29  1153.919227.23 1151.53
19234.54  1149.819264.72 1148.6119301.88 1149.1819312.66 1149.2419321.63 1153.07
19345.79  1160.519359.34 1163.9319372.89 1160.0119413.94 1149.2719424.31 1150.02
19429.24  1151.419449.21 1156.05 19463.2 1155.7519470.75 1155.3719482.11 1155.91
19490.16  1156.519515.24 1157.13 19531.2 1156.8519538.57 1156.7519557.52 1156.05
19569.37  1154.319578.77 1150.9819621.52 1135.6919639.77 1137.6619664.83 1138.36
19683.76  1139.619696.55  1140.219792.75 1135.9519801.48 1135.6319809.81 1135.64
19930.61  1135.6 19952.6 1135.0220048.27 1131.9820062.35 1131.4320118.13 1132.03
20188.61  1132.820256.01 1133.8320328.23 1134.9920344.49 1135.7320398.32 1150.33
20444.56  1149.320448.72 1149.2420500.55 1153.6220532.37 1161.4920549.57 1160.51
20591.58  1159.620597.21 1163.8720601.99 1167.9620608.04 1168.4920623.32  1170.4
20633.95  1185.320664.73 1188.4320691.02  1193.520695.44 1193.75 20731.2 1194.65
20757.37  1194.220802.53 1193.12 20875.7 1170.62 20935.8 1151.7721005.31 1151.38
21015.05  1151.421032.49 1159.2121042.59 1162.2821067.91 1162.0621078.72 1162.04
21087.43  1159.821108.55 1164.4321119.27 1166.3721136.51 1168.7821156.97 1171.78
21181.55  1173.221224.13 1174.0921225.45 1174.0321237.16  1172.621259.28 1173.37
21263.15  1173.921265.76 1174.5421290.93  1181.321294.11 1181.6821307.93  1184.1
21311.44  1183.921323.42 1186.2721330.86    1188 21350.2 1190.65 21383.8 1193.88
21398.66  1195.921412.73 1196.4821457.15 1199.4621465.59 1200.2921472.67  1200.3
21494.72  1199.821504.66 1199.8721507.38 1199.5221513.07 1199.3721550.52 1198.95
21556.04  1198.4 21565.5    119721600.52 1193.2121641.91 1195.5321657.62 1196.55
21668.48  1196.821700.06 1197.98 21737.6  1200.921761.14 1203.2121776.72 1202.99
21809.75  1199.321823.95 1196.4121841.35 1193.7221860.33  1190.621870.81 1190.21
 21876.3  1189.321877.32 1189.7321886.39 1182.7921889.31 1181.9321924.92 1198.54
 21961.7  1215.821975.74 1215.3122016.97 1216.2222055.35 1216.9922056.74 1217.21
22068.24  1217.522085.46 1210.45 22117.6 1198.1722144.34 1201.08 22149.1  1201.3
22172.26  1201.822186.69 1198.3822212.74 1192.7822227.35 1191.2322233.87 1190.29
22238.41  1190.522264.25 1201.5422293.82 1203.8922306.88 1204.9622329.48 1205.83
22355.06  1204.2 22362.7    120522381.95 1207.7322409.35 1210.8322422.38 1213.82
22452.03  1217.322465.67 1218.1822486.12  1219.922521.14 1223.9922541.54 1227.41
22565.51  1228.622593.47 1229.64 22599.6 1229.7422632.35 1229.8822692.15 1230.21
22784.26  1230.222789.94 1230.1722834.18 1226.2422845.95 1225.0822870.24 1222.04
22905.22  1217.122943.77 1215.8322971.27 1217.64 22987.3 1217.5323025.79 1216.08
23041.13    121423057.71 1212.1823080.55 1212.9723085.19  1212.623101.56 1209.96
 23105.4  1210.623114.94 1213.9723128.29 1214.0623160.28 1220.45 23227.7  1228.4
23255.87    122723295.71 1225.98 23316.8    122523353.75  1229.123362.76 1229.54
23379.03  1231.9 23383.4 1231.6123400.86 1232.7623414.28 1233.17 23442.3 1232.57
23485.54  1233.523504.28 1234.0523519.98 1232.6823538.44 1233.3823551.81    1234
23569.64  1228.823593.85  1222.623612.35 1221.1423617.94 1220.7723666.63 1216.36
23697.32  1211.923718.26 1215.2423733.11 1216.4123754.02 1217.7123795.87 1220.44
23802.27  1220.723810.78 1221.2423853.34 1227.82 23875.7 1228.4323907.31 1226.99
23909.33  1227.223932.78 1230.3323960.12 1231.3523975.15 1230.8224031.74 1235.23
24040.61    123624080.63 1234.3324095.36 1232.62 24155.4 1226.3824156.92 1226.27
24172.86  1226.224184.42 1228.2624192.42 1228.4324207.32 1228.1624216.38 1228.09
24250.41  1227.724277.05 1230.7924281.21 1231.1724306.16 1232.5824320.27 1232.46

Manning's n Values         num=        3
     Sta   n Val     Sta   n Val     Sta   n Val
14992.66     .0519515.24    .03520532.37     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19515.2420532.37              220  262.31     780              .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14992.6619515.24 1157.1320532.3724320.27 1161.49

CROSS SECTION OUTPUT     Profile #PF#1

  E.G. Elev (ft)            1154.73   Element                    Left OB    Channel    Right OB
  Vel Head (ft)                2.48   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1152.25   Reach Len. (ft)             220.00     262.31     780.00
  Crit W.S. (ft)            1146.78   Flow Area (sq ft)                    13599.09
  E.G. Slope (ft/ft)       0.002427   Area (sq ft)                336.16   13599.09      56.33
  Q Total (cfs)           172000.00   Flow (cfs)                           172000.00
```

Top Width (ft)	1145.99	Top Width (ft)	154.18	909.14	82.67
Vel Total (ft/s)	12.65	Avg. Vel. (ft/s)		12.65	
Max Chl Dpth (ft)	20.82	Hydr. Depth (ft)		14.96	
Conv. Total (cfs)	3491377.8	Conv. (cfs)		3491377.8	
Length Wtd. (ft)	262.31	Wetted Per. (ft)		914.47	
Min Ch El (ft)	1131.43	Shear (lb/sq ft)		2.25	
Alpha	1.00	Stream Power (lb/ft s)		28.50	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)	2433.58	13301.53	1275.73
C & E Loss (ft)	0.34	Cum SA (acres)	209.15	812.67	243.78

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1154.73	Element			
Vel Head (ft)	2.48	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.25	Reach Len. (ft)	220.00	262.31	780.00
Crit W.S. (ft)	1146.78	Flow Area (sq ft)		13599.21	
E.G. Slope (ft/ft)	0.002427	Area (sq ft)		13599.21	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	909.14	Top Width (ft)		909.14	
Vel Total (ft/s)	12.65	Avg. Vel. (ft/s)		12.65	
Max Chl Dpth (ft)	20.82	Hydr. Depth (ft)		14.96	
Conv. Total (cfs)	3491421.0	Conv. (cfs)		3491421.0	
Length Wtd. (ft)	262.31	Wetted Per. (ft)		914.47	
Min Ch El (ft)	1131.43	Shear (lb/sq ft)		2.25	
Alpha	1.00	Stream Power (lb/ft s)		28.50	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)		13302.34	0.32
C & E Loss (ft)	0.34	Cum SA (acres)		812.66	0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.26

INPUT
Description: Upstream face of New Mill Ave Bridge

Station Elevation Data num= 54

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19250.65	1153.419	328.32	1160	19346.95	1155	19365.49	1150	19373.18	1148
19379.27	1147.819	405.67	1147.219	421.12	1147	19428.81	1148	19435.43	1150
19440.82	1151	19460.6	1152	19485.32	1153	19495.66	1152.21	19516.22	1152.05
19528.92	1144.09	19563.1	1136.95	19641.28	1134.4	19667	1129.59	19688.2	1134.81
19787.1	1134.03	19809.84	1128.07	19835.67	1132.66	19929.08	1131.17	19952.46	1124.29
19982.57	1130.01	20059.41	1129.66	20080.56	1127.32	20095.93	1126.57	20108.75	1125.93
20132.81	1129.24	20168.05	1130.17	20215.61	1131.51	20238.76	1127.62	20269.26	1131.4
20316.63	1134.36	20387.64	1136.47	20404.56	1148.37	20438.76	1149.18	20479.33	1160.19
20557.7	1158.23	20571.28	1158	20594.5	1157.82	20611.72	1157	20615.34	1157
20632.65	1156.22	20645.98	1155.92	20657.81	1156.5	20658.7	1155.12	20676.27	1156.3
20734.91	1175.52	20745.77	1179.22	20783.91	1191.92	20790.27	1195.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19250.65	.05	19495.66	.035	20479.33	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19495.66	20479.33	101.04	101.04	101.04	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19250.65	19495.66	1155	20479.33	20790.27	1160.19

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1154.01	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.35	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.66	Reach Len. (ft)	26.50	26.50	26.50
Crit W.S. (ft)	1142.60	Flow Area (sq ft)		18112.34	
E.G. Slope (ft/ft)	0.000973	Area (sq ft)	396.98	18112.34	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1082.89	Top Width (ft)	126.98	955.91	
Vel Total (ft/s)	9.33	Avg. Vel. (ft/s)		9.33	
Max Chl Dpth (ft)	28.37	Hydr. Depth (ft)		18.95	
Conv. Total (cfs)	5419186.0	Conv. (cfs)		5419186.0	
Length Wtd. (ft)	26.50	Wetted Per. (ft)		968.11	
Min Ch El (ft)	1124.29	Shear (lb/sq ft)		1.14	
Alpha	1.00	Stream Power (lb/ft s)		10.60	
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)	2431.73	13206.04	1275.23
C & E Loss (ft)	0.03	Cum SA (acres)	208.44	807.05	243.04

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1154.01	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.35	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.65	Reach Len. (ft)	26.50	26.50	26.50
Crit W.S. (ft)	1142.60	Flow Area (sq ft)		18111.99	
E.G. Slope (ft/ft)	0.000973	Area (sq ft)		18111.99	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	955.90	Top Width (ft)		955.90	
Vel Total (ft/s)	9.33	Avg. Vel. (ft/s)		9.33	
Max Chl Dpth (ft)	28.36	Hydr. Depth (ft)		18.95	
Conv. Total (cfs)	5417359.5	Conv. (cfs)		5417359.5	
Length Wtd. (ft)	26.50	Wetted Per. (ft)		968.56	
Min Ch El (ft)	1124.29	Shear (lb/sq ft)		1.14	
Alpha	1.00	Stream Power (lb/ft s)		10.60	
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)		13206.86	0.32
C & E Loss (ft)	0.03	Cum SA (acres)		807.04	0.18

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 221.25

INPUT
Description: New Mill Avenue Bridge (North Bound)
Distance from Upstream XS = 26.5
Deck/Roadway Width = 48
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 23

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19250.65	1175	115019250.66		1175	116419321.13		1175.65	1170.65
19391.61	1175.95	116419462.08		1176.25	1171.2519532.56		1176.55	1164.8
19603.04	1176.85	1171.8519673.52		1177.15	1165.219743.99		1177.45	1172.45
19814.47	1177.82	1165.819884.95		1177.52	1172.5219955.43		1177.22	1165.2
20025.9	1176.92	1171.9220096.38		1176.62	1164.820166.86		1176.32	1171.32
20237.34	1176.02	116420307.81		1175.72	1170.7220378.29		1175.42	1163.5
20448.77	1175.12	1170.1220519.25		1174.82	116320589.72		1174.52	1169.52
20660.19	1174.22	1163 20660.2		1174.22	1150			

Upstream Bridge Cross Section Data
Station Elevation Data num= 54

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19250.65	1153.419328.32		116019346.95		115519365.49		115019373.18		1148
19379.27	1147.819405.67		1147.219421.12		114719428.81		114819435.43		1150
19440.82	1151 19460.6		115219485.32		115319495.66		1152.2119516.22		1152.05
19528.92	1144.09 19563.1		1136.9519641.28		1134.4 19667		1129.59 19688.2		1134.81
19787.1	1134.0319809.84		1128.0719835.67		1132.6619929.08		1131.1719952.46		1124.29
19982.57	1130.0120059.41		1129.6620080.56		1127.3220095.93		1126.5720108.75		1125.93
20132.81	1129.2420168.05		1130.1720215.61		1131.5120238.76		1127.6220269.26		1131.4

```
20316.63 1134.3620387.64 1136.4720404.56 1148.3720438.76 1149.1820479.33 1160.19
 20557.7 1158.2320571.28    1158 20594.5  1157.820611.72    115720615.34    1157
20632.65  1156.220645.98  1155.920657.81  1156.5 20658.7  1155.120676.27  1156.3
20734.91  1175.520745.77  1179.220783.91  1191.920790.27  1195.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19250.65     .0519495.66    .03520479.33     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19495.6620479.33             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19250.6519495.66    115520479.3320790.27 1160.19

Downstream  Deck/Roadway Coordinates
    num=      23
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19250.65    1175    115019250.66    1175    116419321.13 1175.65 1170.65
19391.61 1175.95    116419462.08 1176.25 1171.2519532.56 1176.55  1164.8
19603.04 1176.85 1171.8519673.52 1177.15  1165.219743.99 1177.45 1172.45
19814.47 1177.82  1165.819884.95 1177.52 1172.5219955.43 1177.22  1165.2
 20025.9 1176.92 1171.9220096.38 1176.62  1164.820166.86 1176.32 1171.32
20237.34 1176.02    116420307.81 1175.72 1170.7220378.29 1175.42  1163.5
20448.77 1175.12 1170.1220519.25 1174.82    116320589.72 1174.52 1169.52
20660.19 1174.22    1163 20660.2 1174.22    1150

Downstream Bridge Cross Section Data
Station Elevation Data    num=      54
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19250.65  1153.419328.32    116019346.95    115519365.49    115019373.18    1148
19379.27  1147.819405.67  1147.219421.12    114719428.81    114819435.43    1150
19440.82    1151 19460.6    115219485.32    115319495.66 1152.2119516.22 1152.05
19528.92 1144.09 19563.1 1136.9519641.28  1134.4   19667 1129.59 19688.2 1134.81
 19787.1 1134.0319809.84 1128.0719835.67 1132.6619929.08 1131.1719952.46 1124.29
19982.57 1130.0120059.41 1129.6620080.56 1127.3220095.93 1126.5720108.75 1125.93
20132.81 1129.2420168.05 1130.1720215.61 1131.5120238.76 1127.6220269.26  1131.4
20316.63 1134.3620387.64 1136.4720404.56 1148.3720438.76 1149.1820479.33 1160.19
 20557.7 1158.2320571.28    1158 20594.5  1157.820611.72    115720615.34    1157
20632.65  1156.220645.98  1155.920657.81  1156.5 20658.7  1155.120676.27  1156.3
20734.91  1175.520745.77  1179.220783.91  1191.920790.27  1195.4

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19250.65     .0519495.66    .03520479.33     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19495.6620479.33             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19250.6519495.66    115520479.3320790.27 1160.19

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  9

Pier Data
Pier Station     Upstream=19391.61    Downstream=19391.61
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165
```

```
Pier Data
Pier Station     Upstream=19532.56    Downstream=19532.56
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1140      10    1165
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1140      10    1165

Pier Data
Pier Station     Upstream=19673.52    Downstream=19673.52
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1130      10    1166
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1130      10    1166

Pier Data
Pier Station     Upstream=19814.47    Downstream=19814.47
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1130      10    1166
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1130      10    1166

Pier Data
Pier Station     Upstream=19955.43    Downstream=19955.43
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1028      10    1166
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1028      10    1166

Pier Data
Pier Station     Upstream=20096.38    Downstream=20096.38
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1025      10    1166
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1025      10    1166

Pier Data
Pier Station     Upstream=20237.34    Downstream=20237.34
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1125      10    1165
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1125      10    1165

Pier Data
Pier Station     Upstream=20378.29    Downstream=20378.29
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1128      10    1165
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1128      10    1165

Pier Data
Pier Station     Upstream=20519.25    Downstream=20519.25
Upstream     num=        2
    Width   Elev    Width   Elev
      10    1125      10    1165
Downstream     num=        2
    Width   Elev    Width   Elev
      10    1125      10    1165
```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
Energy
Momentum Cd = 1.2
Yarnell KVal = 1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1154.01	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1152.66	E.G. Elev (ft)	1153.94	1153.85
Q Total (cfs)	169000.00	W.S. Elev (ft)	1152.26	1152.15
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1143.29	1143.28
Q Weir (cfs)		Max Chl Dpth (ft)	27.38	27.27
Weir Sta Lft (ft)		Vel Total (ft/s)	10.39	10.45
Weir Sta Rgt (ft)		Flow Area (sq ft)	16272.86	16175.59
Weir Submerg		Froude # Chl	0.43	0.43
Weir Max Depth (ft)		Specif Force (cu ft)	219790.19	218329.56
Min Top Rd (ft)	1160.19	Hydr Depth (ft)	18.40	18.45
Min El Prs (ft)	1172.52	W.P. Total (ft)	1186.58	1177.50
Delta EG (ft)	0.28	Conv. Total (cfs)	3958245.0	3938995.0
Delta WS (ft)	0.33	Top Width (ft)	985.24	973.88
BR Open Area (sq ft)	35810.05	Frctn Loss (ft)	0.09	0.04
BR Open Vel (ft/s)	10.45	C & E Loss (ft)	0.00	0.09
Coef of Q		Shear Total (lb/sq ft)	1.56	1.58
Br Sel Method	Energy only	Power Total (lb/ft s)	16.21	16.49

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1154.01	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1152.65	E.G. Elev (ft)	1153.94	1153.85
Q Total (cfs)	169000.00	W.S. Elev (ft)	1152.26	1152.15
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1143.29	1143.28
Q Weir (cfs)		Max Chl Dpth (ft)	27.38	27.27
Weir Sta Lft (ft)		Vel Total (ft/s)	10.39	10.45
Weir Sta Rgt (ft)		Flow Area (sq ft)	16272.54	16175.27
Weir Submerg		Froude # Chl	0.43	0.43
Weir Max Depth (ft)		Specif Force (cu ft)	219785.28	218324.73
Min Top Rd (ft)	1175.11	Hydr Depth (ft)	18.40	18.45
Min El Prs (ft)	1172.52	W.P. Total (ft)	1186.57	1177.45
Delta EG (ft)	0.28	Conv. Total (cfs)	3958130.3	3938985.5
Delta WS (ft)	0.33	Top Width (ft)	884.46	876.90
BR Open Area (sq ft)	30549.84	Frctn Loss (ft)	0.09	0.04
BR Open Vel (ft/s)	10.45	C & E Loss (ft)	0.00	0.09
Coef of Q		Shear Total (lb/sq ft)	1.56	1.58
Br Sel Method	Energy only	Power Total (lb/ft s)	16.21	16.49

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.24

INPUT
Description: Downstream face of New Mill Ave Bridge

Station Elevation Data num= 54

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19250.65	1153.419	328.32	116	019346.95	115519365.49		115019373.18		1148
19379.27	1147.819	405.67	1147.219	421.12	114719428.81		114819435.43		1150
19440.82	1151	19460.6	115219485.32		115319495.66	1152.211	9516.22	1152.05	
19528.92	1144.09	19563.1	1136.951	9641.28	1134.4	19667	1129.59	19688.2	1134.81
19787.1	1134.031	9809.84	1128.071	9835.67	1132.661	9929.08	1131.171	9952.46	1124.29
19982.57	1130.012	0059.41	1129.662	0080.56	1127.322	0095.93	1126.572	0108.75	1125.93
20132.81	1129.242	0168.05	1130.172	0215.61	1131.512	0238.76	1127.622	0269.26	1131.4
20316.63	1134.362	0387.64	1136.472	0404.56	1148.372	0438.76	1149.182	0479.33	1160.19
20557.7	1158.232	0571.28	1158	20594.5	1157.82	0611.72	115720615.34		1157
20632.65	1156.22	0645.98	1155.92	0657.81	1156.5	20658.7	1155.12	0676.27	1156.3
20734.91	1175.52	0745.77	1179.22	0783.91	1191.92	0790.27	1195.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19250.65	.05	19495.66	.03	20479.33	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19495.66	20479.33	185.11	185.11	185.11	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19250.65	19495.66	115	20479.33	20790.27	1160.19

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1153.73	Element			
Vel Head (ft)	1.40	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.32	Reach Len. (ft)	185.11	185.11	185.11
Crit W.S. (ft)	1142.61	Flow Area (sq ft)		17796.79	
E.G. Slope (ft/ft)	0.001029	Area (sq ft)	357.30	17796.79	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1067.96	Top Width (ft)	113.27	954.69	
Vel Total (ft/s)	9.50	Avg. Vel. (ft/s)		9.50	
Max Chl Dpth (ft)	28.03	Hydr. Depth (ft)		18.64	
Conv. Total (cfs)	5267326.5	Conv. (cfs)		5267326.5	
Length Wtd. (ft)	185.11	Wetted Per. (ft)		966.85	
Min Ch El (ft)	1124.29	Shear (lb/sq ft)		1.18	
Alpha	1.00	Stream Power (lb/ft s)		11.23	
Frctn Loss (ft)	0.19	Cum Volume (acre-ft)	2430.99	13167.36	1275.23
C & E Loss (ft)	0.00	Cum SA (acres)	208.20	804.97	243.04

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1153.72	Element			
Vel Head (ft)	1.40	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.32	Reach Len. (ft)	185.11	185.11	185.11
Crit W.S. (ft)	1142.61	Flow Area (sq ft)		17796.44	
E.G. Slope (ft/ft)	0.001030	Area (sq ft)		17796.44	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	954.69	Top Width (ft)		954.69	
Vel Total (ft/s)	9.50	Avg. Vel. (ft/s)		9.50	
Max Chl Dpth (ft)	28.03	Hydr. Depth (ft)		18.64	
Conv. Total (cfs)	5266739.0	Conv. (cfs)		5266739.0	
Length Wtd. (ft)	185.11	Wetted Per. (ft)		966.97	
Min Ch El (ft)	1124.29	Shear (lb/sq ft)		1.18	
Alpha	1.00	Stream Power (lb/ft s)		11.23	
Frctn Loss (ft)	0.20	Cum Volume (acre-ft)		13168.18	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		804.95	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.2

INPUT
Description: Upstream face of Old Mill Ave Bridge

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

```
   19150  1163.219151.72  1163.3 19171.3  1159.719182.63  1153.219194.41  1153.2
 19194.5  1154.119194.68  1155.119215.25  1150.119236.37    115019248.15    1150
19268.09    115619282.77    116019303.26    116019324.72    115519340.96    1151
19362.53  1150.919373.13    115219396.42  1151.919419.26    115219443.64  1150.2
19452.61    115019459.68    115119483.61    115119487.05    115019493.21  1147.7
 19497.2  1146.819510.34    114019518.41  1138.419520.86  1138.319530.74  1135.8
 19541.7    113519562.09  1133.119589.92    113219604.42  1131.819611.22  1131.4
 19619.1  1131.519649.46    113119658.43    113119682.63    113119704.66    1131
19713.07    1131 19754.5    113119776.89    113119797.37    1131 19817.4  1130.1
19836.52    113019839.42    113019861.27  1129.419867.06  1129.419900.87    1129
19922.35    112919945.55    112919963.49  1128.219984.25    112820003.37  1128.7
20014.97  1128.8 20036.9    112920062.37  1129.220084.03  1129.420099.26  1129.8
20128.71    113020145.21    113020161.79  1131.120183.09    113220199.13  1132.8
20227.41  1133.420254.78  1134.420274.45  1135.120298.28    113620315.23  1137.3
20321.57    1138 20342.6  1143.720347.59    114520352.93    1146 20377.4    1147
20396.98    115420410.66    115920427.79    115920440.12    1156 20468.5  1155.2
20484.07    115620494.69    115620509.54  1157.620525.22    115920533.29    1160
20550.32    116120562.56    116220580.14    116320602.54  1164.820606.89  1165.6
20617.12  1166.620624.55  1166.620643.58  1168.320667.87  1168.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   19150     .0519419.26    .03520410.66     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19419.2620410.66            91.95   91.95   91.95             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1915019419.26    115520410.6620667.87    1159

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1153.53   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.43   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1152.10   Reach Len. (ft)            22.98     22.98     22.98
  Crit W.S. (ft)            1142.32   Flow Area (sq ft)                  17628.11
  E.G. Slope (ft/ft)       0.001079   Area (sq ft)              124.66   17628.11
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1103.28   Top Width (ft)            130.87     972.41
  Vel Total (ft/s)             9.59   Avg. Vel. (ft/s)                      9.59
  Max Chl Dpth (ft)           24.10   Hydr. Depth (ft)                     18.13
  Conv. Total (cfs)       5145964.0   Conv. (cfs)                        5145964.0
  Length Wtd. (ft)            22.98   Wetted Per. (ft)                    977.70
  Min Ch El (ft)            1128.00   Shear (lb/sq ft)                      1.21
  Alpha                        1.00   Stream Power (lb/ft s)               11.64
  Frctn Loss (ft)              0.03   Cum Volume (acre-ft)      2429.97  13092.09   1275.23
  C & E Loss (ft)              0.03   Cum SA (acres)             207.68    800.87    243.04


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1153.53   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.43   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1152.10   Reach Len. (ft)            22.98     22.98     22.98
  Crit W.S. (ft)            1142.32   Flow Area (sq ft)                  17627.75
  E.G. Slope (ft/ft)       0.001079   Area (sq ft)                       17627.75
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             972.40   Top Width (ft)                       972.40
  Vel Total (ft/s)             9.59   Avg. Vel. (ft/s)                      9.59
  Max Chl Dpth (ft)           24.10   Hydr. Depth (ft)                     18.13
  Conv. Total (cfs)       5145449.0   Conv. (cfs)                        5145449.0
  Length Wtd. (ft)            22.98   Wetted Per. (ft)                    977.80
  Min Ch El (ft)            1128.00   Shear (lb/sq ft)                      1.21
  Alpha                        1.00   Stream Power (lb/ft s)               11.64
  Frctn Loss (ft)              0.03   Cum Volume (acre-ft)              13092.91      0.32
  C & E Loss (ft)              0.03   Cum SA (acres)                      800.86      0.18


BRIDGE                  RIVER: Salt River
```

REACH: Reach 4 RS: 221.195

INPUT
Description: Old Mill Avenue Bridge (South Bound)
Distance from Upstream XS = 22.98
Deck/Roadway Width = 46
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 23

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19154.58	1175.53	1149.4919191.08	1175.69	1149.4919266.08	1175.87	1159.67		
19341.58	1176.15	1149.9519415.83	1176.42	1170.2219490.08	1176.69	1150.49		
19560.06	1176.89	1170.6919628.48	1177.19	1150.9919696.46	1177.25	1171.05		
19764.16	1177.31	1151.1119831.22	1177.35	1171.1519897.65	1177.4	1151.2		
19964.72	1177.37	1171.0420031.61	1177.35	1151.1520099.31	1177.24	1171.04		
20167.28	1177.18	1150.9820234.62	1176.89	1170.6920301.87	1176.72	1150.52		
20371.22	1176.45	1170.2520444.72	1176.18	1149.9820519.22	1175.92	1169.72		
20593.72	1175.66	1149.4620631.92	1175.54	1149.46				

Upstream Bridge Cross Section Data
Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19150	1163.219151.72	1163.3	19171.3	1159.719182.63	1153.219194.41	1153.2			
19194.5	1154.119194.68	1155.119215.25	1150.119236.37	115019248.15	1150				
19268.09	115619282.77	116019303.26	116019324.72	115519340.96	1151				
19362.53	1150.919373.13	115219396.42	1151.919419.26	115219443.64	1150.2				
19452.61	115019459.68	115119483.61	115119487.05	115019493.21	1147.7				
19497.2	1146.819510.34	114019518.41	1138.419520.86	1138.319530.74	1135.8				
19541.7	113519562.09	1133.119589.92	113219604.42	1131.819611.22	1131.4				
19619.1	1131.519649.46	113119658.43	113119682.63	113119704.66	1131				
19713.07	1131 19754.5	113119776.89	113119797.37	1131 19817.4	1130.1				
19836.52	113019839.42	113019861.27	1129.419867.06	1129.419900.87	1129				
19922.35	112919945.55	112919963.49	1128.219984.25	112820003.37	1128.7				
20014.97	1128.8 20036.9	112920062.37	1129.220084.03	1129.420099.26	1129.8				
20128.71	113020145.21	113020161.79	1131.120183.09	113220199.13	1132.8				
20227.41	1133.420254.78	1134.420274.45	1135.120298.28	113620315.23	1137.3				
20321.57	1138 20342.6	1143.720347.59	114520352.93	1146 20377.4	1147				
20396.98	115420410.66	115920427.79	115920440.12	1156 20468.5	1155.2				
20484.07	115620494.69	115620509.54	1157.620525.22	115920533.29	1160				
20550.32	116120562.56	116220580.14	116320602.54	1164.820606.89	1165.6				
20617.12	1166.620624.55	1166.620643.58	1168.320667.87	1168.6					

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19150	.05	19419.26	.03	20410.66	.05

Bank Sta: Left	Right	Coeff Contr.	Expan.
19419.2	20410.66	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19150	19419.26	115	20410.66	20667.87	1159

Downstream Deck/Roadway Coordinates
num= 23

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19154.58	1175.53	1149.4919191.08	1175.69	1149.4919266.08	1175.87	1159.67		
19341.58	1176.15	1149.9519415.83	1176.42	1170.2219490.08	1176.69	1150.49		
19560.06	1176.89	1170.6919628.48	1177.19	1150.9919696.46	1177.25	1171.05		
19764.16	1177.31	1151.1119831.22	1177.35	1171.1519897.65	1177.4	1151.2		
19964.72	1177.37	1171.0420031.61	1177.35	1151.1520099.31	1177.24	1171.04		
20167.28	1177.18	1150.9820234.62	1176.89	1170.6920301.87	1176.72	1150.52		
20371.22	1176.45	1170.2520444.72	1176.18	1149.9820519.22	1175.92	1169.72		
20593.72	1175.66	1149.4620631.92	1175.54	1149.46				

Downstream Bridge Cross Section Data
Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19150	1163.219151.72	1163.3	19171.3	1159.719182.63	1153.219194.41	1153.2			
19194.5	1154.119194.68	1155.119215.25	1150.119236.37	115019248.15	1150				
19268.09	115619282.77	116019303.26	116019324.72	115519340.96	1151				

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19362.53  1150.919373.13    115219396.42  1151.919419.26    115219443.64  1150.2
19452.61    115019459.68    115119483.61    115119487.05    115019493.21  1147.7
 19497.2  1146.819510.34    114019518.41  1138.419520.86  1138.319530.74  1135.8
 19541.7    113519562.09  1133.119589.92    113219604.42  1131.819611.22  1131.4
 19619.1  1131.519649.46    113119658.43    113119682.63    113119704.66    1131
19713.07    1131 19754.5    113119776.89    113119797.37    1131 19817.4  1130.1
19836.52    113019839.42    113019861.27  1129.419867.06  1129.419900.87    1129
19922.35    112919945.55    112919963.49  1128.219984.25    112820003.37  1128.7
20014.97  1128.8 20036.9    112920062.37  1129.220084.03  1129.420099.26  1129.8
20128.71    113020145.21    113020161.79  1131.120183.09    113220199.13  1132.8
20227.41  1133.420254.78  1134.420274.45  1135.120298.28    113620315.23  1137.3
20321.57    1138 20342.6  1143.720347.59    114520352.93    1146 20377.4    1147
20396.98    115420410.66    115920427.79    115920440.12    1156 20468.5  1155.2
20484.07    115620494.69    115620509.54  1157.620525.22    115920533.29    1160
20550.32    116120562.56    116220580.14    116320602.54  1164.820606.89  1165.6
20617.12  1166.620624.55  1166.620643.58  1168.320667.87  1168.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   19150     .0519419.26    .03520410.66     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19419.2620410.66             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1915019419.26    115520410.6620667.87    1159

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  9

Pier Data
Pier Station     Upstream=19341.58    Downstream=19341.58
Upstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155
Downstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155

Pier Data
Pier Station     Upstream=19490.08    Downstream=19490.08
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=19628.48    Downstream=19628.48
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=19764.16    Downstream=19764.16
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
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       9    1125       9    1155

Pier Data
Pier Station     Upstream=19897.65    Downstream=19897.65
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20031.61    Downstream=20031.61
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20167.28    Downstream=20167.28
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20301.87    Downstream=20301.87
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20444.72    Downstream=20444.72
Upstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155
Downstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1153.53   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1152.10   E.G. Elev (ft)               1153.47       1153.38
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1151.78       1151.67
```

Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1142.85	1142.84
Q Weir (cfs)		Max Chl Dpth (ft)	23.78	23.67
Weir Sta Lft (ft)		Vel Total (ft/s)	10.44	10.51
Weir Sta Rgt (ft)		Flow Area (sq ft)	16182.38	16086.55
Weir Submerg		Froude # Chl	0.50	0.44
Weir Max Depth (ft)		Specif Force (cu ft)	218852.14	217469.09
Min Top Rd (ft)	1162.77	Hydr Depth (ft)	17.88	17.80
Min El Prs (ft)	1171.15	W.P. Total (ft)	1161.50	1158.00
Delta EG (ft)	0.25	Conv. Total (cfs)	3977888.8	3946629.3
Delta WS (ft)	0.30	Top Width (ft)	973.20	969.99
BR Open Area (sq ft)	26765.75	Frctn Loss (ft)	0.08	0.03
BR Open Vel (ft/s)	10.51	C & E Loss (ft)	0.00	0.07
Coef of Q		Shear Total (lb/sq ft)	1.57	1.59
Br Sel Method	Energy only	Power Total (lb/ft s)	16.40	16.71

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

		Element	Inside BR US	Inside BR DS
E.G. US. (ft)	1153.53	E.G. Elev (ft)	1153.47	1153.38
W.S. US. (ft)	1152.10	W.S. Elev (ft)	1151.77	1151.67
Q Total (cfs)	169000.00	Crit W.S. (ft)	1142.85	1142.84
Q Bridge (cfs)	169000.00	Max Chl Dpth (ft)	23.77	23.67
Q Weir (cfs)		Vel Total (ft/s)	10.44	10.51
Weir Sta Lft (ft)		Flow Area (sq ft)	16182.05	16086.21
Weir Sta Rgt (ft)		Froude # Chl	0.44	0.44
Weir Submerg		Specif Force (cu ft)	218847.33	217464.36
Weir Max Depth (ft)		Hydr Depth (ft)	17.88	17.80
Min Top Rd (ft)	1176.38	W.P. Total (ft)	1161.48	1157.99
Min El Prs (ft)	1171.15	Conv. Total (cfs)	3977782.3	3946517.8
Delta EG (ft)	0.25	Top Width (ft)	905.11	903.72
Delta WS (ft)	0.30	Frctn Loss (ft)	0.08	0.03
BR Open Area (sq ft)	25090.83	C & E Loss (ft)	0.00	0.07
BR Open Vel (ft/s)	10.51	Shear Total (lb/sq ft)	1.57	1.59
Coef of Q		Power Total (lb/ft s)	16.40	16.71
Br Sel Method	Energy only			

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.19

INPUT
Description: Downstream face of Old Mill Ave Bridge

Station Elevation Data num= 94

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19150	1163.219	151.72	1163.3	19171.3	1159.719	182.63	1153.219	194.41	1153.2
19194.5	1154.119	194.68	1155.119	215.25	1150.119	236.37	115	019248.15	1150
19268.09	115	619282.77	116	019303.26	116	019324.72	115	519340.96	1151
19362.53	1150.919	373.13	115	219396.42	1151.919	419.26	115	219443.64	1150.2
19452.61	115	019459.68	115	119483.61	115	119487.05	115	019493.21	1147.7
19497.2	1146.819	510.34	114	019518.41	1138.419	520.86	1138.319	530.74	1135.8
19541.7	113	519562.09	1133.119	589.92	113	219604.42	1131.819	611.22	1131.4
19619.1	1131.519	649.46	113	119658.43	113	119682.63	113	119704.66	1131
19713.07	1131	19754.5	113	119776.89	113	119797.37	1131	19817.4	1130.1
19836.52	113	019839.42	113	019861.27	1129.419	867.06	1129.419	900.87	1129
19922.35	112	919945.55	112	919963.49	1128.219	984.25	112	820003.37	1128.7
20014.97	1128.8	20036.9	112	920062.37	1129.220	084.03	1129.420	099.26	1129.8
20128.71	113	020145.21	113	020161.79	1131.120	183.09	113	220199.13	1132.8
20227.41	1133.420	254.78	1134.420	274.45	1135.120	298.28	113	620315.23	1137.3
20321.57	1138	20342.6	1143.720	347.59	114	520352.93	1146	20377.4	1147
20396.98	115	420410.66	115	920427.79	115	920440.12	1156	20468.5	1155.2
20484.07	115	620494.69	115	620509.54	1157.620	525.22	115	920533.29	1160
20550.32	116	120562.56	116	220580.14	116	320602.54	1164.820	606.89	1165.6
20617.12	1166.620	624.55	1166.620	643.58	1168.320	667.87	1168.6		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19150	.05	19419.26	.03	20410.66	.05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

```
     19419.2620410.66              790  650.87     300             .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1915019419.26    115520410.6620667.87    1159
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1153.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.47	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.80	Reach Len. (ft)	790.00	650.87	300.00
Crit W.S. (ft)	1142.33	Flow Area (sq ft)		17340.64	
E.G. Slope (ft/ft)	0.001134	Area (sq ft)	93.34	17340.64	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1048.37	Top Width (ft)	79.45	968.92	
Vel Total (ft/s)	9.75	Avg. Vel. (ft/s)		9.75	
Max Chl Dpth (ft)	23.80	Hydr. Depth (ft)		17.90	
Conv. Total (cfs)	5018996.0	Conv. (cfs)		5018996.0	
Length Wtd. (ft)	650.87	Wetted Per. (ft)		974.16	
Min Ch El (ft)	1128.00	Shear (lb/sq ft)		1.26	
Alpha	1.00	Stream Power (lb/ft s)		12.28	
Frctn Loss (ft)	0.72	Cum Volume (acre-ft)	2429.78	13057.32	1275.23
C & E Loss (ft)	0.00	Cum SA (acres)	207.52	798.93	243.04

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1153.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.47	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.80	Reach Len. (ft)	790.00	650.87	300.00
Crit W.S. (ft)	1142.33	Flow Area (sq ft)		17340.17	
E.G. Slope (ft/ft)	0.001134	Area (sq ft)		17340.17	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	968.91	Top Width (ft)		968.91	
Vel Total (ft/s)	9.75	Avg. Vel. (ft/s)		9.75	
Max Chl Dpth (ft)	23.80	Hydr. Depth (ft)		17.90	
Conv. Total (cfs)	5018794.0	Conv. (cfs)		5018794.0	
Length Wtd. (ft)	650.87	Wetted Per. (ft)		974.15	
Min Ch El (ft)	1128.00	Shear (lb/sq ft)		1.26	
Alpha	1.00	Stream Power (lb/ft s)		12.28	
Frctn Loss (ft)	0.72	Cum Volume (acre-ft)		13058.14	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		798.91	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.06

INPUT
Description: Upstream face of SPRR bridge

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18840	1164.719	100.66	1166.53	19100.76	1162.21	9100.86	1158.71	9131.19	1154.4
19133.48	1154.41	9162.91	1152	19165.2	1152	19194.54	1148.61	9195.73	1148.6
19196.93	1148.61	9226.26	1148	19228.55	1148	19257.89	1148	19260.28	1148
19289.61	1147.6	19291.9	1147.61	9321.44	1146	19326.41	1146	19331.88	1145.7
19359.72	1145	19370.37	1145	19402.49	1144	19419.89	1144.51	9427.85	1144.5
19432.82	1146.31	9452.71	1147.81	9498.46	1150	19517.35	1151	19571.55	1150.3
19579.51	1150.31	9619.89	1132.11	9682.54	1126	19723.61	1128	19731.57	1128
19801.88	1126.81	9874.97	1126	19882.93	1126	19953.04	1126	20026.94	1126.1
20034.89	1126.12	0110.17	1130	20187.95	1133.4	20196.3	1133.42	0272.28	1135
20350.05	1135.22	0358.01	1135.22	0380.68	1135	20414.49	1145.72	0440.35	1151.3
20479.13	1157.42	0494.05	1151.82	0501.31	1150	20509.27	1150	20515.93	1150
20603.15	1151.42	0611.11	1151.62	0631.99	1167.522	0640.04	1167.52	0868.78	1168

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18840	.05	19517.35	.03	20479.13	.05

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19517.3520479.13            84.74   84.74   84.74              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1884019517.35    115520479.1320868.78  1157.4

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1152.56   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.48   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1151.07   Reach Len. (ft)            31.00     31.00      31.00
  Crit W.S. (ft)            1140.98   Flow Area (sq ft)                 17282.71
  E.G. Slope (ft/ft)       0.001076   Area (sq ft)             1326.93  17282.71      53.91
  Q Total (cfs)           169000.00   Flow (cfs)                       169000.00
  Top Width (ft)            1351.93   Top Width (ft)            344.15    921.95      85.83
  Vel Total (ft/s)             9.78   Avg. Vel. (ft/s)                     9.78
  Max Chl Dpth (ft)           25.07   Hydr. Depth (ft)                    18.75
  Conv. Total (cfs)       5152827.0   Conv. (cfs)                     5152827.0
  Length Wtd. (ft)            31.00   Wetted Per. (ft)                   928.65
  Min Ch El (ft)            1126.00   Shear (lb/sq ft)                     1.25
  Alpha                        1.00   Stream Power (lb/ft s)              12.22
  Frctn Loss (ft)              0.04   Cum Volume (acre-ft)     2416.90  12798.65    1275.04
  C & E Loss (ft)              0.02   Cum SA (acres)            203.67    784.80     242.75


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1152.56   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.48   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1151.07   Reach Len. (ft)            31.00     31.00      31.00
  Crit W.S. (ft)            1140.98   Flow Area (sq ft)                 17282.38
  E.G. Slope (ft/ft)       0.001076   Area (sq ft)                      17282.38
  Q Total (cfs)           169000.00   Flow (cfs)                       169000.00
  Top Width (ft)             921.95   Top Width (ft)                     921.95
  Vel Total (ft/s)             9.78   Avg. Vel. (ft/s)                     9.78
  Max Chl Dpth (ft)           25.07   Hydr. Depth (ft)                    18.75
  Conv. Total (cfs)       5152396.0   Conv. (cfs)                     5152396.0
  Length Wtd. (ft)            31.00   Wetted Per. (ft)                   928.72
  Min Ch El (ft)            1126.00   Shear (lb/sq ft)                     1.25
  Alpha                        1.00   Stream Power (lb/ft s)              12.22
  Frctn Loss (ft)              0.04   Cum Volume (acre-ft)              12799.47       0.32
  C & E Loss (ft)              0.02   Cum SA (acres)                      784.79       0.18


BRIDGE                  RIVER: Salt River
REACH: Reach 4             RS: 221.055

INPUT
Description: Southern Pacific Railraod
Distance from Upstream XS =      31
Deck/Roadway Width        =      23
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      20
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18840  1164.7  1164.719100.66 1166.53 1166.5319100.76 1166.53 1162.23
19131.19  1166.6  1162.319162.91 1166.65 1162.3519194.54 1166.72 1162.42
19226.26 1166.78  1162.519257.89 1166.84 1162.5419289.61 1167.09 1161.79
19321.44 1167.09 1161.7919419.89 1167.45 1162.1519571.55 1167.45 1162.15
19723.61 1167.46 1162.1619874.97 1167.48 1162.1820026.94 1167.51 1162.21
20187.95 1167.53 1162.2320350.05 1167.55 1162.2520501.31 1167.57 1162.27
20603.15  1167.5  1162.220631.99 1167.52 1163.07

Upstream Bridge Cross Section Data
Station Elevation Data    num=      60
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18840  1164.719100.66 1166.5319100.76  1162.219100.86  1158.719131.19  1154.4
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19133.48  1154.419162.91    1152 19165.2    115219194.54  1148.619195.73  1148.6
19196.93  1148.619226.26    114819228.55    114819257.89    114819260.28    1148
19289.61  1147.6 19291.9  1147.619321.44    114619326.41    114619331.88  1145.7
19359.72    114519370.37    114519402.49    114419419.89  1144.519427.85  1144.5
19432.82  1146.319452.71  1147.819498.46    115019517.35    115119571.55  1150.3
19579.51  1150.319619.89  1132.119682.54    112619723.61    112819731.57    1128
19801.88  1126.819874.97    112619882.93    112619953.04    112620026.94  1126.1
20034.89  1126.120110.17    113020187.95  1133.4 20196.3  1133.420272.28    1135
20350.05  1135.220358.01  1135.220380.68    113520414.49  1145.720440.35  1151.3
20479.13  1157.420494.05  1151.820501.31    115020509.27    115020515.93    1150
20603.15  1151.420611.11  1151.620631.99 1167.5220640.04  1167.520868.78    1168

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18840     .0519517.35    .03520479.13     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19517.3520479.13             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1884019517.35    115520479.1320868.78  1157.4

Downstream  Deck/Roadway Coordinates
    num=      20
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18840  1164.7  1164.719100.66 1166.53 1166.5319100.76 1166.53 1162.23
19131.19  1166.6  1162.319162.91 1166.65 1162.3519194.54 1166.72 1162.42
19226.26 1166.78  1162.519257.89 1166.84 1162.5419289.61 1167.09 1161.79
19321.44 1167.09 1161.7919419.89 1167.45 1162.1519571.55 1167.45 1162.15
19723.61 1167.46 1162.1619874.97 1167.48 1162.1820026.94 1167.51 1162.21
20187.95 1167.53 1162.2320350.05 1167.55 1162.2520501.31 1167.57 1162.27
20603.15  1167.5  1162.220631.99 1167.52 1163.07

Downstream Bridge Cross Section Data
Station Elevation Data    num=      60
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18840  1164.719100.66 1166.5319100.76  1162.219100.86  1158.719131.19  1154.4
19133.48  1154.419162.91    1152 19165.2    115219194.54  1148.619195.73  1148.6
19196.93  1148.619226.26    114819228.55    114819257.89    114819260.28    1148
19289.61  1147.6 19291.9  1147.619321.44    114619326.41    114619331.88  1145.7
19359.72    114519370.37    114519402.49    114419419.89  1144.519427.85  1144.5
19432.82  1146.319452.71  1147.819498.46    115019517.35    115119571.55  1150.3
19579.51  1150.319619.89  1132.119682.54    112619723.61    112819731.57    1128
19801.88  1126.819874.97    112619882.93    112619953.04    112620026.94  1126.1
20034.89  1126.120110.17    113020187.95  1133.4 20196.3  1133.420272.28    1135
20350.05  1135.220358.01  1135.220380.68    113520414.49  1145.720440.35  1151.3
20479.13  1157.420494.05  1151.820501.31    115020509.27    115020515.93    1150
20603.15  1151.420611.11  1151.620631.99 1167.5220640.04  1167.520868.78    1168

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18840    .03519517.35    .03520479.13    .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19517.3520479.13             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1884019517.35    115520479.1320868.78  1157.4

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  16

Pier Data
Pier Station     Upstream=19133.34    Downstream=19133.34
```

```
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19165.06    Downstream=19165.06
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream= 19193.7    Downstream= 19193.7
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19228.41    Downstream=19228.41
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19260.04    Downstream=19260.04
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19291.76    Downstream=19291.76
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19323.59    Downstream=19323.59
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19424.89    Downstream=19424.89
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
```

```
Pier Station     Upstream=19576.55    Downstream=19576.55
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=19728.61    Downstream=19728.61
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=19879.97    Downstream=19879.97
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20031.94    Downstream=20031.94
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20192.95    Downstream=20192.95
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20355.05    Downstream=20355.05
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20506.31    Downstream=20506.31
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20608.15    Downstream=20608.15
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
Energy
Momentum Cd = 1.2
Yarnell KVal = 1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream water surface

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1152.56	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1151.07	E.G. Elev (ft)	1152.50	1152.46
Q Total (cfs)	169000.00	W.S. Elev (ft)	1150.80	1150.76
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1141.39	1141.38
Q Weir (cfs)		Max Chl Dpth (ft)	24.80	24.76
Weir Sta Lft (ft)		Vel Total (ft/s)	10.44	10.46
Weir Sta Rgt (ft)		Flow Area (sq ft)	16189.90	16149.89
Weir Submerg		Froude # Chl	0.42	0.42
Weir Max Depth (ft)		Specif Force (cu ft)	227777.16	227156.89
Min Top Rd (ft)	1164.70	Hydr Depth (ft)	18.88	18.92
Min El Prs (ft)	1166.53	W.P. Total (ft)	1076.26	1071.86
Delta EG (ft)	0.19	Conv. Total (cfs)	4188476.0	4182654.8
Delta WS (ft)	0.23	Top Width (ft)	1236.27	1228.04
BR Open Area (sq ft)	33186.61	Frctn Loss (ft)	0.04	0.04
BR Open Vel (ft/s)	10.46	C & E Loss (ft)	0.00	0.05
Coef of Q		Shear Total (lb/sq ft)	1.53	1.54
Br Sel Method	Energy only	Power Total (lb/ft s)	15.96	16.07

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1152.56	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1151.07	E.G. Elev (ft)	1152.50	1152.46
Q Total (cfs)	169000.00	W.S. Elev (ft)	1150.80	1150.76
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1141.39	1141.38
Q Weir (cfs)		Max Chl Dpth (ft)	24.80	24.76
Weir Sta Lft (ft)		Vel Total (ft/s)	10.44	10.46
Weir Sta Rgt (ft)		Flow Area (sq ft)	16189.58	16149.58
Weir Submerg		Froude # Chl	0.42	0.42
Weir Max Depth (ft)		Specif Force (cu ft)	227772.30	227152.05
Min Top Rd (ft)	1167.45	Hydr Depth (ft)	18.88	18.92
Min El Prs (ft)	1166.53	W.P. Total (ft)	1076.23	1071.82
Delta EG (ft)	0.19	Conv. Total (cfs)	4188423.5	4182607.3
Delta WS (ft)	0.23	Top Width (ft)	857.58	853.74
BR Open Area (sq ft)	25997.88	Frctn Loss (ft)	0.04	0.04
BR Open Vel (ft/s)	10.46	C & E Loss (ft)	0.00	0.05
Coef of Q		Shear Total (lb/sq ft)	1.53	1.54
Br Sel Method	Energy only	Power Total (lb/ft s)	15.96	16.07

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.05

INPUT
Description: Downstream face of SPRR bridge

Station Elevation Data num= 60

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18840	1164.719	100.66	1166.53	19100.76	1162.21	9100.86	1158.71	9131.19	1154.4
19133.48	1154.419	162.91	1152	19165.2	1152	19194.54	1148.61	9195.73	1148.6
19196.93	1148.619	226.26	1148	19228.55	1148	19257.89	1148	19260.28	1148
19289.61	1147.6	19291.9	1147.61	9321.44	1146	19326.41	1146	19331.88	1145.7
19359.72	1145	19370.37	1145	19402.49	1144	19419.89	1144.51	9427.85	1144.5
19432.82	1146.319	452.71	1147.81	9498.46	1150	19517.35	1151	19571.55	1150.3
19579.51	1150.319	619.89	1132.11	9682.54	1126	19723.61	1128	19731.57	1128
19801.88	1126.819	874.97	1126	19882.93	1126	19953.04	1126	20026.94	1126.1
20034.89	1126.120	110.17	1130	20187.95	1133.4	20196.3	1133.42	0272.28	1135
20350.05	1135.220	358.01	1135.22	0380.68	1135	20414.49	1145.72	0440.35	1151.3
20479.13	1157.420	494.05	1151.82	0501.31	1150	20509.27	1150	20515.93	1150
20603.15	1151.420	611.11	1151.62	0631.99	1167.52	20640.04	1167.52	0868.78	1168

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18840	.035	19517.35	.035	20479.13	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19517.3	20479.13	210	167.68	80	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18840	19517.35	1155	20479.13	20868.78	1157.4

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1152.36	Element			
Vel Head (ft)	1.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1150.84	Reach Len. (ft)	210.00	167.68	80.00
Crit W.S. (ft)	1140.99	Flow Area (sq ft)		17070.64	
E.G. Slope (ft/ft)	0.001100	Area (sq ft)	1247.82	17070.64	35.84
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1318.35	Top Width (ft)	339.18	908.67	70.49
Vel Total (ft/s)	9.90	Avg. Vel. (ft/s)		9.90	
Max Chl Dpth (ft)	24.84	Hydr. Depth (ft)		18.79	
Conv. Total (cfs)	5096675.5	Conv. (cfs)		5096675.5	
Length Wtd. (ft)	167.68	Wetted Per. (ft)		915.35	
Min Ch El (ft)	1126.00	Shear (lb/sq ft)		1.28	
Alpha	1.00	Stream Power (lb/ft s)		12.67	
Frctn Loss (ft)	0.21	Cum Volume (acre-ft)	2414.58	12766.48	1274.98
C & E Loss (ft)	0.03	Cum SA (acres)	203.04	783.09	242.62

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1152.36	Element			
Vel Head (ft)	1.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1150.84	Reach Len. (ft)	210.00	167.68	80.00
Crit W.S. (ft)	1140.99	Flow Area (sq ft)		17070.31	
E.G. Slope (ft/ft)	0.001100	Area (sq ft)		17070.31	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	908.64	Top Width (ft)		908.64	
Vel Total (ft/s)	9.90	Avg. Vel. (ft/s)		9.90	
Max Chl Dpth (ft)	24.84	Hydr. Depth (ft)		18.79	
Conv. Total (cfs)	5096620.5	Conv. (cfs)		5096620.5	
Length Wtd. (ft)	167.68	Wetted Per. (ft)		915.32	
Min Ch El (ft)	1126.00	Shear (lb/sq ft)		1.28	
Alpha	1.00	Stream Power (lb/ft s)		12.67	
Frctn Loss (ft)	0.21	Cum Volume (acre-ft)		12767.30	0.32
C & E Loss (ft)	0.03	Cum SA (acres)		783.08	0.18

CROSS SECTION **RIVER: Salt River**
REACH: Reach 4 RS: 221.02

INPUT
Description:
Station Elevation Data num= 285

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

```
 15044.3    116115046.74 1160.8115054.99 1160.9915067.31 1160.6915118.09 1159.67
15188.86  1159.915261.54 1159.9715295.45 1160.1415332.02 1158.6115339.82 1158.24
15380.65  1157.715388.69 1157.7615513.83 1159.1115577.72 1158.4215622.59 1158.37
15670.19  1158.315740.55 1159.1815755.81 1159.1915780.94 1158.42 15794.9 1158.07
15840.15    1157 15862.8 1158.0415868.58 1158.2515878.24 1158.2715931.25 1157.44
16026.39  1158.3 16042.1 1158.3516063.87 1158.0616173.44 1157.7216198.77 1157.57
16240.13  1156.916263.89 1157.7716286.32 1156.4916315.25 1157.6816425.38 1156.64
 16472.1  1156.216481.97 1156.1316484.62 1156.2416543.72 1155.97 16656.3 1155.75
16680.03  1156.416701.67 1155.6816728.06 1157.12 16750.9 1156.9516855.76 1157.05
16901.91  1157.116958.94 1156.6217074.38 1155.6617090.35 1156.28 17098.2 1156.49
17121.74  1155.117157.02 1155.3917177.67 1155.3717290.67 1155.8117359.48 1156.44
17401.65  1156.617496.83 1157.4717533.23 1157.7117610.32 1157.9617651.54 1158.27
17781.11  1158.517812.58 1158.8317889.77 1158.4817945.95 1158.4318065.89 1158.44
18105.38  1158.318202.28 1157.8818260.45 1157.8418310.83 1158.05   18378 1158.54
 18419.2  1157.718429.86 1157.3818444.45 1157.7718468.43 1158.2518483.22 1156.71
18487.84  1156.7   18552 1157.6218598.58 1157.51 18671.6 1157.4718724.73 1157.28
18802.71  1157.118855.51 1156.8918882.85  1156.418939.89 1157.0118962.01  1156.9
18980.67  1156.718996.52 1156.7519046.82 1156.3919054.65 1155.9519125.72 1152.64
 19144.8  1157.3 19147.3 1157.8119158.87 1158.7819187.22 1152.7319199.35 1150.01
19201.06  1149.319219.83 1149.8719235.69 1149.9519258.88 1149.0119304.33 1148.04
   19324  1149.519332.28 1149.3819355.27 1148.9819376.72 1147.7219403.68 1146.08
19419.08  1147.1 19423.4 1147.2919495.54 1154.05 19517.5 1152.0319549.33 1135.36
19552.87  1133.419554.34 1133.5319573.39 1132.4719596.68 1135.0219601.53 1134.82
19702.75    113119732.46 1130.5319814.47 1130.3419836.04 1130.1819975.05  1131.8
20064.35  1130.620095.86 1130.06 20155.2 1130.7520233.83 1131.55 20325.5 1131.38
20386.81  1145.120408.54  1147.820419.42 1150.0620451.78 1156.5920491.77 1150.65
20510.97  1153.420514.94 1153.3720528.31 1152.7620572.59 1150.3120585.04 1150.64
20626.37  1151.520662.58 1160.2420712.66  1177.620718.86 1179.5720725.27 1182.13
20753.98  1190.920766.38 1193.5620794.56 1193.4920802.53 1193.0320860.02 1192.48
20891.04    118920921.83 1184.5520973.53 1176.5821007.78 1169.71 21020.9  1166.7
21043.59  1167.921058.76 1167.3921077.96  1165.121084.16 1164.5121125.91 1172.49
21137.04  1175.421155.09 1177.0621179.84 1178.32 21199.1  1179.721217.63 1179.96
21324.45  1182.921329.09 1182.8921337.12 1180.9721339.29 1181.3121359.14 1183.27
21368.63  1182.221379.89  1181.421410.49 1180.9921439.46 1180.7821455.92 1180.06
21468.95  1179.321470.21 1179.7421475.48 1179.9821499.92 1177.2821505.23  1176.9
 21509.4  1177.821555.88 1191.1721570.26 1193.9721572.09 1194.7821600.37 1195.61
21610.52  1195.621618.72 1196.1321666.21 1196.3721680.57 1195.6921714.58 1194.78
21730.11  1194.521742.46 1194.7221795.72 1191.81 21831.3  1190.321844.02 1190.21
 21857.8  1193.421868.24 1193.7721900.08 1195.1721920.57 1195.0221934.48 1195.09
21969.69  1194.521976.39 1193.8721983.44 1192.3322009.08 1186.9922014.93 1184.49
22029.94  1180.922037.04 1182.4622091.03  1189.922162.07 1190.8722166.94 1190.86
 22215.5  1190.322266.04 1190.12 22298.3 1190.6622366.78 1191.9122403.52 1189.31
22423.03  1187.822445.82 1188.4322464.84 1187.8522480.95 1189.1422494.56  1191.3
22503.83  1193.722519.51 1197.4522549.87 1199.2322551.71 1199.2822593.44 1188.58
22602.18  1185.622606.36 1186.2422646.46 1190.4822659.37 1191.9222679.25 1194.21
22689.24  1194.122712.89 1193.6422724.02 1195.1522742.53 1197.0522793.34 1205.23
22794.69  1205.422840.11 1208.5922859.08 1209.79 22867.2 1210.3722871.18 1210.29
22901.97  1208.622925.46 1204.6423009.68 1186.9123011.18 1186.9423034.04 1191.67
23060.11  1195.323082.52 1198.0423142.98 1202.9323146.07 1203.2723211.74 1208.21
23222.67  1208.123242.42 1208.1323281.11 1207.76 23320.2 1206.15 23334.1 1205.52
23424.31    120223453.03  1200.923472.73 1201.06 23496.6 1201.1623505.04 1201.36
23591.98  1201.9   23598 1201.4423626.23  1199.923657.13 1197.9823660.64 1198.11
23675.64  1198.123734.52 1195.3923759.52 1194.3723785.55 1193.0323838.22 1191.33
23861.28  1192.223891.49 1195.2623911.55 1198.0423951.75 1201.5423963.55 1202.44
   23973  1202.723990.63  1205.124027.75 1209.5124034.76 1210.3724051.49 1211.52
24083.81  1214.424148.96 1215.7424163.71 1211.2224178.37 1212.1424204.33 1211.22
 24212.4  1210.124281.78  1202.424340.67  1209.424367.64 1210.2124376.47 1210.31

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 15044.3    .03519495.54    .03520451.78    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19495.5420451.78              530  503.55     450              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 15044.319495.54 1154.0520451.7824376.47 1156.59

CROSS SECTION OUTPUT     Profile #PF#1

  E.G. Elev (ft)             1152.13   Element                    Left OB    Channel   Right OB
```

Vel Head (ft)	1.77	Wt. n-Val.		0.035	
W.S. Elev (ft)	1150.36	Reach Len. (ft)	530.00	503.55	450.00
Crit W.S. (ft)	1142.60	Flow Area (sq ft)		15806.92	
E.G. Slope (ft/ft)	0.001403	Area (sq ft)	450.49	15806.92	0.06
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1161.10	Top Width (ft)	258.32	900.19	2.59
Vel Total (ft/s)	10.69	Avg. Vel. (ft/s)		10.69	
Max Chl Dpth (ft)	20.30	Hydr. Depth (ft)		17.56	
Conv. Total (cfs)	4512207.5	Conv. (cfs)		4512207.5	
Length Wtd. (ft)	503.55	Wetted Per. (ft)		906.62	
Min Ch El (ft)	1130.06	Shear (lb/sq ft)		1.53	
Alpha	1.00	Stream Power (lb/ft s)		16.32	
Frctn Loss (ft)	0.77	Cum Volume (acre-ft)	2410.49	12703.20	1274.95
C & E Loss (ft)	0.02	Cum SA (acres)	201.60	779.61	242.55

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1152.13	Element			
Vel Head (ft)	1.78	Wt. n-Val.		0.035	
W.S. Elev (ft)	1150.36	Reach Len. (ft)	530.00	503.55	450.00
Crit W.S. (ft)	1142.60	Flow Area (sq ft)		15806.59	
E.G. Slope (ft/ft)	0.001403	Area (sq ft)		15806.59	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	900.19	Top Width (ft)		900.19	
Vel Total (ft/s)	10.69	Avg. Vel. (ft/s)		10.69	
Max Chl Dpth (ft)	20.30	Hydr. Depth (ft)		17.56	
Conv. Total (cfs)	4512066.0	Conv. (cfs)		4512066.0	
Length Wtd. (ft)	503.55	Wetted Per. (ft)		906.62	
Min Ch El (ft)	1130.06	Shear (lb/sq ft)		1.53	
Alpha	1.00	Stream Power (lb/ft s)		16.33	
Frctn Loss (ft)	0.77	Cum Volume (acre-ft)		12704.03	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		779.60	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.92

INPUT
Description:
Station Elevation Data num= 308

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15056.94	1158.315	076.82	1156.241	5078.01	1156.51	5085.42	1156.98	15091.4	1157.54
15092.38	1157.715	132.68	1156.191	5136.58	1156.011	5142.69	1156.041	5285.82	1156.09
15333.21	1155.415	354.33	1154.781	5385.82	1155.3	15402	1155.471	5501.97	1156.32
15525.24	1156.115	590.72	1155.4	15610.6	1155.341	5746.64	1155.41	5775.17	1154.91
15792.22	1154.915	831.19	1154.71	5850.08	1154.581	5854.93	1154.511	5860.35	1153.76
15861.43	1153.815	883.33	1156.141	5928.57	1155.611	5962.04	1155.281	5975.13	1155.33
15996.69	1155.316	126.78	1154.931	6218.25	1154.61	6274.39	1155.21	6288.62	1155.19
16354.88	1154.616	404.13	1154.61	6519.19	1154.571	6521.31	1154.67	16544.3	1155.19
16674.08	1156.216	693.66	1155.391	6704.58	1155.211	6754.43	1154.751	6767.64	1154.51
16947.93	1153.917	054.56	1153.291	7089.35	1154.581	7115.83	1153.75	17124.3	1154.05
17152.88	1154.717	229.24	1155.171	7259.62	1155.51	7358.95	1154.931	7368.96	1155.12
17384.65	1156.217	408.17	1154.91	7428.41	1156.271	7434.19	1156.341	7506.93	1156.38
17532.5	1156.617	643.84	1156.481	7662.16	1156.611	7702.03	1156.7	17817.4	1156.92
17830.58	115717	917.79	1157.63	17979.7	1157.651	8018.43	1157.521	8084.18	1157.06
18143.35	1157.518	147.32	1157.531	8297.14	1157.231	8301.96	1157.211	8323.41	1156.76
18375.77	1155.818	380.73	1155.791	8409.33	1155.731	8422.82	1155.511	8452.23	1155.53
18468.78	1155.918	481.68	1155.861	8496.53	1156.031	8551.56	1155.671	8647.29	1154.57
18693.89	1153.918	707.39	1153.641	8754.24	1153.761	8813.55	1153.871	8864.59	1154.06
18887.41	1154.718	913.94	1155.011	8934.68	1156.231	8984.13	1150.57	18986.8	1150.32
19004.77	1153.319	026.27	1156.881	9040.29	1157.531	9050.92	1155.851	9073.98	1152.34
19092.01	**1151.619**	**116.39**	**1150.051**	**9123.92**	**1149.361**	**9138.68**	**1149.361**	**9192.02**	**1149.53**
19214.34	1149.919	229.37	1152.641	9252.46	1158.11	19262.2	1158.871	9297.45	1157.11
19318.87	1155.819	324.16	1154.79	19345.6	1150.211	9393.36	1149.071	9440.17	1147.87
19483.52	1147.719	505.95	1147.451	9520.91	1149.261	9533.07	1150.961	9545.94	1150.41
19576.51	1134.619	587.17	1129.16	19608.3	1130.091	9676.46	1131.71	19705.2	1131.96
19733.24	1131.719	838.63	1130.351	9914.22	1131.581	9977.78	1132.572	0015.93	1131.94
20098.73	1130.320	220.32	1131.442	0236.84	1131.562	0266.69	1131.62	0358.46	1131.61

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20387.17  1140.320398.68 1143.6220414.42 1144.9120423.49 1145.3220434.59 1145.09
20452.66    114920478.34 1155.8620500.34 1153.6620517.26 1151.7820534.04 1153.66
20550.83  1155.220586.97 1152.9420612.39 1156.7520658.12 1163.3320671.02 1163.53
20687.74  1163.420738.56  1179.820774.83 1191.3720800.66 1191.22 20804.1 1190.88
20824.56  1189.420851.13 1190.8420874.18 1191.0820941.46 1192.1620978.01 1191.07
 20982.4  1190.821008.46 1193.5321016.52  1192.821033.82 1192.7121056.09 1192.73
21105.45  1178.521154.97 1162.9421224.56 1163.9221300.76  1165.7 21334.6 1167.81
21348.51  1166.721358.61 1165.4721385.06 1167.9521409.45    1166 21414.6 1165.77
21417.39  1168.521429.15 1178.6621433.72 1178.4321441.24 1177.6621447.86 1177.93
 21464.7  1178.421471.88 1177.9321486.87 1177.4521524.71 1176.6921570.22 1175.12
21579.81  1175.321582.09  1175.221594.81 1172.4521597.81 1172.4521618.81 1176.85
 21623.8  1177.721636.86 1177.4221646.82 1176.7321679.64 1174.7821702.01 1174.22
21704.67  1174.721721.42 1174.9421740.46 1176.1321746.66 1176.3521773.81 1176.59
21787.05  1176.121792.77 1175.4521822.28 1176.8621838.23 1177.1221868.53 1177.94
21871.44  1178.121877.86 1177.8521903.56  1176.521908.69 1173.6421921.88 1172.56
 21936.7  1176.721948.26 1177.5221955.08 1178.1821978.05 1179.6421987.23 1181.32
21991.73  1181.922001.18  1181.922022.78 1184.1222029.69 1184.9622051.86 1185.91
 22081.2  1187.122087.57 1187.4522112.52 1185.6622122.29 1184.3322146.68 1182.16
22172.21  1180.522189.25 1177.5122196.21 1176.8622204.41 1176.3722207.61  1176.5
22229.25  1175.422252.83 1180.4922263.35 1181.2422272.03 1180.5422326.75 1180.19
22330.68  1180.422367.48 1183.9222408.32 1184.9122434.33 1185.4222440.61 1185.34
 22461.3  1184.822481.54 1184.4322517.74 1184.5322541.33 1184.8122553.21 1185.68
22570.11  1186.422584.93 1186.97 22604.7 1184.4422607.62 1184.4822721.99  1184.8
 22726.6  1184.922765.21 1185.9622787.42 1186.2622818.78 1187.4622872.88 1187.93
22898.91  1188.522965.49 1188.2222983.54 1188.2923016.85 1188.23 23021.3 1188.26
23043.47  1188.123076.97 1188.9423136.37 1189.8523145.85 1189.96 23155.9  1189.9
 23179.9    119023187.54  1189.8 23204.3 1186.5723224.62 1187.0323236.98  1187.6
23243.05  1187.723255.26 1188.0123303.44 1189.1923309.59 1188.4823351.25 1190.31
23380.47  1191.823416.36 1197.29 23505.4 1208.9423549.46 1211.2323567.19  1208.6
23587.21  1206.323594.62 1205.28 23633.5 1204.4423643.71 1204.5823649.32 1204.52
23711.69  1196.823723.75 1196.1423748.17 1199.0523751.46  1199.623757.89  1199.8
23799.99  1196.223808.97  1197.423828.15 1197.9323867.37 1201.7523874.94 1203.82
23883.19  1204.323910.05  1204.923941.39 1204.66 23953.4 1204.6623981.76 1204.51
 24044.8  1204.324075.27 1204.0924100.71 1203.7524146.43  1203.524160.54  1203.4
24169.47  1203.124242.01 1203.0724250.55 1203.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
15056.94    .03519533.07    .03520478.34    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19533.0720478.34              560  518.52     450             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
15056.9419533.07 1150.9620478.3424250.55 1155.86

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1151.35   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1149.39   Reach Len. (ft)            560.00     518.52     450.00
  Crit W.S. (ft)            1142.46   Flow Area (sq ft)                   15058.51
  E.G. Slope (ft/ft)       0.001666   Area (sq ft)               171.52   15058.51
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1072.33   Top Width (ft)             166.12     906.20
  Vel Total (ft/s)            11.22   Avg. Vel. (ft/s)                     11.22
  Max Chl Dpth (ft)           20.23   Hydr. Depth (ft)                     16.62
  Conv. Total (cfs)       4140889.0   Conv. (cfs)                        4140889.0
  Length Wtd. (ft)           518.52   Wetted Per. (ft)                    913.49
  Min Ch El (ft)            1129.16   Shear (lb/sq ft)                      1.71
  Alpha                        1.00   Stream Power (lb/ft s)               19.24
  Frctn Loss (ft)              0.87   Cum Volume (acre-ft)      2406.70   12524.80    1274.95
  C & E Loss (ft)              0.00   Cum SA (acres)             199.02     769.17     242.54

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1151.34   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.035
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W.S. Elev (ft)	1149.39	Reach Len. (ft)	560.00	518.52	450.00
Crit W.S. (ft)	1142.46	Flow Area (sq ft)		15058.18	
E.G. Slope (ft/ft)	0.001666	Area (sq ft)		15058.18	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.20	Top Width (ft)		906.20	
Vel Total (ft/s)	11.22	Avg. Vel. (ft/s)		11.22	
Max Chl Dpth (ft)	20.23	Hydr. Depth (ft)		16.62	
Conv. Total (cfs)	4140742.5	Conv. (cfs)		4140742.5	
Length Wtd. (ft)	518.52	Wetted Per. (ft)		913.49	
Min Ch El (ft)	1129.16	Shear (lb/sq ft)		1.71	
Alpha	1.00	Stream Power (lb/ft s)		19.24	
Frctn Loss (ft)	0.87	Cum Volume (acre-ft)		12525.63	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		769.16	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.82

INPUT
Description:
Station Elevation Data num= 315

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14966.67	1155.7	14994.9	1155.2	315013.71	1154.01	15021.11	1153.24	15050.66	1152.65
15099.94	1152.7	15126.2	1152.59	15191.9	1152.86	15243.19	1152.47	15250.24	1152.37
15320	1152.9	15352.84	1153.54	15386.05	1153.48	15392.04	1153.2	15408	1152.23
15416.37	1152.3	15429.68	1152.57	15444.43	1152.34	15469.09	1152.25	15557.75	1151.86
15628.53	1152.5	15672.2	1152.98	15686.44	1151.53	15728.08	1152.16	15748.26	1152.35
15782.75	1153.4	15803.31	1152.78	15849.34	1152.41	15922.54	1151.54	15965.71	1151.57
16105.59	1151.5	16112.76	1151.61	16148.28	1154.03	16175.63	1153.91	16187.03	1153.49
16210.44	1153.4	16219.87	1153.16	16229.03	1153.43	16231.92	1153.72	16303.07	1152.63
16354.15	1152.7	16380.98	1152.72	16394.77	1152.62	16430.95	1152.89	16514.83	1153.13
16560.89	1153.4	16578.84	1152.58	16629.65	1150.42	16648.01	1150.45	16695.46	1150.95
16724.6	1151.1	16832.81	1151.84	16937.42	1151.78	16970.15	1152.39	16981.11	1152.48
16989.67	1152.9	17011.25	1152.77	17034.73	1153.11	17039.76	1153.32	17062.09	1155.14
17147.1	1153.9	17172.08	1154.02	17193.39	1155.52	17202.14	1155.88	17248.97	1155.9
17265.63	1155.7	17297.38	1154.76	17315.73	1153.87	17319.73	1153.6	17352.48	1154.26
17361.43	1154.4	17372.68	1154.31	17442.96	1153.64	17471.11	1154.41	17499.21	1155.65
17565.37	1155.4	17596.88	1155.26	17615.1	1155.85	17640.73	1156.45	17653.51	1156.31
17664.8	1156.1	17677	1156.53	17703.8	1156.62	17762.99	1156.09	17805.4	1156.21
17842.82	1156.4	17871.78	1156.85	17885.61	1156.37	17937.13	1156.86	17965.61	1157.26
17997.08	1157.1	18162.42	1157.13	18212.41	1157.01	18217.42	1156.95	18247.84	1155.01
18291.62	1156.8	18294.91	1157.06	18323.51	1154.6	18349.5	115	18418364.36	1153.56
18380.47	1154.6	18411.31	1153.67	18465.27	1153.46	18533.94	1152.58	18551.54	1152.58
18577.54	1152.4	18629.65	1152.66	18635.6	1152.83	18686.63	1153.78	18723.07	1154.13
18733.12	1154.8	18806.96	1153.95	18815.49	1153.63	18848.51	1149.72	18861.19	1148.53
18876.01	1148.8	18879.55	1149.32	18908.05	1153.79	18919.3	1153.4	18983.58	1152.3
19000.8	1151.8	19010	1153.74	19023.73	1156.27	19034.07	1157.29	19037.58	1156.53
19073.99	1149.1	19089.08	1149.28	19093.85	1149.07	19102.34	1150.42	19115.72	1150.38
19135.01	1150.6	19152.18	1149.59	19196.97	1148.97	19202.14	1148.81	19216.01	1149.13
19228.26	1148.9	19235.07	1147.76	19299.3	1147.92	19335.62	1148.25	19357.09	1148.57
19390.82	1155.4	19394.26	1155.99	19404.6	1156.66	19422.48	1152.71	19456.86	1145.22
19466.2	1146.6	19492.6	1150.15	19507.76	1150.84	19513.3	1145.13	19521.34	1137.9
19535.91	1139.4	19554.48	1132.94	19565.22	1129.56	19593.76	1130.3	19639.73	1131.73
19657.19	1131.5	19773.87	1129.98	19873.48	1130.98	19913.76	1131.19	19944.72	1131
20035.35	113	20064.49	1130.01	20174.19	1130.04	20216.93	1129.99	20301.27	1129.71
20329.01	1130.7	20343.21	1135.16	20365.9	1143.69	20387.28	1144.46	20416.82	1145.17
20440.64	1151.1	20462.85	1156.6	20480.62	1156.26	20503.43	1156.02	20520.86	1155.78
20610.58	1177.3	20618.09	1178.97	20650.23	1177.92	20654.43	1179.08	20672.84	1182.98
20691.43	1182.5	20711.77	1182.31	20726.85	1180.57	20751.98	1176.53	20790.42	1177.83
20866.31	1179.4	20886.86	1179.88	20891.78	1179.88	20945.2	1178.33	20946.24	1178.46
20970.97	118	20977.55	1183.6	20990.97	1182.36	21016.54	1183.84	21027.23	1184.24
21049.3	1185.6	21139.77	1162.31	21157.79	1157.66	21160.49	1157.4	21179.51	1154.73
21238.31	1153.5	21243.5	1153.81	21315.86	1157.29	21324.45	1157.58	21363.1	1159.48
21380.83	1160.5	21399.61	1165.3	21437.88	1163.96	21447.56	1160.68	21454.8	1158.03
21473.7	1158.4	21494.5	1158.6	21549.92	1158.29	21575.58	1159.94	21603.97	1164.9
21625.71	1169.5	21631.47	1171.18	21647.04	1167.9	21667.64	1170.41	21673.43	1170.97
21685.04	1170.7	21720.26	1171.33	21734.34	1171.52	21777.94	1171.02	21794.5	1171.13
21803.73	1171.3	21815.17	1171.71	21830.12	1169.92	21841.34	1168.28	21848.75	1169.53
21866.74	1173.4	21873.12	1174.92	21919.28	1175.27	21939.52	1175.2	21987.72	1175.35
22008.71	1176.1	22022.69	1176.31	22044.47	1176.42	22061.01	1176.71	22105.28	1176.92
22127.76	1176.8	22155.6	1177.46	22185.01	1176.68	22253.65	1177.1	22327.29	1175.37

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22341.26  1175.322408.59 1175.9722420.56 1182.1222430.93 1184.4122455.02 1185.54
22498.64  1186.422528.32 1187.0822547.85 1187.3722613.03 1189.7722628.56 1190.15
22692.42  1189.822729.49 1189.3222816.03  1184.922825.01 1184.5222851.72 1184.29
22871.37  1184.422899.79 1183.2922924.29 1182.57 22945.8 1182.4122971.38 1183.08
23000.84  1183.123020.21 1182.8223025.73 1182.6623052.98 1181.4223076.38 1181.53
 23096.7  1183.223121.44 1183.4223159.34 1183.8523161.94 1183.9523164.26 1183.42
23185.17  1177.5 23201.8 1179.4323212.44 1181.8223218.91 1181.0323257.33 1180.08
23268.82  1179.923272.49 1179.9923283.71 1180.6923311.15 1184.3823344.13 1191.98
23371.97    119323403.29 1193.4523452.17 1193.4923455.92 1193.2223484.16 1191.65
23502.65  1190.223526.76 1188.9323566.97 1189.7423575.16 1189.7123648.69 1209.57
23653.44  1209.323683.28 1207.3723709.76 1198.46 23757.7 1193.1823760.97 1193.22
23768.31  1193.723820.08 1193.0623832.26 1193.0323856.11 1193.4623876.79 1194.23
23913.62    1195 23920.1    1195 23937.7 1196.5823939.72 1197.1523954.29 1198.94
 23987.9  1197.123991.34 1197.1324013.63 1197.9624016.42 1197.9624029.48 1194.99

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14966.67    .03519507.76    .03520462.85    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19507.7620462.85              500  494.93     490             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14966.6719507.76 1150.8420462.8524029.48  1156.6

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1150.47   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.94   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1148.53   Reach Len. (ft)            500.00     494.93     490.00
  Crit W.S. (ft)            1141.72   Flow Area (sq ft)                   15100.60
  E.G. Slope (ft/ft)       0.001688   Area (sq ft)               127.85   15100.60
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1082.87   Top Width (ft)             162.57     920.30
  Vel Total (ft/s)            11.19   Avg. Vel. (ft/s)                     11.19
  Max Chl Dpth (ft)           18.97   Hydr. Depth (ft)                     16.41
  Conv. Total (cfs)       4113951.8   Conv. (cfs)                        4113951.8
  Length Wtd. (ft)           494.93   Wetted Per. (ft)                    928.94
  Min Ch El (ft)            1129.56   Shear (lb/sq ft)                      1.71
  Alpha                        1.00   Stream Power (lb/ft s)               19.17
  Frctn Loss (ft)              0.84   Cum Volume (acre-ft)      2404.78   12345.30    1274.95
  C & E Loss (ft)              0.01   Cum SA (acres)             196.90     758.30     242.54


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1150.47   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.94   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1148.53   Reach Len. (ft)            500.00     494.93     490.00
  Crit W.S. (ft)            1141.72   Flow Area (sq ft)                   15100.27
  E.G. Slope (ft/ft)       0.001688   Area (sq ft)                        15100.27
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             920.30   Top Width (ft)                       920.30
  Vel Total (ft/s)            11.19   Avg. Vel. (ft/s)                     11.19
  Max Chl Dpth (ft)           18.97   Hydr. Depth (ft)                     16.41
  Conv. Total (cfs)       4113809.5   Conv. (cfs)                        4113809.5
  Length Wtd. (ft)           494.93   Wetted Per. (ft)                    928.94
  Min Ch El (ft)            1129.56   Shear (lb/sq ft)                      1.71
  Alpha                        1.00   Stream Power (lb/ft s)               19.17
  Frctn Loss (ft)              0.84   Cum Volume (acre-ft)              12346.13       0.32
  C & E Loss (ft)              0.01   Cum SA (acres)                       758.29       0.18


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.73

INPUT
Description:
Station Elevation Data    num=     313
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Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14797.3	1154.31	4913.57	1152.42	14944.1	1152.26	14944.42	1151.47	14966.97	1151.88
14980.8	1152.31	5003.23	1152.21	5059.05	1152.19	15081.02	1152.11	15093.12	1152.34
15126.06	1152.11	5181.19	1151.61	15210.79	1150.47	15233.66	1151.47	15251.43	1150.94
15273.4	11511	5362.88	1150.59	15379.06	1150.05	15423.88	1149.95	15459.88	1149.65
15539.57	1149.31	5572.44	1149.28	15584.29	1149.51	15599.68	1150.44	15612.48	1148.8
15672.24	1149.41	5700.28	1151.35	15798	1151.37	15867.6	1150.99	15916.69	1151.03
15952.86	11511	6008.14	1150.91	16080.12	1151.75	16088.31	1151.84	16116.46	1153.28
16139.26	1152.91	6148.32	1152.62	16153.19	1153.23	16160.23	1153.56	16218.88	1151.88
16243.62	1151.31	6274.61	1151.3	16363.6	1151.49	16393.63	1151.52	16435.51	1151.52
16490.57	1151.81	6564.86	1151.81	16567.24	1151.77	16703.9	1151.52	16710.5	1151.66
16724.61	1151.71	6797.96	1151.77	16899.05	1151.75	16906.7	1152.02	16932.49	1152.13
16942.39	1152.2	16955.5	1152.76	16971.52	1153.25	16982.43	1153.08	16998.31	1153.1
17049.19	1153.11	7072.46	1153.08	17121.46	1152.89	17145.41	1153.03	17192.67	1153.2
17215.62	1153.21	7238.43	1153.03	17247.66	1152.63	17269.82	1153.19	17281.82	1153.38
17364.73	1153.4	17374.5	1153.64	17397.24	1153.36	17437.21	1153.78	17481	1154.3
17525.1	1153.81	7548.55	1153.43	17626.8	1154.29	17747.58	1156.28	17767.79	1154.13
17778.06	1154.21	7792.77	1154.55	17840.7	1154.96	17896.44	1155.19	17915.02	1155.09
17924.66	1154.91	7968.81	1154.31	18001.48	1154.43	18082.98	1154.32	18106.55	1154.56
18117.14	1154.61	8144.52	1155.13	18166.73	1155.06	18183.2	1155.13	18210.02	1155.28
18218.19	1155.21	8251.96	1154.51	18271.92	1154.17	18289.25	1153.69	18309.93	1154.27
18348.27	1153.31	8353.67	1153.17	18492.05	1153.31	18501.57	1153.27	18558.69	1153.22
18604.41	1153.21	8618.27	1152.91	18676.89	1152.15	18726.4	1149.04	18748.84	1147.58
18787.16	1146.91	8832.85	1146.21	18862.62	1152.72	18869.61	1154.01	18945.35	1153.81
18952.13	1152.51	8954.69	1152.24	18985.94	1152.96	19036.14	1153.25	19045.15	1154.09
19057.29	1152.31	9087.96	1150.45	19132.13	1150.49	19162.52	1150.91	19192.54	1151.69
19218.75	1151.21	9232.69	1151.84	19251.32	1151.43	19302.95	1151.56	19341.3	1150.74
19381.97	1149.61	9439.95	1151.67	19450.97	1151.96	19479.57	11581	9490.11	1159.02
19492.12	1158.5	19515.2	1153.56	19531.14	1150.79	19555.44	1133.36	19557.72	1132.21
19576.93	1131.51	9658.15	1128.96	19701.95	1127.69	19712.81	1128.35	19715.3	1128.61
19760.95	1129.31	9803.61	1129.34	19851.53	1129.51	19950.1	1130.61	19973.26	1130.69
20100.83	1130.92	0112.26	1130.99	20141.19	1130.47	20222.72	1129.06	20239.48	1128.75
20265.71	1129.52	0365.39	1132.38	20374.45	1134.07	20381.94	1136.31	20423.81	1148.67
20441.46	1153.62	0453.82	1155.55	20476.74	1158.07	20495.14	1160.26	20503.4	1162.18
20564.01	1175.52	0578.57	1176.65	20595.22	1178.91	20620.06	1178.54	20631.53	1178.69
20644.53	1178.72	0676.97	1173.58	20739.84	1163.12	20756.44	1163.61	20786.35	1163.92
20833.99	1164.9	20861.4	1164.23	20868.64	1164.33	20875.76	1164.24	20907.84	1164.16
20926.94	1165.92	0936.61	1166.42	20963.09	1168.25	20978.69	1174.43	21014.75	1188.53
21036.74	1188.62	1049.33	1188.61	21126.03	1167.39	21141.74	1163.46	21147.25	1162.17
21162.06	1159.52	1169.27	1159.28	21221.77	1159.61	21288.72	1159.11	21296.9	1160.02
21311.98	1162.22	1324.94	1161.83	21345.92	1161.38	21351.63	1158.53	21364.03	1152
21386.28	1152.22	1402.73	1143.16	21406.95	1140.73	21424.81	1142.25	21442.17	1149.28
21451.75	1153.32	1477.29	1153.24	21492.55	1153.12	21565.24	1152.78	21589.18	1151.51
21648.09	11512	1676.81	1150.71	21687.2	1153.03	21691.96	1153.87	21694	1153.58
21705.22	1153.52	1747.92	1152.74	21763.65	1155.18	21768.74	1156.06	21780.97	1157.01
21785.19	1157.72	1799.01	1160.84	21849.66	1162.72	21868.62	1160.99	21880.15	1161.95
21897.96	1164.42	1923.34	1164.55	21939.34	1165.09	21967.35	1166.13	21991.87	1166.37
22036.99	1167.12	2046.99	1168.09	22070.54	1166.34	22091.72	1167.65	22094	1167.89
22100.85	1167.62	2114.57	1167.48	22158.49	1166.67	22173.5	11672	2193.46	1166.44
22234.87	1166.22	2258.75	1166.45	22292.82	1167.3	22320.1	1167.43	22329.22	1167.07
22352.2	1166.42	2366.09	1167.14	22415.22	1167.47	22453.69	1167.77	22492.16	1168.56
22642.92	1170.22	2688.53	1170.48	22739.89	1170.76	22822.87	1170.76	22871.73	1170.39
22889.98	1170.72	2937.42	1171.88	23028.91	1173.81	23031.57	1173.91	23070.19	1175.98
23095.28	1176.52	3102.86	1176.88	23148.1	1179.42	23163.39	1179.85	23165.07	1180
23188.47	1180.42	3213.41	1179.72	23249.54	1179.93	23278.98	1180.03	23290.4	1180.18
23363.69	1180.82	3383.38	1180.42	23401.79	1180.07	23419.41	1180.21	23433.68	1178.29
23452.43	1175.52	3471.84	1176.63	23487.22	1174.68	23499.32	1176.09	23523.76	1176.96
23530.78	11772	3580.84	1178.87	23599.92	1179.73	23610.68	1180.24	23668.01	1183.3
23684.49	1183.12	3737.23	1183.18	23753.82	1183.99	23771.45	1184.51	23788.82	1185.45
23802.17	1184.92	3805.38	1184.67	23809.24	1184.87	23813.53	1184.64	23851.27	1183.72
23864.52	1183.82	3891.02	1183.26	23892.96	1183.32	23897.08	1182.72	23973.88	1172.66
24039.67	1173.42	4085.52	1187.32	24090.47	1189.08	24151.58	1190.78	24165.54	1191.26
24172.71	1191.42	4192.87	1191.59	24242.54	1192.26	24276.93	1192.61	24289.34	1195.49
24302.68	1197.9	24332	1197.62	24347.55	1198.15				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14797.3	.035	19490.11	.035	20495.14	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19490.11	20495.14	510	501.55	490	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14797.3	19490.11	1159.02	20495.14	24347.55	1160.26

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1149.62	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1147.59	Reach Len. (ft)	510.00	501.55	490.00
Crit W.S. (ft)	1141.05	Flow Area (sq ft)		14782.77	
E.G. Slope (ft/ft)	0.001715	Area (sq ft)	65.13	14782.77	185.87
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1018.38	Top Width (ft)	90.49	884.55	43.33
Vel Total (ft/s)	11.43	Avg. Vel. (ft/s)		11.43	
Max Chl Dpth (ft)	19.90	Hydr. Depth (ft)		16.71	
Conv. Total (cfs)	4080422.3	Conv. (cfs)		4080422.3	
Length Wtd. (ft)	501.55	Wetted Per. (ft)		891.71	
Min Ch El (ft)	1127.69	Shear (lb/sq ft)		1.78	
Alpha	1.00	Stream Power (lb/ft s)		20.30	
Frctn Loss (ft)	0.87	Cum Volume (acre-ft)	2403.67	12175.53	1273.90
C & E Loss (ft)	0.01	Cum SA (acres)	195.45	748.05	242.30

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1149.62	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1147.59	Reach Len. (ft)	510.00	501.55	490.00
Crit W.S. (ft)	1141.05	Flow Area (sq ft)		14782.43	
E.G. Slope (ft/ft)	0.001716	Area (sq ft)		14782.43	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	884.55	Top Width (ft)		884.55	
Vel Total (ft/s)	11.43	Avg. Vel. (ft/s)		11.43	
Max Chl Dpth (ft)	19.90	Hydr. Depth (ft)		16.71	
Conv. Total (cfs)	4080282.8	Conv. (cfs)		4080282.8	
Length Wtd. (ft)	501.55	Wetted Per. (ft)		891.70	
Min Ch El (ft)	1127.69	Shear (lb/sq ft)		1.78	
Alpha	1.00	Stream Power (lb/ft s)		20.30	
Frctn Loss (ft)	0.87	Cum Volume (acre-ft)		12176.37	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		748.03	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.63

INPUT
Description:
Station Elevation Data num= 293

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14824	1150.3	14870.19	1149.9	14906.61	1150.46	14934.6	1150.2	14996.54	1149.63
15005.4	1149.3	15035.6	1149.7	15073.05	1149.71	15119.49	1149.5	15140.51	1148.65
15164.17	1149.5	15176.48	1149.8	15188.71	1149.76	15222.37	1149.92	15284.22	1149.41
15311.03	1149.71	15339.76	1150.2	15407.72	1149.71	15469.64	1149.48	15540.95	1149.31
15601.47	1148.5	15631.9	1149.3	15681.89	1149.86	15766.94	1149.98	15791.74	1149.81
15882.72	1150.6	15969.23	1150.4	16026.97	1151.37	16037.23	1150.87	16047.44	1150.22
16051.03	1150.2	16077.31	1149.2	16098.49	1151.22	16164.63	1150.5	16172.4	1150.53
16267.84	1150.4	16308.54	1150.7	16383.35	1151.49	16440.92	1151.52	16503.85	1151.17
16547.1	1151.1	16625.17	1151.0	16666.85	1151.6	16686.26	1152.15	16703.27	1151.91
16750.45	1151.5	16831.13	1151.7	16846.42	1151.65	16860.48	1151.37	16872.44	1151.59
16891.43	1151.5	16919.41	1152.1	16929.14	1152.23	17034.57	1152.16	17112.73	1152.31
17151.56	1153	17317.16	1152.4	17213.39	1152.6	17256.25	1152.15	17300.25	1151.98
17312.74	1152.6	17370.38	1154.2	17456.04	1154.23	17496.26	1154.11	17547.83	1153.9
17604.31	**1153.8**	**17688.93**	**1153.5**	**17722.82**	**1153.27**	**17729.13**	**1153.5**	**17744.1**	**1153.57**
17804.7	1154.1	17925.11	1154.3	17981.54	1154.57	18023.62	1154.59	18059.13	1154.52
18113.05	1154.1	18137.88	1154.1	18140.35	1154.19	18159.61	1154.66	18172.45	1154.58
18185.1	1154.3	18215.34	1153.5	18233.36	1153.99	18307.25	1153.15	18360.97	1153.08
18408.08	1153.5	18500.25	1153.0	18520.71	1152.7	18535.53	1152.69	18539.52	1152.17
18551.01	1151.7	18558.74	1151.5	18573.36	1151.01	18611.78	1150.64	18625.8	1150.46
18647.75	1153	18657.7	1153.8	18674.43	1152.77	18723.13	1152.74	18734.97	1152.54

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18743.63  1152.318780.43 1150.66   18816 1152.1118843.95 1154.4218864.43 1154.66
18922.43  1156.418936.63 1156.4318972.93  1153.519047.63 1154.08 19180.2 1154.87
19184.81  1154.819228.77 1154.5319245.97 1154.4819262.55  1154.519312.33 1154.65
19339.84  1154.719364.44  1154.119384.69 1152.6419429.36 1143.5519434.17 1143.26
19437.42    114419487.14 1156.1819502.33 1159.1819508.86 1156.1319533.27 1145.86
19545.56    114719552.18 1142.2519562.89 1133.6419591.04 1132.3719650.01 1129.14
19773.79  1129.519790.22 1129.4919802.35 1129.2519912.09 1127.17 19968.5  1127.1
19998.74  1127.320051.26 1129.3720068.85  1129.420178.63 1128.86 20268.5  1129.8
20304.69  1130.520328.46 1130.7120359.22 1130.6120416.92 1138.2420430.96 1145.24
20440.58  1147.420475.73 1155.9620483.75 1156.0920494.25 1156.7520495.83 1156.24
20517.61  1161.220571.44 1174.4720606.77 1174.2720610.81 1174.1320641.95 1166.52
20689.44    115520692.07 1155.0820726.24 1156.4420766.82 1157.2520783.96  1157.5
20815.62  1157.220830.99 1157.1320842.11 1156.8720875.53 1156.8520911.76 1160.68
20935.56  1160.520937.82 1160.6120985.04 1183.8420990.99 1183.96 21011.6 1182.74
21099.54  1158.421115.04 1154.1821117.51 1154.2621170.33 1155.5921193.48 1158.99
21199.07  1159.921207.28 1159.7521228.86 1158.6121250.98 1150.8821272.44 1151.36
 21291.3  1141.221314.36  1141.121321.72 1145.03 21333.2 1151.5321348.91 1151.86
21376.92  1151.521411.05 1151.4221474.01 1151.0921553.59 1151.1121637.39 1150.79
21722.63  1150.721785.67 1150.7321874.62 1151.9921878.38 1152.0321921.19 1159.69
21948.69  1160.721992.61 1162.1922000.71  1160.522008.81 1158.6122018.63 1159.95
 22032.5  1161.722048.31 1161.6422055.74 1161.93   22094 1163.0822134.12 1164.39
22143.98  1165.122154.38 1163.8722176.46 1161.48 22190.1 1164.8922195.05 1164.95
22228.55  1165.122302.09 1165.7922385.05 1167.1522394.52 1167.2222452.52 1166.41
22520.66  1165.622561.39 1165.1922580.78 1165.3522602.39  1165.622636.28 1164.69
22655.55  1164.422690.77 1163.5122697.75 1163.3822702.64  1162.322753.06 1152.71
 22801.2    115422825.88 1154.6122880.79 1160.43 22884.4 1160.7322888.09 1161.52
   22924  1165.522955.81  1163.922967.88 1163.3822985.75 1163.4523003.91 1166.93
 23020.6  1168.423039.26 1170.1523047.39  1171.7   23059 1174.3223113.46 1183.75
23129.96  1186.623137.87 1187.1623234.39 1195.15 23268.4 1196.11 23278.9 1196.22
23289.67  1196.623300.62 1197.46   23329    119523354.08 1190.0723359.12 1190.93
23364.81  1192.823377.13 1196.3123381.26 1196.9523402.82 1194.9923412.98  1193.6
23418.94  1192.523442.23 1187.8523455.44 1185.93 23473.3 1182.7723480.12 1183.18
23500.09  1183.523511.29 1183.9223528.38 1179.1323531.54 1177.8723542.35 1178.74
23558.13  1179.723564.97 1179.9723576.86  1179.4 23611.1  1177.423628.94  1181.9
 23666.9  1192.123690.06 1192.8823754.42  1196.123759.24 1196.8323774.42  1193.2
23805.81  1186.423842.08 1186.1223884.13 1185.9323889.09 1185.6423923.01 1182.75
23994.76  1183.224012.39 1183.04 24030.1 1180.4624046.96 1185.0124084.61 1190.55
 24101.8    119124136.25 1191.4224170.43 1192.0824211.66 1193.0424220.01 1193.29
24252.23  1192.824282.41 1193.1324299.04 1193.29

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   14824    .03519502.33    .03520494.25    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19502.3320494.25              490  501.08     510             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1482419502.33 1159.1820494.2524299.04 1156.75

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1148.75   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.01   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1146.74   Reach Len. (ft)            490.00     501.08     510.00
  Crit W.S. (ft)            1140.24   Flow Area (sq ft)                    14857.16
  E.G. Slope (ft/ft)       0.001734   Area (sq ft)                66.47   14857.16     187.02
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)             981.94   Top Width (ft)              34.92     903.29      43.72
  Vel Total (ft/s)            11.37   Avg. Vel. (ft/s)                        11.37
  Max Chl Dpth (ft)           19.64   Hydr. Depth (ft)                        16.45
  Conv. Total (cfs)      4057886.5    Conv. (cfs)                         4057886.5
  Length Wtd. (ft)           501.08   Wetted Per. (ft)                       910.50
  Min Ch El (ft)            1127.10   Shear (lb/sq ft)                         1.77
  Alpha                        1.00   Stream Power (lb/ft s)                  20.10
  Frctn Loss (ft)              0.88   Cum Volume (acre-ft)      2402.90   12004.89    1271.80
  C & E Loss (ft)              0.00   Cum SA (acres)             194.72     737.75     241.81

Warning: Divided flow computed for this cross-section.
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CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1148.75	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.01	Wt. n-Val.		0.035	
W.S. Elev (ft)	1146.74	Reach Len. (ft)	490.00	501.08	510.00
Crit W.S. (ft)	1140.24	Flow Area (sq ft)		14856.83	
E.G. Slope (ft/ft)	0.001735	Area (sq ft)		14856.83	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	903.29	Top Width (ft)		903.29	
Vel Total (ft/s)	11.38	Avg. Vel. (ft/s)		11.38	
Max Chl Dpth (ft)	19.64	Hydr. Depth (ft)		16.45	
Conv. Total (cfs)	4057759.3	Conv. (cfs)		4057759.3	
Length Wtd. (ft)	501.08	Wetted Per. (ft)		910.49	
Min Ch El (ft)	1127.10	Shear (lb/sq ft)		1.77	
Alpha	1.00	Stream Power (lb/ft s)		20.10	
Frctn Loss (ft)	0.88	Cum Volume (acre-ft)		12005.73	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		737.74	0.18

Warning: Divided flow computed for this cross-section.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.54

INPUT
Description:
Station Elevation Data num= 318

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14801.12	1148.114	812.54	1148.07	14917.34	1147.38	14942.26	1146.51	14971.01	1147.44
14987.16	1147.61	5014.67	1147.51	5087.52	1147.27	15174.13	1146.91	15179.25	1146.71
15198.73	1145	15227.13	1146.94	15255.43	1148.17	15326.06	1148.53	15350.94	1148.42
15371.84	1147.71	5395.39	1147.66	15403.6	1147.58	15438.23	1147.87	15442.3	1149.14
15474.44	1148	15485.49	1148.24	15528.24	1149.06	15544.24	1148.76	15568.11	1147.38
15645.6	1147.2	15695.2	1147.44	15712.03	1150.09	15760.49	1149.27	15778.54	1148.93
15796.55	1148.91	5878.15	1149.43	15936.34	1149.46	16036.67	1148.95	16081.24	1148.97
16132.26	1149.4	16138.4	1149.41	6193.74	1149.93	16245.08	1150.16	16287.42	1149.78
16328.17	1149.91	6408.16	1150.19	16436.34	1149.18	16469.09	1150.55	16478.31	1150.91
16494.71	1150.11	6516.71	1150.01	16578.93	1150.06	16592.92	1150.04	16698.21	1150.06
16766.45	1150.81	6795.37	1151.58	16822.36	1151.34	16839.56	1150.86	16850.28	1150.99
16914.07	1151.51	6976.42	1151.49	17033.22	1151.69	17080.06	1151.62	17109.07	1151.67
17180.95	1151.71	7204.63	1151.85	17265.71	1151.93	17282.42	1151.89	17301.8	1151.62
17351.35	1151.81	7381.17	1151.71	17423.14	1151.85	17451.37	1151.55	17471.72	1151.43
17490.39	1151.21	7550.02	1151.43	17577.93	1151.85	17591.81	1152.31	7603.93	1153.05
17616.04	1153.61	7638.31	115	17648.83	1154.09	17661.78	1153.85	17698.43	1153.35
17750.33	1152.91	7802.96	1152.58	17845.63	1152.33	17856.54	1152.76	17871.73	1153.13
17899.64	1153.41	7932.91	1153.42	18011.33	1152.71	18028.57	1152.71	18060.3	1152.8
18070.9	1152.21	8125.61	1152.41	8139.99	1152.37	18143.34	1152.62	18154.39	1153.04
18165.9	1151.81	8176.18	1150.86	18193.98	1152.21	8210.24	1153.28	18363.83	1153.68
18515.17	1151.31	8533.63	1151.15	18547.59	1150.93	18583.44	1149.87	18589.14	1149.66
18591.13	1149.81	8623.29	1151.39	18643.25	1151.88	18663.74	1152.21	18689.11	1152.2
18762.5	1153.21	8764.59	1154.01	18797.54	1153.85	18841.07	1153.68	18888.92	1153.68
18894.16	1154.51	8906.46	1156.01	18923.78	1154.16	18930.74	1153.33	18931.5	1153.54
18944.76	1153.71	8973.23	1154.48	19043.11	1154.46	19057.5	1154.41	19086.5	1154.14
19126.25	1154.11	9221.41	1155.18	19262.48	1155.41	9316.88	1155.92	19322.58	1155.97
19351.74	115	19373.63	1146.84	19398.6	1135.71	19415.07	1133.45	19418.42	1133.67
19443.87	1140.8	19492.1	1154.08	19508.34	1157.81	9536.59	1143.13	19546.11	1145.24
19563.04	1133.21	9565.48	1131.54	19567.11	1131.57	19586.71	1130.79	19664.41	1129.89
19726.79	1129.61	9754.39	1129.25	19798.54	1128.69	19848.54	1128.01	19888.08	1128.08
19987.58	1127.82	0102.16	1127.39	20114.83	1127.32	20125.16	1127.38	20240.77	1127.91
20326.68	1128.42	0349.68	1128.48	20357.7	1128.57	20425.53	1139.15	20428.07	1139.71
20437.09	1143.82	0447.18	1145.96	20460.57	1149.85	20481.21	1155.31	20491.27	1156.3
20505.8	1155.52	0544.78	1163.97	20582.75	1163.93	20596.25	1163.63	20608.52	1160.71
20642.57	1152.3	20672.4	1152.46	20684.76	1152.52	20753.51	1154.32	20766.23	1154.3
20791.41	1154.12	0805.86	1153.82	0841.26	1153.72	20868.87	1156.83	20900.95	1156.86
20917.6	1158.72	0924.05	1159.27	20934.41	1159.92	0951.83	1161.36	20968.01	1154.61
20989.78	1146.5	21025.2	1145.43	21038.38	1147.04	21076	1157.72	21110.76	1156.47
21129.93	1151.62	1132.61	1150.85	21158.94	1153.37	21176.73	1153.62	21197.09	1154.4
21203.78	1150.12	1217.27	1140.36	21245.34	1139.79	21262.49	1139.68	21275.44	1145.24
21284.3	1150.72	1302.26	1150.47	21311.98	1150.82	21327.71	1151.08	21377.48	1150.22
21401.21	1149.8	21454	1149.85	21556.04	1149.73	21633.17	1149.73	21650.47	1149.83
21796.34	1150.22	1872.57	1150.21	21917.66	1149.93	21954.45	1149.87	21974.64	1154.51

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 21994.3  1158.722036.34  1159.522058.49 1155.5322082.22 1159.6522098.66 1158.78
22143.89  1160.722168.86 1159.9122182.01 1159.4222189.91 1159.8422193.83 1159.44
22212.89  1157.9 22227.2 1159.9722231.65 1160.35   22233 1161.4522274.63 1161.04
22292.93  1157.122314.39 1152.5522336.43  1152.722394.74 1152.7222536.32 1152.44
22549.68  1154.122578.44 1156.5522587.09 1157.5922601.62 1158.3222634.03 1160.85
22649.16  1163.222652.36 1164.7622698.86 1170.8822732.02  1178.522750.13 1180.51
22764.69  1183.822786.36 1185.0922801.42 1186.7722807.62 1186.9522821.79  1185.8
22837.43  1182.4 22869.3 1183.02 22895.2 1182.5222904.25 1179.5822933.69 1169.33
 22950.9  1170.822965.88  1173.222982.72 1171.5723029.35 1168.28 23037.9 1169.19
23050.74  1171.323094.46 1178.9623104.35 1180.55 23113.1 1181.4323129.31 1184.41
23158.01  1185.823167.19 1186.1223175.38 1186.0823251.08 1186.5223315.44 1186.17
23330.46  1186.923340.75 1188.0823347.56 1187.9923361.34  1188.323374.98 1185.09
23384.93  1182.523392.12 1183.48 23403.1  1183.123417.07 1183.02 23439.8 1181.66
23467.05  1173.623510.61 1166.0723546.75  1173.923560.99 1175.2423605.58  1179.9
23610.35  1180.223648.59 1176.5123658.04 1177.0623679.04 1179.3723737.48 1184.35
23746.68  1185.423757.51 1186.2123782.27 1187.8323806.71 1188.2923814.08 1187.68
23822.57  1185.6 23836.1 1184.4523839.74 1183.76 23876.7 1183.32 23932.7 1183.22
23939.22  1185.2 23942.1 1185.6123948.18 1186.9323956.29  1188.123973.47 1189.62
23995.43  1189.424030.29 1190.38 24061.1  1191.724079.65 1192.3124092.29 1193.11
24108.39  1192.1 24116.9 1191.9224122.12 1191.1124132.53 1189.8524183.32 1184.77
24208.61  1178.324227.19 1182.9124228.22  1183.1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14801.12    .03519508.34    .03520491.27    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19508.3420491.27              470  492.46     510              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14801.1219508.34  1157.820491.2724228.22  1156.3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1147.86   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1145.84   Reach Len. (ft)             470.00     492.46     510.00
  Crit W.S. (ft)            1139.51   Flow Area (sq ft)                    14796.15
  E.G. Slope (ft/ft)       0.001789   Area (sq ft)                615.92   14796.15     334.79
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1107.01   Top Width (ft)              108.14     915.24      83.63
  Vel Total (ft/s)            11.42   Avg. Vel. (ft/s)                      11.42
  Max Chl Dpth (ft)           18.52   Hydr. Depth (ft)                      16.17
  Conv. Total (cfs)       3995105.3   Conv. (cfs)                         3995105.3
  Length Wtd. (ft)           492.46   Wetted Per. (ft)                     922.51
  Min Ch El (ft)            1127.32   Shear (lb/sq ft)                       1.79
  Alpha                        1.00   Stream Power (lb/ft s)                20.47
  Frctn Loss (ft)              0.87   Cum Volume (acre-ft)       2399.06   11834.34    1268.75
  C & E Loss (ft)              0.00   Cum SA (acres)              193.91     727.29     241.06


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1147.86   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1145.84   Reach Len. (ft)             470.00     492.46     510.00
  Crit W.S. (ft)            1139.51   Flow Area (sq ft)                    14795.70
  E.G. Slope (ft/ft)       0.001790   Area (sq ft)                         14795.70
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)             915.24   Top Width (ft)                         915.24
  Vel Total (ft/s)            11.42   Avg. Vel. (ft/s)                      11.42
  Max Chl Dpth (ft)           18.52   Hydr. Depth (ft)                      16.17
  Conv. Total (cfs)       3994910.0   Conv. (cfs)                         3994910.0
  Length Wtd. (ft)           492.46   Wetted Per. (ft)                     922.51
  Min Ch El (ft)            1127.32   Shear (lb/sq ft)                       1.79
  Alpha                        1.00   Stream Power (lb/ft s)                20.47
  Frctn Loss (ft)              0.87   Cum Volume (acre-ft)               11835.18       0.32
  C & E Loss (ft)              0.00   Cum SA (acres)                        727.28       0.18
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CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.45

INPUT
Description:
Station Elevation Data num= 300

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14746.98	1146.214	752.11	1146.161	4851.06	1146.061	4881.09	1144.141	4910.13	1145.7
14925.3	1146.214	999.81	1146.241	5023.75	1146.271	5115.38	1145.811	5137.82	1145.45
15144.01	1145.31	5160.69	1145.381	5176.34	1145.681	5184.15	1146.331	5241.95	1146.63
15281.17	1146.91	5309.12	1146.71	5343.83	1147	15371.59	1147.271	5386.45	1147.23
15467.17	1146.81	5478.24	1147.041	5519.72	1147.261	5566.17	1147.44	15703.9	1148.08
15879.53	1149.31	5903.48	1149.441	6002.54	1148.821	6043.15	1148.71	6096.54	1148.58
16155.73	1148.31	6205.69	1148.41	6292.19	1148.491	6344.01	1148.061	6355.56	1149.08
16366.8	1149.51	6377.57	1150.251	6384.06	1149.311	6467.03	1150.641	6629.45	1154.53
16647.95	1154.4	16654.8	1154.481	6671.82	1152.76	16685.8	1149.821	6704.38	1150.2
16731.97	1150.51	6753.89	1149.661	6759.47	1149.541	6774.45	1150.011	6781.12	1150.37
16822.5	1150.21	6914.48	1150.391	6964.07	1150.251	7015.87	1150.181	7115.48	1150.27
17187.88	1150.71	7261.47	1150.67	17330.5	1150.531	7389.14	1150.541	7454.55	1150.76
17484.6	1150.71	7564.97	1150.281	7593.47	1150.321	7606.17	1150.271	7616.31	1150
17625.19	1150.51	7645.56	1151.231	7649.08	1151.231	7705.84	1152.031	7761.81	1152.59
17778.02	1151.71	7799.36	1151.141	7813.13	1151.091	7884.85	1151.54	17965.3	1150.68
18001.45	1150.41	8020.96	1150.131	8030.58	1149.761	8070.55	1149.551	8080.22	1149.88
18090.73	1150.11	8108.23	1149.291	8115.98	1148.841	8187.96	1148.571	8459.38	1149.73
18486.51	1149.81	8492.09	1149.661	8519.46	1148.991	8529.99	1150.051	8545.81	1150.22
18609.17	1148.21	8628.58	1148.611	8662.47	1151.71	8721.65	1156.191	8808.58	1156.99
18824.67	1156.71	8860.42	1155.861	8934.66	1154.041	8956.18	1153.371	8972.54	1154.24
18977.64	1154.91	8986.44	1154.391	9001.14	1153.621	9022.53	1154.21	9085.01	1153.2
19149.05	1152.41	9204.31	1151.881	9229.04	1153.671	9242.84	1154.81	9261.71	1156.74
19263.03	1156.91	9275.24	1157.38	19303.4	1158	19310.63	1156.951	9326.37	1154.84
19333.35	1154.41	9355.52	1153.591	9361.74	1154.761	9392.06	1140.481	9416.73	1129.63
19490.61	1151.61	9495.17	1152.941	9510.69	1154.921	9520.68	1151.331	9544.52	1143.35
19553.74	1145.61	9572.14	1129.781	9665.24	1130.6	19786.7	1126.551	9856.98	1127.38
19925.41	1128.22	0052.36	1125.95	20178	1126.88	20308.6	1125.432	0337.05	1126.91
20359.69	1128.1	20418.9	1136.772	0433.54	1138.95	20442.6	1142.972	0452.11	1145.04
20459.98	1147	20486.73	1153.982	0501.85	1152.22	0505.69	1151.842	0508.94	1152.23
20520.58	1154.92	0536.79	1154.882	0579.49	1153.982	0596.08	1152.732	0626.31	1153.04
20638.92	1153	20676.95	1152.042	0712.89	1150.942	0732.98	1151.742	0744.81	1151.6
20771.95	1151.72	0800.57	1150.822	0804.59	1150.662	0830.42	1153.22	20875	1152.73
20887.8	1152.8	20896.5	1150.862	0922.93	1145.522	0938.03	1144.772	0957.31	1143.67
20981.34	1145.2	21015.1	1155.52	1034.51	1153.282	1041.76	1152.662	1066.29	1144.28
21135.83	1144	21154.19	1144.24	21225.1	1144.772	1232.85	1146.092	1249.91	1149.32
21275.87	1149.62	1280.71	1149.542	1284.16	1148.152	1300.98	1140.582	1329.25	1140.09
21345.2	1140.12	1351.19	1143.012	1365.21	1149.012	1385.23	1148.622	1389.35	1148.63
21391.53	1148.32	1406.85	1147.222	1414.28	1147.462	1430.38	1147.512	1459.89	1147.66
21501.59	1148.42	1669.43	1148.692	1698.08	1148.712	1706.27	1148.762	1828.84	1149.75
21966.13	1148.82	1975.32	1148.842	1988.33	1149.16	22026.1	1156.012	2047.67	1158.88
22052.31	1158.92	2066.78	1157.462	2089.29	1162.012	2094.55	1163.022	2102.22	1160.22
22108.11	1160.52	2126.83	1162.352	2134.31	1162.312	2140.23	1162.142	2171.87	1161.82
22185.25	1161.82	2223.04	1161.062	2229.65	1160.892	2241.59	1158.932	2247.22	1158.16
22263.02	1155.72	2277.72	1160.44	22295	1158.712	2312.49	1164.622	2323.46	1167.71
22326.51	1168.42	2334.35	1169.15	22354.2	1171.282	2358.34	1170.912	2366.27	1170.67
22389.93	1162.72	2426.46	1165.352	2447.68	1166.612	2460.42	1164.92	2478.36	1161.88
22493.23	1158.82	2548.65	1168.96	22557.7	1170.772	2571.15	1171.672	2589.76	1171.8
22608.2	1171.82	2632.49	1165.542	2655.97	1165.212	2666.17	1165.212	2706.69	1158.21
22733.65	1159.72	2770.59	1156.432	2796.01	1159.772	2799.92	1160.152	2833.84	1160.25
22864.9	1161.2	22880.6	1162.672	2890.85	1164.42	2917.15	1165.052	2930.23	1166.18
22940.6	1166.12	2971.53	1172.282	2986.71	1172.492	3002.29	1172.942	3015.56	1171.39
23034.78	1168.72	3058.87	1169.222	3069.85	1169.362	3104.84	1169.622	3151.57	1170.04
23174.83	1169.82	3201.95	1169.742	3205.45	1168.882	3214.31	1167.412	3241.36	1161.69
23247.9	1164.62	3269.96	1170.212	3283.36	1169.65	23293	1169.822	3295.79	1169.72
23312.61	1169.92	3326.72	1172.292	3338.48	1174.112	3365.04	1174.782	3374.67	1175.28
23401.49	1178.32	3428.88	1181.892	3450.92	1183.112	3467.59	1185.44	23529.2	1187.78
23533.18	**1187.7**	**23583.4**	**1181.362**	**3609.86**	**1183.112**	**3613.57**	**1183.292**	**3632.88**	**1182.66**
23672.89	1182.4	23712.1	1182.322	3727.43	1181.942	3751.66	1181.082	3776.53	1180.43
23781.57	1180.22	3801.96	1180.492	3855.26	1180.972	3873.06	1182.952	3882.04	1182.85
23890.47	1182.2	23941.5	1180.482	4011.76	1178.482	4062.88	1178.92	4078.81	1178.99

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

14746.98 .03519510.69 .03520486.73 .035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19510.6920486.73 500 506.77 520 .1 .3
Ineffective Flow num= 2
Sta L Sta R Elev Sta L Sta R Elev
14746.9819510.69 1154.9220486.7324078.81 1153.98

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1146.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.01	Wt. n-Val.		0.035	
W.S. Elev (ft)	1144.97	Reach Len. (ft)	500.00	506.77	520.00
Crit W.S. (ft)	1138.52	Flow Area (sq ft)		14836.82	
E.G. Slope (ft/ft)	0.001759	Area (sq ft)	673.78	14836.82	391.17
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1293.58	Top Width (ft)	114.33	908.83	270.42
Vel Total (ft/s)	11.39	Avg. Vel. (ft/s)		11.39	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		16.33	
Conv. Total (cfs)	4029584.3	Conv. (cfs)		4029584.3	
Length Wtd. (ft)	506.77	Wetted Per. (ft)		916.96	
Min Ch El (ft)	1125.43	Shear (lb/sq ft)		1.78	
Alpha	1.00	Stream Power (lb/ft s)		20.24	
Frctn Loss (ft)	0.84	Cum Volume (acre-ft)	2392.10	11666.83	1264.50
C & E Loss (ft)	0.05	Cum SA (acres)	192.71	716.98	238.99

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1146.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.01	Wt. n-Val.		0.035	
W.S. Elev (ft)	1144.97	Reach Len. (ft)	500.00	506.77	520.00
Crit W.S. (ft)	1138.52	Flow Area (sq ft)		14836.49	
E.G. Slope (ft/ft)	0.001759	Area (sq ft)		14836.49	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	908.82	Top Width (ft)		908.82	
Vel Total (ft/s)	11.39	Avg. Vel. (ft/s)		11.39	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		16.32	
Conv. Total (cfs)	4029449.0	Conv. (cfs)		4029449.0	
Length Wtd. (ft)	506.77	Wetted Per. (ft)		916.96	
Min Ch El (ft)	1125.43	Shear (lb/sq ft)		1.78	
Alpha	1.00	Stream Power (lb/ft s)		20.24	
Frctn Loss (ft)	0.84	Cum Volume (acre-ft)		11667.68	0.32
C & E Loss (ft)	0.05	Cum SA (acres)		716.97	0.18

Warning: Divided flow computed for this cross-section.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.35

INPUT
Description:
Station Elevation Data num= 282

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14725.39	1145.514734.14	1145.4714749.59	1144.9614753.94	1145.18	14770.5	1144.77			
14783.72	1144.614795.36	1144.6514804.37	1144.8614823.99	1144.8814829.06	1145.62				
14835.67	1145.614923.33	1146.6814966.39	1146.4815039.52	1144.9215045.24	1145.66				
15049.3	1145.415062.11	1143.8115082.92	1144.6315099.12	1144.9315101.95	1145.22				
15117.01	1145.315160.07	1146.3815194.51	1145.6815220.11	1146.5815232.48	1147.61				
15296.52	1147.915307.85	1148.1615314.28	1147.7815336.75	1146.0615367.99	1146.25				
15380.22	1146.615393.86	1146.715413.12	1147.5615440.83	1147 15456.8	1146.91				
15523.42	**1146.915540.82**	**1146.815642.16**	**1148.2615661.09**	**1148.1515833.01**	**1148.5**				
15861.97	1148.515964.59	1148.2916035.38	1148.9416050.56	1148.7816104.11	1147.66				
16136.13	1146.716148.11	1146.7816172.71	1148.116238.71	1147.116270.89	1146.98				
16286.77	1146.816359.94	1147.9216384.15	1146.6516386.33	1146.616400.88	1146.88				
16413.24	1147.316428.09	1148.8916462.01	1149.0116531.58	1147.9216596.51	1149.25				
16636.45	1149.316648.83	1148.0116654.62	1147.9216676.35	1148.0716697.82	1148.6				
16721.43	1149.416751.94	1149.3516845.03	1149.616937.24	1149.04	16966	1148.95			

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16985.73  1148.717000.91 1148.6417010.69 1148.7617021.47 1148.78 17049.3 1150.14
17054.03  1150.317064.58 1150.3617143.42 1150.3717240.43 1150.2117273.08 1150.21
17281.85    115017305.82 1149.4917311.15 1149.6117331.18 1149.7117358.67 1150.37
17459.87    115017469.16 1149.9817595.87 1150.0917634.61 1150.0117716.87 1150.04
17758.47    115017893.22 1148.82 17925.8 1148.53 17948.2 1148.8517992.64 1147.73
18001.09  1148.418006.03 1148.57 18044.3 1147.6518078.29  1147.218112.96 1147.66
18176.17  1147.818180.45  1147.918266.54  1148.718279.26 1148.7318359.82 1148.08
18394.67  1147.718462.46 1146.6618497.19 1146.2418505.15 1145.9518558.58 1146.42
18561.93  1146.518574.15 1145.8918595.21 1146.5218611.09 1146.7118633.45  1146.7
18642.24  1147.418655.46 1146.77 18672.4 1144.1318674.03 1143.1418695.73 1143.25
18701.34  1143.418727.85 1146.6818745.64 1149.8518777.23 1154.1818821.24 1153.45
18871.15  1153.118908.75  1152.918933.78  1152.318959.08 1151.7818968.95 1152.17
18989.29  1152.319036.39 1152.8219038.88 1152.9619060.44 1153.5219080.83 1154.35
19090.67  1152.719128.69 1153.0119148.78 1152.9819202.42 1153.73 19280.2 1153.64
19308.46  1156.219353.13  1154.119365.17 1153.4319392.88  1154.119395.59 1153.96
19400.85  1151.119432.33    113319500.71 1151.3719502.69 1151.8219519.66 1156.41
   19539  1146.619549.07 1141.9719557.01 1144.4219564.03 1141.7219603.77 1127.37
19631.86  1127.419687.85 1127.18 19723.5  1126.719825.47 1126.6819862.39 1126.52
19883.63  1126.319989.51 1124.35 20081.1  1126.420115.32 1127.1320127.17 1126.67
20175.73  1125.820246.04 1123.9920276.03 1124.8520290.12  1125.320372.13  1127.3
20426.97    113020449.72 1141.49 20458.5 1143.7720477.29 1147.7320496.54  1151.9
 20511.6    115020518.58 1149.2220530.19 1149.95 20547.5 1151.1520575.07 1150.27
20578.53  1150.420588.29 1151.2920610.78 1150.9220640.86 1150.5520660.11 1150.35
20675.24  1149.720706.15 1147.9420728.63 1148.9820731.37 1149.6420735.97 1149.28
20740.15  1149.220789.02 1148.11 20809.2 1148.1820846.38 1150.5920864.44 1151.29
20872.47  1151.620873.77 1151.3420912.02 1145.6220928.49 1145.1420966.28 1143.83
20978.93  1143.820990.28 1143.4721008.25 1148.1521024.38 1152.2921058.78 1151.06
21066.86  1148.221075.46 1144.2421155.96 1144.04 21229.4 1143.8821316.03 1143.34
21317.74  1144.121331.92 1148.7521359.64 1149.1121360.18 1148.6321373.89 1139.71
21393.03  1139.1 21415.4 1138.9221429.42 1143.5721439.44 1147.28 21455.6 1147.16
21462.13    114721473.03 1146.3821482.38 1145.7521499.16 1145.1621579.66 1145.51
21791.94  1147.221856.09  1147.321869.98 1147.3921943.36 1147.4921995.53 1147.19
22028.65  1147.122031.46  1149.1 22070.6 1152.4822088.35  1151.622103.06 1146.47
22110.94  1143.922119.14 1148.6122129.17 1155.6622158.73 1155.2822205.83 1154.86
22246.47  1161.822259.44 1164.1622279.81 1167.2422295.82 1166.5922298.17  1166.8
22321.53  1168.122331.99 1168.5522364.86 1167.8622419.41 1167.48 22478.6 1167.24
 22491.1  1167.122538.98 1166.3322594.96 1166.6122606.99 1166.5222640.11 1166.05
22667.95  1165.422685.57  1166.122706.79  1167.222735.69 1165.75 22764.9 1163.86
22804.35  1162.422865.92 1157.0422891.83 1157.29 22902.1 1157.0622941.33 1156.81
22981.98  1166.723006.53 1173.7623009.37 1172.4123011.72 1171.7923017.67 1172.14
23044.31  1173.1 23056.5 1172.5523110.78 1172.9823119.28 1173.12 23122.8 1173.01
23172.06  1172.223191.68 1172.5223195.02 1172.36 23209.6 1170.9423219.89 1172.82
23223.55  1173.223263.08 1166.54

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14725.39    .03519519.66    .03520496.54    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19519.6620496.54              490  500.81     520             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14725.3919519.66 1156.4120496.5423263.08  1151.9

CROSS SECTION OUTPUT     Profile #PF#1

  E.G. Elev (ft)            1146.10   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.86   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1144.24   Reach Len. (ft)            490.00     500.81     520.00
  Crit W.S. (ft)            1137.09   Flow Area (sq ft)                    15436.37
  E.G. Slope (ft/ft)       0.001554   Area (sq ft)               380.15   15436.37     369.24
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1375.54   Top Width (ft)             112.37     915.59     347.58
  Vel Total (ft/s)            10.95   Avg. Vel. (ft/s)                        10.95
  Max Chl Dpth (ft)           20.25   Hydr. Depth (ft)                        16.86
  Conv. Total (cfs)       4286780.5   Conv. (cfs)                         4286780.5
  Length Wtd. (ft)           500.81   Wetted Per. (ft)                       922.69
  Min Ch El (ft)            1123.99   Shear (lb/sq ft)                         1.62
  Alpha                        1.00   Stream Power (lb/ft s)                  17.77
  Frctn Loss (ft)              0.86   Cum Volume (acre-ft)      2386.05   11490.74    1259.96
  C & E Loss (ft)              0.02   Cum SA (acres)             191.41     706.37     235.30
```

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1146.10	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.86	Wt. n-Val.		0.035	
W.S. Elev (ft)	1144.24	Reach Len. (ft)	490.00	500.81	520.00
Crit W.S. (ft)	1137.09	Flow Area (sq ft)		15435.92	
E.G. Slope (ft/ft)	0.001554	Area (sq ft)		15435.92	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	915.58	Top Width (ft)		915.58	
Vel Total (ft/s)	10.95	Avg. Vel. (ft/s)		10.95	
Max Chl Dpth (ft)	20.25	Hydr. Depth (ft)		16.86	
Conv. Total (cfs)	4286604.0	Conv. (cfs)		4286604.0	
Length Wtd. (ft)	500.81	Wetted Per. (ft)		922.68	
Min Ch El (ft)	1123.99	Shear (lb/sq ft)		1.62	
Alpha	1.00	Stream Power (lb/ft s)		17.77	
Frctn Loss (ft)	0.86	Cum Volume (acre-ft)		11491.59	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		706.36	0.18

Warning: Divided flow computed for this cross-section.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.25

INPUT
Description:
Station Elevation Data num= 349

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14669.3	1141.2	14696	1141.4	114716.46	1141.8	14734.89	1140.2	414738.34	1140
14768.15	1141.6	14812.37	1141.57	14838.8	1141.9	814890.22	1142.5	414893.45	1142.47
14952.96	1141.9	14990.54	1141.8	415014.65	1141.27	15045.5	1141.8	115053.65	1141.8
15146.97	1141.5	15157.23	1141.7	815244.56	1144.0	415266.24	114	415326.43	1145.26
15385.32	1145.5	15516.41	1144.4	715540.47	1144.3	515579.56	1145.6	615680.58	1144.02
15706.7	1143.6	15726.55	1143.5	915754.97	1145.0	815769.83	1145.7	915806.78	1145.19
15847.95	1144.8	15908.04	1146.0	615939.34	1146.5	415962.83	1146.1	915972.94	1145.65
15986.85	1145.3	16000.95	1145.1	216024.19	1145.6	416105.28	1146.1	816115.42	1146.22
16230.86	114	816244.42	1147.2	716258.68	1146.6	16266.61	1146.3	216293.47	1146.09
16301.66	1146.1	16383.22	1146.72	16414.9	1146.7	216482.81	1147.2	316504.83	1147.38
16572.16	1147.3	16578.56	1146.9	516609.46	1146.1	916633.03	1146.9	816649.47	1147.34
16683.41	1147.6	16741.32	1147.9	16756.58	1147.7	616770.63	1147.5	516808.89	1147.46
16851.53	1147.9	16901.19	1148.2	16920.3	1147.6	716939.23	1147.3	216953.12	1147.51
16967.88	1147.9	16989.95	1147.7	317061.99	1148.6	517131.84	1148.8	517184.33	1148.44
17227.94	1148.5	17239.04	1148.3	917265.97	1149.68	17292	1147.8	517303.04	1148.05
17309.99	1148.7	17320.73	1148.4	817366.68	1149.6	917373.41	1149.8	317389.09	1149.83
17504.52	1149.7	17533.74	1148.0	917546.98	1147.4	617587.64	1147.7	717659.68	1148.62
17759.26	1148.1	17829.13	1147.4	417834.45	1147.4	17847.61	1146.5	917850.37	1146.8
17860.97	1146.2	17879.42	1146.0	417912.16	1145.8	617921.91	1145.9	417941.62	1146.82
17978.97	1146.7	18099.37	1145.6	918178.51	1145.8	18227.54	1145.4	618292.64	1145.2
18360.29	1144.4	18416.44	1142.6	318447.34	1143.2	418474.49	1144.5	118542.66	1145.67
18546.53	1145.8	18577.13	1147.42	18602.8	1148.6	518619.79	1147.8	918649.25	1147.01
18663.27	1146.8	18687.94	1145.9	318750.86	1146.48	18782.2	1147.0	118849.61	1148.48
18902.85	1149.5	18980.06	1149.7	18987.95	1150.0	619004.24	1149.5	619011.28	1149.54
19087.34	1151.9	19090.48	1151.93	19116.5	1151.9	719124.55	1151.0	419130.34	1150.2
19136.83	1150.8	19146.03	1152.0	419162.08	1151.7	919184.38	1151.3	719206.42	1149.61
19218	1148.3	19242.91	1147.7	319260.28	1147.3	719277.78	1146.6	19296.05	1145.93
19315.11	1148.3	19336.56	1151.3	19384.06	1151.8	519403.77	1151.9	719432.88	1151.94
19442.06	1151.6	19447	1147.9	919457.65	1140.9	19488.89	1147.4	519507.63	1151.32
19522.87	1153.5	19554.33	1141.0	819559.11	1142.3	19561.79	1142.7	619577.69	1136.68
19600.27	1127.1	19613.8	1127.0	619660.05	1126.5	519717.39	1125.9	919739.56	1126.02
19798.63	1126.8	19898.04	1124.5	719925.47	1124.0	119948.27	1124.3	720038.98	1126.03
20051.01	**1126.2**	**20181.25**	**1124.1**	**520280.79**	**1127.5**	**20309.66**	**1128.5**	**920371.33**	**1129.09**
20431.79	1129.7	20446.94	1136.33	20454.8	1139.6	220497.24	1150.3	120498.94	1150.8
20540.34	1145.8	20550	1146.6	220568.14	1147.9	20569.31	1148.1	420569.71	1149.34
20592.92	1148.8	20615.52	1148.5	720619.54	1149.0	520637.93	1149.7	620641.95	1149.18
20651.88	1149.3	20653.82	1148.88	20662.5	1149.8	520690.24	1147.9	520704.98	1147.45
20728.18	1147.4	20749.28	1147.1	420765.93	1149.2	920797.28	1149.1	20812	1148.78
20834.04	1147.3	20847.92	1146.9	20861.76	1147.1	20865.13	1146.4	620867.65	1146.92

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20905.04  1152.120905.07 1153.1420907.01 1154.1120925.14 1154.0120942.62 1153.22
20957.29  1149.520973.44  1145.220977.87 1146.6120993.54 1145.9521027.21 1144.25
21036.39  1143.921082.58 1143.7121083.18 1145.3121084.35 1145.0621107.03  1150.4
21112.26  1151.521115.86 1151.5221117.26 1152.5721125.17 1149.5121134.03 1149.45
21148.61  1149.9 21148.7 1150.6621156.06 1144.26 21157.4 1143.3221171.27 1144.61
21173.46  1144.121197.06  1143.421201.63 1142.89 21219.1 1142.8121272.36 1142.43
 21272.7    114321303.18 1142.4621324.66  1142.421372.84 1143.3121390.94 1143.96
21395.65  1143.821402.53 1145.5121413.78 1148.6421416.07 1150.17 21438.9 1150.43
21442.05    114921444.91 1144.69 21449.4 1138.83 21459.3 1140.6621484.71 1140.34
21496.57  1140.121500.37 1138.96 21509.3 1143.17   21515 1145.9921516.27 1146.41
21546.73  1147.821548.94 1145.9921550.77 1145.8721558.28  1146.921558.63 1146.08
21583.57  1147.621585.59 1147.6321600.87 1147.8621609.33 1146.6521625.89 1145.94
21667.88  1145.621692.76  1145.521702.11 1146.1721712.99 1147.5821755.73 1146.47
21773.13  1145.821804.28 1146.5721809.78 1146.8221824.28 1146.55 21830.5 1146.34
21838.18  1146.421853.31 1147.6221862.39  1148.221878.77 1148.5721886.99 1147.25
21892.55  1146.921912.24 1146.8321949.06 1146.8821955.72  1147.121992.39 1148.08
21993.27  1147.622003.04 1147.1322013.87 1147.6422020.58 1148.74 22023.8  1151.5
22024.87  1151.922029.37 1150.5622030.61 1149.95 22030.9 1147.6822032.04  1148.3
22032.09  1151.922033.36 1151.0522035.83 1147.6122045.88 1147.6522054.82 1147.85
22058.73  1148.1 22068.2 1147.8722076.26 1147.4422083.29 1151.88 22088.5 1152.85
   22095  1153.722102.18 1152.4722111.71 1147.84 22113.2 1147.2722117.92 1149.93
22123.62  1153.522130.31 1157.38 22135.7 1154.4822157.41 1155.91 22163.5 1154.36
22180.59  1149.122181.12 1148.0622186.75 1150.0122199.13 1153.6922201.91 1154.62
22205.97  1155.622211.34 1155.3222231.42 1153.9522233.49 1154.2422248.76 1154.93
22294.99  1152.7 22358.5 1153.4722364.22 1153.5322412.11 1154.8322415.49 1155.76
22415.89  1156.822419.27 1155.9522429.54 1155.0922450.54 1157.8922483.44 1163.47
22508.73  1163.122514.12 1162.8622521.49 1163.24 22541.1 1163.8922546.09 1164.17
22553.57  1165.122559.79    116622607.78 1166.6422685.95 1168.0322694.88  1168.1
22712.45  1167.922738.54 1167.6422764.84 1166.4922775.76 1163.4422783.83  1165.1
 22785.1  1165.522819.35 1165.8922846.71 1163.9122860.22 1164.0522888.52  1161.7
22898.03  1162.322908.01 1162.0322927.09 1162.6822936.67 1162.76

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14669.3    .03519522.87    .03520498.94    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19522.8720498.94              500  500.83     490             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14669.319522.87  1153.520498.9422936.67  1150.8

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1145.23   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.09   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1143.14   Reach Len. (ft)            500.00     500.83     490.00
  Crit W.S. (ft)            1137.06   Flow Area (sq ft)                   14576.74
  E.G. Slope (ft/ft)       0.001890   Area (sq ft)               770.84   14576.74     249.90
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1743.60   Top Width (ft)             596.42     919.66     227.52
  Vel Total (ft/s)            11.59   Avg. Vel. (ft/s)                     11.59
  Max Chl Dpth (ft)           19.13   Hydr. Depth (ft)                     15.85
  Conv. Total (cfs)       3887181.3   Conv. (cfs)                        3887181.3
  Length Wtd. (ft)           500.83   Wetted Per. (ft)                    925.95
  Min Ch El (ft)            1124.01   Shear (lb/sq ft)                      1.86
  Alpha                        1.00   Stream Power (lb/ft s)               21.54
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)      2379.58   11318.21    1256.26
  C & E Loss (ft)              0.03   Cum SA (acres)             187.43     695.82     231.87


Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1145.23   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.09   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1143.14   Reach Len. (ft)            500.00     500.83     490.00
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Crit W.S. (ft)	1137.06	Flow Area (sq ft)	14576.18	
E.G. Slope (ft/ft)	0.001890	Area (sq ft)	14576.18	
Q Total (cfs)	169000.00	Flow (cfs)	169000.00	
Top Width (ft)	919.65	Top Width (ft)	919.65	
Vel Total (ft/s)	11.59	Avg. Vel. (ft/s)	11.59	
Max Chl Dpth (ft)	19.13	Hydr. Depth (ft)	15.85	
Conv. Total (cfs)	3886946.3	Conv. (cfs)	3886946.3	
Length Wtd. (ft)	500.83	Wetted Per. (ft)	925.95	
Min Ch El (ft)	1124.01	Shear (lb/sq ft)	1.86	
Alpha	1.00	Stream Power (lb/ft s)	21.54	
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)	11319.07	0.32
C & E Loss (ft)	0.03	Cum SA (acres)	695.81	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.16

INPUT
Description:
Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14558.26	1140.1	14601.34	1139.8	14620.29	1139.8	14648.79	1141.5	14664.25	1140.61
14699.34	1141.6	14718.01	1141.5	14790.33	1141.5	14818.53	1141.8	14895.67	1142.18
15034.84	1143.9	15053.17	1143.6	15096.39	1143.07	15111.3	1142.9	15132.96	1142.95
15169.64	1143.4	15197.82	1143.9	15251.91	1143.9	15289.9	1145.8	15300.92	1146.51
15495.98	1143.6	15524.65	1143.3	15535.19	1143.5	15572.76	1144.2	15589.11	1144.43
15614.98	1144.5	15687.06	1145.09	15734.3	1145.4	15803.62	1144.7	15859.66	1144.21
15868.89	1144	15893.57	1144.0	15934.43	1145.12	15967.5	1145.1	15993.08	1145.16
16008.42	1145	16039.76	1144.5	16055.43	1144.9	16152.98	1145.9	16156.28	1146.02
16187.56	1145	16196.71	1144.9	16210.32	1145.4	16216.18	1145.4	16233.87	1145
16271.52	1145.1	16327.67	1145.4	16366.09	1145.9	16374.17	1146.13	16417.1	1146.31
16484.92	1146.4	16497.32	1146.5	16513.78	1146.6	16539.16	1145.3	16560.28	1145.35
16577.35	1145.4	16668.97	1146.28	16689.1	1145.34	16700.4	1144.9	16728.75	1145.08
16832.02	1147.6	16837	1147.6	16858.13	1146.3	16867.63	1146.6	16879.67	1146.67
16908.91	1146.3	17022.46	1147.49	17149.3	1147.8	17167.69	1146.39	17175.6	1146.74
17193.26	1148.3	17217.1	1148.3	17227.91	1148.1	17242.49	1147.8	17354.23	1148.45
17382.23	1148.5	17409.55	1147.8	17425.59	1147.5	17568.1	1145.1	17649.12	1144.43
17682.1	1144	17710.46	1144.2	17771.01	1145.2	17778.25	1145.3	17792.86	1145.15
17804.62	1145.2	17817.29	1145.1	17852.1	1144.9	17869.04	1144.8	17987.97	1145.36
18006.3	1145.7	18056.03	1146.1	18068.08	1145.9	18098.69	1146.5	18107.36	1146.63
18142.42	1145.7	18202.88	1144.1	18218.04	1144.5	18233.08	1145.3	18252.18	1145.25
18278.9	1145.3	18290.75	1145.4	18340.71	1145.9	18372.38	1145.7	18379.92	1145.53
18409.63	1146.3	18413.87	1146.2	18430.47	1145.1	18457.38	1145.0	18514.13	1144.57
18547.44	1145	18575.72	1145.1	18655.55	1145.4	18750.49	1145.4	18839.08	1144.51
18847.3	1144.3	18925.78	1141.8	19006.31	1143.6	19012.55	1143.7	19121.56	1145.48
19156.79	1145	19203.49	1146.0	19209.43	1146.3	19219.89	1146.3	19234.21	1146.33
19241.65	1147.1	19268.87	1147.9	19272.29	1147.9	19289.79	1150.2	19300.47	1154.06
19315.85	1159.1	19322.74	1156.4	19341.28	1149.8	19361.08	1149.4	19367.81	1149.26
19378.01	1149.5	19399.76	1149.5	19414.12	1149.7	19415.39	1149.7	19451.58	1138.81
19454.2	1137.9	19501.23	1151.1	19510.31	1154.0	19515.25	1152.7	19522.24	1151.84
19532	1151.2	19539.77	1147.8	19547.51	1145.9	19556.05	1144.17	19561.2	1141.76
19575.95	1134.2	19608.44	1130.73	19637	1126.5	19664.14	1126	19716.23	1126.18
19735.51	1126.2	19805.41	1126.3	19854.78	1126.2	19862.41	1126.2	19977.89	1125.59
19988	1125.6	20055.71	1125.5	20098.15	1125.8	20118.29	1125.4	20225.13	1126.19
20246.76	1126.3	20256.27	1126.1	20377.74	1124.5	20386.58	1125.4	20451.67	1132
20465.75	1138.5	20490.53	1148.3	20493.76	1149.9	20502.77	1150.2	20505.34	1151.16
20515.14	1151.3	20526.39	1151.2	20530.89	1151.2	20537.96	1151	20557.56	1150.15
20577.7	1150.1	20612.4	1148.9	20650.93	1150.9	20676.41	1152.4	20699.12	1147.44
20720.21	1143.7	20762.3	1144.7	20828.37	1145.5	20830.49	1145.6	20878.51	1145.14
20899.15	1145	20915.75	1144.3	20933.85	1142.5	20938.75	1142.3	20943.08	1141.87
20946.54	1143	20949.2	1143.0	20955.72	1146.9	20979.74	1153.8	21012.55	1164.51
21027.23	**1164.5**	**21059.64**	**1164.5**	**21097.75**	**1151.75**	**21122.9**	**1143.6**	**21126.93**	**1143.42**
21131.64	1141.1	21138.96	1141.4	21158.51	1134.1	21211.22	1134.05	21230.9	1140.88
21249.19	1141.7	21275.9	1150.2	21278.43	1150.9	21287.42	1151	21297.37	1149.81
21321.46	1148.5	21328.5	1143.8	21330.79	1142.5	21351.03	1141.66	21363.9	1141.47
21393.58	1141.9	21405.26	1141.3	21438.19	1141.29	21452.4	1141.3	21473.13	1141.81
21484.79	1145.4	21494.9	1148.1	21509.25	1148.8	21523.37	1149.9	21530.92	1145.09
21541.36	1138.5	21588.15	1139.0	21600.99	1144.8	21630.49	1145.3	21652.18	1145.66

```
21693.37  1145.921699.87 1145.9421757.41  1147.221786.74  1147.821819.64 1148.51
21823.23  1148.421876.31 1147.9821940.69 1150.4721968.32 1151.6621985.13 1153.34
21989.98  1154.122011.31 1154.5622029.38 1154.7822035.21  1152.322042.51 1148.88
22067.57  1152.922071.58 1152.8822102.57 1153.0922111.37 1153.5522128.28 1154.08
 22141.3  1159.122153.18 1163.8722186.69 1177.0722190.01 1177.08

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14558.26    .03519510.31    .03520515.14    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19510.3120515.14              480  495.84     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14558.2619510.31 1154.0820515.1422190.01  1151.3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1144.14   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.40   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1141.74   Reach Len. (ft)            480.00     495.84     550.00
  Crit W.S. (ft)            1136.90   Flow Area (sq ft)                   13591.57
  E.G. Slope (ft/ft)       0.002357   Area (sq ft)               237.01   13591.57     760.95
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1469.89   Top Width (ft)             273.72     912.67     283.50
  Vel Total (ft/s)            12.43   Avg. Vel. (ft/s)                       12.43
  Max Chl Dpth (ft)           17.16   Hydr. Depth (ft)                       14.89
  Conv. Total (cfs)       3480660.3   Conv. (cfs)                        3480660.3
  Length Wtd. (ft)           495.84   Wetted Per. (ft)                      917.43
  Min Ch El (ft)            1124.58   Shear (lb/sq ft)                       2.18
  Alpha                        1.00   Stream Power (lb/ft s)                27.11
  Frctn Loss (ft)              1.11   Cum Volume (acre-ft)      2373.80   11156.28    1250.58
  C & E Loss (ft)              0.04   Cum SA (acres)             182.43     685.29     228.99


Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1144.14   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.40   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1141.74   Reach Len. (ft)            480.00     495.84     550.00
  Crit W.S. (ft)            1136.90   Flow Area (sq ft)                   13590.57
  E.G. Slope (ft/ft)       0.002358   Area (sq ft)                        13590.57
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             912.67   Top Width (ft)                        912.67
  Vel Total (ft/s)            12.44   Avg. Vel. (ft/s)                       12.44
  Max Chl Dpth (ft)           17.16   Hydr. Depth (ft)                       14.89
  Conv. Total (cfs)       3480244.0   Conv. (cfs)                        3480244.0
  Length Wtd. (ft)           495.84   Wetted Per. (ft)                      917.42
  Min Ch El (ft)            1124.58   Shear (lb/sq ft)                       2.18
  Alpha                        1.00   Stream Power (lb/ft s)                27.12
  Frctn Loss (ft)              1.11   Cum Volume (acre-ft)              11157.14       0.32
  C & E Loss (ft)              0.04   Cum SA (acres)                       685.27       0.18


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.06

INPUT
Description: Upstream face of Preist Rd Bridge
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18820    1144   19040    1148   19210    1152 19541.7 1156.02 19541.8 1149.07
 19541.9  1148.5 19555.9 1148.27 19568.6 1138.69 19576.6 1137.91 19594.4 1126.86
```

19652.1	1126.1	19661.1	1124.14	19665.1	1124.14	19728.4	1122.9	19781.5	1123.99
19785.5	1123.99	19844.6	1123.1	19903	1123.46	19963	1123	20023.2	1123.05
20101.5	1123.6	20105.9	1125.63	20146.2	1126.4	20204.1	1126.31	20267.2	1126.5
20327.5	1126.27	20388.2	1126.3	20452.8	1126.86	20488.2	1148.53	20494.5	1148.52
20504.7	1148.55	20504.8	1158.3	20504.9	1165.2	21100	1180		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18820	.035	19541.8	.035	20504.8	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19541.8	20504.8	176.4	176.4	176.4	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18820	19541.8	1149.07	20504.8	21100	1158.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1142.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.27	Wt. n-Val.		0.035	
W.S. Elev (ft)	1140.72	Reach Len. (ft)	0.00	0.00	0.00
Crit W.S. (ft)	1135.39	Flow Area (sq ft)		13992.86	
E.G. Slope (ft/ft)	0.002141	Area (sq ft)		13992.86	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	909.54	Top Width (ft)		909.54	
Vel Total (ft/s)	12.08	Avg. Vel. (ft/s)		12.08	
Max Chl Dpth (ft)	17.82	Hydr. Depth (ft)		15.38	
Conv. Total (cfs)	3652051.8	Conv. (cfs)		3652051.8	
Length Wtd. (ft)	0.00	Wetted Per. (ft)		918.02	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.04	
Alpha	1.00	Stream Power (lb/ft s)		24.61	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	2372.49	10999.28	1245.77
C & E Loss (ft)	0.02	Cum SA (acres)	180.92	674.92	227.20

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1142.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.27	Wt. n-Val.		0.035	
W.S. Elev (ft)	1140.72	Reach Len. (ft)	0.00	0.00	0.00
Crit W.S. (ft)	1135.39	Flow Area (sq ft)		13991.64	
E.G. Slope (ft/ft)	0.002142	Area (sq ft)		13991.64	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	909.53	Top Width (ft)		909.53	
Vel Total (ft/s)	12.08	Avg. Vel. (ft/s)		12.08	
Max Chl Dpth (ft)	17.82	Hydr. Depth (ft)		15.38	
Conv. Total (cfs)	3651537.8	Conv. (cfs)		3651537.8	
Length Wtd. (ft)	0.00	Wetted Per. (ft)		918.01	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.04	
Alpha	1.00	Stream Power (lb/ft s)		24.62	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)		11000.16	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		674.90	0.18

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 220.05

INPUT
Description: Priest Road
Distance from Upstream XS = 0
Deck/Roadway Width = 105
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 13

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
18820	1144	1144	19040	1148	1148	19210	1152	1152
19541.7	1156.02	1156.02	19541.7	1156.02	1149.07	19661.1	1157.26	1150.31
19781.5	1158.44	1151.49	19903	1159.65	1152.7	20023.2	1160.89	1153.94
20142.2	1162.1	1155.11	20263.2	1163.32	1156.37	20384.2	1164.33	1157.4
20504.7	1165.2	1158.25						

```
Upstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18820    1144   19040    1148   19210    1152 19541.7 1156.02 19541.8 1149.07
 19541.9  1148.5 19555.9 1148.27 19568.6 1138.69 19576.6 1137.91 19594.4 1126.86
 19652.1  1126.1 19661.1 1124.14 19665.1 1124.14 19728.4  1122.9 19781.5 1123.99
 19785.5 1123.99 19844.6  1123.1   19903 1123.46   19963    1123 20023.2 1123.05
 20101.5  1123.6 20105.9 1125.63 20146.2  1126.4 20204.1 1126.31 20267.2  1126.5
 20327.5 1126.27 20388.2  1126.3 20452.8 1126.86 20488.2 1148.53 20494.5 1148.52
 20504.7 1148.55 20504.8  1158.3 20504.9  1165.2   21100    1180

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18820    .035 19541.8    .035 20504.8    .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
       19541.8 20504.8             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18820 19541.8 1149.07 20504.8   21100  1158.3

Downstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18820    1144    1144   19040    1148    1148   19210    1152    1152
 19541.7 1156.02 1156.02 19541.7 1156.02 1149.07 19661.1 1157.26 1150.31
 19781.5 1158.44 1151.49   19903 1159.65  1152.7 20023.2 1160.89 1153.94
 20142.2  1162.1 1155.11 20263.2 1163.32 1156.37 20384.2 1164.33  1157.4
 20504.7  1165.2 1158.25

Downstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18820    1144   19040    1148   19210    1152 19541.7 1156.02 19541.8 1149.07
 19541.9  1148.5 19555.9 1148.27 19568.6 1138.69 19576.6 1137.91 19594.4 1126.86
 19652.1  1126.1 19661.1 1124.14 19665.1 1124.14 19728.4  1122.9 19781.5 1123.99
 19785.5 1123.99 19844.6  1123.1   19903 1123.46   19963    1123 20023.2 1123.05
 20101.5  1123.6 20105.9 1125.63 20146.2  1126.4 20204.1 1126.31 20267.2  1126.5
 20327.5 1126.27 20388.2  1126.3 20452.8 1126.86 20488.2 1148.53 20494.5 1148.52
 20504.7 1148.55 20504.8  1158.3 20504.9  1165.2   21100    1180

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18820    .035 19541.8    .035 20504.8    .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
       19541.8 20504.8             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18820 19541.8 1149.07 20504.8   21100  1158.3

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  7

Pier Data
Pier Station     Upstream= 19663.1    Downstream= 19663.1
Upstream     num=       2
    Width   Elev    Width   Elev
        4   1123        4   1151
Downstream     num=       2
    Width   Elev    Width   Elev
        4   1123        4   1151
```

```
Pier Data
Pier Station     Upstream= 19783.5    Downstream= 19783.5
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1152
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1152

Pier Data
Pier Station     Upstream=   19905    Downstream=   19905
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1153
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1153

Pier Data
Pier Station     Upstream= 20025.2    Downstream= 20025.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1154
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1154

Pier Data
Pier Station     Upstream= 20144.2    Downstream= 20144.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1156
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1156

Pier Data
Pier Station     Upstream= 20265.2    Downstream= 20265.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1157
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1157

Pier Data
Pier Station     Upstream= 20386.2    Downstream= 20386.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1158
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1158

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line
```

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1142.99	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1140.72	E.G. Elev (ft)	1142.96	1142.58
Q Total (cfs)	169000.00	W.S. Elev (ft)	1140.46	1139.87
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1135.63	1135.62
Q Weir (cfs)		Max Chl Dpth (ft)	17.56	16.97
Weir Sta Lft (ft)		Vel Total (ft/s)	12.69	13.20
Weir Sta Rgt (ft)		Flow Area (sq ft)	13320.24	12799.20
Weir Submerg		Froude # Chl	0.57	0.61
Weir Max Depth (ft)		Specif Force (cu ft)	170784.95	165762.31
Min Top Rd (ft)	1148.55	Hydr Depth (ft)	15.12	14.56
Min El Prs (ft)	1158.25	W.P. Total (ft)	1107.99	1097.59
Delta EG (ft)	0.67	Conv. Total (cfs)	2967717.3	2794297.5
Delta WS (ft)	0.99	Top Width (ft)	880.77	879.02
BR Open Area (sq ft)	25521.96	Frctn Loss (ft)	0.36	0.22
BR Open Vel (ft/s)	13.20	C & E Loss (ft)	0.02	0.04
Coef of Q		Shear Total (lb/sq ft)	2.43	2.66
Br Sel Method	Energy only	Power Total (lb/ft s)	30.88	35.16

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1142.99	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1140.72	E.G. Elev (ft)	1142.96	1142.58
Q Total (cfs)	169000.00	W.S. Elev (ft)	1140.46	1139.87
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1135.63	1135.62
Q Weir (cfs)		Max Chl Dpth (ft)	17.56	16.97
Weir Sta Lft (ft)		Vel Total (ft/s)	12.69	13.20
Weir Sta Rgt (ft)		Flow Area (sq ft)	13317.63	12798.85
Weir Submerg		Froude # Chl	0.57	0.61
Weir Max Depth (ft)		Specif Force (cu ft)	170770.17	165759.52
Min Top Rd (ft)	1156.28	Hydr Depth (ft)	15.16	14.57
Min El Prs (ft)	1158.25	W.P. Total (ft)	1105.36	1097.10
Delta EG (ft)	0.67	Conv. Total (cfs)	2971454.8	2795003.3
Delta WS (ft)	0.99	Top Width (ft)	878.62	878.62
BR Open Area (sq ft)	25091.80	Frctn Loss (ft)	0.36	0.22
BR Open Vel (ft/s)	13.20	C & E Loss (ft)	0.02	0.04
Coef of Q		Shear Total (lb/sq ft)	2.43	2.66
Br Sel Method	Energy only	Power Total (lb/ft s)	30.88	35.16

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.03

INPUT
Description: Downstream face of Preist Rd Bridge
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18820	1144	19040	1148	19210	1152	19541.7	1156.02	19541.8	1149.07
19541.9	1148.5	19555.9	1148.27	19568.6	1138.69	19576.6	1137.91	19594.4	1126.86
19652.1	1126.1	19661.1	1124.14	19665.1	1124.14	19728.4	1122.9	19781.5	1123.99
19785.5	1123.99	19844.6	1123.1	19903	1123.46	19963	1123	20023.2	1123.05
20101.5	1123.6	20105.9	1125.63	20146.2	1126.4	20204.1	1126.31	20267.2	1126.5
20327.5	1126.27	20388.2	1126.3	20452.8	1126.86	20488.2	1148.53	20494.5	1148.52
20504.7	1148.55	20504.8	1158.3	20504.9	1165.2	21100	1180		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18820	.035	19541.8	.035	20504.8	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19541.8	20504.8	840	799.9	720	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18820	19541.8	1149.07	20504.8	21100	1158.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1142.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.59	Wt. n-Val.		0.035	
W.S. Elev (ft)	1139.74	Reach Len. (ft)	840.00	799.90	720.00
Crit W.S. (ft)	1135.40	Flow Area (sq ft)		13097.09	
E.G. Slope (ft/ft)	0.002656	Area (sq ft)		13097.09	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.62	Top Width (ft)		906.62	
Vel Total (ft/s)	12.90	Avg. Vel. (ft/s)		12.90	
Max Chl Dpth (ft)	16.84	Hydr. Depth (ft)		14.45	
Conv. Total (cfs)	3279183.3	Conv. (cfs)		3279183.3	
Length Wtd. (ft)	799.90	Wetted Per. (ft)		914.49	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.37	
Alpha	1.00	Stream Power (lb/ft s)		30.64	
Frctn Loss (ft)	2.20	Cum Volume (acre-ft)	2372.49	10946.58	1245.77
C & E Loss (ft)	0.01	Cum SA (acres)	180.92	671.33	227.20

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1142.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.59	Wt. n-Val.		0.035	
W.S. Elev (ft)	1139.73	Reach Len. (ft)	840.00	799.90	720.00
Crit W.S. (ft)	1135.40	Flow Area (sq ft)		13096.98	
E.G. Slope (ft/ft)	0.002656	Area (sq ft)		13096.98	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.62	Top Width (ft)		906.62	
Vel Total (ft/s)	12.90	Avg. Vel. (ft/s)		12.90	
Max Chl Dpth (ft)	16.83	Hydr. Depth (ft)		14.45	
Conv. Total (cfs)	3279137.8	Conv. (cfs)		3279137.8	
Length Wtd. (ft)	799.90	Wetted Per. (ft)		914.49	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.37	
Alpha	1.00	Stream Power (lb/ft s)		30.64	
Frctn Loss (ft)	2.20	Cum Volume (acre-ft)		10947.46	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		671.32	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.88

INPUT
Description:
Station Elevation Data num= 261

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14514.07	1139	14534.1	1138.85	14545.54	1138.98	14568.07	1140.1	14616.5	1140.32
14716.7	1141	14745.12	1140.86	14840.33	1140.22	14862.85	1139.85	14909.77	1139.33
14931.77	1140.71	14961.51	1141.91	14973.84	1141.54	14992.46	1141.19	15030.45	1141.06
15047.06	1140.91	15059.77	1141.35	15078.45	1141.79	15107.01	1139.96	15123.4	1140.12
15199.13	1140.21	15217.64	1140.41	15301.85	1142.54	15323.64	1141.01	15345.17	1140.24
15380.24	1140.31	15441.95	1139.88	15464.09	1139.76	15548.89	1141.78	15563.61	1142.06
15578.38	1140.71	15601.21	1140.06	15608.94	1140.05	15634.45	1140.81	15649.04	1140.83
15719.22	1141.11	15815.93	1141.63	15837.84	1140.63	15860.05	1140.15	15893.02	1140.86
15939.51	1140.71	15978.38	1140.66	16064.4	1143.15	16070.41	1143.22	16095.29	1141.64
16115.96	1141.31	16119.03	1141.41	16134.54	1141.57	16146.86	1141.89	16169.82	1142.09
16236.82	1143.51	16306.63	1144.91	16330.96	1145.55	16356.32	1145.04	16390.25	1144.9
16418.37	1146.11	16499.77	1146.41	16543.51	1146.58	16545.29	1146.44	16607.82	1144.66
16624.62	1144.81	16876.38	1145.05	16916.17	1145.31	16938.38	1145.38	16953.95	1145.54
16977.85	1144.51	16984.79	1144.21	17015.75	1144.05	17019.85	1144.41	17024.96	1143.93
17076.6	1143.61	17080.54	1143.81	17109.82	1143.58	17203.42	1142.58	17223.3	1142.22
17320.75	1142.51	17338.45	1142.89	17457.6	1141.91	17572.79	1141.51	17582.93	1141.38
17588.97	1141.51	17626.53	1141.14	17630.9	1142.01	17642.89	1143.31	17665.29	1142.28
17673.37	1142	17690.74	1141.91	17757.85	1141.63	17933.69	1140.81	18090.1	1139.93
18246.31	1140.21	18269.96	1140.23	18307.92	1140.47	18469.32	1140.38	18475.89	1140.37
18530.05	1136.11	18574.27	1136.19	18616.16	1136.32	18617.38	1136.07	18669.45	1135.5
18722.74	1135.61	18758.73	1136.08	18801.35	1134.81	18813.29	1134.54	18825.95	1134.44

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18948.97  1133.119124.49 1134.1719150.71  1134.319175.81 1134.2619242.66 1133.74
19280.61  1132.319300.45 1131.8419312.63 1131.1619339.53 1130.9919367.29 1130.67
19377.92  1131.719385.17 1132.6819400.47 1133.2319437.39 1135.05 19458.1 1136.05
19516.39    1148 19523.8  1146.619527.76 1145.4119551.27 1140.2319567.62 1136.33
19583.83  1126.819590.67 1122.2919682.49  1119.519806.82 1121.44 19858.6 1121.91
19875.84  1122.219937.15 1123.8620067.48 1122.2620073.13 1122.35 20196.5  1124.7
 20230.3  1124.9 20327.1 1125.5120344.25 1125.1420441.63 1124.5120459.19  1124.5
20462.04  1124.8 20473.1 1132.2220494.93 1145.8320511.31 1147.1320520.67 1147.25
20532.47    114320552.33 1139.5420569.55 1144.1120630.63 1158.5220644.87 1158.83
20659.44  1158.920689.08 1158.5720709.23 1158.6120742.28 1150.78   20786 1140.17
20820.66  1139.5 20838.8 1133.3520851.83 1135.7120873.02 1138.6220904.34 1139.63
20914.53  1139.9 20930.3 1137.2420954.89 1142.7820967.13 1145.6921028.23 1143.73
21038.71  1143.321109.85  1143.721125.63 1139.4921156.43 1131.7721173.08 1134.84
21202.67  1140.221223.83 1140.4121235.54 1140.6821249.54 1140.6721256.44 1139.08
21276.33  1134.721309.24 1141.7421343.49 1149.2821373.03 1150.3921382.21 1150.93
21405.52  1145.321425.87 1140.3621435.22 1142.9821447.44 1146.1221457.15 1145.21
21464.44    114521476.64  1148.621498.65 1140.9221504.19 1139.1421507.27 1139.27
 21525.4  1140.621536.85 1145.3321548.26 1150.5621562.18 1151.0821573.25 1151.75
 21581.8    114421586.19 1140.4221590.74 1137.0321614.98 1137.7421621.41  1144.2
21627.18  1149.221647.99  1149.8 21676.5 1150.3921698.78 1150.07 21704.8 1149.87
 21714.9  1149.921718.82 1149.7721741.72 1150.2721756.99 1151.8521761.84 1152.29
21770.32  1152.321786.83 1151.7721798.92 1151.1621812.42 1151.1921825.82 1150.99
21841.46  1151.2 21860.1  1150.721867.61 1153.49 21875.5 1156.1121881.43 1153.28
21885.28  1151.321896.51 1150.9421900.43 1152.4121904.66  1153.521912.81 1153.49
21913.99  1153.121919.15  1152.321957.76 1150.7221960.81 1150.53 22016.2 1147.91
22029.46  1147.522127.03 1149.3122174.32 1150.1222250.23 1150.3622289.13  1150.5
22314.04  1150.822475.21 1153.3722608.07 1155.77 22672.8 1156.7422834.76    1159
22874.27  1159.322935.54  1159.822958.25 1160.0923019.14 1167.4423077.95 1168.76
23103.21  1168.623119.43 1169.0623164.87 1169.3323224.52 1170.5523231.74 1170.44
23235.16  1170.923266.86 1171.7123290.08 1172.1123294.62 1172.4523314.61 1171.39
23332.24  1171.523335.15 1171.4723373.54 1177.4523376.52 1178.07 23468.6  1178.9
23524.62  1178.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14514.07    .03519516.39    .03520520.67    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19516.3920520.67              460   484.7     520             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14514.0719516.39    114820520.6723524.62 1147.25

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1140.11   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.67   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1137.44   Reach Len. (ft)             460.00     484.70     520.00
  Crit W.S. (ft)            1133.46   Flow Area (sq ft)                    12889.63
  E.G. Slope (ft/ft)       0.002850   Area (sq ft)               3074.04   12889.63     263.08
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            2003.65   Top Width (ft)              951.85     918.51     133.29
  Vel Total (ft/s)            13.11   Avg. Vel. (ft/s)                        13.11
  Max Chl Dpth (ft)           17.94   Hydr. Depth (ft)                        14.03
  Conv. Total (cfs)       3165450.5   Conv. (cfs)                         3165450.5
  Length Wtd. (ft)           484.70   Wetted Per. (ft)                       926.49
  Min Ch El (ft)            1119.50   Shear (lb/sq ft)                         2.48
  Alpha                        1.00   Stream Power (lb/ft s)                  32.46
  Frctn Loss (ft)              1.42   Cum Volume (acre-ft)       2342.85   10707.98    1243.60
  C & E Loss (ft)              0.01   Cum SA (acres)              171.75     654.58     226.10


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1140.11   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.67   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1137.44   Reach Len. (ft)             460.00     484.70     520.00
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Crit W.S. (ft)	1133.46	Flow Area (sq ft)	12889.52	
E.G. Slope (ft/ft)	0.002850	Area (sq ft)	12889.52	
Q Total (cfs)	169000.00	Flow (cfs)	169000.00	
Top Width (ft)	918.51	Top Width (ft)	918.51	
Vel Total (ft/s)	13.11	Avg. Vel. (ft/s)	13.11	
Max Chl Dpth (ft)	17.94	Hydr. Depth (ft)	14.03	
Conv. Total (cfs)	3165410.3	Conv. (cfs)	3165410.3	
Length Wtd. (ft)	484.70	Wetted Per. (ft)	926.48	
Min Ch El (ft)	1119.50	Shear (lb/sq ft)	2.48	
Alpha	1.00	Stream Power (lb/ft s)	32.46	
Frctn Loss (ft)	1.42	Cum Volume (acre-ft)	10708.86	0.32
C & E Loss (ft)	0.01	Cum SA (acres)	654.56	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.79

INPUT
Description:
Station Elevation Data num= 223

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14407.68	1139.214	468.83	1139.8214	485.33	1139.93	14518	1139.8914	548.99	1139.18
14620.03	1139.314	668.12	1139.7514	706.45	1139.75	14832.3	1138.32	14892.5	1138.09
14904.61	1138.414	928.04	1139.2714	997.05	1138.81	5025.99	1136.921	5055.19	1137.74
15090.5	1138.515	126.36	1138.715	276.76	1139.291	5340.82	1138.871	5451.12	1139.3
15529.41	1139.415	612.27	1139.3515	725.83	1139.711	5741.08	1140.081	5775.12	1140.19
15873.79	1141.115	910.11	1141.2616	021.21	1142.591	6027.75	1142.651	6074.81	1142.62
16203.28	1142.416	247.36	1143.1616	274.57	1144.11	6342.63	1144.71	6451.28	1144.81
16487.53	1144.7	16516.2	1144.8916	536.79	1144.251	6570.44	1145.221	6584.21	1144.78
16632.47	1144.416	744.74	1143.9216	831.02	1144.411	6889.17	1144.841	6901.11	1144.25
16918.3	1143.216	943.53	1142.6816	949.05	1142.491	6952.26	1142.811	6973.17	1144.37
17009.58	1142.617	012.25	1142.5817	042.77	1142.621	7159.75	1142.881	7191.74	1142.05
17223.52	1140	17234.95	1139.8317	330.48	1139.511	7360.77	1139.371	7365.29	1139.49
17445.7	1142.11	7479.75	1141.5517	492.77	1141.491	7510.85	1141.81	7541.66	1142.67
17553.26	1141.21	7563.12	1140.3817	572.19	1140.381	7574.51	1140.271	7590.06	1142.39
17593.85	1142.2	17613.7	1140.4117	649.97	1140.061	7656.94	1140.181	7712.79	1140.21
17932.29	1139.9	17938.1	1139.86	18254.9	1138.88	18262.6	1138.821	8381.92	1137.77
18518.03	1136.2	18535.5	1135.61	18599	1133.35	18634.5	1133.971	8668.91	1134.64
18727.87	1134.51	8773.84	1134.051	8956.07	1133.561	8965.29	1133.44	19059.1	1132.9
19149.42	1133.91	9199.61	1132.911	9285.53	1130.671	9300.58	1130.711	9327.48	1130.9
19342.87	1132.31	9349.94	1132.811	9375.09	1133.541	9402.26	1134.421	9422.93	1134.51
19423.57	1134.71	9466.98	1147.511	9474.09	1146.361	9481.23	1144.921	9507.83	1138.04
19514.17	1136	19520.98	1131.621	9534.67	1122.981	9592.24	1120.551	9613.26	1119.63
19623.23	1119.31	9688.14	1120.231	9747.16	1121.331	9877.07	1122.51	9969.89	1120.9
20006.98	1120.32	0045.82	1121.082	0135.59	1122.532	0261.98	1121.592	0265.76	1121.6
20295.54	1122.62	0397.76	1126.422	0419.57	1124.74	20440.4	1133.412	0472.23	1147.56
20487.01	1145.72	0493.02	1145.282	0504.32	1143.772	0510.94	1142.272	0531.87	1138.63
20596.65	1152.72	0619.85	1157.452	0637.69	1159.262	0644.03	1159.792	0670.81	1161.71
20683.95	1159.72	0702.44	1157.362	0720.83	1150.492	0759.31	1140.312	0765.94	1139.93
20789.25	1140.22	0811.57	1140.622	0865.32	1141.112	0911.37	1158.932	0922.09	1158.31
20932.71	1159	20934.31	1158.782	0968.75	1152.622	1013.76	1144.322	1015.69	1144.31
21022.9	1143.12	1061.13	1154.712	1124.06	1152.722	1135.53	1154.622	1141.27	1155.41
21152.79	1155	21206.9	1153.242	1239.23	1145.182	1269.78	1140.382	1302.85	1132.7
21322.67	1134.82	1350.48	1138.392	1372.98	1139.942	1392.52	1142.132	1424.09	1142.33
21440.91	1142.72	1452.58	1144.812	1463.84	1145.12	1485.26	1145.44	21502.6	1143.2
21531.89	1138.72	1567.05	1130.012	1573.87	1128.132	1581.65	1128.2	21617.3	1128.89
21677.8	1129	21696.74	1134.572	1704.97	1135.952	1714.07	1137.842	1721.93	1138.03
21766.84	1148.12	1770.48	1148.912	1794.34	1149.192	1802.49	1149.132	1828.42	1149.17
21837.25	1144	21853.31	1137.032	1870.03	1137.782	1879.62	1143.262	1892.74	1147.42
21907.6	1147.62	1916.48	1148.152	1934.61	1150.232	1941.35	1153.172	1953.82	1152.82
21966.37	1149.82	1979.15	1150.132	1998.44	1152.2	22030.3	1150.052	2129.14	1150.78
22161.16	1151.12	2177.76	1151.42	2249.65	1151.862	2358.89	1153.65	22474.2	1154.86
22489.84	1155	22654.62	1155.922	2702.02	1155.852	2777.01	1156.42	22806.8	1156.72
22838.75	1158.32	2897.88	1162.22	2928.01	1163.162	2940.21	1163.212	2970.64	1163.66
22986.06	1163.82	3007.96	1163.52	23070	1163.892	3246.96	1167.562	3338.09	1168.22
23382.44	1168.72	3389.54	1168.282	3399.66	1167.31				

Manning's n Values num= 3

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     Sta   n Val     Sta   n Val     Sta   n Val
14407.68    .03519466.98    .03520472.23    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19466.9820472.23              420  490.52     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14407.6819466.98 1147.5120472.2323399.66 1147.56

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1138.69   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.73   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1135.96   Reach Len. (ft)           420.00     490.52     550.00
  Crit W.S. (ft)            1132.24   Flow Area (sq ft)                  12747.50
  E.G. Slope (ft/ft)       0.003008   Area (sq ft)             2254.97   12747.50    1024.48
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            2039.42   Top Width (ft)            902.66     931.90     204.86
  Vel Total (ft/s)            13.26   Avg. Vel. (ft/s)                     13.26
  Max Chl Dpth (ft)           16.66   Hydr. Depth (ft)                     13.68
  Conv. Total (cfs)       3081485.3   Conv. (cfs)                       3081485.3
  Length Wtd. (ft)           490.52   Wetted Per. (ft)                    938.24
  Min Ch El (ft)            1119.30   Shear (lb/sq ft)                      2.55
  Alpha                        1.00   Stream Power (lb/ft s)               33.82
  Frctn Loss (ft)              1.43   Cum Volume (acre-ft)     2314.71   10565.34    1235.92
  C & E Loss (ft)              0.04   Cum SA (acres)            161.95     644.28     224.08


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1138.69   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.73   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1135.96   Reach Len. (ft)           420.00     490.52     550.00
  Crit W.S. (ft)            1132.24   Flow Area (sq ft)                  12747.28
  E.G. Slope (ft/ft)       0.003008   Area (sq ft)                       12747.28
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             931.90   Top Width (ft)                       931.90
  Vel Total (ft/s)            13.26   Avg. Vel. (ft/s)                     13.26
  Max Chl Dpth (ft)           16.66   Hydr. Depth (ft)                     13.68
  Conv. Total (cfs)       3081397.0   Conv. (cfs)                       3081397.0
  Length Wtd. (ft)           490.52   Wetted Per. (ft)                    938.24
  Min Ch El (ft)            1119.30   Shear (lb/sq ft)                      2.55
  Alpha                        1.00   Stream Power (lb/ft s)               33.83
  Frctn Loss (ft)              1.43   Cum Volume (acre-ft)              10566.23       0.32
  C & E Loss (ft)              0.04   Cum SA (acres)                       644.27       0.18


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.70

INPUT
Description:
Station Elevation Data     num=     215
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
14633.62  1140.414764.84 1139.6614844.88 1138.8314895.18  1138.214947.92 1139.47
14963.26  1139.814966.51 1139.6114991.08 1137.8315049.71 1138.8215058.26 1138.83
 15086.6  1137.815264.28 1140.2115343.48 1140.9315407.52  1140.715507.95 1139.72
15562.35  1140.1 15691.2 1140.2815750.02 1140.5615864.61 1140.6915930.64 1140.63
16007.91    114116038.86  1140.916078.48 1141.21 16114.7 1143.4716117.13 1143.72
16132.24  1143.816319.58 1144.1116329.22 1144.7816335.73 1144.8216362.18 1144.66
16407.68  1144.816486.45 1144.5416566.52 1145.1616580.76 1145.0516604.06 1143.08
16634.35  1144.616658.71 1144.9716665.82  1145.216684.38 1144.7116816.17  1142.9
16816.85    114316945.54 1143.75   16958 1143.85 16965.7 1143.5316989.86 1142.72
17017.43  1142.217023.42 1143.57   17028 1144.3717070.17 1142.5517071.47 1142.53
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17250.94  1143.217259.15 1142.5517296.62 1139.9717355.46 1140.5417369.68 1140.64
17502.59  1141.117532.54 1140.9417570.73  1140.917608.36 1139.8317626.76 1138.78
17637.22  1138.517654.23 1140.8517673.44  1139.217682.64 1139.17 17842.4 1139.03
18023.52  1139.5   18102 1139.6218204.04 1139.3318279.06 1139.1418308.99 1138.59
18495.46  1136.318551.03 1135.6918588.44 1133.9518714.96 1128.2218826.61 1128.03
18839.02  1128.118938.73 1128.52 19017.9 1128.6319037.93 1128.9919100.52 1128.87
19215.21  1128.719248.29 1128.8219280.17 1128.3819285.54 1128.3919377.57 1128.99
19395.02  1129.119399.73 1129.4219421.42 1131.0719429.68 1131.5419452.68 1133.19
19491.29  1141.619513.76 1146.6119524.58 1142.8219527.35 1142.2119559.25 1136.62
19567.04  1134.6 19575.1 1128.5519581.75 1122.9919637.42 1122.6719690.95  1122.4
 19797.6  1121.419814.69 1121.2519944.41 1122.6719984.25 1121.3720074.13 1118.48
20130.98    111920202.55 1119.7920273.94 1117.5720313.19 1116.1320332.53 1115.81
20402.51  1119.220464.33 1122.1320480.18 1122.2420528.41 1140.9920544.81 1147.24
20549.49  1144.320565.63 1141.6120590.33 1140.7220662.36 1137.1320667.43 1136.89
20671.64  1135.720680.37 1133.5520690.16  1132.8 20707.5 1138.3320711.62 1139.31
20731.52  1141.720768.16 1143.3820787.42 1141.6920798.95 1140.1220809.29 1138.44
 20869.2  1140.220902.92 1135.4520947.18 1134.4920962.23 1131.89 20977.7 1128.91
20991.82  1132.421009.72 1135.7721050.94 1133.8521052.85 1133.8121105.52 1135.74
 21109.2  1135.821221.24    113521227.41 1134.8521230.59    113521252.61 1135.61
 21276.6  1135.421303.51 1135.3621333.85 1136.77 21360.7 1137.0121389.07 1138.72
21409.47  1137.321419.54 1137.7921465.27 1139.8721480.19 1138.1721506.69 1150.76
21546.35  1168.721550.48 1169.9721604.24  1167.321613.96 1166.8721616.47 1166.63
 21645.1  1163.321671.54 1163.5121686.93 1163.0721711.68 1162.5421739.31 1154.45
21794.52  1140.921869.82 1128.8221877.11 1128.89 21907.6  1129.621954.37 1143.66
21956.14  1144.421959.45 1144.43 21987.8 1141.7922006.39 1147.7522022.35 1151.08
22052.98  1150.322078.71 1149.3422092.62 1142.1922103.59 1136.1922124.51 1136.06
22138.52  1144.322141.96 1147.6922156.81 1149.3122167.82 1149.4322200.31 1153.08
22222.88  1151.422229.35 1150.6322241.45 1150.9822343.53 1154.4922382.64 1154.34
22464.86  1152.822498.09 1153.02 22580.2 1152.4122599.65 1152.7522733.11    1156
22805.72  1157.522816.51 1157.7922822.49 1157.6822872.27 1158.8722908.77 1159.42
22937.69  1160.222950.05 1160.2522960.03 1161.3922979.67 1162.5323004.16 1164.17
23009.95  1164.823114.11 1165.3223142.08 1165.5823151.18 1165.5523172.79  1165.8
23290.13  1165.923336.65 1165.86 23397.6  1166.723466.81 1167.6723469.22 1167.72

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14633.62    .03519513.76    .03520544.81    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19513.7620544.81              460  477.05     540             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14633.6219513.76 1146.6120544.8123469.22 1147.24

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1137.22   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.59   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1134.63   Reach Len. (ft)             460.00    477.05     540.00
  Crit W.S. (ft)            1130.64   Flow Area (sq ft)                   13091.68
  E.G. Slope (ft/ft)       0.002805   Area (sq ft)               4786.64   13091.68     550.38
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            2045.78   Top Width (ft)              885.57    945.15     215.06
  Vel Total (ft/s)            12.91   Avg. Vel. (ft/s)                      12.91
  Max Chl Dpth (ft)           18.82   Hydr. Depth (ft)                      13.85
  Conv. Total (cfs)        3190673.8  Conv. (cfs)                         3190673.8
  Length Wtd. (ft)           477.05   Wetted Per. (ft)                     951.82
  Min Ch El (ft)            1115.81   Shear (lb/sq ft)                       2.41
  Alpha                        1.00   Stream Power (lb/ft s)                31.10
  Frctn Loss (ft)              1.14   Cum Volume (acre-ft)       2280.77  10419.86    1225.97
  C & E Loss (ft)              0.16   Cum SA (acres)              153.33    633.71     221.43


Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
         additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2
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E.G. Elev (ft)	1137.22	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.59	Wt. n-Val.		0.035	
W.S. Elev (ft)	1134.63	Reach Len. (ft)	460.00	477.05	540.00
Crit W.S. (ft)	1130.64	Flow Area (sq ft)		13091.33	
E.G. Slope (ft/ft)	0.002806	Area (sq ft)		13091.33	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	945.15	Top Width (ft)		945.15	
Vel Total (ft/s)	12.91	Avg. Vel. (ft/s)		12.91	
Max Chl Dpth (ft)	18.82	Hydr. Depth (ft)		13.85	
Conv. Total (cfs)	3190541.8	Conv. (cfs)		3190541.8	
Length Wtd. (ft)	477.05	Wetted Per. (ft)		951.82	
Min Ch El (ft)	1115.81	Shear (lb/sq ft)		2.41	
Alpha	1.00	Stream Power (lb/ft s)		31.10	
Frctn Loss (ft)	1.14	Cum Volume (acre-ft)		10420.75	0.32
C & E Loss (ft)	0.16	Cum SA (acres)		633.70	0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.61

INPUT
Description:
Station Elevation Data num= 247

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14651.85	113	914697.71	1139.04	14706.79	1139.26	14797.41	1139.25	14832.95	1139.2
14844.59	1139.61	4933.07	1139.28	14966.85	1138.8	14984	1138.82	15010.87	1138.63
15043.23	1138.61	5099.91	1138.91	15111.66	1138.89	15134.51	1137.92	15148.37	1137.92
15170.52	1139.21	5175.81	1139.48	15229.08	1140.15	15270.91	1139.92	15321.35	1138.54
15375.73	1138.71	5408.15	1139.83	15518.03	1140.66	15549.8	1140.81	5558.72	1140.49
15632	1141.51	5661.19	1142.41	15682.16	1142.29	15689.74	1142.59	15770.19	1141.99
15835.24	1141.41	5897.66	1140.4	15980.3	1141.52	16082.87	1141.28	16109.07	1142.53
16147.7	1142.21	6164.41	1142.08	16230.45	1141.94	16252.58	1141.78	16272.83	1141.24
16331.44	1142.71	6387.34	1141.67	16436.59	1141.59	16504.6	1141.91	16621.43	1142.3
16634.06	1142.41	6667.37	1142.98	16680.81	1143.26	16687.07	1143.53	16701.14	1143.11
16713.57	1143.11	6747.97	1144.26	16848.16	1142.44	16890.73	1141.89	16912.08	1142.01
17022.75	1142.31	7052.97	1141.57	17071.64	1141.22	17081.48	1141.28	17101.73	1141.8
17111.26	1143.21	7137.12	1142.36	17146.81	1142.37	17267.43	1141.94	17308.32	1143.04
17345.72	1140.61	7355.11	1139.91	17473.15	1139.09	17558.32	1139.88	17564.58	1139.88
17633.8	1139.61	7650.52	1138.62	17664.3	1137.95	17680.79	1137.32	17692.86	1137.23
17708.67	1139.81	7728.45	1138.11	17754.54	1137.99	17807.05	1138.06	17893.02	1137.96
17960.54	1138.91	8084.72	1139.05	18124.45	1139.31	18170.64	1139.36	18306.01	1139.48
18513.36	113	618525.09	1135.49	18583.09	1132.59	18644.56	1131.71	18654.84	1131.2
18688.32	1130.21	8706.18	1130.11	8794.11	1129.99	18840.37	1129.34	18887.46	1129.98
18906.22	113	018996.02	1129.84	19017.85	1130.28	19115.34	1130.25	19143.84	1129.67
19176.75	1130.41	9191.32	1130.74	19203.48	1131.66	19219.44	1132.68	19254.19	1133.06
19278.79	1133.11	9306.96	1132.44	19356.04	1132.47	19384.96	1131.25	19394.54	1130.47
19402.54	1130.1	19406	1129.53	19422.11	1130.32	19422.9	1131.15	19452.59	1130.78
19474.18	1130.51	9479.79	1131.71	19521.95	1141.98	19538.73	114	319567.21	1132.83
19578.53	1133.71	9586.01	1126.93	19591.37	1123.03	19602.42	1122.56	19639.62	1122.19
19707.4	1122	19754.2	1121.52	19835.67	1120.86	19908.35	1120.44	19950.69	1119.77
20036.32	1118.92	0140.17	1116.92	20150.7	1116.66	20252.9	1115.73	20301.64	1115.21
20353.37	1113.52	0368.53	1112.39	20394.53	1112.42	20422.02	1114.24	20533	1122.59
20538.69	1123.72	0567.99	1144.39	20580.96	1144.93	20583.69	1144.82	20590.96	1144.01
20610.7	1141.32	0627.36	1137.25	20651.52	1136.49	20666.08	1136.37	20680.19	1136.77
20701.25	113	620726.85	1130.66	20736.71	1131.16	20750.66	1137.89	20758.46	1137.99
20777.34	1138.62	0826.99	1139.68	20833.14	1139.78	20839.92	1138.76	20884.09	1131.99
20911.21	1132.32	0923.05	1132.46	20996.31	1131.91	21019.84	1131.38	21081.49	1131.24
21118.96	1136.12	1149.81	1140.16	21211.27	1140.24	21225.22	1139.78	21242.25	1137.36
21291.23	112	921297.81	1128.82	21317.56	1127.89	21350.78	1125.15	21363.69	1125.19
21393.12	**1125.52**	**1440.76**	**1125.6**	**21481.2**	**1129.17**	**21521.37**	**1131.29**	**21550.21**	**1132.19**
21583.63	1131.12	1639.47	1128.31	21672.65	1126.51	21687.56	1126.73	21734.61	1126.85
21739.13	1127.12	1789.72	1128.71	21824.55	1128.34	21840.03	1128.87	21848.07	1128.71
21859.98	1128.72	1864.54	1128.54	21904.22	1128.71	21949.34	1128.65	21963.01	1130.96
22011.99	1135.42	2017.42	1136.98	22038.21	1141.85	22075.75	1150.37	22107.68	1155.01
22114.05	1154.42	2129.53	1153.54	22138.87	1150.22	22145.72	1149.07	22175.39	1149.55
22194.88	1149.92	2212.13	1139.72	22217.47	1136.47	22241.39	1136.47	22243.16	1137.31

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22256.99  1145.122272.64 1146.1322275.06 1147.2422276.96 1147.1622290.77 1144.06
 22302.5  1144.522334.77 1145.6922344.24  1146.622351.31 1148.6622385.92 1154.54
22400.67  1153.222413.67 1151.8922423.88 1154.03   22433 1157.7622450.45  1154.1
22462.91  1151.622469.36 1154.7622484.16 1164.5322493.46 1168.4522501.87 1170.86
22504.27  1171.9 22524.4 1178.5822529.11 1177.8522539.59 1176.7622577.15 1166.66
22590.78  1163.6 22595.1 1162.9422601.97 1159.9422605.98 1159.8822666.91 1156.76
22700.56  1156.522804.52 1154.99 22876.8 1155.0722934.19 1156.52 22999.2 1156.68
23150.41  1183.423163.78 1183.43

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14651.85    .03519538.73    .03520567.99    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19538.7320567.99              470  499.49     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14651.8519538.73    114320567.9923163.78 1144.39

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1135.93   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.07   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1133.86   Reach Len. (ft)           470.00     499.49     550.00
  Crit W.S. (ft)            1128.49   Flow Area (sq ft)                  14649.74
  E.G. Slope (ft/ft)       0.002051   Area (sq ft)             2779.51   14649.74    4408.14
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            2912.62   Top Width (ft)            930.96     988.76     992.90
  Vel Total (ft/s)            11.54   Avg. Vel. (ft/s)                     11.54
  Max Chl Dpth (ft)           21.47   Hydr. Depth (ft)                     14.82
  Conv. Total (cfs)       3731983.0   Conv. (cfs)                       3731983.0
  Length Wtd. (ft)           499.49   Wetted Per. (ft)                    996.68
  Min Ch El (ft)            1112.39   Shear (lb/sq ft)                      1.88
  Alpha                        1.00   Stream Power (lb/ft s)               21.71
  Frctn Loss (ft)              1.00   Cum Volume (acre-ft)     2240.82   10267.95    1195.24
  C & E Loss (ft)              0.03   Cum SA (acres)            143.74     623.12     213.94


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1135.93   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.07   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1133.86   Reach Len. (ft)           470.00     499.49     550.00
  Crit W.S. (ft)            1128.49   Flow Area (sq ft)                  14649.25
  E.G. Slope (ft/ft)       0.002051   Area (sq ft)                       14649.25
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             988.76   Top Width (ft)                       988.76
  Vel Total (ft/s)            11.54   Avg. Vel. (ft/s)                     11.54
  Max Chl Dpth (ft)           21.47   Hydr. Depth (ft)                     14.82
  Conv. Total (cfs)       3731781.8   Conv. (cfs)                       3731781.8
  Length Wtd. (ft)           499.49   Wetted Per. (ft)                    996.68
  Min Ch El (ft)            1112.39   Shear (lb/sq ft)                      1.88
  Alpha                        1.00   Stream Power (lb/ft s)               21.71
  Frctn Loss (ft)              1.00   Cum Volume (acre-ft)              10268.85       0.32
  C & E Loss (ft)              0.03   Cum SA (acres)                       623.11       0.18


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.51

INPUT
Description:
Station Elevation Data    num=     242
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
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 14907.1  1137.714918.73 1137.5614943.68  1136.914991.19 1137.3315029.11 1136.79
15038.26  1137.415056.17 1137.4915077.68 1136.7415084.36 1136.3615145.62 1137.65
15159.83  1138.115191.79 1138.62 15219.5 1138.3115314.53 1137.8715372.32 1137.67
15419.74  1137.9 15530.8 1137.8915575.07 1138.6315616.57 1139.5415715.85 1139.83
15727.73  1139.915781.62 1140.1515840.29 1140.3315854.62 1140.2415893.97 1140.25
15961.21  1140.416003.39 1140.32 16029.7 1142.2516075.73 1142.3116283.73 1142.46
16362.84  1142.816386.02 1142.7316472.11 1142.65 16477.3 1142.4616543.73 1142.86
16653.27  1142.816670.33 1142.6816703.08 1141.8916716.48 1141.9816736.38 1140.55
16769.06  1140.416801.48 1141.57 16866.3 1141.5716886.73  1141.516948.97 1141.02
17014.66  1140.917033.21 1140.6217052.23 1140.4417116.76 1139.5417168.51 1138.92
17181.51  1138.8 17196.8 1138.89 17299.4 1138.9917325.94 1138.8617385.87 1138.88
17413.69  1138.817461.57 1138.1417509.77 1137.9517545.89 1137.6817558.05 1137.47
17599.64  1136.917623.36  1137.117657.94 1136.8917675.27 1136.6417692.51 1136.22
17714.36  1136.217724.37 1135.8317742.56 1137.4317752.02 1136.6417767.46 1136.54
17774.03  1136.817783.01 1134.9817787.08 1133.8517793.02 1134.85 17805.5 1136.75
17828.82  1136.617884.99 1135.8217895.95  1135.817940.12 1136.2517951.48 1136.31
17977.27  1135.7   17988 1135.2118036.31 1135.1218041.95 1135.2618062.82 1135.39
18123.49  1135.818159.15 1135.6118203.12 1135.6218239.59 1135.77 18296.3 1135.65
18329.98  1135.618390.66 1135.5818422.21 1135.3918476.58 1135.1918517.78 1135.18
18538.38  1135.218544.05 1135.0818639.41 1133.5118667.57 1132.9218700.21 1133.48
18714.34  1133.418716.44 1133.1618733.91 1130.6318744.18 1131.4818768.41 1133.61
18843.86  1150.318891.18 1160.5818941.06 1161.9818957.81 1162.1219011.57 1181.38
19169.29  1180.219211.07    118019230.82 1180.2419273.33    118119315.33 1181.79
19356.71  1169.719383.56 1161.6819385.62  1161.5 19429.2 1158.9219434.44 1158.89
19478.03  1145.419488.25 1142.3119493.28 1140.5919501.81 1142.0819510.14 1141.72
19517.38  1141.6 19542.2 1132.64 19548.7  1130.519559.57 1131.4119570.41 1123.16
19581.96  1121.919595.79 1121.31 19725.6 1121.4719755.91 1121.6919812.57 1121.45
19889.13  1120.719969.48 1119.3320064.29 1117.4520129.14 1116.0520175.09 1115.73
20184.45  1115.520262.78 1112.9720304.95  1112.120375.67 1111.6420433.28 1112.87
20459.44  1113.620487.19 1115.0320510.33 1116.6320522.25 1117.2620554.82 1137.43
20564.57  1144.120581.79 1143.4720589.29 1141.9320590.28 1141.4320616.53 1139.57
20622.56  1139.2 20683.6 1138.1920692.96 1137.8520705.62  1136.820732.71 1132.48
   20735  1132.420740.07 1132.8720748.73 1135.9220753.07 1137.6120755.82 1138.25
20763.22    113820775.75 1137.6320812.37 1139.3120825.87 1139.8720839.04 1137.72
20866.18  1133.5 20882.4 1133.2620889.04 1133.37 20922.3 1137.6620933.37 1138.59
20961.26  1138.8 20989.1 1138.3320997.01 1137.6621014.79 1133.9621019.19 1134.13
21021.53  1135.321064.97 1129.99 21128.4 1128.5121138.81 1128.3221180.03 1126.32
21212.36  1126.721232.49 1126.48 21238.9 1126.2721265.92 1125.9321350.77 1126.01
21412.28  1126.121431.15  1126.221465.26 1126.0321542.92 1127.5621549.51 1127.62
21567.64  1127.121620.01 1125.9221642.33 1125.4921694.68 1125.7821703.12 1126.65
21734.34  1127.721742.84 1128.18 21778.7    112821854.71 1126.0921911.52 1136.78
   21941  1142.721967.33 1142.9122014.55  1143.422037.84 1143.2822067.55 1143.66
22085.53  1144.522100.03 1145.4422104.75 1143.3922121.49 1135.5322139.24 1135.99
22150.56  1140.922158.78 1144.3622180.45 1145.44   22223 1147.23 22227.4 1147.33
22270.04  1149.522316.45 1151.4122326.33  1151.722388.88 1151.6822435.89 1152.28
 22483.7  1153.122562.58 1154.9322591.21 1155.5622600.01 1156.2122604.66 1156.84
22623.42  1159.622642.13 1156.9122666.24 1158.4322703.02 1161.0722911.95 1162.55
23047.74  1163.6 23098.1 1170.3523103.39 1170.6523146.48 1170.0823170.95 1170.08
23186.03  1170.223222.21 1170.81

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14907.1    .03519517.38    .03520564.57    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19517.3820564.57              450  497.52     570              .1        .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14907.119517.38  1141.620564.5723222.21  1144.1

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1134.90   Element                    Left OB   Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1132.93   Reach Len. (ft)            450.00    497.52    570.00
  Crit W.S. (ft)            1127.37   Flow Area (sq ft)                   14993.73
  E.G. Slope (ft/ft)       0.001942   Area (sq ft)                49.50   14993.73   5002.07
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1910.40   Top Width (ft)              43.74    1006.16    860.50
  Vel Total (ft/s)            11.27   Avg. Vel. (ft/s)                      11.27
  Max Chl Dpth (ft)           21.29   Hydr. Depth (ft)                      14.90
```

Conv. Total (cfs)	3834489.0	Conv. (cfs)		3834489.0	
Length Wtd. (ft)	497.52	Wetted Per. (ft)		1014.15	
Min Ch El (ft)	1111.64	Shear (lb/sq ft)		1.79	
Alpha	1.00	Stream Power (lb/ft s)		20.21	
Frctn Loss (ft)	0.95	Cum Volume (acre-ft)	2225.56	10097.99	1135.83
C & E Loss (ft)	0.01	Cum SA (acres)	138.48	611.68	202.24

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1134.90	Element			
Vel Head (ft)	1.97	Wt. n-Val.		0.035	
W.S. Elev (ft)	1132.93	Reach Len. (ft)	450.00	497.52	570.00
Crit W.S. (ft)	1127.37	Flow Area (sq ft)		14993.11	
E.G. Slope (ft/ft)	0.001943	Area (sq ft)		14993.11	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1006.15	Top Width (ft)		1006.15	
Vel Total (ft/s)	11.27	Avg. Vel. (ft/s)		11.27	
Max Chl Dpth (ft)	21.29	Hydr. Depth (ft)		14.90	
Conv. Total (cfs)	3834241.0	Conv. (cfs)		3834241.0	
Length Wtd. (ft)	497.52	Wetted Per. (ft)		1014.15	
Min Ch El (ft)	1111.64	Shear (lb/sq ft)		1.79	
Alpha	1.00	Stream Power (lb/ft s)		20.21	
Frctn Loss (ft)	0.95	Cum Volume (acre-ft)		10098.90	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		611.67	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.42

INPUT
Description:
Station Elevation Data num= 283

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14620.63	1134.2	14673.5	1134.58	14680.49	1134.59	14707.56	1134.81	14736.04	1134.79
14744.71	1134.71	14800.61	1134.96	14852.42	1135.36	14872.53	1135.34	14996.62	1136.02
15024.81	113	15040.07	1134.95	15072.78	1135.34	15104.52	1135.28	15154.61	1136.63
15165.85	1136.91	15189.91	1138.62	15193.62	1137.78	15202.22	1134.63	15208.04	1134.7
15230.27	1135.6	15279.9	1136.41	15359.95	1138.11	15389.72	1138.11	15395.67	1137.87
15416.25	1137.31	15441.94	1137.36	15550.39	1137.84	15645.01	1138.21	15651.61	1138.28
15660.76	1138.91	15673.51	1139.01	15715.64	1139.32	15799.73	1139.66	15841.82	1139.75
15849.26	1139.31	16021.57	1139.04	16032.03	1139.09	16042.84	113	16062.45	1138.95
16064.41	1139.11	16223.75	1141.61	16265.53	1141.86	16287.67	1141.71	16449.11	1141.24
16462.9	1141.21	16484.58	1141.5	16497.9	1141.99	16504	1141.19	16513.84	1141.32
16535.01	1142.11	16564.67	1143.51	16604.72	1143.49	16672.76	1142.67	16718.88	1142.56
16728.56	1142.31	16754.76	1139.66	16760.38	1139.18	16766.02	1139.21	16791.74	1139.76
16802.67	1140.31	16809.73	1140.71	16853.31	1141.09	16866.4	1141.58	16896.15	1140.65
16991.5	1140.61	17013.35	1140.6	17024.6	1141.76	17043.95	1141.65	17087.99	1141.09
17208.6	1141.51	17267.12	1141.49	17365.55	1140.08	17436.94	1139.43	17452.76	1138.9
17466.98	1138.51	17497.46	1138.11	17509.21	1139.75	17513.99	1138.97	17519.24	1138.8
17531.44	1137.81	17538.37	1137.48	17552.39	1137.16	17562.24	1136.64	17576.82	1135.79
17610.19	113	17630.25	1136.33	17662.06	1137.81	17672.48	1138.21	17695.69	1138.05
17714.32	1139.71	17717.99	1140.23	17745.18	1138.98	17754.43	1138.61	17769.56	1141.21
17783.85	114	17790.83	1142.19	17810.4	1136.62	17845.26	1136.48	17930.63	1135.13
17975.54	1135.11	17978.83	1135.24	18025.92	1134.71	18058.25	1134.61	18076.99	1134.66
18217.18	1135.71	18226.55	1133.31	18241.01	1135.62	18256.47	1135.64	18279.52	1135.46
18286.14	1135.61	18295.02	1135.55	18333.81	1132.12	18340.04	1131.71	18387.94	1135.18
18393.95	1135.71	18463.66	1136.29	18499.34	1133.16	18545.13	1133.66	18628.93	1133.24
18656.03	1133.31	18678.14	1132.98	18714.94	1133.01	18758.06	1133.42	18795.14	1133.9
18830.65	1134.5	18880	1128.29	18906.58	1125.31	18940.59	1122.71	18983.81	1122.31
19027.77	112	19068.19	1122.01	19132.24	1122.18	19198.69	1121.96	19255.29	1121.89
19282.93	112	19295.93	1122.19	19333.76	1122.29	19352.48	1122.25	19363.04	1122.92
19404.32	**1129.51**	**19408.06**	**1130.11**	**19449.44**	**1140.89**	**19462.92**	**1140.81**	**19472.78**	**1137.63**
19494.42	1130.11	19504.35	1130.32	19516.83	1121.32	19539.04	1120.05	19623.47	1120.98
19657.78	1121.11	19662.93	1121.27	19766.98	1119.81	19812.7	1119.45	19910	1117.34
19929.43	111	20002.58	1116.53	20063.35	1115.04	20103.33	1113.83	20178.65	1112.08
20203.64	1111.92	20267.44	1112.02	20326.95	1111.83	20341.15	1112.13	20358.47	1112.72
20387.52	1113.92	20468.61	1117.09	20476.84	1117.21	20495.66	1129.72	20514.18	1141.84
20532.19	1142.12	20544.18	1142.07	20576.7	1134.02	20592.21	1134.48	20598.18	1133.02

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20609.17  1133.720613.05 1134.1420628.23 1134.44 20637.8 1135.1820652.72 1136.85
20684.01  1135.620695.37 1136.7720707.99 1136.04 20716.2 1135.0920749.84 1137.24
20759.31  1137.420786.29 1138.8220810.01 1139.9920832.42  1139.220870.53 1137.79
20878.86  1136.520928.26 1128.47 20940.8 1128.7220962.91 1129.5420981.03  1130.3
21015.89  1131.721089.81 1134.4821093.81 1134.4621134.01    113421148.67  1133.8
21157.69  1133.321183.89 1133.3321227.68 1132.8521268.38 1132.1221273.64 1131.97
21336.46  1126.721392.95 1125.0521397.81 1124.7621407.96 1124.5821460.82  1124.5
21471.44  1124.421512.83 1124.1821533.57 1124.1421553.12 1123.4121623.27 1124.22
21637.25  1124.621691.89 1124.6221698.28  1124.721741.53 1125.0721808.74  1125.6
21829.98  1126.821869.21 1129.3521894.88 1128.1621924.41 1126.4421938.23 1126.38
21949.98  1126.222000.57 1138.9322008.84 1141.2522012.87  1141.222064.49 1140.14
22080.36  1141.422100.73 1143.4722110.57 1143.8722133.37 1145.1222145.89 1139.12
22155.02  1135.122171.69  1134.722193.79 1144.2922211.23 1146.1122231.01 1146.26
22232.93  1146.422244.68 1146.54 22338.9 1148.3422367.96 1148.6922424.19  1149.5
22497.87  1151.422554.89 1152.6622637.92 1153.26 22674.7 1153.6622750.04 1154.03
22794.83  1157.122799.99  1157.422831.07 1159.4122855.05 1158.9722870.31 1158.88
22901.38    115922946.92 1159.6522974.31  1160.223008.94 1161.16 23025.1 1161.51
23092.92  1161.823115.83 1162.42 23147.8 1163.8823158.86 1165.5923168.54 1165.75
23183.72  1165.123195.54 1165.3723227.06 1164.5423241.21 1164.7623252.68 1164.69
23266.75  1165.623333.43 1166.79 23388.4 1168.0423423.21 1168.1423441.97 1167.96
23471.66  1167.123478.89 1168.5723509.38 1171.02 23539.8 1170.6323560.68 1171.68
23569.43  1171.423601.93 1170.3723628.07    1170

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14620.63    .03519462.92    .03520514.18    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19462.9220514.18              410  470.96     560             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14620.6319462.92 1140.8120514.1823628.07 1141.84
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CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1133.94	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.94	Wt. n-Val.		0.035	
W.S. Elev (ft)	1132.00	Reach Len. (ft)	410.00	470.96	560.00
Crit W.S. (ft)	1126.37	Flow Area (sq ft)		15121.63	
E.G. Slope (ft/ft)	0.001898	Area (sq ft)	4887.83	15121.63	4552.80
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2400.89	Top Width (ft)	573.11	1010.17	817.60
Vel Total (ft/s)	11.18	Avg. Vel. (ft/s)		11.18	
Max Chl Dpth (ft)	20.17	Hydr. Depth (ft)		14.97	
Conv. Total (cfs)	3879095.3	Conv. (cfs)		3879095.3	
Length Wtd. (ft)	470.96	Wetted Per. (ft)		1018.10	
Min Ch El (ft)	1111.83	Shear (lb/sq ft)		1.76	
Alpha	1.00	Stream Power (lb/ft s)		19.67	
Frctn Loss (ft)	0.90	Cum Volume (acre-ft)	2200.05	9926.01	1073.32
C & E Loss (ft)	0.00	Cum SA (acres)	135.30	600.17	191.26

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1133.94	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.94	Wt. n-Val.		0.035	
W.S. Elev (ft)	1132.00	Reach Len. (ft)	410.00	470.96	560.00
Crit W.S. (ft)	1126.37	Flow Area (sq ft)		15120.89	
E.G. Slope (ft/ft)	0.001898	Area (sq ft)		15120.89	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1010.17	Top Width (ft)		1010.17	
Vel Total (ft/s)	11.18	Avg. Vel. (ft/s)		11.18	
Max Chl Dpth (ft)	20.17	Hydr. Depth (ft)		14.97	
Conv. Total (cfs)	3878791.5	Conv. (cfs)		3878791.5	
Length Wtd. (ft)	470.96	Wetted Per. (ft)		1018.10	
Min Ch El (ft)	1111.83	Shear (lb/sq ft)		1.76	
Alpha	1.00	Stream Power (lb/ft s)		19.67	
Frctn Loss (ft)	0.90	Cum Volume (acre-ft)		9926.92	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		600.16	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.33

INPUT
Description:
Station Elevation Data num= 258

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14841.36	1134.91	4851.62	1134.92	14986.39	1135.69	15015.71	1134.23	15048.43	1132.55
15064.99	1135.61	5077.24	1137.37	15090.55	1136.92	15107.89	1135.84	15137.1	1136.5
15169.63	1137.11	5190.15	1138.28	15199.59	1138.64	15219.78	1136.06	15223.87	1135.36
15243.59	1135.7	15361	1137.53	15386.12	1137.48	15405.99	1137.39	15495.79	1137.51
15535.52	1137.61	5568.85	1137.36	15587.44	1137.51	15612.13	1137.35	15647.48	1137.44
15656.66	1137.41	5694.61	1137.92	15725.84	1137.72	15731.28	1137.31	15778.13	1136.69
15789.04	1136.41	5803.97	1137.11	15947.32	1137.42	15958.36	1137.49	15987.54	1137.58
16219.35	113	916282.77	1139.37	16338.88	1139.04	16423.21	1139.11	6549.15	1140.03
16592.29	1140.11	6707.93	1140.28	16713.27	1139.92	16735.83	1138.91	6737.63	1138.91
16763.34	1138.31	6797.85	1139.29	16807.74	1139.21	16836.98	1139.63	16863.67	1140.18
16869.35	1140.11	6878.64	1140.14	16942.64	1139.78	17051.78	1139.76	17102.12	1139.21
17127.15	1137.31	7133.29	1137.34	17184.62	1136.95	17193.09	1137.13	17194.3	1137.62
17205.76	1138.31	7211.37	1139.67	17229.73	1139.66	17245.6	1139.77	17263.96	1139.51
17304.03	113	917333.74	1138.61	17347.51	1138.61	17381.09	1138.75	17419.19	1138.53
17430.86	1138.41	7481.44	1137.25	17507.6	1136.84	17512.96	1135.86	17526.61	1134.7
17560.02	113	617577.76	1136.21	17583.19	1136.45	17642.53	1137.15	17674.8	1136.95
17726.24	1136.41	7754.01	1138.81	17771.95	1138.64	17779.81	1137.99	17783.59	1137.84
17805.2	1137.61	7819.74	1135.94	17851.93	1135.31	7952.13	1134.63	17978.25	1135.43
17987.86	1135.91	8048.27	1135.61	18082.89	1135.76	18091.62	1135.24	18115.85	1132.38
18121.19	1130.41	8173.85	1132.84	18204.13	1134.87	18215.33	1134.73	18235.15	1134.23
18245.91	1133.6	18272.8	1133.67	18524.41	1132.89	18554.65	1132.98	18633.36	1134.09
18649.38	1133.71	8657.54	1134.17	18734.52	1134.71	8736.34	1134.81	18743.56	1133.61
18823.84	1122.51	8836.47	1121.39	18886.49	1121.32	19032.83	1121.33	19164.54	1121.16
19273.71	1120.81	9316.38	1120.73	19353.68	1129.46	19356.3	1130.11	19387.11	1140.42
19401.15	1140.71	9430.58	1131.03	19433.25	1130.44	19440.95	1130.28	19456.11	1120.51
19466.61	1119.11	9470.89	1118.66	19509.1	1118.07	19568.12	1117.48	19622.9	1116.83
19650.25	1116.81	9723.26	1116.48	19829.07	1115.46	19902.92	1114.71	20012.93	1113.82
20033.87	1113.42	0068.17	1113.68	20220.97	1114.56	20303.43	1115.97	20407.5	1117.25
20417.61	1116.82	0425.97	1121.55	20432.73	1126.22	20441.7	1127.14	20446.02	1127
20448.12	1126.42	0468.98	1140.19	20472.46	1142.72	20489.35	1141.51	20513.06	1134.97
20534.13	1128.82	0589.19	1128.85	20625.02	1128.48	20653.51	1130.92	20708.31	1135.72
20718.59	1136.72	0761.09	1141.52	20808.6	1143.36	20830.76	1144.03	20884.38	1143.63
20943.28	1131.62	0945.41	1131.36	20993.85	1128.94	21054.83	1125.32	21097.16	1124.39
21129	1123.42	1157.24	1123.07	21195.02	1121.71	21198.85	1121.42	21223.93	1120.31
21232.62	1120.32	1244.16	1119.73	21265.72	1118.53	21292.93	1119.83	21308.98	1120.4
21324.3	1119.6	21342.6	1119.27	21353.11	1119.16	21376.01	1119.89	21408.57	1119.63
21420.04	1119.4	21551.9	1119.03	21578.61	1118.91	21611.11	1118.98	21630.95	1118.96
21654.33	1118.92	1754.59	1117.24	21853.36	1118.95	21863.14	1118.92	21865.77	1119.91
21871.39	1121.52	1913.22	1132.43	21950.91	1133.38	21985.87	1133.91	22014.52	1134.22
22035.73	1134.32	2065.09	1139.78	22077.42	1142.28	22107.86	1143.59	22122.28	1143.72
22126.11	1141.82	2139.29	1136.34	22162.26	1135.11	22173.92	1141.74	22176.48	1142.95
22185.97	1143.72	2202.29	1144.87	22217.97	1146.34	22251.08	1145.93	22299.83	1147
22323.78	1146.22	2335.91	114	722349.03	1146.97	22415.35	1147.95	22509.12	1148.69
22562.42	1148.62	2614.12	1149.01	22625.45	1148.92	22636.25	1151.03	22650.36	1153.26
22663.97	1152.22	2680.81	1150.17	22694.38	1148.96	22708.16	1148.65	22727.33	1148.54
22807.97	1149.42	2847.56	1150.34	22868.91	1151.05	22935.83	1151.85	22981.91	1153.39
23005.61	1153.72	3057.16	1155.26	23071.69	1156.24	23083.89	1156.69	23100.19	1154.27
23104.54	1153.82	3117.44	1154.14	23135.42	1154.82	23144.94	1155.62	3159.22	1156.91
23196.77	1157.62	3229.58	1158.08	23258.36	1158.67	23280.1	1158.61	23480.04	1157.24
23577.25	1156.92	3595.16	1157.21	23646.88	1159.32	3719.99	1162.42	3735.38	1163.17
23741.97	1163.42	3751.71	1163.12	23801.94	1162.73	23824.49	1163.93	23832.95	1164.01
23842.9	1163.5	23866.3	1162.33	23879.96	1162.97				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14841.36	.035	19401.15	.035	20468.98	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19401.15	20468.98	380	467.92	590	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14841.36	19401.15	1140.72	20468.98	23879.96	1140.19

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1133.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.94	Wt. n-Val.		0.035	
W.S. Elev (ft)	1131.10	Reach Len. (ft)	380.00	467.92	590.00
Crit W.S. (ft)	1125.53	Flow Area (sq ft)		15131.52	
E.G. Slope (ft/ft)	0.001929	Area (sq ft)	5378.12	15131.52	9929.08
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2726.06	Top Width (ft)	614.48	1024.85	1086.72
Vel Total (ft/s)	11.17	Avg. Vel. (ft/s)		11.17	
Max Chl Dpth (ft)	17.70	Hydr. Depth (ft)		14.76	
Conv. Total (cfs)	3847780.5	Conv. (cfs)		3847780.5	
Length Wtd. (ft)	467.92	Wetted Per. (ft)		1032.24	
Min Ch El (ft)	1113.40	Shear (lb/sq ft)		1.77	
Alpha	1.00	Stream Power (lb/ft s)		19.72	
Frctn Loss (ft)	0.92	Cum Volume (acre-ft)	2151.74	9762.47	980.23
C & E Loss (ft)	0.00	Cum SA (acres)	129.71	589.17	179.02

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1133.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.94	Wt. n-Val.		0.035	
W.S. Elev (ft)	1131.10	Reach Len. (ft)	380.00	467.92	590.00
Crit W.S. (ft)	1125.53	Flow Area (sq ft)		15130.65	
E.G. Slope (ft/ft)	0.001929	Area (sq ft)		15130.65	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1024.85	Top Width (ft)		1024.85	
Vel Total (ft/s)	11.17	Avg. Vel. (ft/s)		11.17	
Max Chl Dpth (ft)	17.70	Hydr. Depth (ft)		14.76	
Conv. Total (cfs)	3847426.8	Conv. (cfs)		3847426.8	
Length Wtd. (ft)	467.92	Wetted Per. (ft)		1032.24	
Min Ch El (ft)	1113.40	Shear (lb/sq ft)		1.77	
Alpha	1.00	Stream Power (lb/ft s)		19.72	
Frctn Loss (ft)	0.92	Cum Volume (acre-ft)		9763.39	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		589.16	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.24

INPUT
Description:
Station Elevation Data num= 257

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14646.32	1134.4	14764.4	1134.8	14831.71	1135.2	314844.69	1135.3	214892.21	1135.13
14921.24	1136.1	14974.7	1136.8	515052.31	1137.3	915099.21	1135.7	215106.88	1135.32
15191.55	1136.5	15221.5	1135.0	315226.48	1134.8	215290.32	1135.3	915323.23	1136.13
15326.62	1135.5	15337.03	1133.2	15387.5	1136.9	15433.06	1136.8	215539.19	1136.44
15563.61	1136.5	15584.96	1136.2	615688.79	1136.3	815695.05	1135.9	915719.52	1135.69
15887.11	1136.8	15940.24	1136.78	16059.1	1137.2	916082.72	1136.7	916111.12	1137
16127.59	1137.3	16170.82	1136.9	616226.37	1137.0	716275.63	1137.5	416304.44	1137.29
16307.79	1137.3	16370.75	1137.2	416425.82	1138.2	816473.32	1137.3	416495.94	1137.47
16507.5	1137.5	16558.97	1137.71	16592.8	1137.7	916628.27	1137.7	916662.48	1138.27
16689.32	1138.4	16702.03	1138.5	216719.82	1138.5	16738.98	1138.6	216748.91	1139.41
16767.6	1138.5	16784.38	1138.4	216821.91	1138.9	316850.35	1139.4	216859.33	1140.14
16912.28	1140.5	16970.34	1140.0	717198.01	1139.3	917221.24	1137.3	317234.49	1136.34
17272.18	1136	17407.34	1136.8	17431.72	1137.0	717446.85	1138.0	917480.31	1136.81
17503.82	1136.6	17552.53	1136.83	17569.7	1136.94	17610.6	1137.2	917626.55	1136.28
17635.29	1136	17643.59	1134.9	817663.91	1133.89	17678.4	1134.4	517692.56	1134.59
17721.15	1136	17738.84	1136.6	917764.86	1136.6	617777.72	1136.8	517849.78	1136.8
17857.28	**1136.8**	**17920.2**	**1136.6**	**817947.94**	**1136.02**	**17966.4**	**1133.7**	**518068.06**	**1132.7**
18108.56	1132.6	18142.81	1132.7	918249.02	1134.2	818324.26	1134.3	18363.86	1134.1
18388.07	1134	18408.92	1134.1	118487.59	1133.9	18590	1133.7	418649.24	1133.42
18688.62	1133.4	18708	1134.8	118788.17	1134.32	18850.1	1125.4	518883.57	1120.97
18904.83	1120.9	18973.61	1120.9	919117.02	1121.6	919122.76	1121.7	619163.61	1121.65
19204.77	1120.9	19305.4	1121.68	19367.5	1122.1	319377.18	1124.5	19399.49	1130.11
19405.74	1131.9	19428.05	1138.8	819436.24	1138.9	319441.07	1138.7	619464.52	1131.35

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19472.76  1128.619475.72 1128.9219481.84  1129.219490.28 1123.7519495.88 1119.82
19503.56  1119.119575.02 1115.2519583.91    111519682.24 1114.3819737.43 1113.53
19806.63  1112.119846.97 1112.4519977.39 1113.8520018.91 1114.3620027.94 1114.39
20058.13  1114.620207.74 1115.4620265.72 1116.1120322.01 1116.5920376.48  1116.2
20413.78  1116.120439.92 1115.7520457.36 1115.0320474.25 1128.7420483.45 1128.29
 20490.4  1125.720496.83 1127.9520517.22 1140.0920530.41 1139.8920544.69  1136.8
20554.93    113520563.19 1131.38 20602.3 1126.1320608.87 1125.9320653.81  1124.9
20698.56  1125.320771.04 1126.2520771.61 1126.2520807.58 1129.5620831.36 1132.98
20878.82  1134.420898.67 1136.1420912.37  1137.120969.84 1138.0320996.46 1138.65
 21043.1  1138.521053.53 1138.3921079.47 1137.9921082.55    113821086.12 1137.57
21103.33  1135.9 21110.2 1136.1121117.68 1136.1221123.72 1136.7321137.71 1137.27
 21143.9  1136.421154.24 1135.8721198.86 1135.4221233.74 1134.8521241.56 1134.96
21272.19  1135.821279.85 1135.0821422.76 1121.1221458.02 1117.8821468.74 1117.79
21523.76  1116.221590.37 1116.0721601.66 1117.2921641.76 1117.1321703.21 1117.25
21782.66  1117.921808.93 1117.7821876.88 1123.4821880.78 1123.5621951.95 1122.71
21979.11  1130.621989.42 1133.9922008.61 1134.67 22014.2 1134.9222020.74 1132.65
22039.31  1125.622058.15 1119.4722076.68 1119.4622090.39 1119.6622107.16 1118.76
22119.61  1119.822181.31 1120.1222186.64 1122.02 22214.9 1132.6122243.91 1132.68
22264.09  1132.8 22473.5 1134.7822506.19 1134.9922560.06 1135.8122567.51 1135.83
22587.56  1137.4 22634.1  1143.622671.68 1141.5522679.57  1139.322697.08 1134.87
22713.99    113522737.51  1135.3 22749.5 1140.24 22757.1 1142.88 22793.1 1142.58
22801.02  1142.722827.93 1143.2122856.02 1143.2222872.09 1143.1322876.42 1143.53
22909.59  1145.122925.78 1146.0222929.43 1146.1523082.04 1146.0923143.84 1147.23
23171.14  1147.123190.17 1146.9923218.04 1147.7423270.26 1148.0123343.11  1149.1
23374.31  1149.523407.84 1150.1823457.49 1151.5823483.69 1152.1223507.96 1153.18
23515.86  1152.523528.25 1151.8523547.44 1152.9523572.23 1153.9423612.48 1153.79
23645.45  1153.923690.07 1154.0823716.54  1154.323755.06 1154.7423786.78 1154.49
23851.78  1155.123862.13 1155.0723875.66 1155.2623957.31 1155.8423980.42 1155.71
24063.68  1154.624074.39 1154.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14646.32    .03519436.24    .03520517.22    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19436.2420517.22              510  511.34     500             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14646.3219436.24 1138.9320517.2224074.39 1140.09

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1132.12   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1130.16   Reach Len. (ft)            510.00     511.34     500.00
  Crit W.S. (ft)            1124.65   Flow Area (sq ft)                   15051.38
  E.G. Slope (ft/ft)       0.001989   Area (sq ft)              4698.66   15051.38    9173.69
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            2682.75   Top Width (ft)             582.44    1032.45    1067.86
  Vel Total (ft/s)            11.23   Avg. Vel. (ft/s)                      11.23
  Max Chl Dpth (ft)           18.06   Hydr. Depth (ft)                      14.58
  Conv. Total (cfs)       3789764.8   Conv. (cfs)                         3789764.8
  Length Wtd. (ft)           511.34   Wetted Per. (ft)                    1042.11
  Min Ch El (ft)            1112.10   Shear (lb/sq ft)                       1.79
  Alpha                        1.00   Stream Power (lb/ft s)                20.13
  Frctn Loss (ft)              0.99   Cum Volume (acre-ft)      2107.79    9600.35     850.86
  C & E Loss (ft)              0.01   Cum SA (acres)             124.49     578.12     164.43


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1132.12   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1130.16   Reach Len. (ft)            510.00     511.34     500.00
  Crit W.S. (ft)            1124.65   Flow Area (sq ft)                   15050.38
  E.G. Slope (ft/ft)       0.001989   Area (sq ft)                        15050.38
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
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Top Width (ft)	1032.44	Top Width (ft)	1032.44	
Vel Total (ft/s)	11.23	Avg. Vel. (ft/s)	11.23	
Max Chl Dpth (ft)	18.06	Hydr. Depth (ft)	14.58	
Conv. Total (cfs)	3789355.3	Conv. (cfs)	3789355.3	
Length Wtd. (ft)	511.34	Wetted Per. (ft)	1042.10	
Min Ch El (ft)	1112.10	Shear (lb/sq ft)	1.79	
Alpha	1.00	Stream Power (lb/ft s)	20.14	
Frctn Loss (ft)	0.99	Cum Volume (acre-ft)	9601.29	0.32
C & E Loss (ft)	0.01	Cum SA (acres)	578.11	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.14

INPUT
Description:
Station Elevation Data num= 234

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15164.78	1136.4	15208.2	1137.09	15256.23	1136.88	15380.96	1136.55	15422.24	1136.39
15435.33	1136.41	15446.04	1136.21	15465.53	1135.94	15519.25	1134.24	15542.67	1133.6
15565.73	1134.21	15589.49	1134.66	15597.77	1134.62	15670.72	1135.49	15802.44	1135.74
15827.2	1135.61	16196.09	1135.61	16201.64	1135.61	16664.74	1136.68	16758.6	1135.75
16870.13	1135.91	16954.81	1136.28	17040.55	1135.21	17082.77	1134.73	17168.23	1133.92
17192.15	1135.11	17206.81	1134.71	17223.42	1134.49	17230.65	1134.28	17259.46	1132.73
17365	1132.61	17440.14	1133.08	17514.47	1132.95	17584.53	1132.65	17773.68	1137.58
17780.81	1138.21	17796.97	1138.18	17831.92	1137.07	17866.27	1136.67	17871.77	1136.17
17888.74	1135.21	17911.91	1133.48	17919.2	1133	17927.9	1133	17951.44	1132.88
17984.39	1135.21	17989.89	1135.61	18002.57	1135.72	18097.83	1135.86	18160.79	1136.77
18183.72	1136.91	18208.57	1134.27	18242.11	1129.94	18247.45	1129.99	18284.14	1130.13
18376.13	1130.81	18429.04	1131.11	18436.08	1131.21	18491.49	1131.73	18511.74	1132.63
18546.94	1134.41	18670.73	1133.53	18717.03	1133.31	18776.64	1132.84	18789.6	1133.66
18817.97	1134.81	18852.69	1134.41	18893.54	1134.25	18904.92	1133.31	18910.67	1132.7
19016.8	1119.61	19037.75	1117.31	19042.38	1117.54	19090.57	1117.81	19140.69	1117.58
19217.98	1116.81	19251.56	1116.43	19288.52	1117.02	19303.43	1118.65	19325.43	1118.5
19342.44	1119.31	19372.01	1123.37	19386.41	1125.47	19406.2	1130.49	19430.09	1138.01
19445.31	1137.9	19448.4	1137.32	19468.34	1137.05	19470.09	1136.95	19495.93	1119.9
19497.57	1119.41	19524.89	1116.26	19534.77	1115.24	19568.82	1113.75	19629.2	1110.42
19649.81	1110.41	19773.39	1111.38	19866.54	1111.87	19893.37	1112.11	19927.72	1112.67
20063.1	111	20149.03	1116.87	20181.57	1116.61	20245.29	1115.66	20275.45	1115.54
20310.17	1115.12	20452.52	1113.92	20463.91	1114.32	20480.07	1124.6	20483.3	1126.74
20492.82	1126.32	20496.53	1124.32	20511.26	1132.71	20520.48	1138.24	20530.15	1138.08
20534.29	1138.62	20543.75	1136.11	20548.42	1135.04	20558.57	1131.51	20568.89	1128.37
20596.43	1129.2	20621.7	1130.19	20681.66	1129.79	20717.17	1129.36	20767.68	1128.58
20836.05	1134.32	20871.71	1137.19	20937.38	1130.12	20964.21	1130.25	20977.27	1129.96
20988.72	113	20999.08	1131.67	21036.18	1132.48	21072.43	1126.93	21081.9	1127.27
21087.68	1128.72	21133.93	1128.98	21141.15	1129.12	21151.53	1126.39	21185.85	1126.17
21209.44	1126.3	21212.2	1126.37	21217.6	1127.61	21219.95	1127.93	21263.22	1138.51
21266.96	1137.22	21284.09	1133.42	21291.61	1133.18	21300.74	1133.32	21322.62	1133.52
21361.86	1132.9	21390.2	1132.22	21394.13	1132.23	21454.34	1132.01	21464.97	1132.11
21476.33	113	21540.74	1130.12	21568.29	1129.44	21620.64	1129.17	21647.09	1129.18
21664.31	1127.6	21721.5	1124.24	21749.96	1123.15	21761.9	1122.55	21827.64	1121.5
21865.73	1121.62	21878.81	1121.44	21934.36	1121.98	21941.03	1122.68	21973.53	1124.83
22017.41	1131.82	22035.36	1133.11	22053.41	1133.29	22108.52	1123.12	2141.46	1123.59
22167.67	1120.62	22180.34	1119.63	22268.31	1119.63	22278.16	1119.76	22302.79	1119.7
22329.17	1119.8	22368	1119.36	22378.55	1119.39	22389.88	1120.52	22476.5	1126.06
22551.91	1133.12	22556.71	1133.47	22560.92	1134.05	22592.74	1134.85	22613.6	1135.73
22620.2	1135.72	22655.58	1135.15	22684.66	1135.14	22717.56	1134.83	22753.82	1134.64
22781.4	1134.82	22794.68	1134.92	22875.32	1135.38	22948.92	1135.38	22981.01	1138.44
23018.92	1140.62	23038.12	1141.63	23095.2	1141.91	23112.63	1142.09	23153.66	1142.77
23186.62	114	23201.76	1139.76	23217.3	1135.32	23240.34	1135.36	23254.3	1135.04
23274.71	1140.72	23282.92	1142.72	23291.34	1142.62	23321.33	1142.66	23331.53	1143.07
23349.27	1144.82	23367.87	1144.86	23401.72	1143.91	23459.98	1143.28	23542.75	1142.68
23622.63	1143.62	23653.75	1143.68	23696.07	1143.77	23727.01	1145.17	23773.37	1151.8
23779.91	1151.32	23805.74	1149.97	23818.61	1151.19	23823.91	1151.56	23874.31	1151.28
23926.63	1151.22	23980.52	1151.08	24041.38	1151.27	24067.8	1151.47		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

15164.78 .0519470.09 .03520520.48 .05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19470.0920520.48 760 550.34 260 .1 .3
Ineffective Flow num= 2
Sta L Sta R Elev Sta L Sta R Elev
15164.7819470.09 1136.9520520.48 24067.8 1138.24

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1131.11	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.91	Wt. n-Val.		0.035	
W.S. Elev (ft)	1129.20	Reach Len. (ft)	760.00	550.34	260.00
Crit W.S. (ft)	1123.56	Flow Area (sq ft)		15229.76	
E.G. Slope (ft/ft)	0.001887	Area (sq ft)	4504.16	15229.76	5457.03
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2551.49	Top Width (ft)	462.09	1023.28	1066.13
Vel Total (ft/s)	11.10	Avg. Vel. (ft/s)		11.10	
Max Chl Dpth (ft)	18.80	Hydr. Depth (ft)		14.88	
Conv. Total (cfs)	3890025.0	Conv. (cfs)		3890025.0	
Length Wtd. (ft)	550.34	Wetted Per. (ft)		1032.04	
Min Ch El (ft)	1110.40	Shear (lb/sq ft)		1.74	
Alpha	1.00	Stream Power (lb/ft s)		19.30	
Frctn Loss (ft)	1.14	Cum Volume (acre-ft)	2053.91	9422.62	766.89
C & E Loss (ft)	0.02	Cum SA (acres)	118.37	566.05	152.18

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1131.11	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.91	Wt. n-Val.		0.035	
W.S. Elev (ft)	1129.20	Reach Len. (ft)	760.00	550.34	260.00
Crit W.S. (ft)	1123.56	Flow Area (sq ft)		15228.51	
E.G. Slope (ft/ft)	0.001888	Area (sq ft)		15228.51	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1023.27	Top Width (ft)		1023.27	
Vel Total (ft/s)	11.10	Avg. Vel. (ft/s)		11.10	
Max Chl Dpth (ft)	18.80	Hydr. Depth (ft)		14.88	
Conv. Total (cfs)	3889507.0	Conv. (cfs)		3889507.0	
Length Wtd. (ft)	550.34	Wetted Per. (ft)		1032.03	
Min Ch El (ft)	1110.40	Shear (lb/sq ft)		1.74	
Alpha	1.00	Stream Power (lb/ft s)		19.30	
Frctn Loss (ft)	1.14	Cum Volume (acre-ft)		9423.57	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		566.04	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.03

INPUT
Description: Upstream face of Hohokam Bridge

Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17290	113617865.96	1134.318102.01		113618281.41		114018715.74		1144	
19304.64	1144.319304.73	1137.619326.92		1137.68 19359.5		1113.8819387.82		1113.1	
19395.38	1112.919424.18	1112.919429.84		1112.919484.41		1112.919548.81		1112.9	
19554.47	1112.919606.22	1112.919673.45		1112.919679.11		1112.919728.96		1112.9	
19771.17	1112.919781.55	1113.619798.08		1113.519803.74		1113.519853.13		1113.3	
19922.71	1113.8519928.38	1113.8519976.81		1113.520047.35		1113.520053.01		1113.5	
20104.28	1113.720171.98	1114.320177.65		1114.320228.45		1114.3520296.62		1114.65	
20299.45	1114.6520343.83	1114.720383.48		113720420.31		1137 20420.4		1138.5	

```
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values          num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19304.73 20420.4           190.12  190.12  190.12             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1129.94   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.15   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1127.80   Reach Len. (ft)            31.50     31.50     31.50
  Crit W.S. (ft)            1123.15   Flow Area (sq ft)                  14369.09
  E.G. Slope (ft/ft)       0.002299   Area (sq ft)                       14369.09
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1026.67   Top Width (ft)                      1026.67
  Vel Total (ft/s)            11.76   Avg. Vel. (ft/s)                      11.76
  Max Chl Dpth (ft)           14.90   Hydr. Depth (ft)                      14.00
  Conv. Total (cfs)       3524552.3   Conv. (cfs)                       3524552.3
  Length Wtd. (ft)            31.50   Wetted Per. (ft)                    1034.68
  Min Ch El (ft)            1112.90   Shear (lb/sq ft)                       1.99
  Alpha                        1.00   Stream Power (lb/ft s)                23.44
  Frctn Loss (ft)              0.09   Cum Volume (acre-ft)      2014.62   9235.65    750.60
  C & E Loss (ft)              0.04   Cum SA (acres)             114.34    553.10    149.00


CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1129.94   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.15   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1127.79   Reach Len. (ft)            31.50     31.50     31.50
  Crit W.S. (ft)            1123.15   Flow Area (sq ft)                  14367.08
  E.G. Slope (ft/ft)       0.002300   Area (sq ft)                       14367.08
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1026.66   Top Width (ft)                      1026.66
  Vel Total (ft/s)            11.76   Avg. Vel. (ft/s)                      11.76
  Max Chl Dpth (ft)           14.89   Hydr. Depth (ft)                      13.99
  Conv. Total (cfs)       3523750.8   Conv. (cfs)                       3523750.8
  Length Wtd. (ft)            31.50   Wetted Per. (ft)                    1034.68
  Min Ch El (ft)            1112.90   Shear (lb/sq ft)                       1.99
  Alpha                        1.00   Stream Power (lb/ft s)                23.46
  Frctn Loss (ft)              0.09   Cum Volume (acre-ft)                9236.61      0.32
  C & E Loss (ft)              0.04   Cum SA (acres)                       553.09      0.18


BRIDGE                  RIVER: Salt River
REACH: Reach 4             RS: 219.02

INPUT
Description: Hohokam Expressway (SR 143)
Distance from Upstream XS =     31.5
Deck/Roadway Width        =      127
Weir Coefficient          =      2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       16
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   17290    1136    113617865.96  1134.3  1134.318102.01    1136    1136
18281.41    1140    114018715.74    1144    114419304.73  1144.3  1144.3
19304.73  1144.3 1137.6819424.18 1144.43 1137.7219548.81 1145.27 1138.56
19673.45 1145.64 1138.9319798.08 1146.04 1139.3319922.71 1146.44 1139.73
20047.35 1146.71    114020171.98 1146.99 1140.2820299.45 1146.24 1139.53
20420.31 1145.24 1138.53

Upstream Bridge Cross Section Data
Station Elevation Data    num=      45
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```
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   17290    113617865.96  1134.318102.01    113618281.41    114018715.74    1144
19304.64  1144.319304.73  1137.619326.92 1137.68 19359.5 1113.8819387.82  1113.1
19395.38  1112.919424.18  1112.919429.84  1112.919484.41  1112.919548.81  1112.9
19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19304.73 20420.4             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

Downstream  Deck/Roadway Coordinates
    num=       16
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   17290    1136    113617865.96  1134.3  1134.318102.01    1136    1136
18281.41    1140    114018715.74    1144    114419304.73  1144.3  1144.3
19304.73  1144.3 1137.6819424.18 1144.43 1137.7219548.81 1145.27 1138.56
19673.45 1145.64 1138.9319798.08 1146.04 1139.3319922.71 1146.44 1139.73
20047.35 1146.71    114020171.98 1146.99 1140.2820299.45 1146.24 1139.53
20420.31 1145.24 1138.53

Downstream Bridge Cross Section Data
Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   17290    113617865.96  1134.318102.01    113618281.41    114018715.74    1144
19304.64  1144.319304.73  1137.619326.92 1137.68 19359.5 1113.8819387.82  1113.1
19395.38  1112.919424.18  1112.919429.84  1112.919484.41  1112.919548.81  1112.9
19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19304.73 20420.4             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station     Upstream=   19427    Downstream=   19427
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
```

```
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19551.6    Downstream= 19551.6
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19676.3    Downstream= 19676.3
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19800.9    Downstream= 19800.9
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19925.5    Downstream= 19925.5
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20050.2    Downstream= 20050.2
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20174.8    Downstream= 20174.8
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20299.8    Downstream= 20299.8
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
```

Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Pressure and Weir flow
Submerged Inlet Cd =
Submerged Inlet + Outlet Cd = .8
Max Low Cord =

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1129.94	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1127.80	E.G. Elev (ft)	1129.81	1129.24
Q Total (cfs)	169000.00	W.S. Elev (ft)	1127.27	1126.28
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1123.46	1123.45
Q Weir (cfs)		Max Chl Dpth (ft)	14.37	13.38
Weir Sta Lft (ft)		Vel Total (ft/s)	12.79	13.81
Weir Sta Rgt (ft)		Flow Area (sq ft)	13208.41	12238.13
Weir Submerg		Froude # Chl	0.61	0.69
Weir Max Depth (ft)		Specif Force (cu ft)	157676.75	150380.42
Min Top Rd (ft)	1137.00	Hydr Depth (ft)	13.48	12.53
Min El Prs (ft)	1144.30	W.P. Total (ft)	1206.75	1187.18
Delta EG (ft)	0.92	Conv. Total (cfs)	2764387.5	2460980.3
Delta WS (ft)	1.43	Top Width (ft)	979.73	976.61
BR Open Area (sq ft)	25161.30	Frctn Loss (ft)	0.53	0.12
BR Open Vel (ft/s)	13.81	C & E Loss (ft)	0.04	0.09
Coef of Q		Shear Total (lb/sq ft)	2.55	3.03
Br Sel Method	Energy only	Power Total (lb/ft s)	32.68	41.91

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1129.94	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1127.79	E.G. Elev (ft)	1129.81	1129.24
Q Total (cfs)	169000.00	W.S. Elev (ft)	1127.27	1126.28
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1123.46	1123.45
Q Weir (cfs)		Max Chl Dpth (ft)	14.37	13.38
Weir Sta Lft (ft)		Vel Total (ft/s)	12.80	13.81
Weir Sta Rgt (ft)		Flow Area (sq ft)	13204.26	12237.29
Weir Submerg		Froude # Chl	0.61	0.69
Weir Max Depth (ft)		Specif Force (cu ft)	157658.80	150374.92
Min Top Rd (ft)	1144.34	Hydr Depth (ft)	13.52	12.53
Min El Prs (ft)	1144.30	W.P. Total (ft)	1203.32	1187.16
Delta EG (ft)	0.92	Conv. Total (cfs)	2768186.0	2460720.8
Delta WS (ft)	1.43	Top Width (ft)	976.88	976.61
BR Open Area (sq ft)	24873.54	Frctn Loss (ft)	0.53	0.12
BR Open Vel (ft/s)	13.81	C & E Loss (ft)	0.04	0.09
Coef of Q		Shear Total (lb/sq ft)	2.55	3.04
Br Sel Method	Energy only	Power Total (lb/ft s)	32.68	41.92

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.01

INPUT
Description: Downstream face of Hohokam Bridge

Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17290	113617865.96	1134.318102.01		113618281.41		114018715.74		1144	
19304.64	1144.319304.73	1137.619326.92	1137.68	19359.5	1113.8819387.82	1113.1			

```
19395.38  1112.919424.18  1112.919429.84  1112.919484.41  1112.919548.81  1112.9
19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19304.73 20420.4           111.97  111.97  111.97             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1129.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1126.36	Reach Len. (ft)	111.97	111.97	111.97
Crit W.S. (ft)	1123.16	Flow Area (sq ft)		12899.76	
E.G. Slope (ft/ft)	0.003271	Area (sq ft)		12899.76	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1022.15	Top Width (ft)		1022.15	
Vel Total (ft/s)	13.10	Avg. Vel. (ft/s)		13.10	
Max Chl Dpth (ft)	13.46	Hydr. Depth (ft)		12.62	
Conv. Total (cfs)	2954795.0	Conv. (cfs)		2954795.0	
Length Wtd. (ft)	111.97	Wetted Per. (ft)		1029.33	
Min Ch El (ft)	1112.90	Shear (lb/sq ft)		2.56	
Alpha	1.00	Stream Power (lb/ft s)		33.53	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)	2014.62	9179.46	750.60
C & E Loss (ft)	0.27	Cum SA (acres)	114.34	548.80	149.00

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1129.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1126.36	Reach Len. (ft)	111.97	111.97	111.97
Crit W.S. (ft)	1123.16	Flow Area (sq ft)		12898.88	
E.G. Slope (ft/ft)	0.003272	Area (sq ft)		12898.88	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1022.15	Top Width (ft)		1022.15	
Vel Total (ft/s)	13.10	Avg. Vel. (ft/s)		13.10	
Max Chl Dpth (ft)	13.46	Hydr. Depth (ft)		12.62	
Conv. Total (cfs)	2954467.0	Conv. (cfs)		2954467.0	
Length Wtd. (ft)	111.97	Wetted Per. (ft)		1029.32	
Min Ch El (ft)	1112.90	Shear (lb/sq ft)		2.56	
Alpha	1.00	Stream Power (lb/ft s)		33.54	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)		9180.43	0.32
C & E Loss (ft)	0.27	Cum SA (acres)		548.80	0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.97

INPUT
Description: Upstream face of SR153 bridge

Station Elevation Data num= 32

```
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19459.46 1135.8719459.491135.86719466.11 1135.1519468.94 1133.6419479.54 1133.83
 19514.5 1110.2819546.88 1106.45   19567 1107.5619619.62 1109.1319692.07 1108.21
19758.59 1107.6719818.56 1108.5419830.19 1110.4719898.06 1111.2119960.72 1111.55
20034.81 1112.5720102.55 1113.8220108.76 1113.8220114.29 1112.0320176.09 1111.76
20220.38 1112.2420246.16 1111.6420315.81 1109.6620366.41 1111.1620389.63 1110.76
20460.12 1110.5220486.51 1126.3920497.67  1126.120529.61 1135.4720537.11 1136.26
20575.51 1125.3220617.67 1125.62

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19459.46     .0519459.46    .03520537.11     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19459.4620537.11           138.88  138.88  138.88             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19459.4619459.46 1135.8720537.1120617.67 1136.26

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1128.50   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.76   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1126.74   Reach Len. (ft)            10.90      10.90      10.90
  Crit W.S. (ft)            1120.31   Flow Area (sq ft)                  15870.60
  E.G. Slope (ft/ft)       0.001620   Area (sq ft)                       15870.60      57.24
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1056.96   Top Width (ft)                      1009.80      47.16
  Vel Total (ft/s)            10.65   Avg. Vel. (ft/s)                      10.65
  Max Chl Dpth (ft)           20.29   Hydr. Depth (ft)                      15.72
  Conv. Total (cfs)       4198925.5   Conv. (cfs)                       4198925.5
  Length Wtd. (ft)            10.90   Wetted Per. (ft)                    1020.16
  Min Ch El (ft)            1106.45   Shear (lb/sq ft)                       1.57
  Alpha                        1.00   Stream Power (lb/ft s)                16.75
  Frctn Loss (ft)              0.02   Cum Volume (acre-ft)      2014.62   9142.48     750.53
  C & E Loss (ft)              0.03   Cum SA (acres)             114.34    546.19     148.94


Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1128.50   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.76   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1126.74   Reach Len. (ft)            10.90      10.90      10.90
  Crit W.S. (ft)            1120.31   Flow Area (sq ft)                  15869.73
  E.G. Slope (ft/ft)       0.001620   Area (sq ft)                       15869.73
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1009.80   Top Width (ft)                      1009.80
  Vel Total (ft/s)            10.65   Avg. Vel. (ft/s)                      10.65
  Max Chl Dpth (ft)           20.29   Hydr. Depth (ft)                      15.72
  Conv. Total (cfs)       4198559.0   Conv. (cfs)                       4198559.0
  Length Wtd. (ft)            10.90   Wetted Per. (ft)                    1020.15
  Min Ch El (ft)            1106.45   Shear (lb/sq ft)                       1.57
  Alpha                        1.00   Stream Power (lb/ft s)                16.76
  Frctn Loss (ft)              0.02   Cum Volume (acre-ft)               9143.46       0.32
  C & E Loss (ft)              0.03   Cum SA (acres)                      546.18       0.18


BRIDGE                  RIVER: Salt River
REACH: Reach 4             RS: 218.965

INPUT
Description: SR 153
Distance from Upstream XS =    10.9
Deck/Roadway Width        =     117
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       10
```

```
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19480.19 1148.46 1141.7919595.74 1149.67    114319720.43 1150.63 1143.96
19851.65 1151.18 1144.5119988.08  1151.3 1144.6320128.34 1151.01 1144.34
20271.02 1150.29 1143.6220414.69 1149.15 1142.4820557.89 1147.59 1140.92
20670.18 1146.05 1139.38

Upstream Bridge Cross Section Data
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19459.46 1135.8719459.491135.86719466.11 1135.1519468.94 1133.6419479.54 1133.83
 19514.5 1110.2819546.88 1106.45   19567 1107.5619619.62 1109.1319692.07 1108.21
19758.59 1107.6719818.56 1108.5419830.19 1110.4719898.06 1111.2119960.72 1111.55
20034.81 1112.5720102.55 1113.8220108.76 1113.8220114.29 1112.0320176.09 1111.76
20220.38 1112.2420246.16 1111.6420315.81 1109.6620366.41 1111.1620389.63 1110.76
20460.12 1110.5220486.51 1126.3920497.67  1126.120529.61 1135.4720537.11 1136.26
20575.51 1125.3220617.67 1125.62

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19459.46     .0519459.46    .03520537.11     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19459.4620537.11             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19459.4619459.46 1135.8720537.1120617.67 1136.26

Downstream  Deck/Roadway Coordinates
    num=      10
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19480.19 1148.46 1141.7919595.74 1149.67    114319720.43 1150.63 1143.96
19851.65 1151.18 1144.5119988.08  1151.3 1144.6320128.34 1151.01 1144.34
20271.02 1150.29 1143.6220414.69 1149.15 1142.4820557.89 1147.59 1140.92
20670.18 1146.05 1139.38

Downstream Bridge Cross Section Data
Station Elevation Data    num=      27
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19456.79 1136.1819464.29 1135.7619489.35  1117.819499.81 1118.12 19527.2 1106.31
19575.01 1106.8619638.48 1107.0819694.95 1108.06 19764.4 1108.5219823.34 1109.68
19828.52 1110.8419896.81 1110.9319965.33 1111.4520032.89 1111.9220105.85  1113.1
20175.18 1113.6320247.98 1113.2220326.04 1112.5620392.18 1111.7220465.08 1112.15
20485.85 1125.4920496.63  1125.520529.33 1135.7420537.91 1135.9420572.86 1123.41
20600.86 1123.9220641.85 1122.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19456.79     .0519456.79    .03520537.91     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19456.7920537.91             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19456.7919456.79 1136.1820537.9120641.85 1135.94

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station     Upstream=19595.74    Downstream=19595.74
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
```

```
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Pier Data
Pier Station      Upstream=19720.43     Downstream=19720.43
Upstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145
Downstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Pier Data
Pier Station      Upstream=19851.65     Downstream=19851.65
Upstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145
Downstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Pier Data
Pier Station      Upstream=19988.08     Downstream=19988.08
Upstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145
Downstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Pier Data
Pier Station      Upstream=20128.34     Downstream=20128.34
Upstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145
Downstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Pier Data
Pier Station      Upstream=20271.02     Downstream=20271.02
Upstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145
Downstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Pier Data
Pier Station      Upstream=20414.69     Downstream=20414.69
Upstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145
Downstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Pier Data
Pier Station      Upstream=20557.89     Downstream=20557.89
Upstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145
Downstream      num=        2
    Width    Elev     Width    Elev
     6.5     1110      6.5     1145

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd    =      1.2
```

Yarnell KVal = 1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1128.50	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1126.74	E.G. Elev (ft)	1128.46	1128.12
Q Total (cfs)	169000.00	W.S. Elev (ft)	1126.44	1125.89
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1120.63	1120.99
Q Weir (cfs)		Max Chl Dpth (ft)	19.99	19.58
Weir Sta Lft (ft)		Vel Total (ft/s)	11.39	11.99
Weir Sta Rgt (ft)		Flow Area (sq ft)	14834.71	14100.78
Weir Submerg		Froude # Chl	0.51	0.56
Weir Max Depth (ft)		Specif Force (cu ft)	178982.38	170345.88
Min Top Rd (ft)	1133.39	Hydr Depth (ft)	15.41	14.47
Min El Prs (ft)	1144.63	W.P. Total (ft)	1198.01	1195.82
Delta EG (ft)	0.49	Conv. Total (cfs)	3370954.8	3101385.8
Delta WS (ft)	0.72	Top Width (ft)	1008.92	1050.19
BR Open Area (sq ft)	32826.68	Frctn Loss (ft)	0.32	0.03
BR Open Vel (ft/s)	11.99	C & E Loss (ft)	0.02	0.07
Coef of Q		Shear Total (lb/sq ft)	1.94	2.19
Br Sel Method	Energy only	Power Total (lb/ft s)	22.14	26.20

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1128.50	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1126.74	E.G. Elev (ft)	1128.46	1128.11
Q Total (cfs)	169000.00	W.S. Elev (ft)	1126.44	1125.88
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1120.63	1120.99
Q Weir (cfs)		Max Chl Dpth (ft)	19.99	19.57
Weir Sta Lft (ft)		Vel Total (ft/s)	11.39	11.99
Weir Sta Rgt (ft)		Flow Area (sq ft)	14833.88	14099.83
Weir Submerg		Froude # Chl	0.51	0.56
Weir Max Depth (ft)		Specif Force (cu ft)	178973.02	170336.36
Min Top Rd (ft)	1133.39	Hydr Depth (ft)	15.41	14.47
Min El Prs (ft)	1144.63	W.P. Total (ft)	1197.99	1195.80
Delta EG (ft)	0.49	Conv. Total (cfs)	3370677.5	3101073.3
Delta WS (ft)	0.72	Top Width (ft)	1008.91	1050.18
BR Open Area (sq ft)	32826.68	Frctn Loss (ft)	0.32	0.03
BR Open Vel (ft/s)	11.99	C & E Loss (ft)	0.02	0.07
Coef of Q		Shear Total (lb/sq ft)	1.94	2.19
Br Sel Method	Energy only	Power Total (lb/ft s)	22.14	26.20

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 **RS: 218.96**

INPUT
Description: Downsteam face of SR 153 Bridge

Station Elevation Data num= 27

Yarnell KVal = 1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1128.50	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1126.74	E.G. Elev (ft)	1128.46	1128.12
Q Total (cfs)	169000.00	W.S. Elev (ft)	1126.44	1125.89
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1120.63	1120.99
Q Weir (cfs)		Max Chl Dpth (ft)	19.99	19.58
Weir Sta Lft (ft)		Vel Total (ft/s)	11.39	11.99
Weir Sta Rgt (ft)		Flow Area (sq ft)	14834.71	14100.78
Weir Submerg		Froude # Chl	0.51	0.56
Weir Max Depth (ft)		Specif Force (cu ft)	178982.38	170345.88
Min Top Rd (ft)	1133.39	Hydr Depth (ft)	15.41	14.47
Min El Prs (ft)	1144.63	W.P. Total (ft)	1198.01	1195.82
Delta EG (ft)	0.49	Conv. Total (cfs)	3370954.8	3101385.8
Delta WS (ft)	0.72	Top Width (ft)	1008.92	1050.19
BR Open Area (sq ft)	32826.68	Frctn Loss (ft)	0.32	0.03
BR Open Vel (ft/s)	11.99	C & E Loss (ft)	0.02	0.07
Coef of Q		Shear Total (lb/sq ft)	1.94	2.19
Br Sel Method	Energy only	Power Total (lb/ft s)	22.14	26.20

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1128.50	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1126.74	E.G. Elev (ft)	1128.46	1128.11
Q Total (cfs)	169000.00	W.S. Elev (ft)	1126.44	1125.88
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1120.63	1120.99
Q Weir (cfs)		Max Chl Dpth (ft)	19.99	19.57
Weir Sta Lft (ft)		Vel Total (ft/s)	11.39	11.99
Weir Sta Rgt (ft)		Flow Area (sq ft)	14833.88	14099.83
Weir Submerg		Froude # Chl	0.51	0.56
Weir Max Depth (ft)		Specif Force (cu ft)	178973.02	170336.36
Min Top Rd (ft)	1133.39	Hydr Depth (ft)	15.41	14.47
Min El Prs (ft)	1144.63	W.P. Total (ft)	1197.99	1195.80
Delta EG (ft)	0.49	Conv. Total (cfs)	3370677.5	3101073.3
Delta WS (ft)	0.72	Top Width (ft)	1008.91	1050.18
BR Open Area (sq ft)	32826.68	Frctn Loss (ft)	0.32	0.03
BR Open Vel (ft/s)	11.99	C & E Loss (ft)	0.02	0.07
Coef of Q		Shear Total (lb/sq ft)	1.94	2.19
Br Sel Method	Energy only	Power Total (lb/ft s)	22.14	26.20

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.96

INPUT
Description: Downsteam face of SR 153 Bridge

Station Elevation Data num= 27

```
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19456.79 1136.1819464.29 1135.7619489.35  1117.819499.81 1118.12 19527.2 1106.31
19575.01 1106.8619638.48 1107.0819694.95 1108.06 19764.4 1108.5219823.34 1109.68
19828.52 1110.8419896.81 1110.9319965.33 1111.4520032.89 1111.9220105.85  1113.1
20175.18 1113.6320247.98 1113.2220326.04 1112.5620392.18 1111.7220465.08 1112.15
20485.85 1125.4920496.63  1125.520529.33 1135.7420537.91 1135.9420572.86 1123.41
20600.86 1123.9220641.85 1122.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19456.79     .0519456.79    .03520537.91     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19456.7920537.91              570  812.27     860             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19456.7919456.79 1136.1820537.9120641.85 1135.94

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1128.02   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.99   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1126.03   Reach Len. (ft)            570.00     812.27     860.00
  Crit W.S. (ft)            1120.64   Flow Area (sq ft)                   14931.02
  E.G. Slope (ft/ft)       0.002010   Area (sq ft)                        14931.02     184.21
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1096.74   Top Width (ft)                       1020.45      76.29
  Vel Total (ft/s)            11.32   Avg. Vel. (ft/s)                       11.32
  Max Chl Dpth (ft)           19.72   Hydr. Depth (ft)                       14.63
  Conv. Total (cfs)       3769359.3   Conv. (cfs)                        3769359.3
  Length Wtd. (ft)          812.27   Wetted Per. (ft)                     1029.71
  Min Ch El (ft)            1106.31   Shear (lb/sq ft)                        1.82
  Alpha                        1.00   Stream Power (lb/ft s)                 20.60
  Frctn Loss (ft)              1.44   Cum Volume (acre-ft)      2014.62    9096.12     750.18
  C & E Loss (ft)              0.08   Cum SA (acres)             114.34     543.09     148.75


Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1128.02   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.99   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1126.03   Reach Len. (ft)            570.00     812.27     860.00
  Crit W.S. (ft)            1120.67   Flow Area (sq ft)                   14930.15
  E.G. Slope (ft/ft)       0.002011   Area (sq ft)                        14930.15
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1020.44   Top Width (ft)                       1020.44
  Vel Total (ft/s)            11.32   Avg. Vel. (ft/s)                       11.32
  Max Chl Dpth (ft)           19.72   Hydr. Depth (ft)                       14.63
  Conv. Total (cfs)       3769005.0   Conv. (cfs)                        3769005.0
  Length Wtd. (ft)          812.27   Wetted Per. (ft)                     1029.70
  Min Ch El (ft)            1106.31   Shear (lb/sq ft)                        1.82
  Alpha                        1.00   Stream Power (lb/ft s)                 20.60
  Frctn Loss (ft)              1.44   Cum Volume (acre-ft)                9097.10
  C & E Loss (ft)              0.08   Cum SA (acres)                       543.08


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.80

INPUT
Description:
Station Elevation Data    num=     213
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
```

```
19230.12  1143.619275.95 1142.49 19298.4 1144.28 19303.6  1144.219362.21 1142.77
19364.55  1140.419366.35 1142.6619389.24 1134.9919390.52 1122.5519391.85  1122.6
19416.06  1130.919425.99 1133.9219434.92 1133.9919474.23 1134.4419480.09 1134.58
19492.34  1124.519519.89 1106.5719533.48 1106.1119592.78 1106.4819642.24  1105.7
19715.63  1105.819775.16 1106.6819831.61 1107.97 19872.3 1108.48 19895.6 1109.05
19928.19  1109.119966.84 1109.25 20037.5 1109.5420055.76 1109.4920162.44 1109.04
20198.37  1109.220274.27 1110.1320332.25 1110.0820384.73 1109.7920452.41 1109.37
20471.54  1109.420477.22 1113.1620493.52 1124.5920502.73 1124.4720535.08 1134.09
20552.07  1133.620585.31 1120.9620621.87 1120.8720643.27 1121.3620749.27 1124.15
20777.33  1124.620801.74 1125.3320805.79 1123.6920853.71 1105.0920865.69 1106.02
20888.39  1108.620913.05  1110.620935.57 1109.4620977.88 1108.4720986.53 1107.98
21008.91  1108.321050.42 1110.1321079.18 1111.2521102.02 1113.4921107.04  1113.8
21135.68    111321151.72 1113.0121172.25 1114.7421188.09  1114.921191.61  1115.1
21258.86  1116.221268.91 1117.35 21306.2  1120.521325.06 1121.5721339.08 1121.32
21382.66  1125.721405.75 1126.6321437.56 1128.9221454.27 1129.0321463.86 1128.46
21487.06  1127.421495.49 1126.2121514.26 1120.7221537.98 1114.5621552.41  1114.4
21626.08  1115.621671.81  1116.621688.82 1117.0721700.81 1117.3221702.91 1117.56
 21721.4  1117.6 21734.8 1117.71 21761.1 1118.0321780.54 1118.0621807.71 1118.39
 21822.7  1117.721848.49 1123.8821868.08 1123.8621893.84 1130.1221938.83 1140.09
 21950.2  1143.221956.33 1142.6521973.66  1141.522005.29 1142.4922008.68 1142.57
22014.31  1141.122068.94 1126.05 22071.3    112622075.71 1124.2822103.57 1119.37
22106.12  1119.722113.78 1118.4822125.91 1118.7222153.35 1120.12 22180.4 1121.54
22185.65  1123.222195.49 1122.3722234.58 1132.0522241.99 1132.9322266.04 1139.38
 22272.8  1139.422279.88 1141.2922314.52 1141.1822318.47 1140.5222367.43 1137.26
22376.61  1137.122424.35 1134.5922441.67 1134.2722484.91 1130.7122499.19 1130.52
22523.07    113022552.05 1128.5822597.93 1126.7222608.56 1125.9422634.89 1124.45
22654.45  1123.622664.92 1123.9422741.48 1124.0222747.42 1124.5422755.92 1124.96
22779.02  1124.222788.15 1123.9122812.66  1125.822823.63 1126.7422839.46 1126.96
22899.37  1127.522912.58 1126.92 22915.4 1127.0922947.98 1126.5422957.23 1126.42
22968.67  1126.4   22995 1126.7823026.16 1124.0723056.06 1126.0623079.88 1125.62
23086.46  1125.723110.22 1126.0623151.93 1126.5623168.97 1129.0923194.38 1132.61
23290.06  1134.1 23301.8 1134.3523310.28 1134.3723321.13 1134.2723395.93 1133.92
23443.43  1133.8 23480.6 1133.8223509.86  1133.923529.21 1135.8523552.04 1138.26
23569.37  1136.923592.68 1135.6923612.48 1136.2223630.71 1140.4423636.28 1140.87
23652.07  1139.923682.97 1137.8123713.99 1140.5223764.56 1138.6823773.35  1139.1
23815.87  1141.323837.66 1142.1223901.64 1136.6223913.74  1135.723925.44 1138.06
 23940.8    114123974.94 1136.2823984.38 1134.5624000.07 1133.4824033.62 1133.42
24086.89  1133.424105.37 1133.3924131.81 1133.5824293.82 1135.3624310.94 1135.55
24349.58  1135.124361.28 1135.14   24407 1137.4924417.24 1138.0424455.36 1133.54
24462.51  1132.424534.87 1133.1224550.07 1133.1524640.38 1134.3724663.08 1138.06
24668.93  1138.924699.68 1141.6224715.43 1139.4824720.82 1140.0924732.47  1141.2
 24750.1    114124759.71 1139.5324790.49 1134.5224804.27 1134.5524813.68  1134.9
24876.08  1134.924898.65 1135.0724949.53 1135.35

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19230.12     .0519480.09    .03520535.08     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19480.0920535.08              480   483.7     500            .1        .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19230.1219480.09 1134.5820535.0824949.53 1134.09
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1126.50	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.73	Wt. n-Val.		0.035	
W.S. Elev (ft)	1124.77	Reach Len. (ft)	480.00	483.70	500.00
Crit W.S. (ft)	1118.20	Flow Area (sq ft)		16024.96	
E.G. Slope (ft/ft)	0.001572	Area (sq ft)	10.06	16024.96	10157.88
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2479.19	Top Width (ft)	7.89	1011.74	1459.56
Vel Total (ft/s)	10.55	**Avg. Vel. (ft/s)**		**10.55**	
Max Chl Dpth (ft)	**19.68**	**Hydr. Depth (ft)**		**15.84**	
Conv. Total (cfs)	4262084.0	Conv. (cfs)		4262084.0	
Length Wtd. (ft)	483.70	Wetted Per. (ft)		1022.00	
Min Ch El (ft)	1105.70	Shear (lb/sq ft)		1.54	
Alpha	1.00	Stream Power (lb/ft s)		16.23	
Frctn Loss (ft)	0.84	Cum Volume (acre-ft)	2014.55	8807.50	648.09
C & E Loss (ft)	0.03	Cum SA (acres)	114.29	524.14	133.59

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1126.50	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.73	Wt. n-Val.		0.035	
W.S. Elev (ft)	1124.77	Reach Len. (ft)	480.00	483.70	500.00
Crit W.S. (ft)	1118.22	Flow Area (sq ft)		16023.35	
E.G. Slope (ft/ft)	0.001573	Area (sq ft)		16023.35	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1011.73	Top Width (ft)		1011.73	
Vel Total (ft/s)	10.55	Avg. Vel. (ft/s)		10.55	
Max Chl Dpth (ft)	19.07	Hydr. Depth (ft)		15.84	
Conv. Total (cfs)	4261395.0	Conv. (cfs)		4261395.0	
Length Wtd. (ft)	483.70	Wetted Per. (ft)		1021.99	
Min Ch El (ft)	1105.70	Shear (lb/sq ft)		1.54	
Alpha	1.00	Stream Power (lb/ft s)		16.24	
Frctn Loss (ft)	0.84	Cum Volume (acre-ft)		8808.50	
C & E Loss (ft)	0.03	Cum SA (acres)		524.14	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.71

INPUT
Description:
Station Elevation Data num= 291

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13108.87	1138.413	278.13	1138.5	313307.83	1138.3	813369.82	1138.4	613396.93	1138.8
13681.94	1139	13897.73	1137.1	313907.57	1136.8	614314.75	1139.5	14476.52	1139.45
14689.5	1132.7	15041.7	1130.2	615083.77	1130.6	815151.48	1130.9	315504.29	1131.44
15564.72	1132.8	15830.77	1134.2	616062.47	1135.1	616238.42	1135.1	616416.42	1136.23
16480.68	1134	16485.06	1133.4	916492.54	1134.8	916507.64	1135.5	16531.61	1133.05
16537.1	1133	16566.43	1133.8	216604.42	1135.2	316704.47	1133.4	716721.25	1133.25
16727.23	1132.9	16808.6	1132.5	416818.38	1132.5	516874.33	1132.7	316906.02	1132.65
16975.84	1132.4	16982.59	1132.4	617030.46	1132.4	217080.83	1132.8	317122.75	1133.03
17174.22	1133.5	17207.36	1134.33	17218.2	1134.6	417224.56	1134.4	417340.33	1133.83
17601.54	1131.9	17628	1131.7	617647.96	1131.4	517657.08	1131.2	817666.42	1129.12
17724.79	1131.9	17772.56	1133.17	17777.1	1130.1	817790.25	1130.3	417836.23	1130.75
18016.48	1129.9	18128.88	1129.2	318194.29	1129.3	18238	1129.3	318243.61	1130.64
18256.49	1132.6	18278.83	1129.23	18287	1129.3	418316.96	1129.9	418323.31	1130.38
18332.92	1130.9	18344.89	1130.5	318358.07	1130.0	518382.67	1130.0	518587.59	1129.78
18623.24	1130.1	18624.56	1130.48	18746.1	1132.9	18749.34	1132.7	18766.91	1132.42
18775.97	113	18795.74	1129.27	18814.3	1130.0	618834.44	1128.8	518838.62	1130.36
18846.35	113	18864.57	1138.9	818879.51	1138.8	818912.85	1137.7	318930.83	1137.25
18944.55	1137.7	18973.23	1137.5	419001.84	1137.5	619025.44	1131.3	819066.86	1120.02
19083.85	1118.4	19144.47	1118.3	419171.15	1118.04	19215.4	1117.9	819224.64	1119.98
19233.12	111	19300.65	1117.8	119361.77	1118.4	19378.92	1122.1	419405.15	1131.47
19410.65	1130.9	19436.06	1130.4	619437.98	1131.0	719444.77	1134.3	419448.35	1134.51
19476.64	1135.3	19500.13	1124.4	819501.23	1124.1	319509.49	1123.8	619528.44	1113.43
19542.17	110	19564.08	1105.7	819571.57	1105.61	19630.1	1105.3	819746.14	1105.97
19859.52	1107.9	19892.83	1108.8	719921.72	1109.0	520003.31	1109.1	20074.85	1108.65
20166.82	1109.3	20212.22	1109.3	20321.34	1109.9	720337.16	1110.0	320349.18	1109.84
20411.63	110	20450.83	1108.8	420472.69	1108.84	20504.8	1128.6	420519.04	1131.65
20524.71	1132.6	20547.92	1133.2	720556.12	1133.4	720580.57	1126.4	20603.69	1119.89
20612.35	1121.5	20637.84	1125.53	20641.6	1125.24	20677.4	1121.7	120712.93	1119.5
20739.22	1118.4	20808.72	1114.5	920856.68	1113.7	720868.49	1113.5	320875.65	1113.13
20940.08	1111.8	21015.17	1111.1	821108.82	1109.8	821109.54	1109.9	121184.42	1110.28
21206.58	1110.6	21258.63	1112.2	121369.54	1112.4	521478.56	1112.17	21503.8	1112.42
21620.62	1112.7	21626.81	1112.5	321638.76	1111.6	421660.46	1111.9	521684.09	1112.65
21719.47	111	21739.99	1119.4	521752.31	1120.9	921757.21	1121.2	221797.09	1122.35
21830.57	1123.1	21858.67	1123.4	121923.95	1109.0	721958.12	1109.2	421967.64	1112.07
22011.58	1125.4	22044.59	1124.6	522088.13	1117.2	622090.44	1116.7	322092.67	1117.05
22120.97	1120	22146.3	1119.6	22181.35	1119.6	922189.51	1118.1	622194.81	1119.97
22213.55	112	22229.71	1130.1	122266.38	1131.5	722288.71	1134.4	822301.95	1135.03
22316.34	1135.3	22365.48	1136.8	722375.39	1136.93	22387.6	1136.1	522431.44	1133.09
22484.06	1132.7	22493.44	1133.5	22540.73	1131.8	422546.12	1132.2	122556.56	1131.39
22566.44	1130.3	22599.84	1128.46	22620.5	1127.4	422635.98	1126.1	622664.49	1125.49
22685.81	1124.4	22701.91	1125.3	522717.77	1125.7	922736.68	1126.5	322746.98	1127.1

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22783.01  1126.222829.29 1124.8122848.45 1124.6422869.88 1124.5322899.64 1123.26
22923.72  1122.622943.69 1122.14 22948.5 1121.9722986.22 1120.4623019.17 1119.18
 23039.9  1118.623068.79 1116.0923110.64 1113.6223133.17 1116.2623146.64 1118.45
 23171.6    112123212.57 1124.4323232.65 1124.8523281.57 1124.7423307.15 1125.08
23324.89  1125.423375.35 1125.6623416.55 1127.2923447.76 1128.5523475.32 1129.54
23493.64  1130.623506.14 1131.0823535.86 1132.1323602.75 1133.1323621.85 1133.17
23649.32  1133.723722.66 1132.9123759.51 1132.77 23785.2 1132.8123802.65 1133.05
23884.02  1133.723946.91 1133.73 23971.7 1136.6823990.48 1135.9624014.85 1136.68
24039.25  1135.1 24044.2 1135.3524063.83 1137.1724124.43 1137.1924168.68 1136.85
24191.37  1136.624236.32 1137.1224243.91  1137.324299.17 1137.3224337.13 1136.68
24392.36  1137.524404.14 1136.6724453.95 1134.3124469.33 1134.7724501.82 1136.19
 24514.8  1135.524528.89 1135.2824550.09 1133.6924574.19 1133.9324611.53 1134.04
24618.78  1134.124640.33 1134.5824672.32 1135.5424677.18 1135.7224706.31 1138.81
24724.88  1138.524729.54 1138.2224740.65 1137.2224765.72 1134.4724778.49 1132.36
24788.01  1132.324815.55 1132.1624847.55 1135.1524859.82  1136.424883.17 1136.98
24886.57  1137.124910.41 1138.8424915.93 1138.4924941.99  1138.924953.01 1136.56
24968.51  1138.424999.47 1133.9325033.02  1135.225040.52  1135.325101.43 1135.95
25106.12  1135.7

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13108.87     .0519476.64    .03520556.12     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19476.6420556.12           508.24  508.24  508.24             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13108.8719476.64  1135.320556.1225106.12 1133.47

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1125.63   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.00   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1123.63   Reach Len. (ft)            508.24     508.24     508.24
  Crit W.S. (ft)            1118.10   Flow Area (sq ft)                   14891.65
  E.G. Slope (ft/ft)       0.001939   Area (sq ft)              1678.89   14891.65   14919.20
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            3165.42   Top Width (ft)             329.41     986.77    1849.24
  Vel Total (ft/s)            11.35   Avg. Vel. (ft/s)                      11.35
  Max Chl Dpth (ft)           18.25   Hydr. Depth (ft)                      15.09
  Conv. Total (cfs)       3838255.0   Conv. (cfs)                         3838255.0
  Length Wtd. (ft)           508.24   Wetted Per. (ft)                     995.51
  Min Ch El (ft)            1105.38   Shear (lb/sq ft)                       1.81
  Alpha                        1.00   Stream Power (lb/ft s)                20.55
  Frctn Loss (ft)              1.00   Cum Volume (acre-ft)      2005.25    8635.85     504.17
  C & E Loss (ft)              0.00   Cum SA (acres)             112.43     513.05     114.60


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1125.63   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.00   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1123.63   Reach Len. (ft)            508.24     508.24     508.24
  Crit W.S. (ft)            1118.10   Flow Area (sq ft)                   14889.72
  E.G. Slope (ft/ft)       0.001939   Area (sq ft)                        14889.72
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)             986.76   Top Width (ft)                       986.76
  Vel Total (ft/s)            11.35   Avg. Vel. (ft/s)                      11.35
  Max Chl Dpth (ft)           18.25   Hydr. Depth (ft)                      15.09
  Conv. Total (cfs)       3837448.8   Conv. (cfs)                         3837448.8
  Length Wtd. (ft)           508.24   Wetted Per. (ft)                     995.51
  Min Ch El (ft)            1105.38   Shear (lb/sq ft)                       1.81
  Alpha                        1.00   Stream Power (lb/ft s)                20.56
  Frctn Loss (ft)              1.00   Cum Volume (acre-ft)                 8636.87
  C & E Loss (ft)              0.00   Cum SA (acres)                        513.04


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.61
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INPUT
Description:
Station Elevation Data num= 310

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13289.47	1137.613	346.61	1137.691	3482.79	1137.641	3524.63	1137.741	3688.14	1137.42
13855.31	1137.513	919.18	1137.151	4090.61	1136.221	4232.62	1137.051	4635.33	1135.72
14873.58	1129.114	982.81	1127.91	5191.31	1129.821	5261.79	1130.521	5396.44	1131.02
15844.49	1132.3	16148.8	1133.451	6363.69	1134.421	6707.94	1132.891	6805.22	1133.12
16983.62	1131.71	7212.16	1130.321	7224.59	1131.281	7233.14	1130.171	7346.12	1131.24
17604.77	1129.81	7635.65	1129.541	7645.26	1130.851	7654.92	1132.21	7662.71	1132.17
17810.2	1129.81	7837.84	1129.511	7849.59	1129.211	7930.21	1128.691	7940.16	1128.66
17952.59	1128.9	17980.9	1128.291	8009.99	1130.181	8183.13	1130.411	8387.14	1131.31
18397.06	1129.61	8417.48	1129.661	8465.37	1129.591	8493.07	1128.781	8564.61	1129.68
18609.66	1130	18660.73	1130.831	8672.49	1131.37	18695.9	1131.971	8703.44	1132.15
18755.9	1134.11	8816.02	1117.881	8839.85	1111.271	8852.69	1109	18869.25	1109.3
18881.75	1109.11	8916.84	1107.931	8921.76	1107.491	8952.11	1106.181	8955.67	1105.93
18981.82	1112.41	9003.97	1116.781	9055.59	1116.521	9074.97	1115.831	9079.61	1118.02
19087.8	1120	19098.23	1123.381	9124.36	1122.121	9140.32	1121.591	9170.65	1121.15
19193.18	1121.11	9207.75	1125.351	9228.42	1131.111	9242.79	1130.861	9263.02	1130.77
19306.93	1125.11	9312.04	1124.121	9319.87	1124.131	9366.08	1124.031	9392.22	1125.51
19396.62	1125.51	9421.36	1127.211	9427.81	1128.631	9442.05	1132.251	9449.11	1132.57
19482.22	1133.61	9499.23	1124.64	19504.2	1122.211	9514.31	1122.761	9528.38	1116
19541.06	1107.41	9630.81	1106.191	9658.86	1105.781	9730.79	1106.281	9780.04	1107.2
19894.68	1109	19936.32	1109.721	9984.17	1109.112	0102.24	1108.022	0114.96	1107.83
20134.74	1106.22	0205.93	1103.112	0220.47	1101.912	0244.57	1102.682	0310.43	1106.81
20324.3	1107.92	0346.83	1108.062	0468.14	1108	20471.94	1107.812	0491.39	1120.07
20494.43	1121.82	0504.21	1123.072	0506.16	1123.652	0537.49	1132.232	0544.75	1132.58
20551.74	1132.32	0579.63	1121.772	0586.05	1119.882	0608.67	1118.89	20662	1116.23
20674.67	1116.32	0680.85	1115.172	0694.05	1109.812	0719.15	1109.522	0728.31	1108.98
20752.41	1108.42	0762.22	1108.252	0766.77	1108.32	0790.72	1110.442	0816.61	1110.84
20839.45	1110.8	20861.8	1111.352	0877.19	1110.612	0884.38	1110.512	0897.32	1110.56
20916.71	1110.92	0990.92	1110.952	1014.14	1110.932	1065.12	1110.292	1077.78	1110.01
21117.21	1109.62	1156.35	1109.62	1163.52	1109.432	1238.03	1109.762	1256.45	1109.92
21291.06	1110	21327.34	1110.522	1360.83	1110.912	1389.39	1110.952	1433.02	1111.25
21460.08	1111.12	1531.74	1112.152	1537.12	1112.182	1549.16	1113.182	1603.09	1112.3
21607.6	1112.12	1670.02	1112.45	21678.5	1112.51	21688.3	1114.352	1710.39	1116.34
21720.35	1117.42	1727.17	1117.252	1766.26	1119.95	21770.7	1119.742	1792.95	1120.46
21804.93	1121.72	1837.79	1126.912	1846.13	1126.562	1906.58	1124.642	1909.29	1125.34
21929.66	1128.22	1936.81	1129.6	21962.3	1131.312	1980.76	1130.592	1985.59	1129.73
21993.41	1129.42	1996.46	1129.522	2045.28	1130.362	2052.37	1130.052	2059.43	1128.13
22063.42	1127.82	2076.54	1124.232	2084.51	1124.12	2127.04	1123.192	2132.06	1123.02
22150.35	1124.52	2178.85	1122.642	2191.89	1120.922	2200.66	1120.65	22216.9	1120.48
22251.77	1123.72	2265.75	1128.572	2296.06	1127.412	2308.55	1127.042	2323.19	1126.36
22367.62	1127.32	2418.57	1128.292	2437.08	1130.372	2455.65	1129.542	2486.69	1124.45
22502.31	1123.82	2519.76	1124.97	22562.1	1124.32	2602.04	1123.912	2615.19	1122.85
22623.99	1123.42	2655.54	1121.832	2660.03	1123.112	2676.42	1123.872	2690.98	1124
22711.45	1123.72	2730.92	1123.352	2784.64	1123.532	2809.85	1123.582	2842.56	1123.8
22895.97	1124	22931.57	1124.542	2956.78	1124.772	3019.28	1125.092	3038.53	1124.54
23047.09	1124.62	3076.14	1125.332	3083.49	1125.472	3128.33	1125.852	3138.25	1125.61
23155.78	1125.92	3235.12	1126.6	23303.4	1126.69	23334.8	1126.57	23363	1126.56
23393.12	1126.92	3442.45	1127	23477.82	1127.512	3509.64	1128.322	3529.43	1128.91
23554.38	1129.32	3596.01	1129.312	3619.55	1129.482	3629.35	1129.42	3639.35	1129.2
23687.46	1129.52	3751.05	1124.692	3803.22	1123.912	3830.76	1122.552	3869.72	1121.45
23929.15	1119.72	3934.29	1118.842	3957.84	1118.82	3973.32	1120.42	4001.29	1119.61
24018.6	1118.42	4053.99	1118.262	4070.18	1117.532	4089.61	1117.82	4139.08	1118.67
24148.68	1120.32	4159.19	1121.022	4170.32	1128.472	4184.95	1129.072	4197.81	1135.17
24205.02	1134.92	4232.89	1126.222	4279.33	1127.432	4318.02	1124.762	4353.43	1123.93
24413.74	1126.52	4459.64	1127.982	4527.69	1128.772	4546.54	1129.52	4611.74	1132.52
24627.28	1134.3	24674.5	1134.822	4685.21	1134.772	4700.05	1134.912	4713.14	1134.95
24799.3	1135	24804.43	1135.02	24807.1	1135.442	4821.43	1140.462	4826.53	1139.51
24850.13	1137.32	4872.13	1135.522	4876.66	1134.922	4944.38	1134.862	4960.25	1134.97
24973.27	1138.2	24980.7	1140.322	5022.17	1134.452	5025.06	1134.162	5048.29	1133.48
25064.13	1133.7	25071.8	1133.72	5105.59	1133.972	5116.87	1134.932	5132.09	1136.51
25153.12	1136.22	5164.17	1136.28	25189.7	1137.732	5214.04	1133.442	5223.69	1132.41
25242.27	1135.72	5245.39	1136.352	5248.39	1135.982	5256.53	1134.582	5272.47	1134.91
25348.94	1135.72	5355.24	1129.012	5359.63	1134.792	5370.17	1135.92	5396.51	1136.84

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
13289.47	.05	19482.22	.03	20544.75	.05

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19482.2220544.75              510  503.43  503.43             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13289.4719482.22  1133.620544.7525396.51 1132.58
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1124.63	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.02	Wt. n-Val.		0.035	
W.S. Elev (ft)	1122.61	Reach Len. (ft)	510.00	503.43	503.43
Crit W.S. (ft)	1117.10	Flow Area (sq ft)		14827.63	
E.G. Slope (ft/ft)	0.001987	Area (sq ft)	3008.08	14827.63	14041.57
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	3020.79	Top Width (ft)	381.63	994.32	1644.84
Vel Total (ft/s)	11.40	Avg. Vel. (ft/s)		11.40	
Max Chl Dpth (ft)	20.70	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	3791675.5	Conv. (cfs)		3791675.5	
Length Wtd. (ft)	503.43	Wetted Per. (ft)		1003.05	
Min Ch El (ft)	1101.91	Shear (lb/sq ft)		1.83	
Alpha	1.00	Stream Power (lb/ft s)		20.90	
Frctn Loss (ft)	1.01	Cum Volume (acre-ft)	1977.91	8462.47	335.22
C & E Loss (ft)	0.00	Cum SA (acres)	108.28	501.49	94.21

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1124.63	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.02	Wt. n-Val.		0.035	
W.S. Elev (ft)	1122.61	Reach Len. (ft)	510.00	503.43	503.43
Crit W.S. (ft)	1117.08	Flow Area (sq ft)		14824.96	
E.G. Slope (ft/ft)	0.001988	Area (sq ft)		14824.96	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	994.24	Top Width (ft)		994.24	
Vel Total (ft/s)	11.40	Avg. Vel. (ft/s)		11.40	
Max Chl Dpth (ft)	20.70	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	3790746.0	Conv. (cfs)		3790746.0	
Length Wtd. (ft)	503.43	Wetted Per. (ft)		1002.97	
Min Ch El (ft)	1101.91	Shear (lb/sq ft)		1.83	
Alpha	1.00	Stream Power (lb/ft s)		20.91	
Frctn Loss (ft)	1.01	Cum Volume (acre-ft)		8463.52	
C & E Loss (ft)	0.00	Cum SA (acres)		501.48	

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.52

INPUT
Description:
Station Elevation Data num= 293

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13520.55	1136.713	713.31	1136.58	13814.93	1136.79	13884.19	1136.65	13954.33	1136.67
14334.5	1134.91	4700.72	1132.22	15036.75	1128.41	5107.35	1127.72	15258.92	1127.77
15377.61	112815	613.04	1130.02	15863.4	1130.72	16367.69	1132.43	16490.01	1132.98
16574.82	1132.61	6937.95	1133.47	17050.22	1132.54	17078.18	1132.35	17107.8	1131.82
17136.29	1131.41	7179.59	1130.97	17232.08	1130.51	7279.59	1130.4	17321.3	1130.07
17369.88	1130.71	7412.05	1130.49	17523.48	1130.19	17566.99	1129.85	17625	1129.36
17694.84	112917	720.53	1129.08	17760.84	1129.37	17779.61	1129.61	17856.52	1130.91
17893.45	1130.71	8025.87	1130.81	18040.83	1130.66	18114.49	1130.63	18192.45	1130.49
18208.3	1130.41	8225.32	1131.03	18235.41	1130.78	18236.01	1129.64	18240.94	1128.75
18278.92	1128.31	8333.44	1127.39	18352.18	1127.16	18457.54	1125.47	18481.2	1125.43
18498.98	1124.61	8527.85	1124.48	18554.49	112318	599.47	1123.54	18650.02	1123.68

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18712.82  1123.318730.78  1123.418795.31 1124.9218810.33  1124.818831.47 1118.31
18835.93  1117.218838.89 1117.0818857.05 1114.3518866.76 1114.1918868.51  1114.6
18877.42  1118.918880.85 1118.9818881.54 1118.3518887.17 1118.4418910.52 1123.14
18920.95  1122.218941.87 1126.2918947.26 1126.6518960.51 1128.52 18981.6  1132.7
18994.16  1132.519018.91 1132.4219050.87 1138.8119159.68 1158.4119182.71  1158.2
19323.86  1157.5   19325    115719327.65 1154.5719344.49  1147.919382.47 1133.65
19388.43  1133.719432.59 1133.2719466.14 1133.0819479.04 1133.6319487.75 1129.05
 19501.3  1121.119510.55 1121.5819534.34 1109.08 19551.4 1108.3919665.81 1106.79
19705.17  1106.219721.96 1106.1419884.09 1107.2119912.48 1107.4320050.27 1107.75
20057.61  1107.8 20166.9 1106.1920204.03 1104.4320244.72 1102.8420285.16 1101.37
 20301.5  1101.620369.81 1104.6420374.23    110520394.86 1105.6820436.47 1106.97
20477.38    110720481.03 1109.6420496.77 1120.4120506.37 1120.8920538.63 1131.04
20553.62  1131.720591.55 1119.7420594.81 1118.6820613.68 1114.9120635.98 1112.62
20675.54  1099.720678.64 1099.0320682.23 1099.0220739.38 1097.1520788.35 1097.76
20801.92    109820829.02 1101.2220859.02 1103.3320894.78 1102.81 20900.6 1103.25
20903.68  1103.720932.83 1108.6920940.53 1108.8220991.79 1112.0921058.92  1118.3
21085.19  1117.921088.69 1117.4221095.04 1116.2121131.47 1117.0321156.06 1117.27
21195.65  1117.121219.18 1117.0121276.88 1116.14 21291.3 1116.07 21338.7 1121.85
21356.23  1124.221399.91 1130.7921407.41 1130.7921452.82 1132.1521536.82  1131.9
21555.83  1131.921588.13 1131.9721636.88    113221650.96 1131.9621685.86 1132.35
21690.23  1132.321700.14 1132.2621733.05  1132.521757.59 1132.7621778.07  1133.8
21802.82  1137.621804.23 1137.5921846.73 1137.2521857.32 1136.1521880.77  1131.1
 21896.4  1127.621903.63 1126.5321921.13 1126.5521933.54 1125.2421956.75 1124.42
21973.29  1123.222020.69 1122.1722035.17 1121.93 22056.8 1128.4722089.51 1136.91
22103.55  1135.922107.83 1135.8722119.52  1136.522126.06 1135.16 22163.1 1126.68
22182.81    113122194.22  1133.922210.19  1134.722244.21 1134.8422256.17 1134.43
22267.18    112922274.88 1126.53 22290.5 1125.9122312.48 1125.7722319.59  1122.2
22323.34  1119.722374.63 1118.7722379.21 1118.6322386.82 1118.0522403.27 1123.76
22410.86  1125.622415.81 1125.8822424.66 1126.0922436.88 1120.6422441.79 1119.13
22453.68  1119.322527.01 1121.7122532.78 1121.5522534.67 1120.3522554.12 1122.78
22567.56    112522589.46 1123.6522635.82 1123.8722659.76 1122.6722672.91 1121.96
22677.08    112222703.59 1123.3122710.13 1126.07 22728.4 1131.3422748.95 1131.15
22794.47    113022834.69  1129.922844.73 1129.7922923.99  1131.222935.86  1131.3
22965.43  1131.122981.01 1131.4123053.43 1131.9623080.08 1131.8823100.03 1130.64
23174.29  1130.423197.67 1130.3723225.76  1129.823498.31 1126.5123522.66 1127.21
23529.18  1126.923544.73 1126.4923582.11 1126.6423598.43 1126.8123711.29  1128.3
23742.87  1128.7 23753.9 1128.8823845.68 1130.2923893.22 1127.8123934.64 1128.42
 23960.7  1129.124032.63 1130.6724099.62 1132.4924106.15  1132.424183.48 1131.53
24227.48  1131.624250.72 1131.2224308.44 1129.7724349.13 1129.1524384.59 1128.57
24410.64  1128.524453.99 1129.4224470.86 1129.6524490.94 1129.8524539.99 1129.93
24662.52  1130.524667.04 1130.4724710.85 1129.8924728.61 1129.9924749.63 1126.91
24760.99  1127.424799.79 1129.1424828.87 1131.4624914.09 1132.1624924.15 1132.05
   24953  1131.324972.86 1131.6224988.29 1131.6925008.74 1132.2725053.34 1132.33
25062.05  1132.125126.76 1132.72 25187.6  1132.6 25219.2 1132.1625232.25 1131.65
25245.66    113125279.69 1131.7125286.23 1132.0425289.47    113225314.49 1132.24
25348.03  1135.225375.67 1134.8725378.89 1134.7525383.39 1134.9725408.48 1134.65
25435.96  1133.5 25444.9 1133.8425468.99 1134.2325552.04 1133.7925558.09 1133.72
25566.36  1133.4 25567.2 1133.6325571.42 1133.78

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13520.55     .0519487.75    .03520553.62     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19487.7520553.62              520  496.02     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13520.5519487.75 1129.0520553.6225571.42  1131.7

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1123.62   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1121.59   Reach Len. (ft)            520.00     496.02     460.00
  Crit W.S. (ft)            1116.20   Flow Area (sq ft)                    14789.69
  E.G. Slope (ft/ft)       0.002038   Area (sq ft)               334.90   14789.69    8937.67
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            2019.27   Top Width (ft)              82.02    1008.12     929.12
  Vel Total (ft/s)            11.43   Avg. Vel. (ft/s)                       11.43
  Max Chl Dpth (ft)           24.44   Hydr. Depth (ft)                       14.67
  Conv. Total (cfs)       3743574.5   Conv. (cfs)                        3743574.5
```

Length Wtd. (ft)	496.02	Wetted Per. (ft)		1015.92	
Min Ch El (ft)	1101.37	Shear (lb/sq ft)		1.85	
Alpha	1.00	Stream Power (lb/ft s)		21.17	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)	1958.34	8291.32	202.43
C & E Loss (ft)	0.03	Cum SA (acres)	105.57	489.92	79.34

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1123.62	Element			
Vel Head (ft)	2.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1121.59	Reach Len. (ft)	520.00	496.02	460.00
Crit W.S. (ft)	1116.20	Flow Area (sq ft)		14788.33	
E.G. Slope (ft/ft)	0.002039	Area (sq ft)		14788.33	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1008.12	Top Width (ft)		1008.12	
Vel Total (ft/s)	11.43	Avg. Vel. (ft/s)		11.43	
Max Chl Dpth (ft)	20.22	Hydr. Depth (ft)		14.67	
Conv. Total (cfs)	3743018.5	Conv. (cfs)		3743018.5	
Length Wtd. (ft)	496.02	Wetted Per. (ft)		1015.91	
Min Ch El (ft)	1101.37	Shear (lb/sq ft)		1.85	
Alpha	1.00	Stream Power (lb/ft s)		21.17	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)		8292.40	
C & E Loss (ft)	0.02	Cum SA (acres)		489.91	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.42

INPUT
Description:
Station Elevation Data num= 280

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13775.01	1135.114	010.58	1134.98	14024.29	1135.01	14476.92	1133.61	14664.6	1132.73
15249.61	1129.115	272.55	1128.97	15497.69	1128.24	15619.78	1128.22	15827.23	1129.02
16085.44	1129.916	488.61	1131.27	16651.78	1131.77	16720.37	1131.71	6732.64	1131.77
16747.49	1131.717	267.73	1130.19	17278.36	1129.91	17295.48	1129.33	17322.39	1128.3
17469.28	1122.417	486.47	1122.64	17548.9	1123.88	17669.09	1120.35	17792.62	1129.96
17835.52	1130.417	876.22	1131.35	17910.24	1141.82	17925.46	1146.36	17942.58	1150.47
17951.24	1151.517	959.47	1149.17	17971.21	1147.42	18007.39	1147.49	18021.48	1147.48
18076.85	1147.618	098.93	1147.61	8120.08	1147.71	8230.52	1148.69	18247.11	1148.77
18361.71	1150	18371.34	1149.97	18405.87	1150.58	18450.66	1137.63	18465.78	1133.1
18474.03	1133.718	490.29	1135.44	18519.06	1127.51	8528.95	1124.84	18568.93	1123.21
18584.02	1127.318	596.35	1127.03	18661.21	1125.65	18663.21	1126.41	18720.01	1146.17
18757.32	1157.918	760.54	1157.84	18779.39	1157.15	18835.55	1157.27	18916.49	1156.91
19045.66	1156.619	319.48	1155.85	19374.57	1155.81	19417.64	1137.37	19430.47	1131.73
19443.1	1130.719	449.06	1131.04	19466.92	1131.62	19480.61	1131.48	19502.37	1122.14
19524.32	1112.519	564.21	1107.96	19571.3	1107.39	19585.69	1107.26	19627.57	1107.72
19738.83	1106.219	816.62	1105.54	19875.67	1106.32	19888.83	1106.31	19942.45	1107.02
20038.66	1108.120	092.59	1106.72	0123.26	1105.97	20163.88	1104.93	20218.93	1103.78
20266.68	110	20272.84	1101.56	20385.12	1103.63	20394.06	1104.04	20401.77	1103.76
20412.72	1104.420	467.02	110	20482.46	1105.74	20499.22	1117.03	20502.07	1119.07
20512.29	1119.420	536.34	1127.81	20543.39	1130.18	20557.73	1130.92	20566.34	1128.05
20582.27	1124.520	585.48	1123.52	20594.97	1122.22	0621.82	1117.38	20631.3	1119.51
20652.33	1122.720	668.26	1123.26	20702.27	1127.37	20710.06	1128.63	20732.51	1131.4
20758.16	1131.520	795.49	1132.16	20806.82	1129.12	20847.88	1118.33	20864.52	1114.75
20898.27	1114.620	944.31	1128.22	20955.86	1127.92	20972.57	1127.72	21005.35	1118.14
21017.74	1113.521	036.21	1113.54	21093.74	1129.34	21102.08	1131.82	21107.21	1131.77
21139.91	1131.421	173.22	1130.68	21186.04	1130.62	1251.13	1130.84	21275.6	1130.51
21298.56	1130.521	347.39	1130.55	21368.37	1130.55	21373.25	1129.94	21378.56	1129.69
21406.12	1129.521	442.19	1129.49	21465.44	1127.64	21476.37	1126.61	21490.38	1127.15
21525.98	1128.621	556.47	1129.27	21651.65	1131.16	21678.33	1131.34	21733.77	1131.79
21746.38	1131.821	762.15	1132.01	21788.93	1131.66	21846.42	1131.78	21880.42	1131.26
21911.5	1129.821	973.41	1129.23	21986.11	1128.72	22032.49	1129.7	22039.2	1128.83

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22056.94    112622063.39 1126.3722071.03 1125.3422087.39 1125.6222100.05 1123.67
22130.04  1117.222141.04 1118.8522154.83 1118.8122204.54 1117.0422224.25 1118.25
22232.98  1118.122247.02 1117.3822266.11 1118.25   22310 1105.5122315.56 1105.31
22357.67    110522362.33 1105.0622383.86 1109.9822420.72 1117.9522423.69 1118.09
22446.86  1116.9   22480 1117.1822481.83 1117.13 22486.8 1124.0722500.99  1127.9
22531.09  1117.322533.46 1117.2622556.26 1115.9622566.75 1114.7622569.13 1115.35
 22577.1  1114.722588.06  1116.922596.98 1118.4522609.35 1120.2922621.47 1124.08
22640.38  1124.122662.28 1121.4322713.76 1120.6422722.87  1121.122742.51 1122.87
22748.68  1122.222764.92 1120.5122801.71 1123.0422827.81 1122.4122857.28 1121.58
22879.07  1130.9 22884.7 1133.3722887.08 1133.2422893.55 1132.3822908.19 1132.36
 22913.5  1132.323065.86 1131.5823176.13 1129.96 23301.7 1129.8923359.12 1129.96
23409.31  1129.223692.08 1127.7723732.77 1125.6423760.65 1124.8323763.49 1124.63
23786.32  1125.123812.67 1126.6623836.06 1127.4823846.11 1127.6823930.48  1129.1
23972.68  1129.324063.93 1130.0124113.45 1130.52 24141.3 1130.9824223.71 1131.91
24249.38    113224295.28  1131.924327.93 1131.9824404.92 1132.5724410.12 1132.43
24465.19  1130.624471.68 1130.5524546.64 1129.19 24597.6 1128.8324622.78 1128.68
24686.97  1129.424688.17 1129.4724758.56 1129.1524761.02 1129.1224913.06 1129.62
24922.11  1129.524944.11 1128.3124988.23 1129.1425003.98 1129.1425033.94 1129.55
25070.29  1130.425102.72 1130.8525114.57 1130.5225116.25 1131.0625122.69 1129.84
25127.81  1129.525153.98 1129.4125177.68 1129.1425187.58 1129.1325234.01 1129.23
25282.86  1129.225300.51 1129.9125358.34 1130.0725365.57 1129.7525404.43 1131.61
 25414.9  1131.725448.77 1131.5725457.29 1131.6825468.39 1131.4825513.33 1131.41
25547.39  1134.725565.27  1134.825590.42 1133.6525626.59 1130.45 25655.8 1132.23
25661.35  1132.325709.11 1132.8325724.62 1132.5425726.43 1131.35 25730.8 1132.12
 25743.2  1131.625745.24 1132.2825797.56 1134.1525803.07 1134.9225849.59 1134.74

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13775.01     .0519480.61    .03520557.73     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19480.6120557.73              520  502.97     490             .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13775.0119480.61 1131.4820557.7325849.59 1130.92

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1122.48   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.28   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1120.20   Reach Len. (ft)             520.00     502.97     490.00
  Crit W.S. (ft)            1115.71   Flow Area (sq ft)                    13954.61
  E.G. Slope (ft/ft)       0.002468   Area (sq ft)                         13954.61    3062.70
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1630.02   Top Width (ft)                        1007.80     622.21
  Vel Total (ft/s)            12.11   Avg. Vel. (ft/s)                        12.11
  Max Chl Dpth (ft)           18.64   Hydr. Depth (ft)                        13.85
  Conv. Total (cfs)       3401614.5   Conv. (cfs)                         3401614.5
  Length Wtd. (ft)           502.97   Wetted Per. (ft)                      1014.28
  Min Ch El (ft)            1101.56   Shear (lb/sq ft)                        2.12
  Alpha                        1.00   Stream Power (lb/ft s)                 25.68
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)       1956.34    8127.67     139.07
  C & E Loss (ft)              0.14   Cum SA (acres)              105.08     478.44      71.15


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1122.48   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.28   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1120.20   Reach Len. (ft)             520.00     502.97     490.00
  Crit W.S. (ft)            1115.71   Flow Area (sq ft)                    13954.61
  E.G. Slope (ft/ft)       0.002468   Area (sq ft)                         13954.61
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1007.80   Top Width (ft)                        1007.80
  Vel Total (ft/s)            12.11   Avg. Vel. (ft/s)                        12.11
  Max Chl Dpth (ft)           18.64   Hydr. Depth (ft)                        13.85
  Conv. Total (cfs)       3401621.3   Conv. (cfs)                         3401621.3
```

Length Wtd. (ft)	502.97	Wetted Per. (ft)	1014.28
Min Ch El (ft)	1101.56	Shear (lb/sq ft)	2.12
Alpha	1.00	Stream Power (lb/ft s)	25.68
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)	8128.75
C & E Loss (ft)	0.14	Cum SA (acres)	478.44

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.33

INPUT
Description:
Station Elevation Data num= 44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19387.78	1144.119	429.55	1124.711	9449.63	1126.119	472.34	1127.571	9492.02	1118.59
19511.87	111019	534.79	1108.419	542.81	1107.94	19578.9	1108.511	9663.53	1107.59
19764.35	1106.319	769.36	1106.191	9825.17	1104.821	9868.37	1104.819	892.81	1103.54
19948.78	1100.119	973.71	1100.741	9988.39	1101.012	0011.72	1104.562	0091.58	1101.71
20153.7	1099.320	209.26	1100.862	0254.62	1101.942	0337.67	1102.612	0362.43	1102.91
20378.77	110320	387.77	1103.232	0508.48	1105.632	0514.91	1109.432	0529.36	1118.94
20540.63	1119.220	571.05	1129.212	0584.85	1130.742	0606.94	1123.92	0614.38	1126.66
20618.72	1127.820	652.72	1127.352	0707.48	1126.982	0729.09	1127.422	0739.18	1126.24
20744.96	1125.820	766.02	1127.082	0810.51	1127.52	0886.12	1128.01		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19387.78	.05	19472.34	.03	20584.85	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19472.34	20584.85	540	490.24	430	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19387.78	19472.34	1127.57	20584.85	20886.12	1130.74

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1121.29	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.81	Wt. n-Val.		0.035	
W.S. Elev (ft)	1119.49	Reach Len. (ft)	540.00	490.24	430.00
Crit W.S. (ft)	1113.65	Flow Area (sq ft)		15672.82	
E.G. Slope (ft/ft)	0.001773	Area (sq ft)		15672.82	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1051.45	Top Width (ft)		1051.45	
Vel Total (ft/s)	10.78	Avg. Vel. (ft/s)		10.78	
Max Chl Dpth (ft)	20.19	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	4013301.0	Conv. (cfs)		4013301.0	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1058.05	
Min Ch El (ft)	1099.30	Shear (lb/sq ft)		1.64	
Alpha	1.00	Stream Power (lb/ft s)		17.68	
Frctn Loss (ft)	0.97	Cum Volume (acre-ft)	1956.34	7956.62	121.84
C & E Loss (ft)	0.03	Cum SA (acres)	105.08	466.55	67.65

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1121.29	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.81	Wt. n-Val.		0.035	
W.S. Elev (ft)	1119.49	Reach Len. (ft)	540.00	490.24	430.00
Crit W.S. (ft)	1113.65	Flow Area (sq ft)		15672.70	
E.G. Slope (ft/ft)	0.001773	Area (sq ft)		15672.70	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1051.45	Top Width (ft)		1051.45	
Vel Total (ft/s)	10.78	Avg. Vel. (ft/s)		10.78	
Max Chl Dpth (ft)	20.19	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	4013251.0	Conv. (cfs)		4013251.0	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1058.05	
Min Ch El (ft)	1099.30	Shear (lb/sq ft)		1.64	
Alpha	1.00	Stream Power (lb/ft s)		17.68	

Frctn Loss (ft)	0.97	Cum Volume (acre-ft)	7957.70
C & E Loss (ft)	0.03	Cum SA (acres)	466.55

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.24

INPUT
Description:
Station Elevation Data num= 324

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14281.15	1132.31	4294.13	1132.22	14327.07	1132.63	14444.34	1132.29	14473.6	1132.04
14812.04	1130.9	14850.4	1130.56	14891.53	1130.39	14908.34	1133.19	14928.23	1130.3
14933.22	1129.31	4941.85	1129.45	14974.01	1130.33	15003.74	1128.62	15020.27	1127.76
15079.03	112	815088.04	1128.25	15242.58	1127.51	5489.93	1126.25	15549.45	1127.35
15564.61	1127.31	5608.44	1126.27	15682.97	1124.73	15687.27	1125.39	15695.05	1127.11
15710.18	112	715715.16	1124.21	5719.03	1124.15	15721.97	1127.29	15752.54	1127.65
15752.69	1126.61	5758.62	1126.83	15770.79	1127.79	15776.01	1126.38	15788.1	1124.29
15819.42	112	315835.05	1124.86	15867.55	1123.51	15876.02	1123.35	15906.46	1123.78
15954.59	1124.51	5982.54	1124.52	15994.01	1125.79	16063.25	1125.78	16151.28	1126.16
16207.83	112	616278.28	1126.61	16282.62	1126.63	16355.64	1127.31	16388.04	1127.58
16531.67	1127.21	6541.91	1127.16	16583.04	1127.04	16727.63	1127.36	16824.43	1128
17061.82	112	917085.46	112	917100.15	1129.29	17106.77	1126.84	17117.12	1130.56
17126.18	1130.41	7134.91	1128.79	17146.65	1128.35	17165.73	1127.83	17174.12	1127.92
17185.89	1127.61	7191.97	1127.94	17318.87	1128.84	17332.85	1125.94	17334.08	1125.62
17402.7	1125.91	7412.17	1125.46	17472.29	1125.8	17497.5	1125.71	7532.13	1125.67
17545.25	112	617566.52	1125.81	17671.52	1125.35	17788.5	1124.88	17813.93	1125.31
17823.82	112	517839.63	1125.09	17863.14	1125.02	17870.61	1125.16	17934.37	1124.27
18023.41	1123.11	8035.66	1122.53	18059.85	1122.02	18125.47	1122.13	18138.27	1121.98
18168.78	1121.61	8186.76	1121.73	18198.69	1121.45	18233.59	1123.11	8242.95	1122.77
18246.99	1123.31	8267.59	1124.23	18314.4	1142.93	18321.06	1145.11	18345.79	1144.88
18349.32	114	518373.63	1155.52	18376.41	1156.82	18433.9	1156.82	18630.99	1157.04
18777.37	1156.11	8818.63	114	518867.89	1131.9	18880.1	112	818893.85	1127.32
18901.85	1128.61	8916.95	1125.87	18935.45	1122.03	18951.27	1119.27	18982.36	1119.01
19005.36	1121.51	9011.28	1122.05	19015.06	1122.19	19031.88	1122.51	19106.52	1148.14
19125.17	1146.81	9181.33	1148.34	19228.76	114	919283.57	1150.01	19313.78	1135.95
19331.42	1127	19342.2	1127.41	9354.24	1125.99	19367.3	1123.05	19381.9	1123.21
19402.58	1124.21	9443.72	1108.37	19471.62	1106.84	19480.14	1106.61	9516.23	1106.49
19589.68	1106.41	9697.03	1105.66	19730.91	1105.34	19746.01	1105.33	19769.76	1104.71
19868.35	1102.71	9883.89	1102.26	19931.39	1101.59	19957.76	1100.82	20042.64	1097.97
20126.23	1100.32	0176.46	1102.59	20207.92	1103.72	0250.28	1102.84	20326.23	1103.73
20432.28	1109.32	0433.99	1109.45	20471.71	1126.79	20485.96	1127.14	20523.63	1128.2
20544.5	1129.32	0568.69	1129.62	0603.51	1127.94	20701.54	1124.63	20702.21	1124.62
20813.09	1126.22	0826.16	1126.89	20863.31	1128.35	20894.59	1129.74	20903.36	1129.71
20970.77	1129.82	0996.41	1129.62	21048.71	1129.57	21056.52	1129.18	21080.73	1127.63
21108.17	1127.12	1228.87	1124.26	21241.08	1124.16	21263.84	1122.93	21272.69	1124
21322.72	1126.52	1331.62	1127.03	21340.68	1127.13	21364.71	1127.13	21401.73	1128.31
21452.16	1129.62	1476.08	1129.43	21492.69	1128.83	21504.29	1128.69	21528.64	1128.66
21545.85	1128.72	1577.95	1128.97	21623.11	1129.82	21660.11	1130.54	21702.15	1130.95
21744.94	1131.1	21774.1	1130.65	21789.64	1130.29	21839.52	1130.42	21874.34	1130.7
21913.79	1131.22	2022.05	1131.96	22073	1132.42	2076.85	1132.47	22200.69	1133.72
22214.11	1133.82	2287.79	1134.34	22314.82	1134.37	22325.6	1134.82	22363.39	1124.23
22406.05	1114.12	2426.12	1113.72	22470.29	1116.57	22488.42	1119.17	22498.19	1120.38
22507.98	1120.92	2525.74	1124.01	22567.51	1122.38	22578.13	1122.89	22586.38	1122.09
22647.15	1120.52	2666.66	1120.72	22681.19	1120.81	22705.18	1119.75	22736.27	1121.34
22749.25	1119.82	2756.63	1119.07	22784.53	1116.05	22790.26	1115.62	22815.2	1115.09
22841.03	1115.32	2876.59	1134.96	22878.62	1135.73	22910.16	1134.89	22922.83	1134.86
23114.14	1133.52	3169.47	1133	23215.7	1132.39	23407.55	1131.41	23450.64	1131.42
23490.55	1131.22	3528.56	1130.87	23563.62	1130.46	23799.81	1131.92	23848.96	1132.08
23871.12	1131.5	23921.1	1130.69	23993.48	1127.44	24002.94	1127.07	24049.87	1125.6
24092.02	1128.22	4104.78	1129.08	24133.99	1129.36	24163.13	1129.69	24173.94	1129.75
24244.74	1127.12	4277.59	1126.57	24286.89	1126.46	24303.01	1126.51	24345.78	1126.75
24387.44	1127.92	4411.12	1128.53	24423.87	1128.99	24460.4	1130.54	24490.97	1131.01
24506.05	1131.42	4531.86	1131.62	24575.75	1132.12	24649.38	1131.39	24700.08	1129.79
24754.03	1128.92	4776.59	1128.56	24817.88	1126.66	24822.08	1126.44	24842.73	1126.58
24894.53	1127.42	4961.15	1128.47	24972.7	1128.57	25001.71	1128.16	25084.39	1126.72
25096.93	1128.22	5109.76	1131.22	5129.07	1129.06	25136.25	1128.42	25145.94	1128.72
25171.53	1129.9	25181.2	1126.97	25186.07	1128.49	25187.12	1129.04	25249.47	1128.45
25258.1	1128.42	5264.74	1128.52	5299.93	1128.35	25328.56	1127.38	25343.06	1127.07
25363.92	1127.32	5390.79	1127.46	25409.45	1127.96	25420.07	1128.09	25436.16	1129.31
25469.58	1128.92	5521.34	1128.91	25613.95	1128.62	5666.19	1129.08	25710.72	1128.79

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25731.38    113025741.87 1129.2525760.39 1127.4825768.13 1128.9525782.49 1131.99
 25787.4  1131.825792.25 1132.0325810.17 1129.4625817.06 1128.5725835.57 1132.57
25872.44  1127.7 25891.8 1129.42 25901.1  1130.725922.95 1129.3725964.82 1129.19
25969.18  1128.925975.96  1128.125978.38 1127.9425982.79 1128.5725987.59 1128.38
25991.84  1129.826007.52 1130.3326009.17 1130.5626057.44 1130.37

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14281.15     .0519402.58    .03520471.71     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19402.5820471.71              530   499.8     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14281.1519402.58  1124.220471.7126057.44 1126.79

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1120.30   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.10   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1118.20   Reach Len. (ft)            530.00     499.80    460.00
  Crit W.S. (ft)            1113.34   Flow Area (sq ft)                    14549.39
  E.G. Slope (ft/ft)       0.002218   Area (sq ft)                         14549.39    456.77
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1209.33   Top Width (ft)                        1034.85    174.48
  Vel Total (ft/s)            11.62   Avg. Vel. (ft/s)                        11.62
  Max Chl Dpth (ft)           20.23   Hydr. Depth (ft)                        14.06
  Conv. Total (cfs)       3588570.0   Conv. (cfs)                         3588570.0
  Length Wtd. (ft)           499.80   Wetted Per. (ft)                      1039.01
  Min Ch El (ft)            1097.97   Shear (lb/sq ft)                         1.94
  Alpha                        1.00   Stream Power (lb/ft s)                  22.52
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)      1956.34    7786.55    119.59
  C & E Loss (ft)              0.04   Cum SA (acres)             105.08     454.81     66.79


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1120.29   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.10   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1118.20   Reach Len. (ft)            530.00     499.80    460.00
  Crit W.S. (ft)            1113.34   Flow Area (sq ft)                    14549.26
  E.G. Slope (ft/ft)       0.002218   Area (sq ft)                         14549.26
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1034.85   Top Width (ft)                        1034.85
  Vel Total (ft/s)            11.62   Avg. Vel. (ft/s)                        11.62
  Max Chl Dpth (ft)           20.23   Hydr. Depth (ft)                        14.06
  Conv. Total (cfs)       3588521.8   Conv. (cfs)                         3588521.8
  Length Wtd. (ft)           499.80   Wetted Per. (ft)                      1039.01
  Min Ch El (ft)            1097.97   Shear (lb/sq ft)                         1.94
  Alpha                        1.00   Stream Power (lb/ft s)                  22.52
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)                  7787.64
  C & E Loss (ft)              0.04   Cum SA (acres)                         454.81


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.14

INPUT
Description:
Station Elevation Data     num=     318
     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev     Sta     Elev
14350.76  1131.4 14360.5 1131.19 14380.3 1130.9914402.86 1130.3114523.31  1130.4
14558.91  1130.514601.58 1131.52 14607.6 1130.7514614.45 1130.71 14640.8 1131.37
14643.11  1131.414662.14 1128.62 14674.8 1128.0714682.93 1127.2214744.46 1126.69
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14768.12  1126.214773.04 1126.98 14787.2 1127.7214806.51 1129.2414824.82 1129.08
14866.74  1129.514881.86 1129.5914910.06 1129.44 14927.4 1129.4314943.48  1130.9
14952.89  1130.714977.11 1130.1414989.12 1130.0815017.11 1130.1615033.54 1128.84
15048.73  1127.515056.11 1127.2815085.71 1127.16 15209.5 1126.3715261.62 1126.35
15295.84  1125.615419.85 1124.9315690.95 1123.2315720.15 1122.9515785.69 1122.08
15800.05    112215804.38 1122.83 15816.3 1124.5715819.09 1125.6615835.48 1125.52
15874.31    112615894.58 1124.9115895.96 1124.9415900.13 1124.3115906.72 1123.58
15930.36  1121.415936.63 1121.8115947.56  1121.915974.16 1121.9516016.36 1121.83
16077.77  1122.816092.84 1123.0616119.47  1123.116337.61 1124.3616489.75 1125.38
16571.31  1125.916583.51 1126.7116603.58 1126.5316652.76 1125.7816711.29  1127.7
16721.78  1127.716820.47 1126.8416870.62 1127.2317155.31 1127.5417209.46 1127.64
17241.33    112817289.47 1126.6517295.26 1126.45 17420.9 1127.1917443.24 1127.22
17523.36  1125.8 17640.8 1124.8317661.78 1124.5117675.93 1125.4917683.63 1123.97
17705.03  1125.317723.81 1125.9117732.55 1125.8717905.79 1124.2817944.72 1124.69
17946.94  1124.617957.23  1123.317970.64 1123.1917998.24 1123.37   18014 1124.37
18044.09  1124.2 18096.7 1123.3618131.43 1122.8718157.23  1122.618197.27 1122.04
18331.89  1120.218345.39 1122.9818370.13 1125.5918378.71 1125.3218383.68 1126.39
18385.72  1126.618396.44 1126.46 18430.4 1137.8218473.63 1146.4618488.54  1147.2
18500.26    1147 18510.1 1146.8918524.49 1150.3218537.76 1151.9718547.33 1151.61
18562.12  1150.5 18577.7 1149.0318587.35  1148.218612.13 1146.5418643.16 1145.07
18662.15    114518718.32  1145.418740.77  1146.518765.55 1145.56 18774.7 1144.91
18811.46  1141.918825.91 1140.0318866.94  1137.418884.39 1135.9418897.58  1133.7
18937.82    112618957.94 1126.0618969.28 1125.61   18988 1126.6219020.92 1127.19
 19025.1  1127.719059.91 1119.4119064.89 1119.32   19147 1118.7319196.03 1119.11
19302.51  1119.619337.55 1123.7719356.32  1124.1 19371.2 1124.6619394.21 1115.35
19415.94  1106.719425.04  1106.319434.74 1106.0319498.22 1106.0819552.71 1106.72
19581.09    110719629.75 1106.9519660.81 1107.3219690.23 1103.8319697.76    1103
19716.45  1102.6 19829.2 1098.8519866.79  1097.819909.76 1097.4419995.42 1096.58
20006.26  1096.820023.96 1097.2420085.84 1099.1520115.65 1099.97 20182.6 1101.96
   20283  1103.620349.46 1104.7320371.68 1105.2220380.43 1105.4920405.54 1107.57
20407.13  1108.420439.17 1127.5920443.28  1127.420479.36 1125.2520486.53 1125.45
20510.81  1126.320537.57 1126.6920540.25 1126.5720544.23 1126.7920562.34 1127.27
 20603.9  1127.720612.27 1127.7820633.08 1128.2320685.44 1128.5720713.21 1128.87
 20724.9  1128.920808.95 1128.2920843.53 1128.5720884.76 1128.7920923.99 1129.06
21008.49  1130.321041.05 1130.5621067.09 1131.0621146.87 1131.1921252.16 1128.62
21277.89  1128.621308.89  1128.421329.11 1128.6621348.83 1128.5521371.59 1128.78
21421.52  1129.821460.12 1130.5221478.73 1130.9921495.99 1130.6121545.78 1128.71
21560.66  1128.521593.98 1127.5921596.07 1127.7321611.54 1127.5721667.83 1128.58
21730.45  1130.321779.03  1131.221797.76  1131.521816.59 1131.4421855.31 1130.98
22073.65  1132.822372.55 1135.2122384.75  1135.322428.62 1133.2822438.48 1132.72
22443.59  1132.822447.83 1131.9722490.73  1117.222493.13 1116.2222529.32 1116.88
22536.55  1117.622574.86 1116.7222618.58 1118.3422640.82 1117.39 22645.3 1117.04
22669.98  1114.722675.32 1114.3522697.34 1113.8422704.24 1114.37 22721.9  1113.9
22722.46    1114 22765.5 1116.01 22773.6 1115.6622832.46 1115.1222868.61 1114.72
22882.99  1115.122920.52 1116.4822958.38 1131.9622995.46 1135.4823196.44 1135.17
23243.36  1135.223337.14 1135.1123455.35 1134.0223586.54 1133.4223625.18 1133.11
23674.29  1133.123740.74 1133.0523928.91 1132.5823999.09 1132.0724023.54 1131.05
24073.23  1128.824088.58 1128.2124125.81 1126.3424169.63 1128.8524178.41 1129.23
24251.68  1130.724280.87 1129.6424321.48 1128.0324333.82 1127.6524363.84 1126.83
24421.49  1127.724483.92 1128.0924515.57 1129.2624532.73 1129.9524581.95 1131.16
24615.01  1131.1 24653.2 1131.17 24709.3 1130.59 24725.8  1130.524735.01 1130.31
24777.12  1129.924856.35 1128.12 24865.8 1127.9424907.23  1125.724920.27 1125.79
24973.31  1126.725051.33 1127.0725079.85 1127.07 25153.6 1126.5825188.05 1128.94
25223.43    112925254.08 1130.2425269.45 1130.3325273.77 1129.9325317.22 1127.88
25328.61  1127.425354.49 1127.4525380.43  1126.7 25385.4 1126.62 25436.9 1127.12
25502.21  1127.725527.97 1127.0625535.81    112725554.55 1127.55 25570.5 1127.35
25633.81  1128.325699.62 1128.6725742.65 1129.15 25771.9 1129.3725792.08 1128.67
25835.89  1127.825850.73 1131.8325853.04 1132.2825866.15 1133.2125876.19 1131.85
25898.18  1130.425909.01 1131.6925913.03 1131.6125938.93 1130.5925954.13 1128.84
25961.67  1127.925966.17 1127.8525975.16 1128.3826017.24 1128.4326055.88 1128.69
26064.78  1128.826071.65 1128.5326202.12 1128.02

Manning's n Values        num=       3
     Sta    n Val      Sta    n Val      Sta    n Val
14350.76      .05 19371.2     .03520439.17      .05

Bank Sta: Left    Right     Lengths: Left Channel    Right      Coeff Contr.    Expan.
       19371.220439.17                570  508.89     460              .1        .3
Ineffective Flow      num=       2
   Sta L    Sta R     Elev    Sta L    Sta R     Elev
14350.76 19371.2 1124.6620439.1726202.12 1127.59
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1119.21	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.96	Wt. n-Val.		0.035	
W.S. Elev (ft)	1117.25	Reach Len. (ft)	570.00	508.89	460.00
Crit W.S. (ft)	1111.91	Flow Area (sq ft)		15052.31	
E.G. Slope (ft/ft)	0.001977	Area (sq ft)		15052.31	625.29
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1392.06	Top Width (ft)		1032.39	359.67
Vel Total (ft/s)	11.23	Avg. Vel. (ft/s)		11.23	
Max Chl Dpth (ft)	20.67	Hydr. Depth (ft)		14.58	
Conv. Total (cfs)	3801053.0	Conv. (cfs)		3801053.0	
Length Wtd. (ft)	508.89	Wetted Per. (ft)		1037.63	
Min Ch El (ft)	1096.58	Shear (lb/sq ft)		1.79	
Alpha	1.00	Stream Power (lb/ft s)		20.10	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)	1956.34	7616.73	113.87
C & E Loss (ft)	0.01	Cum SA (acres)	105.08	442.95	63.97

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1119.21	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.96	Wt. n-Val.		0.035	
W.S. Elev (ft)	1117.25	Reach Len. (ft)	570.00	508.89	460.00
Crit W.S. (ft)	1111.91	Flow Area (sq ft)		15052.18	
E.G. Slope (ft/ft)	0.001977	Area (sq ft)		15052.18	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1032.39	Top Width (ft)		1032.39	
Vel Total (ft/s)	11.23	Avg. Vel. (ft/s)		11.23	
Max Chl Dpth (ft)	20.67	Hydr. Depth (ft)		14.58	
Conv. Total (cfs)	3801005.0	Conv. (cfs)		3801005.0	
Length Wtd. (ft)	508.89	Wetted Per. (ft)		1037.63	
Min Ch El (ft)	1096.58	Shear (lb/sq ft)		1.79	
Alpha	1.00	Stream Power (lb/ft s)		20.10	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)		7617.81	
C & E Loss (ft)	0.01	Cum SA (acres)		442.95	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.04

INPUT
Description:
Station Elevation Data num= 130

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17025.05	1126.717046.46	1126.6617139.85	1126.68 17265.6	1126.98 17285.3	1126.99				
17339.8	1127.117368.81	1127.7117375.93	1127.9617387.18	1128.1717399.25	1127.84				
17425.14	1126.717437.07	1126.49 17443.1	1125.6617467.12	1123.7517508.82	1122.55				
17536.65	112317568.13	1123.0117580.98	1122.3817590.29	1122.4317737.66	1123.45				
17892.94	1124.617942.04	1124.6717951.06	1123.7118005.77	1119.67 18021	1119.54				
18108.49	1118.518113.14	1118.5618129.44	1118.318131.07	1118.6218140.77	1119.36				
18159.33	1118.818165.64	1118.8118293.58	1119.5118321.22	1119.5418390.72	1121.27				
18439.76	1122.1 18441.1	1121.7118457.03	1122.6518466.03	1121.87 18467.4	1121.17				
18470.13	1120.7 18474.7	1120.9718485.79	1120.9818515.24	1116.82 18517.3	1116.63				
18549.38	1118.918564.81	1119.3118595.58	1120.0518630.98	1121.3218644.41	1121.61				
18659.16	1121.718670.18	1126.3218672.29	1126.7218689.39	1126.0318707.18	1125.77				
18714.82	1125.718750.94	1125.4918765.73	1124.81 18771.4	1124.4418787.46	1123.56				
18862.77	1122.218887.84	1121.6718909.59	1121.5219049.37	1120.9319094.29	1121.96				
19129.54	112119132.79	1120.9219136.43	1127.4619145.96	1127.519158.33	1126.69				
19170.06	1126.9 19198.7	1121.9819200.91	1121.7719219.25	1120.7519316.08	1120.12				
19340.27	1123.519351.62	1123.1919368.53	1123.619373.14	1123.59 19383	1119.27				
19413.55	1106.419423.75	1106.15 19454.2	1106.0719510.81	1106.9219515.21	1106.82				
19530.82	1106.719539.61	1106.0819596.44	1104.6419612.21	1104.4819614.42	1104.01				

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19628.94  1100.219678.34 1099.73 19708.5 1099.8619778.52  1097.919799.29 1097.18
19818.75  1096.919885.99 1095.5119934.83  1096.6 19989.8 1097.9120057.89 1098.84
20096.88  1099.820130.66 1100.6420148.07 1100.9620181.53 1101.7720219.75 1102.33
20259.67  1103.220339.61 1104.9220350.78 1105.1620367.87 1105.3520406.19 1105.85
 20408.5  1105.9 20411.5 1107.5320446.86 1125.39 20467.7 1124.1920481.88 1123.33
20490.04  1123.820513.05 1125.2720532.42 1125.5120536.37 1125.64 20537.8  1125.4
20549.12  1124.620567.27 1125.6620581.06 1126.0720588.15 1125.7220618.54 1126.06
20620.89  1126.220648.58 1126.33 20670.2 1127.8520705.59 1128.4920744.91 1129.44

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17025.05    .03519373.14    .03520446.86    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19373.1420446.86              540  508.91     460             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17025.0519373.14 1123.5920446.8620744.91 1125.39
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CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1118.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.93	Wt. n-Val.		0.035	
W.S. Elev (ft)	1116.27	Reach Len. (ft)	540.00	508.91	460.00
Crit W.S. (ft)	1110.88	Flow Area (sq ft)		15159.76	
E.G. Slope (ft/ft)	0.001946	Area (sq ft)		15159.76	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1038.69	Top Width (ft)		1038.69	
Vel Total (ft/s)	11.15	Avg. Vel. (ft/s)		11.15	
Max Chl Dpth (ft)	20.76	Hydr. Depth (ft)		14.60	
Conv. Total (cfs)	3830866.3	Conv. (cfs)		3830866.3	
Length Wtd. (ft)	508.91	Wetted Per. (ft)		1043.94	
Min Ch El (ft)	1095.51	Shear (lb/sq ft)		1.76	
Alpha	1.00	Stream Power (lb/ft s)		19.67	
Frctn Loss (ft)	0.88	Cum Volume (acre-ft)	1956.34	7440.25	110.57
C & E Loss (ft)	0.07	Cum SA (acres)	105.08	430.85	62.07

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1118.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.93	Wt. n-Val.		0.035	
W.S. Elev (ft)	1116.27	Reach Len. (ft)	540.00	508.91	460.00
Crit W.S. (ft)	1110.88	Flow Area (sq ft)		15159.63	
E.G. Slope (ft/ft)	0.001946	Area (sq ft)		15159.63	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1038.69	Top Width (ft)		1038.69	
Vel Total (ft/s)	11.15	Avg. Vel. (ft/s)		11.15	
Max Chl Dpth (ft)	20.76	Hydr. Depth (ft)		14.59	
Conv. Total (cfs)	3830817.3	Conv. (cfs)		3830817.3	
Length Wtd. (ft)	508.91	Wetted Per. (ft)		1043.94	
Min Ch El (ft)	1095.51	Shear (lb/sq ft)		1.76	
Alpha	1.00	Stream Power (lb/ft s)		19.67	
Frctn Loss (ft)	0.88	Cum Volume (acre-ft)		7441.34	
C & E Loss (ft)	0.07	Cum SA (acres)		430.85	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.95

INPUT
Description:
Station Elevation Data num= 119

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     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17269.81  1125.117273.65 1125.3117289.07 1126.8517434.97 1126.917475.06 1126.89
17493.89  1126.9 17506.3 1125.66 17546.6 1125.0417678.95 1124.7617692.55 1124.75
17751.24    112417816.86 1123.93 17839.6 1123.7417848.23 1120.8817852.14 1119.42
17876.17  1119.517936.73  1119.717973.64 1119.46 18018.6 1119.0918087.43 1119.08
18147.97  1119.418189.16 1119.4418196.58 1119.5518235.93 1118.5418249.03  1118.3
18334.83  1119.218407.85 1119.58 18448.5 1119.97 18467.9 1120.2118500.62 1120.46
 18563.9  1120.318638.14 1120.5118712.75 1120.52 18765.5 1120.3918793.15 1120.44
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18809.28  1120.7   18831  1120.718971.29 1120.2519017.17 1120.1919080.19 1119.71
19143.83  1118.8 19163.6 1118.7519200.56 1118.0319203.44 1117.9119216.64 1117.75
19241.81    111819247.01  1117.819304.49 1117.7319309.51 1117.5919327.42 1119.41
19336.96  1118.419344.65 1119.8119356.41 1119.6419373.44 1119.52   19392 1123.52
19396.21  1124.219414.44 1123.6919423.35 1123.3219457.46 1104.92 19459.3 1104.34
19465.43  1103.219478.29 1102.7119502.95  1101.119508.31 1100.6119520.09 1099.29
19534.74  1100.319561.92 1099.9919566.24 1099.9819579.98 1099.1319594.74 1100.04
19601.92    110019624.85 1101.1919633.23 1102.0319644.34 1102.0419679.09 1099.62
19718.32  1096.719722.87 1096.4919748.34  1095.819755.07 1095.0219785.83 1093.62
19805.29  1092.619835.21 1092.47 19858.9 1093.2619871.17 1093.8219898.88 1094.42
19903.64  1094.419955.08 1095.5920015.76 1097.41 20028.6 1097.5220053.19 1096.86
20096.73  1097.9 20112.7 1097.9920160.62 1102.6720177.69  1104.320185.65 1104.19
20231.67  1103.720255.62 1103.7320324.77 1103.8520340.48 1103.9520344.93 1104.06
20373.56  1104.5 20423.2 1105.2220458.01 1105.2220489.12 1119.9420495.39  1123.1
20526.71  1121.920546.88 1122.8320551.73 1122.9220575.75 1125.5320590.74 1123.37
20615.29  1124.320618.98 1124.3120712.77 1126.2620722.68 1126.42 20743.4 1126.07
 20762.2  1127.320768.52 1127.1720797.01 1127.1720837.27 1127.58

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17269.81    .03519423.35    .03520495.39    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19423.3520495.39              480  489.76  489.76             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17269.8119423.35 1123.3220495.3920837.27  1123.1

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1117.24   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.68   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1115.56   Reach Len. (ft)            480.00     489.76     489.76
  Crit W.S. (ft)            1109.16   Flow Area (sq ft)                   16240.07
  E.G. Slope (ft/ft)       0.001556   Area (sq ft)                        16240.07
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1042.14   Top Width (ft)                      1042.14
  Vel Total (ft/s)            10.41   Avg. Vel. (ft/s)                      10.41
  Max Chl Dpth (ft)           23.09   Hydr. Depth (ft)                      15.58
  Conv. Total (cfs)       4284419.0   Conv. (cfs)                        4284419.0
  Length Wtd. (ft)           489.76   Wetted Per. (ft)                    1048.39
  Min Ch El (ft)            1092.47   Shear (lb/sq ft)                      1.50
  Alpha                        1.00   Stream Power (lb/ft s)               15.66
  Frctn Loss (ft)              0.76   Cum Volume (acre-ft)      1956.34    7256.83     110.57
  C & E Loss (ft)              0.01   Cum SA (acres)             105.08     418.70      62.07


CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1117.24   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.68   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1115.56   Reach Len. (ft)            480.00     489.76     489.76
  Crit W.S. (ft)            1109.16   Flow Area (sq ft)                   16240.07
  E.G. Slope (ft/ft)       0.001556   Area (sq ft)                        16240.07
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1042.14   Top Width (ft)                      1042.14
  Vel Total (ft/s)            10.41   Avg. Vel. (ft/s)                      10.41
  Max Chl Dpth (ft)           23.09   Hydr. Depth (ft)                      15.58
  Conv. Total (cfs)       4284418.0   Conv. (cfs)                        4284418.0
  Length Wtd. (ft)           489.76   Wetted Per. (ft)                    1048.39
  Min Ch El (ft)            1092.47   Shear (lb/sq ft)                      1.50
  Alpha                        1.00   Stream Power (lb/ft s)               15.66
  Frctn Loss (ft)              0.76   Cum Volume (acre-ft)                7257.92
  C & E Loss (ft)              0.01   Cum SA (acres)                       418.70


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.86

INPUT
Description:
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Station Elevation Data    num=     171
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
17078.98 1127.0417117.34  1126.617131.91 1126.7217144.52 1126.5317172.48 1126.55
17204.49 1126.5117221.97  1126.417304.37 1125.3617352.83 1125.3217367.66 1125.48
17411.95  1125.1 17436.4    112517508.42 1125.0217590.84 1125.1517616.69 1125.16
17630.56 1124.3517685.03  1124.117785.59 1123.5917806.54 1123.4717906.06 1122.75
17936.31 1120.9717943.18  1120.917953.79 1120.07 17954.8 1118.3817967.12 1117.68
18025.43 1118.2618041.07  1118.9 18057.5 1118.4518082.12 1117.9218101.97 1118.31
18116.81  1118.518227.91  1118.718336.13 1118.1718346.49 1119.0518368.76 1119.01
18438.69 1119.0518469.08  1119.118483.98 1119.3318499.75 1122.3718501.49 1121.58
 18541.4 1104.5218551.36  1104.518573.43 1104.6518605.75 1104.7118623.04 1104.79
 18627.6 1104.7518659.96  1104.818660.85 1104.7618684.48 1116.9318693.71 1121.82
18696.44 1121.6318728.94  1117.818748.07 1117.69 18750.8 1117.6418782.11 1118.09
18823.37 1118.8618877.62  1119.818882.44    112018890.83 1119.9118957.44 1119.69
18998.75 1118.9319031.46  1118.1 19046.7 1117.9419060.05 1117.87 19070.2 1117.66
19085.41 1117.8519151.43  1117.219186.68  1118.919207.55 1119.1219307.48    1120
19373.63  1120.319381.44  1119.919403.68 1119.7419413.37 1122.0919416.58 1123.01
19437.06 1123.7819456.28  1123.219458.45 1122.6219462.82 1122.8919480.48 1121.89
19494.97 1115.9119522.47  1103.619564.08 1103.1219596.01 1103.38   19619 1103.74
19653.41 1104.6919666.21  1104.519676.03 1104.75 19701.3  1103.7 19726.7 1103.73
19734.12 1103.5119745.14  1102.219761.36 1100.1419825.98 1088.6519847.42  1088.6
19875.54 1088.8819884.18  1089.119899.82 1089.1819960.22 1092.6619992.54 1093.61
20002.61 1093.0320021.16    1093 20090.5  1093.120097.42 1093.0520133.52 1094.22
20163.22 1094.97 20169.4  1095.820205.62 1102.6120222.55 1102.7720273.85 1103.07
20306.43 1102.9220371.13  1103.120392.57 1102.9720410.69 1103.2720522.58 1103.94
20553.05 1121.7120583.17  1122.420601.67 1123.2820605.56 1123.31 20611.6 1123.86
20620.46 1123.6820636.41  1123.720653.03 1122.2220660.32 1122.9120684.42 1125.51
 20713.5 1125.4320806.16  1125.520839.53 1125.6220853.48 1126.5220864.06 1127.29
20898.25 1126.7220935.28  1127.4 20984.1 1126.4521010.78 1124.9421020.26 1124.46
21043.59 1124.2921090.25  1124.121109.74 1124.2321156.37 1124.3621174.01 1124.86
21207.33 1126.3221217.88  1126.721250.75 1127.8321284.09 1127.7821338.59 1127.88
21413.84  1127.421436.95    112721478.69 1126.2321507.42 1124.6821525.41 1123.67
21549.84 1123.3121583.05  1123.421640.05 1125.6421645.23 1125.7821650.27 1126.16
21656.45  1126.221740.28    112721808.21 1125.9921821.16 1125.6421841.85 1124.74
 21864.8 1123.9421904.39  1125.621994.14 1127.2522058.96 1127.9922079.42 1128.33
22139.44 1128.7922161.17  1128.722263.41 1129.8722295.96 1130.14 22396.5 1130.57
22411.39 1130.72

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17078.98    .03519437.06    .035 20611.6    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19437.06 20611.6              470  512.67     540             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17078.9819437.06 1123.78 20611.622411.39 1123.86

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1116.48   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.66   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1114.82   Reach Len. (ft)             470.00     512.67     540.00
  Crit W.S. (ft)            1108.27   Flow Area (sq ft)                   16329.44
  E.G. Slope (ft/ft)       0.001533   Area (sq ft)               1432.66   16329.44
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1206.90   Top Width (ft)              163.07    1043.83
  Vel Total (ft/s)            10.35   Avg. Vel. (ft/s)                        10.35
  Max Chl Dpth (ft)           26.22   Hydr. Depth (ft)                        15.64
  Conv. Total (cfs)        4315816.5  Conv. (cfs)                         4315816.5
  Length Wtd. (ft)           512.67   Wetted Per. (ft)                    1051.30
  Min Ch El (ft)            1088.60   Shear (lb/sq ft)                       1.49
  Alpha                        1.00   Stream Power (lb/ft s)                 15.39
  Frctn Loss (ft)              1.17   Cum Volume (acre-ft)       1948.44    7073.74     110.57
  C & E Loss (ft)              0.18   Cum SA (acres)              104.18     406.97      62.07

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
         additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less
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than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1116.48	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.66	Wt. n-Val.		0.035	
W.S. Elev (ft)	1114.82	Reach Len. (ft)	470.00	512.67	540.00
Crit W.S. (ft)	1108.27	Flow Area (sq ft)		16329.32	
E.G. Slope (ft/ft)	0.001533	Area (sq ft)		16329.32	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1043.82	Top Width (ft)		1043.82	
Vel Total (ft/s)	10.35	Avg. Vel. (ft/s)		10.35	
Max Chl Dpth (ft)	26.22	Hydr. Depth (ft)		15.64	
Conv. Total (cfs)	4315769.5	Conv. (cfs)		4315769.5	
Length Wtd. (ft)	512.67	Wetted Per. (ft)		1051.29	
Min Ch El (ft)	1088.60	Shear (lb/sq ft)		1.49	
Alpha	1.00	Stream Power (lb/ft s)		15.39	
Frctn Loss (ft)	1.17	Cum Volume (acre-ft)		7074.82	
C & E Loss (ft)	0.18	Cum SA (acres)		406.97	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.76

INPUT
Description:
Station Elevation Data num= 105

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18696.26	1131.5	18704.4	1129.24	18708.16	1126.54	18723.72	1113.04	18733.67	1113.04
18747.99	1112.8	18761.93	1118.72	18768.63	1121.71	18787.92	1121	18800.11	1120.45
18804.79	1121.7	18811.76	1123.27	18842.98	1128.42	18872.95	1131.36	18874.31	1131.55
18898.39	1127.6	18914.36	1123.3	18942.8	1123.65	18946.55	1123.78	18977.23	1117.62
18985.07	1117.6	18988.68	1116.59	18996.3	1116.5	19048.98	1117.15	19075.91	1117.36
19118.51	1114.3	19121.71	1114.19	19125.71	1114.07	19140.48	1114.46	19194.3	1115.7
19209.65	1116.29	19251.27	1116.2	19260.11	1114.26	19269.27	1113.88	19287.02	1113.49
19302.34	1113.97	19320.61	1114.7	19328.5	1115.38	19416.97	1117.24	19447.56	1116.72
19454.34	1116.86	19460.63	1117.6	19468.83	1119.7	19475.55	1121.58	19478.28	1121.66
19491.87	1122.61	19506.5	1122.8	19527.24	1121.98	19532.35	1121.71	19549.15	1114.56
19560.66	1109.55	19566.72	1106.6	19595.17	1105.4	19607.57	1105.47	19620.51	1105.24
19694.19	1103.6	19703.83	1103.5	19713.94	1103.61	19716.38	1103.44	19746.13	1103.55
19754.83	1103.65	19810.5	1103.9	19814.58	1102.32	19822.14	1099.87	19840.89	1093.64
19881.09	1093.88	19929.82	1093	19952.35	1092.71	19954.71	1092.5	20010.46	1092.19
20012.53	1092.38	20048.72	1092.2	20135.92	1093.05	20155.3	1093.05	20177.38	1092.54
20185.54	1093.42	20204.39	1094.8	20219.2	1094.47	20233.32	1095.06	20239.91	1095
20262.89	1095.61	20311.58	1098.3	20347.84	1101.52	20357.92	1102.6	20392.73	1117.38
20401.2	1121.12	20415.35	1121.6	20425.11	1121.17	20435.31	1121.14	20492.9	1121.13
20502.18	1121.18	20533.15	1121.3	20548.06	1120.88	20573.49	1120.81	20606.3	1120.63
20642.39	1120.97	20658.83	1122.2	20679.17	1122.47	20706.16	1122.9	20712.94	1122.71
20757.82	1123.68	20875.26	1124	20913.28	1123.99	20925.68	1124.06	20967.17	1124.99

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18696.26	.035	19532.35	.035	20401.2	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19532.35	20401.2	440	496.98	560	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1115.14	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.43	Wt. n-Val.		0.035	
W.S. Elev (ft)	1111.71	Reach Len. (ft)	440.00	496.98	560.00

Crit W.S. (ft)		Flow Area (sq ft)		11373.31	
E.G. Slope (ft/ft)	0.003729	Area (sq ft)		11373.31	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	823.68	Top Width (ft)		823.68	
Vel Total (ft/s)	14.86	Avg. Vel. (ft/s)		14.86	
Max Chl Dpth (ft)	19.52	Hydr. Depth (ft)		13.81	
Conv. Total (cfs)	2767516.3	Conv. (cfs)		2767516.3	
Length Wtd. (ft)	496.98	Wetted Per. (ft)		828.84	
Min Ch El (ft)	1092.19	Shear (lb/sq ft)		3.19	
Alpha	1.00	Stream Power (lb/ft s)		47.47	
Frctn Loss (ft)	1.31	Cum Volume (acre-ft)	1940.72	6910.72	110.57
C & E Loss (ft)	0.44	Cum SA (acres)	103.30	395.98	62.07

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1115.14	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.43	Wt. n-Val.		0.035	
W.S. Elev (ft)	1111.71	Reach Len. (ft)	440.00	496.98	560.00
Crit W.S. (ft)		Flow Area (sq ft)		11373.01	
E.G. Slope (ft/ft)	0.003729	Area (sq ft)		11373.01	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	823.68	Top Width (ft)		823.68	
Vel Total (ft/s)	14.86	Avg. Vel. (ft/s)		14.86	
Max Chl Dpth (ft)	19.52	Hydr. Depth (ft)		13.81	
Conv. Total (cfs)	2767402.8	Conv. (cfs)		2767402.8	
Length Wtd. (ft)	496.98	Wetted Per. (ft)		828.84	
Min Ch El (ft)	1092.19	Shear (lb/sq ft)		3.19	
Alpha	1.00	Stream Power (lb/ft s)		47.47	
Frctn Loss (ft)	1.31	Cum Volume (acre-ft)		6911.81	
C & E Loss (ft)	0.44	Cum SA (acres)		395.98	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.66

INPUT
Description:
Station Elevation Data num= 372

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13410.42	1123.113	473.99	1122.911	3516.62	1131.131	3543.66	1137.511	3584.78	1134.64
13596.45	1133.9	13619.3	1136.491	3626.52	1135.681	3677.48	1130.671	3717.14	1128.34
13776.9	1126.81	3804.61	1126.171	3834.66	1126.131	3859.65	1126.911	3882.59	1127.2
13906.27	1122.3	13927	1115.951	3935.96	1115.931	3966.69	1123.991	3988.92	1124.03
14057.49	1124.11	4168.71	1123.971	4185.98	1122.631	4226.67	1131.881	4260.04	1138.88
14284.22	1139.21	4296.65	1139.371	4303.35	1133.831	4318.65	1123.161	4381.69	1123.02
14395.23	1123.91	4409.22	1123.681	4451.38	1122.851	4686.66	1123.41	4708.91	1123.48
14720.56	1123.51	4771.92	1123.71	4775.61	1124.071	4783.01	1124.31	14893.4	1124.41
15021.73	1124.31	5065.51	1124.291	5152.12	1124.421	5166.47	1125.451	5169.36	1124.47
15173.39	1122.31	5184.39	1125.311	5197.33	1121.851	5209.72	1122.091	5221.25	1122.1
15261.61	1122.21	5273.44	1122.151	5472.27	1121.851	5515.15	1121.741	5653.06	1122.36
15687.14	1122.61	5694.72	1120.451	5705.26	1120.581	5708.14	1120.49	15711.1	1119.23
15718.06	1115.71	5726.44	1112.141	5731.84	1114.881	5735.56	1116.321	5745.42	1119.87
15759.29	1120.61	5775.81	1121.051	5818.82	1120.61	5838.97	1120.581	5981.18	1120.58
16009.13	1120.5	16051.3	1120.961	6054.83	1120.941	6081.64	1121.141	6107.61	1121.52
16133.09	1121.5	16284	1121.311	6355.84	1121.47	16362.6	1121.451	6455.75	1121.69
16494.23	1121.61	6511.76	1121.681	6682.87	1121.641	6751.88	1121.71	6772.61	1122.1
16856.98	1122.4	16986.6	1122.751	6993.55	1119.981	6999.97	1117.011	7006.97	1119.86
17011.4	1121.41	7068.59	1121.621	7330.83	1122.881	7336.66	1122.771	7342.37	1122.23
17471.22	112217	523.38	1121.831	7537.29	1121.751	7706.17	1120.561	7757.42	1120.15
17772.44	1119.7	17797.8	1119.881	7843.85	1120.021	7846.29	1119.981	7904.52	1120.37

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17932.13    112017961.76 1119.5218098.62 1117.0418120.45 1117.2618141.36 1114.53
18192.83  1115.818212.37 1116.3518246.14 1114.9918265.67  1115.818279.11  1116.7
 18285.4  1116.718475.61 1115.9718517.59 1115.7818527.31 1115.3518537.22  1115.4
18634.69  1115.118636.28 1115.0518651.27 1115.71 18681.6 1115.6518721.36 1115.23
18732.89  1119.518751.61 1125.9218796.59 1124.7218810.83 1124.4118813.56 1123.32
18833.84  1114.518876.74 1113.9318884.46 1118.0218910.38 1113.7618939.94 1113.73
18961.41  1113.419001.48 1113.1119015.49 1112.6819023.38 1112.7819039.73 1113.98
 19069.1  1116.319093.22  1116.419130.33 1116.14 19141.7  1115.919265.87 1121.29
19293.94  1124.6 19334.5 1124.3319354.41 1124.15 19356.6 1123.7919410.55 1114.35
19414.17  1113.819433.06 1111.53 19441.8 1111.5319450.12 1115.0219466.46 1122.48
19494.33  1122.119515.26 1121.8119539.84 1121.1619580.79 1107.8819594.81 1102.95
19596.51    110319600.29 1102.1819636.62 1102.4519670.06 1102.3119693.25  1102.1
19724.56    110219758.95 1102.3319793.46  1101.819828.27 1101.1919869.42 1094.53
19875.54  1093.419881.49 1093.3819915.76 1092.34 19935.3 1092.3120012.91 1091.97
20134.14  1090.120186.97 1089.4520267.56 1088.3820280.62 1088.1420300.88 1088.56
20321.71  1088.620370.15  1100.820444.71 1101.9720457.16 1102.0620496.87 1102.77
20570.08  1102.420595.78  1113.720611.59 1120.9120626.26 1120.9720681.12  1121.2
20719.24    112220730.66 1121.5420748.21 1116.07 20772.6 1117.8920794.31 1118.17
20806.14  1118.7   20820 1118.76 20835.7 1116.7720852.57 1115.7620859.93 1116.29
20897.72  1119.4 20914.2 1120.3920936.74 1120.96   21040 1123.0221080.02 1124.35
21118.54  1124.5 21153.4 1125.1521172.76 1125.2621190.21 1125.2721198.03 1125.08
21227.59  1123.721237.84 1122.7521258.59 1121.4221286.08 1120.5421298.81  1120.2
21344.09    112121362.52 1121.2521389.25 1121.9721423.61 1122.9721444.34 1123.69
21482.28  1124.921551.91 1124.9721630.03 1125.4921686.22 1123.8521730.36  1122.5
21772.83  1120.821807.93 1118.9821829.36  1119.921889.27 1123.8921908.41 1124.61
21957.53  1125.3   22029  1124.722046.76 1124.1222096.45 1122.2822107.92 1122.52
22134.75  1123.222175.16 1123.92 22212.2 1124.6722282.56 1124.5222301.52 1124.52
22313.23  1124.422360.42 1123.9622453.56 1124.11 22499.1 1123.7722568.82 1122.85
22600.22  1123.222760.33 1123.5222795.48 1123.2922946.59 1124.8122961.54 1124.91
22973.66  1113.422976.98 1110.8323014.87  1111.723021.87  1111.8 23026.6 1112.23
23036.03  1113.323084.59 1113.5523126.41 1112.7423160.75 1112.5623187.77  1115.1
 23284.7  1112.723287.36 1112.6623310.27 1111.3123319.93 1113.0923326.38 1112.41
23354.29  1111.223358.17 1111.15 23362.3 1110.8323376.07 1110.7123397.66 1111.46
23413.46  1111.923416.02  1124.823422.05 1128.8123434.88  1127.223444.61 1131.45
23449.55  1130.123467.88 1126.6523476.08 1124.7323480.33 1123.9523513.25 1123.77
23526.72  1123.123588.94 1122.31 23609.4 1122.3223623.44 1121.5723644.03 1121.11
23660.06  1121.123672.26 1120.8723719.12  1121.123727.25 1120.9323783.98 1120.19
23804.35  1120.523833.72 1120.4323868.86 1120.21 23940.8 1119.4424000.97 1119.45
24011.32  1119.3 24030.5 1118.65 24034.9  1118.324049.97 1118.7424086.64 1119.71
24097.36  1120.524121.77 1123.0324250.12 1122.1624286.75 1122.0124299.77 1122.06
24318.71  1122.224326.95 1123.0124337.31 1124.3724362.95 1124.3924415.05 1124.63
24453.48  1124.924487.85 1125.1924508.31 1124.7424563.28 1123.7124611.54  1121.3
24670.84  1123.724744.16 1125.0424817.27 1124.2224851.05 1123.8124875.81 1123.72
24908.85    112324938.38 1122.2424984.44 1122.5524988.71 1122.5525017.47 1122.93
25071.65  1124.725147.19  1126.225219.12 1125.6125231.11 1125.1725271.87 1123.52
25310.51  1122.525363.56 1120.8525398.47 1119.6825417.31 1119.8325485.13 1120.47
25492.62    112125553.87 1121.3725595.25 1121.21 25608.8  1120.725616.61 1120.33
25621.07  1120.825635.19 1122.4225679.65    112225700.64 1121.3725714.87  1121.7
 25764.3  1122.225797.69 1122.27 25803.4 1122.7425840.75 1123.7525861.23 1122.27
25899.09    112125943.38 1121.1125965.86 1120.9225997.55 1121.0326027.88 1121.03
26193.91  1121.426231.58 1120.9526242.65 1120.6526261.99 1121.4226317.07 1123.54
26345.09  1123.826357.86 1124.05 26374.6 1124.5826383.03  1124.726400.99  1124.4
26432.91  1120.626436.28 1120.1826439.46 1120.2326507.57 1122.56 26523.1 1121.51
26559.65  1120.826568.23 1120.39

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13410.42    .03519539.84    .03520611.59    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19539.8420611.59              450  512.72     610              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13410.4219539.84 1121.1620611.5926568.23 1120.91

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1113.39   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1111.41   Reach Len. (ft)             450.00     512.72     610.00
  Crit W.S. (ft)            1106.01   Flow Area (sq ft)                    14996.01
```

E.G. Slope (ft/ft)	0.001973	Area (sq ft)		14996.01	27.00
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1096.23	Top Width (ft)		1020.69	75.54
Vel Total (ft/s)	11.27	Avg. Vel. (ft/s)		11.27	
Max Chl Dpth (ft)	23.27	Hydr. Depth (ft)		14.69	
Conv. Total (cfs)	3805127.8	Conv. (cfs)		3805127.8	
Length Wtd. (ft)	512.72	Wetted Per. (ft)		1026.31	
Min Ch El (ft)	1088.14	Shear (lb/sq ft)		1.80	
Alpha	1.00	Stream Power (lb/ft s)		20.28	
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)	1940.72	6760.29	110.40
C & E Loss (ft)	0.01	Cum SA (acres)	103.30	385.46	61.58

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1113.39	Element			
Vel Head (ft)	1.97	Wt. n-Val.		0.035	
W.S. Elev (ft)	1111.41	Reach Len. (ft)	450.00	512.72	610.00
Crit W.S. (ft)	1106.01	Flow Area (sq ft)		14995.52	
E.G. Slope (ft/ft)	0.001973	Area (sq ft)		14995.52	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1020.69	Top Width (ft)		1020.69	
Vel Total (ft/s)	11.27	Avg. Vel. (ft/s)		11.27	
Max Chl Dpth (ft)	23.27	Hydr. Depth (ft)		14.69	
Conv. Total (cfs)	3804926.8	Conv. (cfs)		3804926.8	
Length Wtd. (ft)	512.72	Wetted Per. (ft)		1026.30	
Min Ch El (ft)	1088.14	Shear (lb/sq ft)		1.80	
Alpha	1.00	Stream Power (lb/ft s)		20.28	
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)		6761.39	
C & E Loss (ft)	0.01	Cum SA (acres)		385.46	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.57

INPUT
Description:
Station Elevation Data num= 105

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18013.92	1116.718	030.44	1116.7718	050.63	1116.618	124.33	1115.87	18144.5	1115.64
18154.92	1114.41	18158.3	1113.7918	171.62	1113.418	200.22	1113.78	18249.2	1114.76
18266.95	1115.68	18280.84	1114.7618	429.88	1113.818	454.55	1113.62	18487.31	1113.66
18545.3	1113.618	565.51	1114.6918	581.96	1116.618	605.39	1116.24	18683.97	1115.91
18713.94	1116.02	18721	1115.9518	738.56	1115.918	756.25	1116.15	18765.47	1116.71
18771.16	1116.71	18776.2	1116.4518	778.79	111618	796.35	1115.09	18813.36	1112.34
18835.01	1112.43	18860.91	1113.1718	921.01	1113.218	979.66	1113.24	19077.95	1113.09
19108.89	1113.09	19154.6	1113.6719	331.07	1113.719	363.04	1113.73	19368.48	1110.99
19386.38	1116.41	19390.31	1116.8619	399.78	1121.319	441.79	1120.26	19485.2	1119.25
19501.28	1119.43	19517.83	1111.9619	542.42	1100.819	562.16	1100.51	19573.71	1100.43
19641.56	1100.15	19684.46	1100.2719	701.88	1101.319	744.82	1101.15	19760.44	1103.05
19763.19	1103.26	19765.82	1102.7519	813.71	109519	882.78	1093.95	19949.38	1093.86
20056.13	1091.89	20072.3	1091.5120	084.44	1091.620	107.99	1091.63	20116.34	1091.72
20137.39	1091.43	20220.85	1090.84	20249.2	1089.9	20340.4	1092.34	20349.92	1092.62
20392.31	1099.25	20465.11	1099.3320	495.23	1099.1	20519.8	1099.62	20539.7	1100.15
20581.07	1118.54	20584.26	1120.0120	585.96	112020	610.43	1118.85	20619.07	1118.72
20644.43	1117.93	20682.45	1116.39	20683.6	1117.420	692.98	1116.92	20718.89	1119.63
20724.51	1119.62	20786.53	1119.7120	817.17	1119.320	836.38	1118.95	20871.36	1118.94
20876.01	**1118.36**	**20886.18**	**1118.120**	**897.97**	**1117.120**	**918.52**	**1117.46**	**20923.93**	**1117.42**
20943.41	1117.88	20969.17	1118.4420	995.25	1118.521	016.21	1118.74	21157.2	1120.99
21158.67	1121.22	21198.38	1122.37	21205.2	1122.521	244.33	1123.05	21283.18	1124.4

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18013.92	.035	19501.28	.035	20584.26	.035

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19501.2820584.26              440  481.39     550             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18013.9219501.28 1119.4320584.2621283.18 1120.01
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1112.33	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.04	Wt. n-Val.		0.035	
W.S. Elev (ft)	1110.29	Reach Len. (ft)	440.00	481.39	550.00
Crit W.S. (ft)	1105.33	Flow Area (sq ft)		14759.05	
E.G. Slope (ft/ft)	0.002135	Area (sq ft)		14759.05	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1041.01	Top Width (ft)		1041.01	
Vel Total (ft/s)	11.45	Avg. Vel. (ft/s)		11.45	
Max Chl Dpth (ft)	20.39	Hydr. Depth (ft)		14.18	
Conv. Total (cfs)	3657246.0	Conv. (cfs)		3657246.0	
Length Wtd. (ft)	481.39	Wetted Per. (ft)		1046.66	
Min Ch El (ft)	1089.90	Shear (lb/sq ft)		1.88	
Alpha	1.00	Stream Power (lb/ft s)		21.52	
Frctn Loss (ft)	0.97	Cum Volume (acre-ft)	1940.72	6585.18	110.21
C & E Loss (ft)	0.04	Cum SA (acres)	103.30	373.33	61.05

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1112.33	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.04	Wt. n-Val.		0.035	
W.S. Elev (ft)	1110.29	Reach Len. (ft)	440.00	481.39	550.00
Crit W.S. (ft)	1105.33	Flow Area (sq ft)		14758.29	
E.G. Slope (ft/ft)	0.002136	Area (sq ft)		14758.29	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1041.00	Top Width (ft)		1041.00	
Vel Total (ft/s)	11.45	Avg. Vel. (ft/s)		11.45	
Max Chl Dpth (ft)	20.39	Hydr. Depth (ft)		14.18	
Conv. Total (cfs)	3656946.5	Conv. (cfs)		3656946.5	
Length Wtd. (ft)	481.39	Wetted Per. (ft)		1046.65	
Min Ch El (ft)	1089.90	Shear (lb/sq ft)		1.88	
Alpha	1.00	Stream Power (lb/ft s)		21.53	
Frctn Loss (ft)	0.97	Cum Volume (acre-ft)		6586.28	
C & E Loss (ft)	0.04	Cum SA (acres)		373.32	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.48

INPUT
Description:
Station Elevation Data num= 97

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18236.01	1115.05	18272.78	1113.88	18299.5	1113.71	8461.95	1114.16	18582.8	1113.67
18624.01	1113.31	8715.24	1113.17	18745.54	1112.91	8823.91	1112.71	18846.96	1112.57
18909.1	1111.99	18953.02	1111.81	18967.9	1111.61	8979.02	1111.64	19012.67	1112.25
19020.47	1112.43	19161.51	1112.46	19286.59	1112.81	9289.43	1110.58	19291.33	1108.23
19313.73	1107.49	19325.12	1107.55	19339.03	1108.71	9355.96	1108.79	19373.28	1114.84
19386.09	1119.49	19400.18	1119.62	19414.72	1119.51	9455.38	1100.62	19458.49	1099.22
19474.03	1099	19563.4	1098.78	19603.52	1097.31	9638.95	1096.94	19660.85	1097.57
19768.13	1095.74	19800.17	1095.22	19882.6	1094.21	9956.71	1092.95	20030.08	1092.03
20076.99	1091.65	20113.27	1091.29	20220.52	1090.82	0232.88	1091.02	20294.34	1092.46
20300.97	1093.07	20325.41	1093.25	20377.34	1093.82	0417.34	1093.72	20445.53	1093.85
20450.8	1093.77	20491.19	1113.91	20498.98	1117.72	0513.25	1118.44	20542.36	1114.68
20544.57	1114.98	20555.29	1118.05	20575.97	1107.12	0599.36	1096.93	20605.23	1097.02
20634.43	1096.68	20651.66	1096.15	20664.64	1096.52	0666.24	1096.68	20691.83	1098.05

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20706.82 1099.4620720.66 1099.4820742.45  1100.920758.79 1099.1920801.19 1096.79
20811.68 1096.4920830.24  1098.420839.88  1099.920864.97 1099.2920911.54 1095.31
20913.45 1095.2720932.99 1096.9120934.71  1097.920962.36 1103.8620964.19 1104.52
20985.71 1110.4620988.58 1110.8921014.49  1116.821030.88 1121.0321042.74 1121.04
21077.31 1121.44 21112.3 1121.0221119.26    112121131.41 1120.8121157.18 1122.19
21160.98 1122.5121216.92 1122.1821234.98  1122.321275.95 1122.9121296.32    1123
21355.12 1123.5421359.24 1123.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18236.01    .03519400.18    .03520513.25    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19400.1820513.25              440  502.74     570             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18236.0119400.18 1119.6220513.2521359.24 1118.44

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1111.32   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.89   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1109.42   Reach Len. (ft)           440.00     502.74     570.00
  Crit W.S. (ft)            1103.96   Flow Area (sq ft)                  15312.30
  E.G. Slope (ft/ft)        0.001901  Area (sq ft)               87.42   15312.30    4343.11
  Q Total (cfs)            169000.00  Flow (cfs)                        169000.00
  Top Width (ft)            1523.56   Top Width (ft)             67.41    1045.77     410.38
  Vel Total (ft/s)            11.04   Avg. Vel. (ft/s)                     11.04
  Max Chl Dpth (ft)           18.62   Hydr. Depth (ft)                     14.64
  Conv. Total (cfs)        3875793.0  Conv. (cfs)                       3875793.0
  Length Wtd. (ft)           502.74   Wetted Per. (ft)                   1051.84
  Min Ch El (ft)            1090.80   Shear (lb/sq ft)                      1.73
  Alpha                        1.00   Stream Power (lb/ft s)               19.07
  Frctn Loss (ft)              0.98   Cum Volume (acre-ft)      1940.27    6419.02      82.79
  C & E Loss (ft)              0.01   Cum SA (acres)             102.96     361.80      58.46


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1111.31   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.89   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1109.42   Reach Len. (ft)           440.00     502.74     570.00
  Crit W.S. (ft)            1103.96   Flow Area (sq ft)                  15311.27
  E.G. Slope (ft/ft)        0.001902  Area (sq ft)                       15311.27
  Q Total (cfs)            169000.00  Flow (cfs)                        169000.00
  Top Width (ft)            1045.77   Top Width (ft)                     1045.77
  Vel Total (ft/s)            11.04   Avg. Vel. (ft/s)                     11.04
  Max Chl Dpth (ft)           18.62   Hydr. Depth (ft)                     14.64
  Conv. Total (cfs)        3875377.3  Conv. (cfs)                       3875377.3
  Length Wtd. (ft)           502.74   Wetted Per. (ft)                   1051.84
  Min Ch El (ft)            1090.80   Shear (lb/sq ft)                      1.73
  Alpha                        1.00   Stream Power (lb/ft s)               19.08
  Frctn Loss (ft)              0.98   Cum Volume (acre-ft)               6420.13
  C & E Loss (ft)              0.01   Cum SA (acres)                      361.79


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.38

INPUT
Description:
Station Elevation Data    num=      79
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18086.73 1112.0518126.89 1112.4218150.62 1112.0918201.77  1113.618220.17    1114
18237.96 1115.4118287.77 1111.6818344.46 1112.0718357.62  1112.118382.37  1112.5
18426.79 1112.6918439.52 1112.5618457.61 1112.6218702.97  1111.818907.87 1111.14
19011.51 1111.1219178.13 1111.6919301.14  1112.1 19317.4  1105.119320.63 1103.76
19335.04 1103.4319351.16 1103.2619358.14 1104.3519370.25  1107.219381.46 1110.01
19395.65 1115.6719402.86 1118.2919431.07 1118.7119439.66  1118.6 19442.3 1117.62
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19484.06 1098.9519540.04 1097.3119613.99 1095.0519621.74  1092.719630.27 1093.05
19693.84 1095.3419708.66 1095.4819797.26 1095.4719890.58    109519950.72 1094.15
19986.47    109420001.92 1094.5520006.51 1094.3220014.34    109220017.76 1091.13
20122.42 1091.5820137.88 1091.5220199.08 1090.9920247.14  1090.720266.57 1090.72
20284.24 1090.8120369.63 1090.8320388.79 1091.0420435.65  1091.820464.45 1092.28
20482.16 1100.8120517.96 1118.4620522.43 1118.6820533.82  1119.820551.54 1116.77
20563.25 1114.9820578.85 1118.3520607.13 1116.8820613.72  1115.220625.52 1115.32
20699.29  1112.920784.31 1114.3320858.69 1114.5120942.13  1115.220971.88 1115.46
20986.64 1115.6220994.77  1115.821006.23 1115.7321029.87  1116.621038.75 1117.47
21069.36  1118.321124.54 1117.9121131.75 1118.2721141.23  1120.1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18086.73    .03519431.07    .03520533.82    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19431.0720533.82              480  491.58     500             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18086.7319431.07 1118.7120533.8221141.23  1119.8

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1110.33   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1108.36   Reach Len. (ft)            480.00     491.58     500.00
  Crit W.S. (ft)            1103.09   Flow Area (sq ft)                    15019.71
  E.G. Slope (ft/ft)       0.002000   Area (sq ft)               240.44   15019.71
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1099.53   Top Width (ft)              65.06    1034.47
  Vel Total (ft/s)            11.25   Avg. Vel. (ft/s)                       11.25
  Max Chl Dpth (ft)           17.66   Hydr. Depth (ft)                       14.52
  Conv. Total (cfs)       3778859.8   Conv. (cfs)                         3778859.8
  Length Wtd. (ft)           491.58   Wetted Per. (ft)                     1041.13
  Min Ch El (ft)            1090.70   Shear (lb/sq ft)                        1.80
  Alpha                        1.00   Stream Power (lb/ft s)                 20.27
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)      1938.62    6243.98      54.37
  C & E Loss (ft)              0.02   Cum SA (acres)             102.29     349.79      55.78


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1110.33   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1108.36   Reach Len. (ft)            480.00     491.58     500.00
  Crit W.S. (ft)            1103.08   Flow Area (sq ft)                    15018.44
  E.G. Slope (ft/ft)       0.002001   Area (sq ft)                         15018.44
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1034.46   Top Width (ft)                       1034.46
  Vel Total (ft/s)            11.25   Avg. Vel. (ft/s)                       11.25
  Max Chl Dpth (ft)           17.66   Hydr. Depth (ft)                       14.52
  Conv. Total (cfs)       3778346.3   Conv. (cfs)                         3778346.3
  Length Wtd. (ft)           491.58   Wetted Per. (ft)                     1041.12
  Min Ch El (ft)            1090.70   Shear (lb/sq ft)                        1.80
  Alpha                        1.00   Stream Power (lb/ft s)                 20.27
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)                 6245.10
  C & E Loss (ft)              0.02   Cum SA (acres)                        349.79


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.29

INPUT
Description:
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Station Elevation Data num= 116

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17592.29	1111.71	7614.88	1111.81	7664.02	1111.71	17752.58	1111.91	17843.08	1112.08
17920.11	1112.08	17944.56	1112.41	7982.64	1112.72	18013.13	1111.94	18087.65	1112.95
18090.45	1113.06	18114.24	1114.4	18124.9	1111.85	18131.2	1112.17	18155.06	1112.5
18189.89	1113.32	18274.36	1112.51	8291.98	1112.26	18333.14	1111.91	18344.34	1111.11
18371.02	1111.34	18421.76	1111.31	8427.34	1111.67	18444.57	1113.12	18462.13	1112.67
18497.57	1111.99	18551.54	111	18610.97	1111.67	18621.63	1111.58	18633.54	1110.94
18648.88	1110.42	18657.86	1110.91	8672.68	1110.02	18687.43	1109.47	18708.66	1109.79
18717.04	1109.66	18753.11	1109.71	8807.22	1110.01	18812.62	1110.07	18948.31	1110.02
19090.58	1111.11	9120.56	1111	19190.9	1111.31	9226.21	1097.42	19258.62	1084.15
19290.38	1083.85	19300.61	1083.51	9302.57	1083.07	19307.96	1083.39	19316.86	1084.69
19331.74	1084.23	19344.83	1083.91	9422.26	1108.05	19444.61	1115.21	19452.65	1117.55
19462.9	1117.95	19477.1	1118.31	9486.17	1118.89	19496.87	1114.07	19531.51	1096.62
19546.03	1097.33	19548.73	1097.21	9558.04	1097.48	19574.74	1097.61	19591.87	1092.21
19597.05	1090.29	19618.15	1091.21	9660.06	1091.86	19673.55	1092.93	19739.34	1094.67
19756.1	1095.17	19763.03	1095.31	9792.66	1095.1	19850.8	1094.93	19903.19	1095.06
19913.69	1090.36	19933.59	1091.9	19946	1092.67	20049.21	1092.84	20056.98	1092.83
20077.25	1092.42	20174.92	1090.52	0182.61	1090.54	20238.41	1090.74	20250.25	1090.69
20267.27	1090.35	20365.21	1089.72	0386.55	1090.11	20473.48	1091.06	20479.07	1091.14
20481.6	1092.41	20527.91	1116.52	0544.71	1117.58	20551.28	1116.79	20580.82	1114.1
20586.62	1115.22	20592.95	1116.1	20623.3	1115.98	20635.89	1116.25	20639.82	1116.07
20646.67	1116.03	20655.38	1116.22	0712.57	1116.03	20739.26	111	20740.92	1116.07
20762.38	1115.28	20774.06	1115.32	0779.97	1115.24	20786.6	1115.34	20835.43	1116.46
20846.42	1121.55	20850.12	1121.32	0857.54	1119.87	20878.44	1116.53	20941.72	1116.53
20982.95	1116.48								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17592.29	.035	19486.17	.035	20544.71	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19486.17	20544.71	511.81	511.81	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17592.29	19486.17	1118.89	20544.71	20982.95	1117.58

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1109.25	Element			
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1107.06	Reach Len. (ft)	511.81	511.81	520.00
Crit W.S. (ft)	1102.31	Flow Area (sq ft)		14234.06	
E.G. Slope (ft/ft)	0.002291	Area (sq ft)	3495.32	14234.06	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1216.42	Top Width (ft)	217.42	999.00	
Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)		11.87	
Max Chl Dpth (ft)	23.99	Hydr. Depth (ft)		14.25	
Conv. Total (cfs)	3530980.8	Conv. (cfs)		3530980.8	
Length Wtd. (ft)	511.81	Wetted Per. (ft)		1007.79	
Min Ch El (ft)	1089.70	Shear (lb/sq ft)		2.02	
Alpha	1.00	Stream Power (lb/ft s)		23.98	
Frctn Loss (ft)	1.36	Cum Volume (acre-ft)	1918.04	6078.91	54.37
C & E Loss (ft)	0.05	Cum SA (acres)	100.74	338.32	55.78

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1109.25	Element			
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1107.06	Reach Len. (ft)	511.81	511.81	520.00
Crit W.S. (ft)	1102.31	Flow Area (sq ft)		14234.06	
E.G. Slope (ft/ft)	0.002291	Area (sq ft)		14234.06	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	998.99	Top Width (ft)		998.99	

Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)	11.87
Max Chl Dpth (ft)	17.36	Hydr. Depth (ft)	14.25
Conv. Total (cfs)	3530987.8	Conv. (cfs)	3530987.8
Length Wtd. (ft)	511.81	Wetted Per. (ft)	1007.79
Min Ch El (ft)	1089.70	Shear (lb/sq ft)	2.02
Alpha	1.00	Stream Power (lb/ft s)	23.98
Frctn Loss (ft)	1.36	Cum Volume (acre-ft)	6080.04
C & E Loss (ft)	0.05	Cum SA (acres)	338.32

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.19

INPUT
Description:
Station Elevation Data num= 131

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17868.47	111	317872.22	1112.96	17878.5	1112.4	317906.06	1112.21	7937.27	1112.15
17948.67	1112.01	17971.46	1111.86	17986.85	1112.24	18013.53	1112.21	8096.19	1111.12
18102.73	1111.22	18134.04	1112.05	18142.05	1112.11	8145.04	1111.71	8154.15	1111.25
18183.36	1110.51	18196.9	1110.37	18225.44	1110.74	18234.36	1110.51	8292.49	1110.84
18353.78	1110.15	18501.8	1109.96	18642.55	1110.25	18712.4	1110.71	8716.06	1110.96
18719.43	1110.68	18726.98	1110.44	18788.74	1107.87	18797.78	1107.61	8833.04	1108.51
18848.04	1109.01	18870.09	1109.25	18889.15	1109.51	18904.84	1109.91	8911.41	1110.26
19029.77	1111.35	19032.7	1111.39	19104.02	1081.93	19114.16	1081.31	9134.01	1080.09
19183.28	1047.79	19188.4	1044.61	19195.79	1044.58	19307.62	1044.41	9372.04	1084.4
19396.15	1083.29	19410.84	1087.71	19457.52	1102.86	19482.12	111	9487.07	1112.23
19503.99	1117.88	19535.55	1118.23	19580.46	109	19594.73	1095.61	9603.61	1093.85
19631.85	1087.47	19672.7	1087.11	19678.04	1087.16	19701.97	1087.91	9714.89	1090.68
19726.52	1092.74	19728.93	1092.93	19733.6	1090.68	19748.63	1092.31	9756.06	1090.27
19770.57	1086.43	19789.83	1089.86	19799.13	1091.79	19815.12	1092.21	9846.41	1093.75
19880.57	1093.83	19923.81	1093.84	19958.55	1093.81	19993.29	1094.12	0012.94	1094
20084.62	1093.92	20119.46	1093.76	20130.95	1093.43	20162.91	1092.42	0224.37	1089.79
20233.29	1089.76	20242.06	1089.34	20265.26	1089.14	20296.53	1088.62	0367.15	1089.11
20390.04	1089.26	20427.85	1089.56	20481.37	1090.53	20522.87	1110.72	0530.53	1114.35
20543.32	1115.14	20548.79	1115.57	20580.16	1113.63	20596.01	1112.52	0606.62	1115.42
20633.35	1115.85	20642.78	1116.07	20682.36	1115.66	20749.89	1114.52	0800.98	1114.31
20808.82	111	20811.14	1114.12	20857.81	1114.08	20970.04	1113.52	0977.08	1113.52
20981.42	1114.32	20985.68	1114.78	21028.25	1114.96	21044.92	1114.62	1070.55	1115.24
21135.67	1115.84	21210.52	1115.05	21233.2	1114.94	21353.11	1114.92	1435.26	1115.53
21438.1	1115.64	21457.55	1115.68	21487.41	1115.48	21498.25	1115.42	1529.39	1114.78
21567.97	1115.12	21595.46	1114.82	21620.49	1114.86	21704.77	1115.32	1785.89	1115.77
21855.84	1116.98	21950.96	1117.84	21962.58	1117.51	21980.48	1117.32	2033.04	1117.97
22041.35	1118.12								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17868.47	.035	19535.55	.035	20548.79	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19535.5	520548.79	490	502.45	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17868.47	19535.55	1118.23	20548.79	22041.35	1115.57

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1107.84	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.73	Wt. n-Val.		0.035	
W.S. Elev (ft)	**1105.11**	**Reach Len. (ft)**	**490.00**	**502.45**	**520.00**
Crit W.S. (ft)	1101.53	Flow Area (sq ft)		12740.54	
E.G. Slope (ft/ft)	0.003099	Area (sq ft)	14820.63	12740.54	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1366.69	Top Width (ft)	417.37	949.31	
Vel Total (ft/s)	13.26	Avg. Vel. (ft/s)		13.26	
Max Chl Dpth (ft)	60.71	Hydr. Depth (ft)		13.42	

Conv. Total (cfs)	3035751.0	Conv. (cfs)		3035751.0	
Length Wtd. (ft)	502.45	Wetted Per. (ft)		958.21	
Min Ch El (ft)	1086.43	Shear (lb/sq ft)		2.57	
Alpha	1.00	Stream Power (lb/ft s)		34.12	
Frctn Loss (ft)	0.99	Cum Volume (acre-ft)	1810.43	5920.44	54.37
C & E Loss (ft)	0.31	Cum SA (acres)	97.01	326.87	55.78

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1107.84	Element			
Vel Head (ft)	2.73	Wt. n-Val.		0.035	
W.S. Elev (ft)	1105.11	Reach Len. (ft)	490.00	502.45	520.00
Crit W.S. (ft)	1101.53	Flow Area (sq ft)		12740.54	
E.G. Slope (ft/ft)	0.003099	Area (sq ft)		12740.54	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	949.31	Top Width (ft)		949.31	
Vel Total (ft/s)	13.26	Avg. Vel. (ft/s)		13.26	
Max Chl Dpth (ft)	18.68	Hydr. Depth (ft)		13.42	
Conv. Total (cfs)	3035751.0	Conv. (cfs)		3035751.0	
Length Wtd. (ft)	502.45	Wetted Per. (ft)		958.21	
Min Ch El (ft)	1086.43	Shear (lb/sq ft)		2.57	
Alpha	1.00	Stream Power (lb/ft s)		34.12	
Frctn Loss (ft)	0.99	Cum Volume (acre-ft)		5921.58	
C & E Loss (ft)	0.31	Cum SA (acres)		326.87	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.10

INPUT
Description:
Station Elevation Data num= 138

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17600.59	1112.9	17620.68	1112.34	17646.86	1112.03	17688.41	1111.74	17704.24	1112.1
17719.14	1112.18	17741.7	1111.68	17756.4	1111.07	17848.24	1110.96	18074.7	1111.3
18124.9	1111.23	18130.99	1110.62	18263.83	1109.98	18349.69	1109.65	18551.23	1110
18587.18	1109.89	18617.17	1109.76	18679.02	1109.56	18790.59	1109.24	18799.21	1109.2
18826.91	1109.38	18858.24	1108.36	18865.89	1108.2	18871.8	1109.02	18888.69	1111.7
18924.73	1094.26	18950.29	1081.46	18981.7	1080.71	19039.03	1045.05	19290.6	1045.4
19355.94	1045.47	19360.51	1048.54	19414.92	1085.6	19438.51	1084.48	19442.09	1085.4
19479.15	1095.56	19513.38	1107.78	19519.12	1110.01	19523.16	1111.11	19527.72	1112
19543.34	1116.59	19557.04	1117.46	19576.88	1118.05	19625.46	1096.98	19630.49	1094.9
19636.74	1084.58	19656.27	1083.62	19664	1083.18	19707.71	1083.72	19719.1	1084.8
19752.09	1088.43	19764.19	1089.53	19778.39	1090.58	19819.8	1092.18	19851.38	1094
19859.54	1089.46	19866.15	1085.4	19901.3	1085.07	19960.76	1083.75	19990.62	1083
20044.95	1083.12	20059.64	1083.07	20069.32	1083.61	20085.24	1084.23	20093.93	1088.3
20100.95	1091.32	20119.63	1090.54	20142.57	1089.73	20157.78	1089.12	20182.35	1088.3
20238.55	1086.83	20252.74	1086.55	20296.58	1086.02	20303.64	1086.23	20311.45	1085.7
20323.94	1085.37	20342.66	1084.94	20355.06	1084.95	20378.95	1085.82	20390.46	1085.6
20408.3	1085.93	20431.7	1085.48	20467.32	1085.77	20478.03	1085.8	20495.77	1094.6
20534.13	1112.96	20539.41	1113.15	20545.86	1113.16	20551.73	1113.34	20608.55	1110.1
20612.3	1111.24	20622.42	1113.61	20630.42	1113.64	20660.12	1113.59	20683.8	1114.2
20797.02	1116.45	20802.59	1116.48	20819.36	1113.9	20973.36	1114.12	20993.05	1114.2
21007.1	1115.05	21015.63	1114.93	21024.21	1114.14	21047.61	1114.18	21063.7	1114.3
21091.99	1114.58	21217.52	1114.7	21282.21	1114.44	21373.52	1114.53	21392.21	1115

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   21426 1114.2421435.77 1114.1721463.99 1114.8321517.28 1114.7721539.61  1114.6
 21542.9 1114.7221602.03 1114.5621650.05 1114.5321747.34 1114.6621788.15  1114.8
21843.92 1114.0621877.29 1113.7721888.46 1113.7721906.58 1113.4421918.44  1113.6
21977.61 1114.2721997.78 1114.1222002.26 1114.1922004.64 1113.8422112.68  1113.6
22115.58 1114.8722134.58 1116.15 22165.7 1115.8722209.46 1114.6722245.06  1114.7
22272.55 1114.0322349.62 1114.6822409.32 1114.41

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17600.59    .03519576.88    .03520551.73    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19576.8820551.73           481.37  481.37  481.37             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17600.5919576.88 1118.0520551.7322409.32 1113.34

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1106.55   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.71   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1104.84   Reach Len. (ft)           481.37    481.37     481.37
  Crit W.S. (ft)            1097.07   Flow Area (sq ft)                 16093.27
  E.G. Slope (ft/ft)       0.001360   Area (sq ft)            26088.09  16093.27
  Q Total (cfs)           169000.00   Flow (cfs)                       169000.00
  Top Width (ft)            1512.06   Top Width (ft)            602.26    909.81
  Vel Total (ft/s)            10.50   Avg. Vel. (ft/s)                    10.50
  Max Chl Dpth (ft)           59.79   Hydr. Depth (ft)                    17.69
  Conv. Total (cfs)       4582329.5   Conv. (cfs)                     4582329.5
  Length Wtd. (ft)           481.37   Wetted Per. (ft)                   926.56
  Min Ch El (ft)            1083.00   Shear (lb/sq ft)                     1.47
  Alpha                        1.00   Stream Power (lb/ft s)              15.49
  Frctn Loss (ft)              0.63   Cum Volume (acre-ft)     1580.35  5754.15      54.37
  C & E Loss (ft)              0.02   Cum SA (acres)             91.27   316.15      55.78


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1106.55   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.71   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1104.83   Reach Len. (ft)           481.37    481.37     481.37
  Crit W.S. (ft)            1097.08   Flow Area (sq ft)                 16092.72
  E.G. Slope (ft/ft)       0.001360   Area (sq ft)                      16092.72
  Q Total (cfs)           169000.00   Flow (cfs)                       169000.00
  Top Width (ft)             909.80   Top Width (ft)                     909.80
  Vel Total (ft/s)            10.50   Avg. Vel. (ft/s)                    10.50
  Max Chl Dpth (ft)           21.83   Hydr. Depth (ft)                    17.69
  Conv. Total (cfs)       4582072.0   Conv. (cfs)                     4582072.0
  Length Wtd. (ft)           481.37   Wetted Per. (ft)                   926.56
  Min Ch El (ft)            1083.00   Shear (lb/sq ft)                     1.48
  Alpha                        1.00   Stream Power (lb/ft s)              15.49
  Frctn Loss (ft)              0.63   Cum Volume (acre-ft)              5755.28
  C & E Loss (ft)              0.02   Cum SA (acres)                     316.15


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.00

INPUT
Description:
Station Elevation Data    num=     226
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14098.54  1120.514128.08 1120.14 14198.7 1120.0114421.36 1119.2814431.34 1119.84
14448.43  1119.314456.42 1119.3414471.01 1119.0614490.05 1118.8814516.45 1119.53
14537.44  1119.714554.43 1119.5814617.79  1119.914660.16 1119.6514666.56 1119.38
14787.23  1118.914878.68 1119.7814889.68 1118.8714909.73  1119.614913.37 1119.56
14934.09  1120.115004.13 1120.0215086.65 1120.83 15149.1 1119.7215170.02 1119.89
15211.59  1120.415214.69 1119.08   15221 1117.1315223.38 1117.4115231.65 1119.09
15369.53  1118.415529.51 1117.5815568.29 1117.6515589.35 1117.7315625.57 1117.19
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15713.69  1117.215728.81 1117.3915756.29  1117.315778.83 1118.9915786.84 1118.99
15860.73  1118.615896.88 1118.3816022.87    111816123.06 1116.7216218.41 1116.25
16287.25  1115.816300.33 1117.7416307.46 1117.92 16312.8 1117.77   16334 1108.63
16334.91    110916352.76 1117.5716359.24 1117.5516368.86 1116.9516396.58 1116.92
16404.96  1116.616496.79 1115.5816509.53 1115.7416540.83 1115.53 16545.1 1115.56
16719.07  1116.616790.96 1116.5716831.51 1116.6116898.02 1116.8416936.04 1116.86
16953.66  1116.716979.21 1116.8817023.76 1117.6917046.68 1117.9317068.68 1118.12
17072.78  1118.217080.88 1114.1217095.31 1119.1417112.28 1118.8417122.51 1117.68
17124.11  1117.717151.42  1114.417210.52 1107.3317265.35  1109.617279.62 1110.22
17323.85  1110.717327.55 1110.7917339.24 1110.71 17455.2 1110.6817513.41 1110.58
17539.87  1110.517573.18 1111.0417591.05 1111.1917607.24 1110.6117633.85 1110.87
17658.39  1109.417668.45 1109.4717742.89 1109.7517841.92 1110.3517990.57 1110.29
18050.32  1110.4 18104.4 1110.8918111.39 1110.9118127.89 1110.7118160.16 1111.14
18166.69  1111.218319.16 1110.0118410.48 1109.9818426.92 1109.8118479.03 1109.33
18518.93  1109.618557.34 1109.9118562.47 1109.92 18596.5 1109.6718602.19 1109.68
18677.67  1109.218690.17 1108.9918715.41 1108.7918722.39 1109.3618734.94  1110.2
18740.09  1110.818780.12 1091.1618802.42 1080.9218813.26    108118834.72 1080.55
18889.72  1051.618903.97 1044.4119200.31 1045.2419354.64 1046.1319368.47 1046.18
19370.82  1047.819425.74 1084.1819443.19 1083.4919485.52 1094.1819493.29 1096.86
19532.95  1109.919544.05 1113.8219551.29 1116.2919560.29 1116.1219574.59 1116.78
19584.47  1117.519632.35 1094.7319637.36 1092.2819648.07 1092.4219657.88 1087.81
19670.13  1085.619677.79 1084.8919724.59 1082.9819785.99 1083.2319801.01 1083.06
19819.83  1083.219833.32 1083.2419843.23 1083.0619893.28 1081.9919914.53 1081.38
19934.85  1081.319942.34 1081.8319970.45 1082.8419973.18 1082.4320001.14 1083.03
20034.89  1084.820050.24 1084.7420065.58 1084.8320068.23 1084.6720103.24 1084.14
20131.69  1082.720143.96 1085.3620148.75 1088.5820176.06 1087.8620181.16 1087.84
20214.08  1088.220228.34 1087.66 20255.4 1087.7520266.51 1088.5420293.74 1088.64
20315.95  1088.920340.21 1088.8820357.96 1088.6820368.51 1088.3220383.76 1088.06
20393.33  1087.220428.08 1086.4620448.71 1086.9620485.81    108920518.72 1104.87
20535.78  1113.320540.04 1113.4420551.23 1113.1620580.83 1111.8420589.82 1112.24
20600.75  1111.620615.43 1110.4920646.56 1110.6620697.83 1109.93   20706 1110.67
20707.21  1110.120715.01 1115.9120728.15 1118.6320730.93 1120.6620743.72 1114.93
 20745.4  1114.420785.35 1114.9420789.93 1116.83 20809.4 1122.6520837.73 1122.07
20861.48  1114.420900.21 1114.2820939.63 1114.0120945.97 1113.7120974.02 1111.87
20982.49  1112.220990.46 1113.28   21006 1113.1521055.12 1113.8221160.88 1114.41
21227.71  1114.421317.97 1113.6521340.57 1113.6621367.07 1113.8321407.84 1113.83
21455.78  1113.421480.61 1113.5621489.69  1113.421551.01 1112.9521621.93 1112.61
21681.36  1112.821734.31 1112.6221813.77 1112.2721854.83 1112.1321976.67 1111.87
22006.05  1111.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14098.54    .03519584.47    .03520540.04    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19584.4720540.04               510  506.49  506.49             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14098.5419584.47  1117.520540.0422006.05 1113.44

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1105.90   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.65   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1104.25   Reach Len. (ft)            510.00     506.49     506.49
  Crit W.S. (ft)            1096.14   Flow Area (sq ft)                   16376.45
  E.G. Slope (ft/ft)       0.001261   Area (sq ft)             35082.66   16376.45
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1667.39   Top Width (ft)             762.31     905.09
  Vel Total (ft/s)            10.32   Avg. Vel. (ft/s)                       10.32
  Max Chl Dpth (ft)           59.84   Hydr. Depth (ft)                       18.09
  Conv. Total (cfs)       4759874.5   Conv. (cfs)                        4759874.5
  Length Wtd. (ft)           506.49   Wetted Per. (ft)                      914.21
  Min Ch El (ft)            1081.30   Shear (lb/sq ft)                       1.41
  Alpha                        1.00   Stream Power (lb/ft s)                14.55
  Frctn Loss (ft)              0.71   Cum Volume (acre-ft)      1242.35    5574.74      54.37
  C & E Loss (ft)              0.02   Cum SA (acres)              83.73     306.12      55.78


Warning: Divided flow computed for this cross-section.
```

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1105.90	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.65	Wt. n-Val.		0.035	
W.S. Elev (ft)	1104.25	Reach Len. (ft)	510.00	506.49	506.49
Crit W.S. (ft)	1096.12	Flow Area (sq ft)		16375.79	
E.G. Slope (ft/ft)	0.001261	Area (sq ft)		16375.79	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	905.09	Top Width (ft)		905.09	
Vel Total (ft/s)	10.32	Avg. Vel. (ft/s)		10.32	
Max Chl Dpth (ft)	22.95	Hydr. Depth (ft)		18.09	
Conv. Total (cfs)	4759559.0	Conv. (cfs)		4759559.0	
Length Wtd. (ft)	506.49	Wetted Per. (ft)		914.21	
Min Ch El (ft)	1081.30	Shear (lb/sq ft)		1.41	
Alpha	1.00	Stream Power (lb/ft s)		14.55	
Frctn Loss (ft)	0.71	Cum Volume (acre-ft)		5575.88	
C & E Loss (ft)	0.02	Cum SA (acres)		306.12	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.91

INPUT
Description:
Station Elevation Data num= 211

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14099.2	1119.714	559.42	1118.48	14566.97	1118.51	14578.11	1119.46	14593.53	1119.09
14601.62	1118.814	746.19	1119.11	14854.73	1118.68	14937.59	1118.43	14951.24	1117.55
14966.68	1117.414	990.32	1118.08	15006.25	1118.36	15033.56	1118.27	15048.46	1118.25
15062.29	1118	15083.6	1120.41	15093.56	1120.29	15108.89	1119.73	15234.76	1120.77
15337.22	1119	15374.11	1119.08	15404.53	1118.89	15474.81	1118.29	15587.87	1117.53
15589.63	1117.61	5604.39	1118.98	15646.54	1119.21	5679.98	1119.29	15705.15	1118.52
15713.71	1118.51	5778.73	1119.05	15798.21	1118.99	15827.48	1118.25	15897.7	1117.91
15921.07	1117.41	5929.28	1116.68	15931.21	1116	15949.88	1115.76	15973.81	1115.71
15991.09	1116.81	6180.68	1115.75	16274.57	1114.75	16288.72	1114.68	16314.26	1114.45
16402.38	1114	16429.73	1113.85	16441.14	1116.62	16451.87	1116.33	16458.12	1113.19
16470.06	1107	16487.19	1115.04	16491.62	1116.81	16504.46	1116.91	6509.38	1115.83
16514.62	1115.51	6530.29	1115.96	16543.87	1115.93	16636.54	1115.94	16757.34	1115.65
16760.46	1116	16771.55	1115.49	16775.94	1115.21	6794.31	1115.46	16813.69	1116.08
16944.03	1115.41	6966.49	1115.16	16976.03	1114.66	16993.21	1113.94	17023.17	1113.55
17058.98	1112.9	17099.6	1111.66	17134.49	1109.16	17172.2	1109.07	17315.71	1108.88
17381.63	1108.91	7422.97	1109.31	7426.29	1109.05	17446.84	1107.87	17498.83	1109.49
17518.15	1110.21	7530.75	1111.11	17545.5	1110.78	17557.96	1110.98	17596.95	1111.04
17620.83	1110.61	7686.59	1110.51	7707.19	1110.54	17803.03	1110.49	17862.12	1110.02
17903.23	1109.91	7956.17	1109.71	7992.63	1109.52	17999.6	1109.53	18086.52	1109.38
18347.34	1109	18413.24	1108.95	18479.03	1109.11	18494.69	1107.91	18513.77	1109.06
18550.3	1108.21	8568.86	1109.29	18573.12	1109.61	18584.94	1109.97	18629.91	1089.27
18649.22	1080.11	8674.53	1080.43	18684.62	1075.77	18751.76	1045.81	19017.44	1045.16
19362.16	1045.51	9380.07	1057.11	9419.67	1083.22	19469.66	1091.18	19489.79	1094.18
19494.38	1095.71	9510.69	1101.67	19550.02	1115.21	9570.88	1116.09	19579.12	1116.14
19606.91	1102.31	9629.92	1090.42	19637.51	1090.12	19644.24	1089.62	19646.83	1088.31
19648.97	1087.81	9689.66	1083.46	19695.04	1083.15	19721.45	1082.32	19750.64	1084.27
19792.85	1084.51	9827.51	1083.41	9875.56	1083.48	19883.38	1083.52	19904.38	1083.27
19946.63	1083.11	9996.87	1082.73	20001.81	1082.68	20066.92	1084.56	20106.23	1083.09
20115.87	1083	20146.21	1083.12	0171.89	1082.99	20203.8	1082.96	20223.46	1082.77
20228.02	1086.32	0238.83	1092.68	20243.18	1090.64	20250.58	1090.26	20284.19	1090.18
20308.83	1090.42	0319.78	1089.82	0333.36	1089.91	20356.79	1088.91	20391.15	1089.01
20399.3	1089.22	0411.96	1089.67	20446.41	1090.79	20468.88	1091.56	20484.39	1091.9
20494.43	1095.72	0506.88	1102.16	20525.95	1111.05	20542.47	1112.35	20588.08	1111.82
20603.92	1111.92	0609.85	1113.39	20614.96	1113.15	20669.51	1112.04	20688.84	1111.49
20707	1111.22	0734.16	1111.22	20793.21	1110.58	20809.02	1110.36	20829.83	1110.92
20852.41	1112.42	0876.38	1112.75	20906.45	1112.82	20937.2	1113.44	20983.26	1114.06
21016.37	1113.32	1024.58	1113.33	21034.96	1113.18	21053.76	1112.63	21074.52	1111.84
21094.09	1111.6	21101.4	1111.14	21111.91	1110.13	21123.63	1110.32	21142.99	1110.89
21181.47	1111.82	1203.41	1112.22	1254.24	1112.21	1300.76	1111.16	1318.07	1112.06
21404.77	1112	21588.54	1112.13	21607.47	1111.77	21651.58	1111.97	21678.44	1112.06
21691.4	1110.32	1706.27	1112.45	21782.41	1112.05	21815.83	1111.61	21896.63	1111.46
21901.86	1111.52	1931.58	1112.35	22003.66	1112.57	22039.7	1112.52	2465.13	1110.71
22514.01	1110.6								

Manning's n Values num= 3

Length Wtd. (ft)	508.39	Wetted Per. (ft)		905.63	
Min Ch El (ft)	1080.17	Shear (lb/sq ft)		1.27	
Alpha	1.00	Stream Power (lb/ft s)		12.56	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)	97.61	5013.95	54.37
C & E Loss (ft)	0.02	Cum SA (acres)	58.81	274.95	55.78

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1103.80	Element			
Vel Head (ft)	1.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1102.29	Reach Len. (ft)	500.00	508.39	520.00
Crit W.S. (ft)	1093.15	Flow Area (sq ft)		17098.18	
E.G. Slope (ft/ft)	0.001078	Area (sq ft)		17098.18	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	897.91	Top Width (ft)		897.91	
Vel Total (ft/s)	9.88	Avg. Vel. (ft/s)		9.88	
Max Chl Dpth (ft)	22.12	Hydr. Depth (ft)		19.04	
Conv. Total (cfs)	5146910.5	Conv. (cfs)		5146910.5	
Length Wtd. (ft)	508.39	Wetted Per. (ft)		905.62	
Min Ch El (ft)	1080.17	Shear (lb/sq ft)		1.27	
Alpha	1.00	Stream Power (lb/ft s)		12.56	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)		5015.13	
C & E Loss (ft)	0.02	Cum SA (acres)		274.95	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.62

INPUT
Description:
Station Elevation Data num= 128

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17142.5	1115.817	184.69	1109.7717	189.53	1109.3217	259.99	1108.4217	304.26	1107.66
17319.68	1105.717	329.73	1104.3117	375.77	1098.1517	385.87	1097.9817	407.25	1098.07
17460.95	1106.617	479.37	1109.4717	507.52	1109.84	17512	1109.3917	534.88	1107.69
17543.2	1106.717	614.91	1106.4717	685.22	1106.1917	854.67	1105.9117	959.61	1105.83
18032.1	110618	093.53	1106.0318	105.57	1105.618	236.52	1106.0318	340.33	1105.88
18462.7	1105.518	594.48	1105.5918	709.29	1105.6718	762.77	1105.7618	765.56	1105.67
18934.43	1106.318	943.81	1106.3618	965.82	1107.918	972.63	1108.6219	018.75	1109.19
19055.14	110919	116.38	1108.7919	165.03	1111.2719	184.54	1111.1419	250.11	1110.58
19257.95	1109.6	19289.7	1106.5819	307.87	1107.3119	324.83	1107.8519	342.73	1103.51
19352.54	110119	369.09	1100.919	452.78	1106.87	19464.6	1108.5919	499.01	1108.85
19522.86	1108.819	525.52	1108.6219	538.92	1108.5819	547.37	1108.6819	548.15	1108.84
19553.43	1111.219	564.56	1111.0519	584.87	1103.8919	632.28	1086.6219	639.92	1083.9
19641.78	108419	679.02	1083.9919	738.88	1083.1819	788.98	1083.3219	815.96	1082.59
19863.35	1081.719	910.35	1081.0119	945.76	1080.6619	965.57	1080.6320	021.96	1081.11
20032.29	1081.220	047.02	1081.91	20104.6	1084.2620	150.01	1082.9220	158.64	1082.78
20177.75	1084.220	227.23	1078.6920	234.38	1078.9120	239.96	1079.2320	257.65	1079.48
20264.91	1079.520	285.15	1080.28	20290.2	1079.720	299.23	1078.3320	302.46	1078.39
20306.78	1079.220	322.87	1082.9420	358.89	1083.36	20360.7	1083.5120	396.11	1087.98
20423.78	1088.3	20458.1	1088.5520	465.44	1090.3820	499.35	1099.5320	505.64	1101.28
20513.86	1101.420	540.01	1101.4120	577.65	1101.7620	608.55	1102.2920	649.81	1101.57
20650.06	1104.320	671.03	1104.2620	754.59	1103.7720	804.75	1105.4320	840.84	1106.33
20844.54	1106.5	20876	1108.9220	900.25	1108.320	930.29	1108.0720	960.84	1108.07
21408.47	1109.321	426.76	1109.2621	613.71	110921	660.45	1108.6121	671.94	1107.77
21675.14	1107.421	683.28	1109.4221	699.37	1108.9	21726.2	1108.4421	746.45	1108.84
21896.19	1108.621	910.62	1108.0321	920.67	1107.8421	941.45	1107.8722	118.94	1108.49
22492.85	1107.622	533.76	1108.34	22583.5	1108.99				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17142.5	.035	19564.56	.035	20876	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan:
19564.56	20876	470	499.71	570	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17142.5	19564.56	1111.05	20876	22583.5	1108.92

CROSS SECTION OUTPUT Profile #PF#1

```
     Sta   n Val     Sta   n Val     Sta   n Val
 14099.2    .03519579.12    .03520542.47    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19579.1220542.47           503.44  503.44  503.44            .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14099.219579.12 1116.1420542.4722514.01 1112.35
```

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1105.17	Element			
Vel Head (ft)	1.87	Wt. n-Val.		0.035	
W.S. Elev (ft)	1103.31	Reach Len. (ft)	503.44	503.44	503.44
Crit W.S. (ft)	1096.30	Flow Area (sq ft)		15408.17	
E.G. Slope (ft/ft)	0.001545	Area (sq ft)	42993.48	15408.17	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1820.47	Top Width (ft)	916.03	904.45	
Vel Total (ft/s)	10.97	Avg. Vel. (ft/s)		10.97	
Max Chl Dpth (ft)	58.15	Hydr. Depth (ft)		17.04	
Conv. Total (cfs)	4299575.0	Conv. (cfs)		4299575.0	
Length Wtd. (ft)	503.44	Wetted Per. (ft)		914.39	
Min Ch El (ft)	1082.32	Shear (lb/sq ft)		1.63	
Alpha	1.00	Stream Power (lb/ft s)		17.83	
Frctn Loss (ft)	0.69	Cum Volume (acre-ft)	785.30	5389.96	54.37
C & E Loss (ft)	0.07	Cum SA (acres)	73.91	295.60	55.78

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1105.17	Element			
Vel Head (ft)	1.87	Wt. n-Val.		0.035	
W.S. Elev (ft)	1103.30	Reach Len. (ft)	503.44	503.44	503.44
Crit W.S. (ft)	1096.31	Flow Area (sq ft)		15407.28	
E.G. Slope (ft/ft)	0.001545	Area (sq ft)		15407.28	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	904.44	Top Width (ft)		904.44	
Vel Total (ft/s)	10.97	Avg. Vel. (ft/s)		10.97	
Max Chl Dpth (ft)	20.98	Hydr. Depth (ft)		17.04	
Conv. Total (cfs)	4299177.0	Conv. (cfs)		4299177.0	
Length Wtd. (ft)	503.44	Wetted Per. (ft)		914.38	
Min Ch El (ft)	1082.32	Shear (lb/sq ft)		1.63	
Alpha	1.00	Stream Power (lb/ft s)		17.83	
Frctn Loss (ft)	0.69	Cum Volume (acre-ft)		5391.11	
C & E Loss (ft)	0.07	Cum SA (acres)		295.60	

```
CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.81

INPUT
Description:
Station Elevation Data    num=     207
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14826.86  1117.315074.81 1117.3215121.98  1117.415234.89 1117.1615368.88 1116.83
15374.04  1117.815395.67 1122.3915417.92 1122.1115421.66    112215554.53 1118.45
15577.36  1119.315719.49  1114.915731.96 1113.8915742.84 1113.15 15776.7 1115.71
15945.17  1115.515966.24 1115.5416005.02 1115.42 16009.4 1116.7816018.59 1118.76
16025.55  1116.716031.99 1115.4816122.77 1115.6116131.04 1117.3216147.34  1120.1
16169.01  1114.616180.01 1114.5516219.77 1114.1616225.87 1114.1616240.21 1113.18
 16284.9  1113.716305.02 1113.7416452.71 1113.9316465.24 1115.2316478.67 1114.97
 16487.9  1109.416495.05 1105.6716508.62 1112.01 16516.7 1115.3916523.38  1115.3
16535.02  1115.716550.34 1115.3416563.07 1114.7416568.64 1114.7916577.33 1115.17
16611.89  1113.816622.88 1113.6416644.22 1113.6316652.51 1113.7216696.87 1113.95
16728.68  1113.916734.43 1114.1116808.69 1115.4416840.78 1115.6916894.19 1115.07
 16942.9    111516958.95 1114.9916986.36 1114.4116994.93 1114.3117000.64 1113.59
17007.03  1113.117010.39 1113.14 17020.3  1114.2 17069.5 1113.4417090.81 1113.43
17110.64    111317117.84 1112.2417147.92 1111.2617188.49    111117209.44 1110.53
17256.88  1109.817282.12 1109.9617305.71 1109.8417331.56 1109.6517372.28 1110.32
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17373.99  1110.517384.34  1110.417469.49 1110.1417509.83 1109.2317519.01 1108.92
17551.66  1108.217578.56 1108.0517626.01 1108.6317667.54 1108.28   17898 1109.08
17920.34  1109.217956.23 1109.3118005.24 1109.0618161.61 1108.5818331.29 1108.01
18351.89  1108.918392.86 1107.6518423.28 1108.1918577.84 1107.6118586.22 1107.59
18602.22  1109.418613.37 1109.7518642.23 1099.7418702.44 1081.0718721.85 1081.29
18788.63    105518812.86  1045.3 18834.8 1045.1318883.55 1045.3218988.23 1044.74
19257.63  1044.9 19316.1 1044.9119372.68 1072.2519385.55  1080.419393.08 1080.33
19411.19  1080.519434.69 1086.4319442.05 1088.1319453.88 1091.5119464.06 1094.18
19490.85  1104.819511.71 1113.6619532.66 1111.8219548.98 1112.1219557.65 1112.45
19562.91  1113.619565.56 1113.51 19577.4  1113.619622.58 1096.6819646.03 1087.62
19658.12  1087.219664.26 1085.5619691.93 1084.1419727.69 1082.1319753.37 1081.99
19779.03  1082.519789.25 1082.5419834.99 1080.0919890.35  1081.619933.18 1083.41
19935.92  1083.5 19961.9 1083.2719980.83 1083.0319995.55 1083.2320005.99 1082.91
20022.31  1082.620040.29 1082.2920080.75 1081.8120099.51 1082.1320130.96 1081.32
20144.15  1082.3   20145 1082.7820156.68  1086.520163.67  1089.320168.14 1090.38
20179.75  1091.820183.35 1090.7520194.66 1086.3120205.53  1082.320214.36  1082.3
20220.69  1083.720229.44 1087.3620251.13 1084.4920262.14 1085.0320271.54 1080.74
20280.37  1079.9 20287.7 1079.5520300.81 1084.4620358.85 1084.4220381.15  1084.2
20397.02  1084.520467.37  1086.120517.23 1110.4520533.96 1110.6820570.19 1110.64
20594.26  1110.320610.59  1110.420632.61 1110.2620674.67 1110.4320701.11 1110.57
21037.42    1111 21124.1 1110.9621136.91 1111.1321179.36  1111.321182.02 1111.27
21202.46  1110.721219.63 1112.6321221.91 1112.6221258.72 1111.6121333.79 1109.91
21340.19  1109.721388.49 1109.6721725.44 1110.1321891.54 1110.3221894.05 1110.29
21912.43  1109.621938.45 1109.3921983.98 1109.2722000.48 1108.5122023.47 1109.89
22041.79    111022072.76 1109.9722184.77 1110.12 22202.1  1110.222227.52 1110.66
22237.06  1110.822260.98 1110.56 22301.5 1110.59 22873.9 1109.0722942.44 1108.51
22955.28  1107.322990.05 1107.36

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14826.86    .035 19577.4    .03520517.23    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19577.420517.23           498.18  498.18  498.18             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14826.86 19577.4  1113.620517.2322990.05 1110.45

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1104.41   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.64   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1102.78   Reach Len. (ft)           498.18     498.18     498.18
  Crit W.S. (ft)            1094.35   Flow Area (sq ft)                  16455.12
  E.G. Slope (ft/ft)       0.001230   Area (sq ft)            38204.85   16455.12
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1747.47   Top Width (ft)            852.26     895.21
  Vel Total (ft/s)            10.27   Avg. Vel. (ft/s)                     10.27
  Max Chl Dpth (ft)           58.04   Hydr. Depth (ft)                     18.38
  Conv. Total (cfs)       4818069.5   Conv. (cfs)                       4818069.5
  Length Wtd. (ft)           498.18   Wetted Per. (ft)                    908.52
  Min Ch El (ft)            1079.55   Shear (lb/sq ft)                      1.39
  Alpha                        1.00   Stream Power (lb/ft s)               14.29
  Frctn Loss (ft)              0.57   Cum Volume (acre-ft)      316.08   5205.83      54.37
  C & E Loss (ft)              0.04   Cum SA (acres)             63.69    285.20      55.78


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1104.41   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.64   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1102.77   Reach Len. (ft)           498.18     498.18     498.18
  Crit W.S. (ft)            1094.37   Flow Area (sq ft)                  16454.13
  E.G. Slope (ft/ft)       0.001231   Area (sq ft)                       16454.13
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             895.20   Top Width (ft)                       895.20
  Vel Total (ft/s)            10.27   Avg. Vel. (ft/s)                     10.27
  Max Chl Dpth (ft)           23.22   Hydr. Depth (ft)                     18.38
  Conv. Total (cfs)       4817613.0   Conv. (cfs)                       4817613.0
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Length Wtd. (ft)	498.18	Wetted Per. (ft)	908.51
Min Ch El (ft)	1079.55	Shear (lb/sq ft)	1.39
Alpha	1.00	Stream Power (lb/ft s)	14.29
Frctn Loss (ft)	0.57	Cum Volume (acre-ft)	5206.99
C & E Loss (ft)	0.04	Cum SA (acres)	285.20

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.72

INPUT
Description:
Station Elevation Data num= 166

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15417.47	1116.115	474.29	1115.95	15547.94	1116.21	15569.22	1116.22	15709.49	1115.31
15721.83	1115.2	15778.3	1121.81	15787.24	1122.35	15809.79	1123.56	15819.12	1123.39
15850.98	1123.81	5869.71	1122.74	15892.68	1118.94	15909.8	1119.16	15995.41	1116.79
16017.62	1116.11	6022.65	1116.44	16051.43	1117.75	16149.15	1115.03	16186.44	1113.96
16270.13	1124.9	16273.2	1125.38	16279.29	1125.45	16347.32	1125.78	16403.26	1121.94
16454.9	1115.91	6501.53	1111.11	16536.68	1113.09	16550.6	1113.61	6579.09	1113.04
16613.89	1107	16634.61	1103.51	6695.61	1103.51	16721.07	1103.57	16737.76	1106.35
16753.95	1108.21	6757.65	1113.58	16777.91	1117.71	16820.39	1126.69	16841.31	1129.83
16928.63	1127.61	6931.47	1127.58	16943.11	1124.83	16992.13	1113.54	17010.85	1113.65
17025.38	1113.61	7038.21	1111.68	17047.17	1110.44	17055.95	1110.45	17114.12	1110.28
17234.89	1109.81	7512.57	1108.19	17553.86	1107.82	17598.86	1107.57	17670.56	1107.36
17804.97	1107	17971.68	1106.53	18088.71	1106.04	18104.41	1106.02	18131.14	1106.19
18186.07	1106.81	8226.13	1106.54	18254.5	1106.41	8266.22	1106.94	18292.31	1106.98
18329.34	1106.71	8362.99	1106.63	18447.6	1106.76	18532.58	1106.96	18584.51	1107.09
18595.09	1107.31	8662.68	1107.71	18794.66	1107.98	18892.55	1108.08	18911.03	1107.96
18975.29	1107.91	9003.02	1107.85	19134.52	1107.78	19170.42	1107.96	19188.23	1107.95
19344.38	1108.51	9404.19	1108.54	19546.41	1108.87	19550.04	1108.85	19559.44	1111.18
19569.21	1112.11	9622.28	1093.27	19646.4	1084.62	19714.35	1083.76	19737.49	1083.74
19767.27	1082.7	19787	1082.11	19845.37	1080.65	19898.93	1080.33	19903.45	1080.5
19973.17	1082.71	9976.11	1082.74	20043.38	1081.04	20055.06	1080.79	20118.31	1080.17
20136.87	1080.42	0206.06	1080.49	20212.4	1080.78	20218.2	1082.12	0260.96	1080.89
20269.28	1080.62	0271.57	1080.96	20312.74	1085.73	20378.18	1082.57	20456.41	1085.24
20460.07	1085.32	0509.38	1109.43	20523.78	1110.58	20530.13	1110.51	20589.99	1108.84
20604.23	1108.92	0617.71	1109.52	20684.05	1109.34	20695.96	1109.27	20804.74	1109.46
20942.06	1109.82	1026.78	1109.83	21215.57	1110.16	21268.95	1110.46	21380.55	1110.76
21406.78	1111	21446.98	1110.79	21469.18	1109.99	21509.85	1109.95	21547.67	1110.01
21601.77	1109.82	1625.14	1109.85	21630.48	1109.81	21645.52	1108.52	1701.95	1107.87
21919.77	1107.22	1953.35	1107.23	21977.46	1107.22	22192.68	1107.31	22212.18	1106.98
22273.96	1107.42	2285.04	1106.64	22291.96	1106.04	22333.53	1106.47	22352.34	1106.74
22365.19	1107	22371.8	1107.04	22376.74	1107.27	22381.57	1107.76	22404.63	1108.01
22415.5	1108.62	2426.85	1109.09	22439.42	1109.12	2503.13	1109.23	22771.44	1108.9
22782.52	1108.92	2824.21	1108.72	2825.73	1108.14	22838.66	1104.74	22874.12	1104.65
22891.81	1104.7	22901.3	1104.54	22905	1105.92	22919.78	1109.45	22988.94	1109.12
23211.3	1107.9								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
15417.47	.035	19569.21	.035	20523.78	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19569.21	20523.78	500	508.39	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
15417.47	19569.21	1112.12	20523.78	23211.3	1110.58

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1103.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1102.29	Reach Len. (ft)	500.00	508.39	520.00
Crit W.S. (ft)	1093.15	Flow Area (sq ft)		17099.27	
E.G. Slope (ft/ft)	0.001078	Area (sq ft)		17099.27	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	897.91	Top Width (ft)		897.91	
Vel Total (ft/s)	9.88	Avg. Vel. (ft/s)		9.88	
Max Chl Dpth (ft)	22.12	Hydr. Depth (ft)		19.04	
Conv. Total (cfs)	5147435.5	Conv. (cfs)		5147435.5	

E.G. Elev (ft)	1103.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.72	Wt. n-Val.		0.035	
W.S. Elev (ft)	1101.44	Reach Len. (ft)	470.00	499.71	570.00
Crit W.S. (ft)	1093.62	Flow Area (sq ft)		16067.80	
E.G. Slope (ft/ft)	0.001429	Area (sq ft)	193.54	16067.80	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1054.35	Top Width (ft)	103.03	951.32	
Vel Total (ft/s)	10.52	Avg. Vel. (ft/s)		10.52	
Max Chl Dpth (ft)	23.11	Hydr. Depth (ft)		16.89	
Conv. Total (cfs)	4471166.0	Conv. (cfs)		4471166.0	
Length Wtd. (ft)	499.71	Wetted Per. (ft)		957.53	
Min Ch El (ft)	1078.33	Shear (lb/sq ft)		1.50	
Alpha	1.00	Stream Power (lb/ft s)		15.74	
Frctn Loss (ft)	0.85	Cum Volume (acre-ft)	96.50	4820.41	54.37
C & E Loss (ft)	0.03	Cum SA (acres)	58.22	264.16	55.78

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1103.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.72	Wt. n-Val.		0.035	
W.S. Elev (ft)	1101.44	Reach Len. (ft)	470.00	499.71	570.00
Crit W.S. (ft)	1093.62	Flow Area (sq ft)		16066.40	
E.G. Slope (ft/ft)	0.001429	Area (sq ft)		16066.40	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	951.16	Top Width (ft)		951.16	
Vel Total (ft/s)	10.52	Avg. Vel. (ft/s)		10.52	
Max Chl Dpth (ft)	23.11	Hydr. Depth (ft)		16.89	
Conv. Total (cfs)	4471017.5	Conv. (cfs)		4471017.5	
Length Wtd. (ft)	499.71	Wetted Per. (ft)		957.37	
Min Ch El (ft)	1078.33	Shear (lb/sq ft)		1.50	
Alpha	1.00	Stream Power (lb/ft s)		15.75	
Frctn Loss (ft)	0.85	Cum Volume (acre-ft)		4821.59	
C & E Loss (ft)	0.03	Cum SA (acres)		264.16	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.52

INPUT
Description: Upstream face of I-10 bridge

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18100	112019	233.73	112419	487.43	1123.08	19487.53	111619	521.34	1099.5
19587.97	1098.1	19618.9	1087.75	19624.77	1087.75	19641.67	1083.2	19664.55	1083.2
19753.06	1084.45	19759.02	1084.5	19822.18	1083.2	19887.31	1083.2	19893.28	1083.2
19956.43	1083.2	20021.57	1083.2	20027.54	1083.2	20090.69	1083.2	20155.83	1083.2
20161.8	1083.2	20224.95	1083.2	20290.09	1083.2	20296.05	1083.2	20359.21	1083.2
20424.34	1083.2	20430.31	1083.2	20441.25	1083.2	20486	1097.3	20515.84	1098.2
20545.67	111420	561.59	1115.3	20561.69	1122.4	21103.4	1120		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18100	.04	19487.53	.03	20561.59	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19487.53	20561.59	256.5	256.5	256.5	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18100	19487.53	111620	561.59	21103.4	1115.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1102.27	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.07	Wt. n-Val.		0.035	

W.S. Elev (ft)	1100.20	Reach Len. (ft)	23.50	23.50	23.50
Crit W.S. (ft)	1094.26	Flow Area (sq ft)		14652.61	
E.G. Slope (ft/ft)	0.002072	Area (sq ft)		14652.61	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	999.71	Top Width (ft)		999.71	
Vel Total (ft/s)	11.53	Avg. Vel. (ft/s)		11.53	
Max Chl Dpth (ft)	17.00	Hydr. Depth (ft)		14.66	
Conv. Total (cfs)	3712869.5	Conv. (cfs)		3712869.5	
Length Wtd. (ft)	23.50	Wetted Per. (ft)		1004.88	
Min Ch El (ft)	1083.20	Shear (lb/sq ft)		1.89	
Alpha	1.00	Stream Power (lb/ft s)		21.75	
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	95.45	4644.20	54.37
C & E Loss (ft)	0.04	Cum SA (acres)	57.67	252.97	55.78

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1102.27	Element			
Vel Head (ft)	2.07	Wt. n-Val.		0.035	
W.S. Elev (ft)	1100.20	Reach Len. (ft)	23.50	23.50	23.50
Crit W.S. (ft)	1094.26	Flow Area (sq ft)		14653.22	
E.G. Slope (ft/ft)	0.002072	Area (sq ft)		14653.22	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	999.72	Top Width (ft)		999.72	
Vel Total (ft/s)	11.53	Avg. Vel. (ft/s)		11.53	
Max Chl Dpth (ft)	17.00	Hydr. Depth (ft)		14.66	
Conv. Total (cfs)	3713114.8	Conv. (cfs)		3713114.8	
Length Wtd. (ft)	23.50	Wetted Per. (ft)		1004.88	
Min Ch El (ft)	1083.20	Shear (lb/sq ft)		1.89	
Alpha	1.00	Stream Power (lb/ft s)		21.75	
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)		4645.39	
C & E Loss (ft)	0.04	Cum SA (acres)		252.97	

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 216.505

INPUT
Description: I-10 Bridge
Distance from Upstream XS = 23.5
Deck/Roadway Width = 210
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 12

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
18100	1120	112	19233.73	1124	112	19487.43	1123.08	1123.08
19487.53	1123.08	1116	19618.9	1123.42	1116.34	19753.06	1123.48	1116.4
19887.31	1123.53	1116.45	20027.54	1123.49	1116.41	20161.8	1123.26	1116.19
20296.05	1123.02	1115.93	20430.31	1122.69	1115.62	20561.59	1122.45	1115.37

Upstream Bridge Cross Section Data
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18100	112	19233.73	112	19487.43	1123.08	19487.53	111	19521.34	1099.5
19587.97	1098.1	19618.9	1087.75	19624.77	1087.75	19641.67	1083.21	19664.55	1083.2
19753.06	1084.45	19759.02	1084.5	19822.18	1083.21	19887.31	1083.21	19893.28	1083.2
19956.43	1083.22	20021.57	1083.22	20027.54	1083.22	20090.69	1083.22	20155.83	1083.2
20161.8	1083.22	20224.95	1083.22	20290.09	1083.22	20296.05	1083.22	20359.21	1083.2
20424.34	1083.22	20430.31	1083.22	20441.25	1083.2	20486	1097.32	20515.84	1098.2
20545.67	111	20561.59	1115.32	20561.69	1122.4	21103.4	1120		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18100	.04	19487.53	.03	20561.59	.04

Bank Sta: Left	Right	Coeff Contr.	Expan.
19487.53	20561.59	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18100	19487.53	111	20561.59	21103.4	1115.3

```
Downstream  Deck/Roadway Coordinates
    num=      12
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18100    1120    112019233.73    1124    112419487.43 1123.08 1123.08
19487.53 1123.08    1116 19618.9 1123.42 1116.3419753.06 1123.48  1116.4
19887.31 1123.53 1116.4520027.54 1123.49 1116.41 20161.8 1123.26 1116.19
20296.05 1123.02 1115.9320430.31 1122.69  1115.620561.59 1122.45 1115.37

Downstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02  1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18100     .0419487.53    .03520561.59     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19487.5320561.59             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  7

Pier Data
Pier Station     Upstream=   19620    Downstream=   19620
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   19755    Downstream=   19755
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   19890    Downstream=   19890
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20025    Downstream=   20025
Upstream     num=       2
    Width   Elev    Width   Elev
```

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       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20160    Downstream=   20160
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20295    Downstream=   20295
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20430    Downstream=   20430
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1102.27   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1100.20   E.G. Elev (ft)               1102.17       1101.33
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1099.75       1098.38
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1094.62       1094.61
  Q Weir (cfs)                           Max Chl Dpth (ft)              16.55         15.18
  Weir Sta Lft (ft)                      Vel Total (ft/s)               12.48         13.78
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           13544.36      12267.22
  Weir Submerg                           Froude # Chl                   0.58          0.66
  Weir Max Depth (ft)                    Specif Force (cu ft)       173610.44     162761.94
  Min Top Rd (ft)              1115.30   Hydr Depth (ft)                14.17         13.64
  Min El Prs (ft)              1116.45   W.P. Total (ft)              1180.25       1104.36
  Delta EG (ft)                   1.12   Conv. Total (cfs)          2925549.0     2592762.8
  Delta WS (ft)                   1.67   Top Width (ft)                955.95        899.64
  BR Open Area (sq ft)        29744.80   Frctn Loss (ft)                0.79          0.08
  BR Open Vel (ft/s)             13.78   C & E Loss (ft)                0.05          0.10
  Coef of Q                              Shear Total (lb/sq ft)         2.39          2.95
  Br Sel Method            Energy only   Power Total (lb/ft s)         29.83         40.59
```

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1102.27	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1100.20	E.G. Elev (ft)	1102.17	1101.33
Q Total (cfs)	169000.00	W.S. Elev (ft)	1099.75	1098.38
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1094.62	1094.61
Q Weir (cfs)		Max Chl Dpth (ft)	16.55	15.18
Weir Sta Lft (ft)		Vel Total (ft/s)	12.48	13.78
Weir Sta Rgt (ft)		Flow Area (sq ft)	13545.18	12268.43
Weir Submerg		Froude # Chl	0.58	0.66
Weir Max Depth (ft)		Specif Force (cu ft)	173618.06	162771.28
Min Top Rd (ft)	1115.30	Hydr Depth (ft)	14.17	13.64
Min El Prs (ft)	1116.45	W.P. Total (ft)	1180.27	1104.45
Delta EG (ft)	1.11	Conv. Total (cfs)	2925816.0	2593054.5
Delta WS (ft)	1.67	Top Width (ft)	955.95	899.71
BR Open Area (sq ft)	29744.80	Frctn Loss (ft)	0.79	0.08
BR Open Vel (ft/s)	13.78	C & E Loss (ft)	0.05	0.10
Coef of Q		Shear Total (lb/sq ft)	2.39	2.95
Br Sel Method	Energy only	Power Total (lb/ft s)	29.82	40.58

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.49

INPUT
Description: Downstream face of I-10 bridge

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18100	112	019233.73	112	419487.43	1123.08	19487.53	111	619521.34	1099.5
19587.97	1098.1	19618.9	1087.75	19624.77	1087.75	19641.67	1083.2	19664.55	1083.2
19753.06	1084.45	19759.02	1084.5	19822.18	1083.2	19887.31	1083.2	19893.28	1083.2
19956.43	1083.2	20021.57	1083.2	20027.54	1083.2	20090.69	1083.2	20155.83	1083.2
20161.8	1083.2	20224.95	1083.2	20290.09	1083.2	20296.05	1083.2	20359.21	1083.2
20424.34	1083.2	20430.31	1083.2	20441.25	1083.2	20486	1097.3	20515.84	1098.2
20545.67	111	420561.59	1115.3	20561.69	1122.4	21103.4	1120		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18100	.04	19487.53	.03	20561.59	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19487.53	20561.59	23.25	23.25	23.25	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18100	19487.53	111	20561.59	21103.4	1115.3

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1101.15	Element			
Vel Head (ft)	2.62	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.53	Reach Len. (ft)	23.25	23.25	23.25
Crit W.S. (ft)	1094.27	Flow Area (sq ft)		13010.51	
E.G. Slope (ft/ft)	0.002871	Area (sq ft)		13010.51	
Q Total (cfs)	**169000.00**	**Flow (cfs)**		**169000.00**	
Top Width (ft)	949.03	Top Width (ft)		949.03	
Vel Total (ft/s)	12.99	Avg. Vel. (ft/s)		12.99	
Max Chl Dpth (ft)	15.33	Hydr. Depth (ft)		13.71	
Conv. Total (cfs)	3153832.0	Conv. (cfs)		3153832.0	
Length Wtd. (ft)	23.25	Wetted Per. (ft)		953.60	
Min Ch El (ft)	1083.20	Shear (lb/sq ft)		2.45	

Alpha	1.00	Stream Power (lb/ft s)		31.77	
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	95.45	4567.70	54.37
C & E Loss (ft)	0.16	Cum SA (acres)	57.67	247.48	55.78

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1101.15	Element			
Vel Head (ft)	2.62	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.53	Reach Len. (ft)	23.25	23.25	23.25
Crit W.S. (ft)	1094.27	Flow Area (sq ft)		13011.78	
E.G. Slope (ft/ft)	0.002870	Area (sq ft)		13011.78	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	949.02	Top Width (ft)		949.02	
Vel Total (ft/s)	12.99	Avg. Vel. (ft/s)		12.99	
Max Chl Dpth (ft)	15.33	Hydr. Depth (ft)		13.71	
Conv. Total (cfs)	3154346.0	Conv. (cfs)		3154346.0	
Length Wtd. (ft)	23.25	Wetted Per. (ft)		953.61	
Min Ch El (ft)	1083.20	Shear (lb/sq ft)		2.45	
Alpha	1.00	Stream Power (lb/ft s)		31.76	
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)		4568.89	
C & E Loss (ft)	0.16	Cum SA (acres)		247.48	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.42

INPUT
Description:
Station Elevation Data num= 72

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15777.7	1112.1	15814.7	1111.7	15831.8	1110.6	15875.7	1110.6	15885.9	1111.3
15893.7	1110.9	16065.1	1110.8	16181.6	1110.4	16240.1	1110.4	16387.1	1109.3
16549.8	1108.9	16759.7	1109.7	16884.3	1111.2	16896.3	1107.6	16901.6	1105.5
16913.6	1111	16927.7	1110.7	16938.6	1109.3	17091.4	1109.6	17141.3	1105.7
17272	1104.7	17353.3	1106.1	17450	1106.2	17489	1105.9	17502.3	1107.2
17504.8	1107.2	17515.4	1105.7	17645.7	1105.4	17957.8	1104.6	18072.2	1104.6
18179.4	1104.8	18216.5	1105	18243.2	1104.5	18287	1102.9	18295	1103.8
18318	1105.2	18344.5	1103.3	18351.5	1102	18404.5	1102.5	18478.9	1099.8
18570.3	1099.5	18605.7	1098.9	18636.3	1099	18687.6	1107.9	18696.7	1107.4
18726.1	1101.6	18730.1	1100.6	18787.2	1100.9	18803.2	1100.4	18861.6	1100.1
18886.8	1100.3	18910.6	1099.7	18933	1098.7	18949.5	1098.8	18971.8	1098.2
19069.8	1100	19105.6	1101.7	19140.3	1102.6	19190.3	1106.6	19238.1	1106.5
19263.1	1102.7	19282	1099.5	19320.5	1099.6	19503	1099	19535.3	1098.8
19593	1082.7	20065.5	1082.3	20416.4	1082	20517.4	1107.9	20540.4	1108.4
21279.3	1108.4	21332.3	1117.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
15777.7	.04	19535.3	.035	20517.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19535.3	20517.4	510	488.7	410	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
15777.7	19238.1	1106.6	20517.4	21332.3	1107.9

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1100.93	Element			
Vel Head (ft)	2.08	Wt. n-Val.	0.040	0.035	
W.S. Elev (ft)	1098.86	Reach Len. (ft)	510.00	488.70	410.00
Crit W.S. (ft)	1093.10	Flow Area (sq ft)	0.26	14613.04	
E.G. Slope (ft/ft)	0.001943	Area (sq ft)	22.02	14613.04	
Q Total (cfs)	169000.00	Flow (cfs)	0.04	168999.95	

Top Width (ft)	1034.14	Top Width (ft)	87.30	946.84	
Vel Total (ft/s)	11.56	Avg. Vel. (ft/s)	0.15	11.57	
Max Chl Dpth (ft)	16.86	Hydr. Depth (ft)	0.03	15.43	
Conv. Total (cfs)	3834042.0	Conv. (cfs)	0.9	3834041.0	
Length Wtd. (ft)	488.70	Wetted Per. (ft)	9.21	951.17	
Min Ch El (ft)	1082.00	Shear (lb/sq ft)	0.00	1.86	
Alpha	1.00	Stream Power (lb/ft s)	0.00	21.55	
Frctn Loss (ft)	0.81	Cum Volume (acre-ft)	95.45	4560.33	54.37
C & E Loss (ft)	0.13	Cum SA (acres)	57.64	246.97	55.78

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1100.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.08	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.86	Reach Len. (ft)	510.00	488.70	410.00
Crit W.S. (ft)	1093.10	Flow Area (sq ft)		14614.20	
E.G. Slope (ft/ft)	0.001943	Area (sq ft)		14614.20	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	946.84	Top Width (ft)		946.84	
Vel Total (ft/s)	11.56	Avg. Vel. (ft/s)		11.56	
Max Chl Dpth (ft)	16.86	Hydr. Depth (ft)		15.43	
Conv. Total (cfs)	3834380.0	Conv. (cfs)		3834380.0	
Length Wtd. (ft)	488.70	Wetted Per. (ft)		951.23	
Min Ch El (ft)	1082.00	Shear (lb/sq ft)		1.86	
Alpha	1.00	Stream Power (lb/ft s)		21.55	
Frctn Loss (ft)	0.81	Cum Volume (acre-ft)		4561.51	
C & E Loss (ft)	0.13	Cum SA (acres)		246.97	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.33

INPUT
Description:
Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16758.3	1108.5	16790.3	1107.7	16915.7	1107.5	16918.4	1107.9	16967.4	1107.4
17088.3	1107.2	17177.1	1106.2	17230.7	1104.1	17307.8	1103.2	17334.2	1104.9
17463	1103.9	17551.9	1102.8	17622.5	1102.7	17630	1102.1	17648.2	1103
17795.3	1103.3	17860	1103.2	17891.3	1102.2	17916.7	1102.4	17965.2	1101.9
18006.5	1101	18033.6	1102.9	18180.2	1102.5	18367.3	1102	18378.1	1101.3
18378.9	1101.5	18394.8	1101.2	18436.8	1101.5	18455.1	1100.2	18456.6	1099.1
18460.2	1098.5	18515.1	1096.6	18522	1099.8	18679.4	1098.3	18698.7	1105.3
18708.3	1106	18720.5	1103.8	18776.6	1098.7	18854.4	1098	18903.5	1095.3
18944.6	1095.5	19011.4	1101.4	19047.5	1101.5	19084.2	1098.3	19216.8	1097.9
19269.7	1097.9	19277.9	1097.7	19340.8	1106.5	19365.5	1107.1	19449.3	1085.8
19464.7	1082.2	19617.8	1081.5	19658.8	1081.1	20011.3	1080.8	20067.2	1081
20260.4	1081.5	20350	1081.5	20372.7	1082.2	20453.9	1106.7	20475	1107.5
21204.4	1107.5	21217.8	1103.3	21250.9	1104.2	21299.5	1103.3	21362.4	1102.8
21472.6	1102.9	21493.1	1102.9	21553.9	1103.7	21577.9	1103.5	21604.5	1102.4
21612.7	1101.6	21638.7	1101.3	21661.9	1095.5	21751.1	1112.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16758.3	.04	19365.5	.035	20453.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19365.5	20453.9	600	490.24	380	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16758.3	19365.5	1107.1	20453.9	21751.1	1106.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1099.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.63	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.35	Reach Len. (ft)	600.00	490.24	380.00
Crit W.S. (ft)	1091.37	Flow Area (sq ft)		16489.69	

E.G. Slope (ft/ft)	0.001446	Area (sq ft)	370.01	16489.69	37.18
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1473.62	Top Width (ft)	421.23	1026.33	26.05
Vel Total (ft/s)	10.25	Avg. Vel. (ft/s)		10.25	
Max Chl Dpth (ft)	17.55	Hydr. Depth (ft)		16.07	
Conv. Total (cfs)	4444829.0	Conv. (cfs)		4444829.0	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1030.72	
Min Ch El (ft)	1080.80	Shear (lb/sq ft)		1.44	
Alpha	1.00	Stream Power (lb/ft s)		14.80	
Frctn Loss (ft)	0.60	Cum Volume (acre-ft)	93.15	4385.86	54.20
C & E Loss (ft)	0.10	Cum SA (acres)	54.67	235.90	55.66

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1099.99	Element			
Vel Head (ft)	1.63	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.36	Reach Len. (ft)	600.00	490.24	380.00
Crit W.S. (ft)	1091.37	Flow Area (sq ft)		16490.95	
E.G. Slope (ft/ft)	0.001445	Area (sq ft)		16490.95	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1026.33	Top Width (ft)		1026.33	
Vel Total (ft/s)	10.25	Avg. Vel. (ft/s)		10.25	
Max Chl Dpth (ft)	17.56	Hydr. Depth (ft)		16.07	
Conv. Total (cfs)	4445389.5	Conv. (cfs)		4445389.5	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1030.72	
Min Ch El (ft)	1080.80	Shear (lb/sq ft)		1.44	
Alpha	1.00	Stream Power (lb/ft s)		14.79	
Frctn Loss (ft)	0.60	Cum Volume (acre-ft)		4387.03	
C & E Loss (ft)	0.10	Cum SA (acres)		235.90	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.23

INPUT
Description:
Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16307.2	1106.8	16347.4	1106.3	16584.4	1106.6	16655.9	1106.7	16722.9	1105
16805.1	1104.8	16843.8	1105.4	16940.7	1105.1	17025.5	1103.7	17072.4	1104.3
17106.6	1103.9	17271.4	1105.1	17286.3	1105.2	17300.1	1103	17309.7	1103.1
17479.7	1103.3	17486.2	1103.3	17748.9	1103.1	17792.4	1103	17807.8	1101.8
17964.2	1101.2	18041.5	1100.9	18063.2	1101.5	18221.3	1101.1	18316.7	1097.6
18393.9	1100.2	18494.3	1099.7	18526.6	1100.5	18534.7	1099.9	18548.2	1097
18576.9	1100.1	18638.8	1099.4	18676.7	1096.6	18856.1	1094.3	18888.6	1092.6
18923.6	1105.7	18937.2	1105.4	18965.6	1093.9	18973.7	1091.2	18983.9	1091.1
19024.1	1096.2	19175.7	1097.7	19329.5	1097.3	19356.4	1093	19372.4	1091.7
19394.5	1090.9	19443.1	1084.8	19458.8	1083.8	19477	1083.8	19514.7	1080.5
19554.9	1078.5	19707.6	1078.8	19807	1078.7	19970	1078.7	20101	1079.1
20257.8	1079.2	20360.8	1079.3	20429.8	1103.9	20444.5	1103.8	21274.9	1103.8
21292.4	1106.1	21298.1	1106.3	21304.5	1103.8	21313.9	1101.7	21457.4	1101.4
21690	1101.2	21797.9	1101.7	21816.8	1103.7	21840.4	1102.2	21943.8	1102.1
21957.3	1102.8	21973.7	1101.5	22038.8	1101	22065.3	1102.4	22088.6	1101
22106	1098	22140.9	1104.1	22146.7	1104.5	22197.5	1114		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16307.2	.04	19329.5	.035	20429.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19329.5	20429.8	590	517.61	450	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16307.2	19329.5	1105	20429.8	22197.5	1105

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1099.28	Element			

Vel Head (ft)	1.30	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.99	Reach Len. (ft)	590.00	517.61	450.00
Crit W.S. (ft)	1089.39	Flow Area (sq ft)		18502.08	
E.G. Slope (ft/ft)	0.001058	Area (sq ft)	1205.93	18502.08	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1738.50	Top Width (ft)	654.78	1083.71	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.49	Hydr. Depth (ft)		17.07	
Conv. Total (cfs)	5194599.5	Conv. (cfs)		5194599.5	
Length Wtd. (ft)	517.61	Wetted Per. (ft)		1087.96	
Min Ch El (ft)	1078.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.26	
Frctn Loss (ft)	0.52	Cum Volume (acre-ft)	82.30	4188.95	54.04
C & E Loss (ft)	0.03	Cum SA (acres)	47.26	224.03	55.54

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1099.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.30	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.99	Reach Len. (ft)	590.00	517.61	450.00
Crit W.S. (ft)	1089.39	Flow Area (sq ft)		18503.28	
E.G. Slope (ft/ft)	0.001059	Area (sq ft)		18503.28	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1083.71	Top Width (ft)		1083.71	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.49	Hydr. Depth (ft)		17.07	
Conv. Total (cfs)	5192976.0	Conv. (cfs)		5192976.0	
Length Wtd. (ft)	517.61	Wetted Per. (ft)		1088.65	
Min Ch El (ft)	1078.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.26	
Frctn Loss (ft)	0.52	Cum Volume (acre-ft)		4190.11	
C & E Loss (ft)	0.03	Cum SA (acres)		224.03	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.13

INPUT
Description:
Station Elevation Data num= 67

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16426.6	1105.9	16587.5	1104.7	16635.7	1102.6	16819.4	1103.3	16993.1	1102.9
17098.1	1102.8	17115.4	1100.5	17132.4	1100.6	17142	1102.8	17188.2	1102.3
17212.9	1103.3	17259.7	1102.7	17444	1103	17594.1	1102.7	17626.7	1102.3
17648.9	1100.8	17726.6	1100.8	17763	1102.2	17831.1	1102.1	17922.1	1103.5
17930.8	1101.9	17948.1	1103.8	17970.1	1100.9	18007	1100.9	18014.4	1095.7
18705.2	1095.7	18812.9	1096.6	18825.4	1095.8	18974.2	1096.9	19012	1096.6
19022.3	1098.1	19071.7	1097.7	19097.3	1098.8	19117.4	1098.8	19143.8	1101.1
19154.2	1103.6	19166	1103.6	19179.4	1099.6	19318.1	1099.4	19345.1	1091.3
19390.3	1087	19444.1	1082.8	19458.1	1083	19534.5	1080	19580.9	1082.3
19595.2	1078.2	19849.2	1078.4	19937.8	1078.2	20155.1	1078	20385	1078.6
20445.7	1100.3	21392	1100.3	21412.6	1104.5	21436	1098.6	21594.6	1099.3
21748.3	1100.3	21786.3	1099.8	21807.4	1098.6	21868.2	1100	21940	1100.5
22096.1	1101.4	22142.8	1101.3	22335.7	1100	22363.4	1098.9	22490.9	1100.4
22516.1	1096.7	22597.4	1115.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16426.6	.04	19318.1	.035	20445.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19318.1	20445.7	550	500.46	390	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16426.6	19318.1	1099.4	20445.7	22597.4	1100.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1098.73	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.54	Reach Len. (ft)	550.00	500.46	390.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		19303.70	
E.G. Slope (ft/ft)	0.000954	Area (sq ft)	1650.34	19303.70	3.97
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2129.80	Top Width (ft)	1006.68	1113.68	9.44
Vel Total (ft/s)	8.75	Avg. Vel. (ft/s)		8.75	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		17.33	
Conv. Total (cfs)	5471702.5	Conv. (cfs)		5471702.5	
Length Wtd. (ft)	500.46	Wetted Per. (ft)		1118.94	
Min Ch El (ft)	1078.00	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		8.99	
Frctn Loss (ft)	0.50	Cum Volume (acre-ft)	62.96	3964.33	54.02
C & E Loss (ft)	0.01	Cum SA (acres)	36.00	210.97	55.49

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1098.73	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.54	Reach Len. (ft)	550.00	500.46	390.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		19304.79	
E.G. Slope (ft/ft)	0.000954	Area (sq ft)		19304.79	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1113.68	Top Width (ft)		1113.68	
Vel Total (ft/s)	8.75	Avg. Vel. (ft/s)		8.75	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		17.33	
Conv. Total (cfs)	5472215.0	Conv. (cfs)		5472215.0	
Length Wtd. (ft)	500.46	Wetted Per. (ft)		1118.94	
Min Ch El (ft)	1078.00	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		8.99	
Frctn Loss (ft)	0.50	Cum Volume (acre-ft)		3965.48	
C & E Loss (ft)	0.01	Cum SA (acres)		210.97	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.04

INPUT
Description:
Station Elevation Data num= 63

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17056.9	1104.8	17064.5	1104.7	17069.2	1099.8	17072	1101.9	17078.9	1105
17149.1	1103.4	17162.9	1101.9	17281	1100	17549.7	1099.4	17599.6	1100.8
17818.3	1099.8	17961.6	1101.8	18091.7	1101.7	18098	1099.8	18798.9	1099.8
18807.5	1094.8	18960.8	1094.8	19054.4	1094.7	19081.9	1095.5	19098	1093.5
19151.6	1094.3	19175.6	1095	19188.4	1098.5	19201	1100	19214.9	1098.4
19219.3	1099.1	19227.7	1103.2	19386.1	1101.6	19417.8	1089	19500.7	1080.6
19516.7	1080.2	19531.5	1078.4	19608.3	1077.5	19724.9	1081.7	19739.1	1080.4
19758.6	1081.1	19770	1077.8	19800	1077.8	20231.5	1078.4	20418.1	1078.3
20424.4	1078.2	20473.4	1099.4	20478	1099	21487.5	1099	21501.9	1098.9
21528.7	1104.2	21544.2	1099.7	21573.3	1099.2	21582.6	1100.4	21586.2	1102.2
21768	1099.8	21775.2	1099	21961	1098.7	21988.6	1099.7	22183.1	1099.4
22224.8	1100.5	22465.8	1100	22481.3	1098.4	22530.7	1098.7	22555.3	1100.8
22840.9	1100.4	22866.7	1097.9	22941.8	1117.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17056.9	.04	19386.1	.035	20473.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19386.1	20473.4	540	507.78	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17056.9	19386.1	1101.6	20473.4	22941.8	1099.4

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1098.22	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.29	Wt. n-Val.		0.035	
W.S. Elev (ft)	1096.93	Reach Len. (ft)	540.00	507.78	500.00
Crit W.S. (ft)	1088.52	Flow Area (sq ft)		18515.97	
E.G. Slope (ft/ft)	0.001041	Area (sq ft)	847.18	18515.97	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1448.65	Top Width (ft)	378.81	1069.83	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.43	Hydr. Depth (ft)		17.31	
Conv. Total (cfs)	5238312.5	Conv. (cfs)		5238312.5	
Length Wtd. (ft)	507.78	Wetted Per. (ft)		1076.39	
Min Ch El (ft)	1077.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.20	
Frctn Loss (ft)	0.94	Cum Volume (acre-ft)	47.19	3747.08	54.00
C & E Loss (ft)	0.21	Cum SA (acres)	27.26	198.43	55.45

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1098.22	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.29	Wt. n-Val.		0.035	
W.S. Elev (ft)	1096.93	Reach Len. (ft)	540.00	507.78	500.00
Crit W.S. (ft)	1088.52	Flow Area (sq ft)		18517.14	
E.G. Slope (ft/ft)	0.001041	Area (sq ft)		18517.14	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1069.84	Top Width (ft)		1069.84	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.43	Hydr. Depth (ft)		17.31	
Conv. Total (cfs)	5238850.5	Conv. (cfs)		5238850.5	
Length Wtd. (ft)	507.78	Wetted Per. (ft)		1076.39	
Min Ch El (ft)	1077.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.20	
Frctn Loss (ft)	0.94	Cum Volume (acre-ft)		3748.21	
C & E Loss (ft)	0.21	Cum SA (acres)		198.43	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.94

INPUT
Description:
Station Elevation Data num= 65

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17234.9	1103.6	17416.5	1099.3	17481.8	1099.6	17669.1	1098.4	17750	1099.1
17946.3	1099.3	18106.7	1099.8	18125.7	1102.5	18151.3	1094.6	18167.9	1094.6
18209	1090.7	18234.4	1099.1	18274.9	1092.7	18296.5	1092.5	18324.6	1096.4
18363.1	1100	18415	1106.7	18417.8	1107.8	18426.6	1103.4	19038.8	1103.4
19077.4	1103.5	19085.3	1101.4	19097.5	1104.1	19147.9	1103.4	19268.7	1104.6
19306.1	1104.5	19526.4	1107.5	19620.3	1079.3	19632.6	1079.5	19650.2	1077.8
19673.9	1077.8	20074	1078.4	20226	1078.4	20242.2	1082.6	20312.6	1082.8
20361.4	1085.9	20380.6	1089.1	20408	1090.1	20426	1093.3	20477.9	1093.4
20496.8	1098.5	20512.7	1098	20521.3	1094.3	20544.4	1094.2	20552.5	1096.4
21573.5	1096.4	21577.1	1100.2	21638.8	1099.7	21664.8	1103.7	21680.7	1100.4
21856.5	1099.3	22065	1098.8	22070.7	1098.8	22073.1	1097.8	22355.6	1099.5
22366.6	1099.8	22599.5	1099.2	22620.8	1098.1	22669.8	1098	22679.1	1099.5
22906.4	1098.8	23101.2	1100.9	23111.4	1099.5	23139.6	1106.3	23179.1	1117.8

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17234.9	.04	19526.4	.035	20496.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19526.4	20496.8	560	540.02	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17234.9	19526.4	1107.5	20496.8	23179.1	1098.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1097.08	Element			
Vel Head (ft)	3.38	Wt. n-Val.		0.035	
W.S. Elev (ft)	1093.70	Reach Len. (ft)	560.00	540.02	520.00
Crit W.S. (ft)	1090.81	Flow Area (sq ft)		11461.59	
E.G. Slope (ft/ft)	0.004117	Area (sq ft)	93.26	11461.59	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	983.97	Top Width (ft)	77.30	906.67	
Vel Total (ft/s)	14.74	Avg. Vel. (ft/s)		14.74	
Max Chl Dpth (ft)	15.90	Hydr. Depth (ft)		12.64	
Conv. Total (cfs)	2633937.0	Conv. (cfs)		2633937.0	
Length Wtd. (ft)	540.02	Wetted Per. (ft)		910.11	
Min Ch El (ft)	1077.80	Shear (lb/sq ft)		3.24	
Alpha	1.00	Stream Power (lb/ft s)		47.73	
Frctn Loss (ft)	2.09	Cum Volume (acre-ft)	41.36	3572.36	54.00
C & E Loss (ft)	0.04	Cum SA (acres)	24.43	186.91	55.45

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1097.08	Element			
Vel Head (ft)	3.37	Wt. n-Val.		0.035	
W.S. Elev (ft)	1093.70	Reach Len. (ft)	560.00	540.02	520.00
Crit W.S. (ft)	1090.81	Flow Area (sq ft)		11464.57	
E.G. Slope (ft/ft)	0.004113	Area (sq ft)		11464.57	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.67	Top Width (ft)		906.67	
Vel Total (ft/s)	14.74	Avg. Vel. (ft/s)		14.74	
Max Chl Dpth (ft)	15.90	Hydr. Depth (ft)		12.64	
Conv. Total (cfs)	2635069.5	Conv. (cfs)		2635069.5	
Length Wtd. (ft)	540.02	Wetted Per. (ft)		910.12	
Min Ch El (ft)	1077.80	Shear (lb/sq ft)		3.23	
Alpha	1.00	Stream Power (lb/ft s)		47.68	
Frctn Loss (ft)	2.09	Cum Volume (acre-ft)		3573.46	
C & E Loss (ft)	0.04	Cum SA (acres)		186.91	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.84

INPUT
Description:
Station Elevation Data num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17657.2	1101.6	17764.4	1101.1	17778.7	1099.6	17915.7	1096.1	18947	1096.1
18949.6	1098.8	18966	1095.8	19012.5	1096.3	19065.4	1099.6	19087.3	1099.8
19091.9	1097.4	19117.9	1099	19128.4	1100.8	19135.6	1097.9	19142.8	1097.9
19299.1	1098.5	19370.8	1098.4	19556.3	1100.9	19597.1	1077	19685.5	1077.2
19875.2	1077.5	19951	1077.7	19963.2	1080.6	19989.6	1080.1	19999.6	1077.7
20186.5	1077.9	20315.6	1078.3	20324.3	1075.8	20340	1076	20351.9	1079.6
20416.4	1079	20443.6	1092.1	20461.6	1098.2	20612.7	1096.8	20680.5	1097.4
21713	1097.4	21721.9	1098	21747.8	1102.3	21761.3	1098.5	21898.1	1098.1

22152.1	1097.3	22203.5	1096.9	22219.4	1097.9	22403	1099.1	22420.2	1097.7
22434.6	1098.7	22545.4	1098.4	22704	1099.2	22777.7	1097.8	22788.5	1100.1
22799.7	1097.6	22986.5	1097.8	23064	1099.6	23323.1	1098.4	23377.2	1117.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17657.2	.04	19556.3	.035	20461.6	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19556.3	20461.6	120	123.82	130	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17657.2	19556.3	1100.9	20461.6	23377.2	1098.2

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1094.94	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.23	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.71	Reach Len. (ft)	120.00	123.82	130.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		11719.46	
E.G. Slope (ft/ft)	0.003651	Area (sq ft)		11719.46	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	870.81	Top Width (ft)		870.81	
Vel Total (ft/s)	14.42	Avg. Vel. (ft/s)		14.42	
Max Chl Dpth (ft)	15.91	Hydr. Depth (ft)		13.46	
Conv. Total (cfs)	2797094.8	Conv. (cfs)		2797094.8	
Length Wtd. (ft)	123.82	Wetted Per. (ft)		879.22	
Min Ch El (ft)	1075.80	Shear (lb/sq ft)		3.04	
Alpha	1.00	Stream Power (lb/ft s)		43.81	
Frctn Loss (ft)	0.36	Cum Volume (acre-ft)	40.76	3428.67	54.00
C & E Loss (ft)	0.21	Cum SA (acres)	23.93	175.89	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1094.94	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.23	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.72	Reach Len. (ft)	120.00	123.82	130.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		11725.41	
E.G. Slope (ft/ft)	0.003644	Area (sq ft)		11725.41	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	870.81	Top Width (ft)		870.81	
Vel Total (ft/s)	14.41	Avg. Vel. (ft/s)		14.41	
Max Chl Dpth (ft)	15.92	Hydr. Depth (ft)		13.46	
Conv. Total (cfs)	2799436.0	Conv. (cfs)		2799436.0	
Length Wtd. (ft)	123.82	Wetted Per. (ft)		879.24	
Min Ch El (ft)	1075.80	Shear (lb/sq ft)		3.03	
Alpha	1.00	Stream Power (lb/ft s)		43.73	
Frctn Loss (ft)	0.36	Cum Volume (acre-ft)		3429.72	
C & E Loss (ft)	0.21	Cum SA (acres)		175.89	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.82

INPUT
Description: Upstream Face of 24th St. Bridge
Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18260	1096	18620	1094.7	19170	1096	19549.9	1097.71	19550	1094.5
19550.1	1088.1	19553.1	1088.1	19587.4	1076	20384.4	1076	20407.9	1085.7
20410.9	1085.7	20410.9	1094.7	20411	1097.8	21080	1097.4	21490	1100

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

18260	.04	19550	.035	20410.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19550	20410.9	115.96	115.96	115.96	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18260	19550	1094.5	20410.9	21490	1085.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1094.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.53	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.84	Reach Len. (ft)	25.98	25.98	25.98
Crit W.S. (ft)	1087.02	Flow Area (sq ft)		13249.11	
E.G. Slope (ft/ft)	0.002409	Area (sq ft)		13249.11	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.86	Top Width (ft)		860.86	
Vel Total (ft/s)	12.76	Avg. Vel. (ft/s)		12.76	
Max Chl Dpth (ft)	15.84	Hydr. Depth (ft)		15.39	
Conv. Total (cfs)	3443548.5	Conv. (cfs)		3443548.5	
Length Wtd. (ft)	25.98	Wetted Per. (ft)		874.68	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.28	
Alpha	1.00	Stream Power (lb/ft s)		29.05	
Frctn Loss (ft)	0.08	Cum Volume (acre-ft)	40.76	3393.18	54.00
C & E Loss (ft)	0.04	Cum SA (acres)	23.93	173.43	55.45

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1094.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.85	Reach Len. (ft)	25.98	25.98	25.98
Crit W.S. (ft)	1087.02	Flow Area (sq ft)		13254.68	
E.G. Slope (ft/ft)	0.002405	Area (sq ft)		13254.68	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.86	Top Width (ft)		860.86	
Vel Total (ft/s)	12.75	Avg. Vel. (ft/s)		12.75	
Max Chl Dpth (ft)	15.85	Hydr. Depth (ft)		15.40	
Conv. Total (cfs)	3445927.0	Conv. (cfs)		3445927.0	
Length Wtd. (ft)	25.98	Wetted Per. (ft)		874.69	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.28	
Alpha	1.00	Stream Power (lb/ft s)		29.01	
Frctn Loss (ft)	0.08	Cum Volume (acre-ft)		3394.22	
C & E Loss (ft)	0.04	Cum SA (acres)		173.43	

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 215.815

INPUT
Description: 24th Street
Distance from Upstream XS = 25.98
Deck/Roadway Width = 64
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 13

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19550	1097.71	1094.54	19618.9	1098.05	1094.87	19690.9	1098.45	1095.27
19762.9	1098.66	1095.48	19837.9	1098.67	1095.5	19906.9	1098.93	1095.76
19978.9	1098.93	1095.76	20053.9	1098.94	1095.77	20125.9	1098.83	1095.66
20197.9	1098.69	1095.51	20269.9	1098.47	1095.3	20341.9	1098.19	1095.01
20410.9	1097.85	1094.68						

Upstream Bridge Cross Section Data
Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18260	1096	18620	1094.7	19170	1096	19549.9	1097.71	19550	1094.5
19550.1	1088.1	19553.1	1088.1	19587.4	1076	20384.4	1076	20407.9	1085.7
20410.9	1085.7	20410.9	1094.7	20411	1097.8	21080	1097.4	21490	1100

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Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18260     .04   19550    .035 20410.9     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
         19550 20410.9             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7

Downstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19550 1097.71 1094.54 19618.9 1098.05 1094.87 19690.9 1098.45 1095.27
 19762.9 1098.66 1095.48 19837.9 1098.67  1095.5 19906.9 1098.93 1095.76
 19978.9 1098.93 1095.76 20053.9 1098.94 1095.77 20125.9 1098.83 1095.66
 20197.9 1098.69 1095.51 20269.9 1098.47  1095.3 20341.9 1098.19 1095.01
 20410.9 1097.85 1094.68

Downstream Bridge Cross Section Data
Station Elevation Data    num=      15
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18260    1096   18620  1094.7   19170    1096 19549.9 1097.71   19550  1094.5
 19550.1  1088.1 19553.1  1088.1 19587.4    1076 20384.4    1076 20407.9  1085.7
 20410.9  1085.7 20410.9  1094.7   20411  1097.8   21080  1097.4   21490    1100

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18260     .04   19550    .035 20410.9     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
         19550 20410.9             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  11

Pier Data
Pier Station     Upstream= 19620.4    Downstream= 19620.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1094.8
Downstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1094.8

Pier Data
Pier Station     Upstream= 19692.4    Downstream= 19692.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3 1095.27
Downstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3 1095.27

Pier Data
Pier Station     Upstream= 19764.4    Downstream= 19764.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3 1095.48
Downstream     num=       2
    Width   Elev    Width   Elev
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       3    1076       3 1095.48

Pier Data
Pier Station     Upstream= 19836.4    Downstream= 19836.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5

Pier Data
Pier Station     Upstream= 19908.4    Downstream= 19908.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
Pier Station     Upstream= 19980.4    Downstream= 19980.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
Pier Station     Upstream= 20052.4    Downstream= 20052.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
Pier Station     Upstream= 20124.4    Downstream= 20124.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.6
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.6

Pier Data
Pier Station     Upstream= 20196.4    Downstream= 20196.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5

Pier Data
Pier Station     Upstream= 20268.4    Downstream= 20268.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.3
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.3

Pier Data
Pier Station     Upstream= 20340.4    Downstream= 20340.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3    1095
Downstream     num=       2
```

Width	Elev	Width	Elev
3	1076	3	1095

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
Energy
Momentum Cd = 1.2
Yarnell KVal = 1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1094.37	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1091.84	E.G. Elev (ft)	1094.24	1093.90
Q Total (cfs)	169000.00	W.S. Elev (ft)	1091.30	1090.71
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1087.33	1087.32
Q Weir (cfs)		Max Chl Dpth (ft)	15.30	14.71
Weir Sta Lft (ft)		Vel Total (ft/s)	13.77	14.33
Weir Sta Rgt (ft)		Flow Area (sq ft)	12274.94	11791.49
Weir Submerg		Froude # Chl	0.63	0.67
Weir Max Depth (ft)		Specif Force (cu ft)	164743.48	160678.91
Min Top Rd (ft)	1094.50	Hydr Depth (ft)	14.83	14.24
Min El Prs (ft)	1095.77	W.P. Total (ft)	1177.03	1163.08
Delta EG (ft)	0.65	Conv. Total (cfs)	2487522.5	2344965.3
Delta WS (ft)	1.03	Top Width (ft)	827.85	827.84
BR Open Area (sq ft)	15655.29	Frctn Loss (ft)	0.31	0.10
BR Open Vel (ft/s)	14.33	C & E Loss (ft)	0.02	0.09
Coef of Q		Shear Total (lb/sq ft)	3.01	3.29
Br Sel Method	Energy only	Power Total (lb/ft s)	41.37	47.12

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1094.37	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1091.85	E.G. Elev (ft)	1094.24	1093.90
Q Total (cfs)	169000.00	W.S. Elev (ft)	1091.30	1090.71
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1087.33	1087.32
Q Weir (cfs)		Max Chl Dpth (ft)	15.30	14.71
Weir Sta Lft (ft)		Vel Total (ft/s)	13.76	14.33
Weir Sta Rgt (ft)		Flow Area (sq ft)	12281.21	11792.30
Weir Submerg		Froude # Chl	0.63	0.67
Weir Max Depth (ft)		Specif Force (cu ft)	164799.55	160685.28
Min Top Rd (ft)	1094.50	Hydr Depth (ft)	14.84	14.24
Min El Prs (ft)	1095.77	W.P. Total (ft)	1177.27	1163.10
Delta EG (ft)	0.66	Conv. Total (cfs)	2489299.8	2345201.5
Delta WS (ft)	1.03	Top Width (ft)	827.85	827.84
BR Open Area (sq ft)	15655.29	Frctn Loss (ft)	0.31	0.10
BR Open Vel (ft/s)	14.33	C & E Loss (ft)	0.03	0.09
Coef of Q		Shear Total (lb/sq ft)	3.00	3.29
Br Sel Method	Energy only	Power Total (lb/ft s)	41.31	47.11

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.81

INPUT
Description: Downstream Face of 24th St. Bridge
Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18260	1096	18620	1094.7	19170	1096	19549.9	1097.71	19550	1094.5
19550.1	1088.1	19553.1	1088.1	19587.4	1076	20384.4	1076	20407.9	1085.7
20410.9	1085.7	20410.9	1094.7	20411	1097.8	21080	1097.4	21490	1100

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18260	.04	19550	.035	20410.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19550	20410.9	300	264.36	230	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18260	19550	1094.5	20410.9	21490	1085.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1093.71	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.90	Wt. n-Val.		0.035	
W.S. Elev (ft)	1090.81	Reach Len. (ft)	300.00	264.36	230.00
Crit W.S. (ft)	1087.03	Flow Area (sq ft)		12363.67	
E.G. Slope (ft/ft)	0.003024	Area (sq ft)		12363.67	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.84	Top Width (ft)		860.84	
Vel Total (ft/s)	13.67	Avg. Vel. (ft/s)		13.67	
Max Chl Dpth (ft)	14.81	Hydr. Depth (ft)		14.36	
Conv. Total (cfs)	3073424.0	Conv. (cfs)		3073424.0	
Length Wtd. (ft)	264.36	Wetted Per. (ft)		872.62	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.67	
Alpha	1.00	Stream Power (lb/ft s)		36.56	
Frctn Loss (ft)	1.04	Cum Volume (acre-ft)	40.76	3360.68	54.00
C & E Loss (ft)	0.12	Cum SA (acres)	23.93	171.21	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1093.71	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.90	Wt. n-Val.		0.035	
W.S. Elev (ft)	1090.81	Reach Len. (ft)	300.00	264.36	230.00
Crit W.S. (ft)	1087.03	Flow Area (sq ft)		12364.51	
E.G. Slope (ft/ft)	0.003023	Area (sq ft)		12364.51	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.84	Top Width (ft)		860.84	
Vel Total (ft/s)	13.67	Avg. Vel. (ft/s)		13.67	
Max Chl Dpth (ft)	14.81	Hydr. Depth (ft)		14.36	
Conv. Total (cfs)	3073767.5	Conv. (cfs)		3073767.5	
Length Wtd. (ft)	264.36	Wetted Per. (ft)		872.62	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.67	
Alpha	1.00	Stream Power (lb/ft s)		36.55	
Frctn Loss (ft)	1.04	Cum Volume (acre-ft)		3361.71	
C & E Loss (ft)	0.12	Cum SA (acres)		171.21	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.75

INPUT
Description:
Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17125.3	1100.1	17248.5	1099.8	17267.3	1100.8	17468.2	1100.1	17719.4	1099.7

17947.7	1097.8	18060.6	1099.3	18081.3	1096.7	18136.4	1097.4	19508	1097.7
19508.1	1097.6	19524	1097.4	19542.9	1095.1	19551.7	1095.7	19565.8	1090.9
19639.9	1074.2	19781.5	1073.6	19800.3	1075	20035.2	1074.5	20197.2	1075.1
20278.8	1076.8	20300	1074.7	20349.4	1079.3	20362	1082.9	20390.2	1083.6
20417.4	1087.3	20492.6	1093.4	20522.5	1094.6	21418.5	1094.6	21459.6	1096.1
21491.5	1096.3	21500.1	1097.2	21614.1	1094.5	21671.6	1098.1	21725.1	1102
21736.3	1098.2	21746.9	1098.3	21761.2	1095.9	21937.7	1095.8	22101	1095.7
22107.9	1097.1	22124.7	1093.9	22195.8	1094.6	22429.3	1094.9	22460.5	1094.9
22651.2	1094.2	22731.5	1094.6	22743.8	1096.2	22841.4	1095.8	22852.4	1097.3
23039.9	1097.6	23152.1	1097.4	23353.9	1096.6	23520.2	1097.5	23562	1097.4
23577.6	1110.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17125.3	.04	19508.1	.035	20522.5	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19508.1	20522.5	520	500.69	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17125.3	19508.1	1097.6	20522.5	23577.6	1094.6

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1092.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	4.11	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.44	Reach Len. (ft)	520.00	500.69	470.00
Crit W.S. (ft)	1086.81	Flow Area (sq ft)		10385.16	
E.G. Slope (ft/ft)	0.005283	Area (sq ft)		10385.16	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	854.81	Top Width (ft)		854.81	
Vel Total (ft/s)	16.27	Avg. Vel. (ft/s)		16.27	
Max Chl Dpth (ft)	14.84	Hydr. Depth (ft)		12.15	
Conv. Total (cfs)	2325027.8	Conv. (cfs)		2325027.8	
Length Wtd. (ft)	500.69	Wetted Per. (ft)		857.59	
Min Ch El (ft)	1073.60	Shear (lb/sq ft)		3.99	
Alpha	1.00	Stream Power (lb/ft s)		65.00	
Frctn Loss (ft)	1.52	Cum Volume (acre-ft)	40.76	3291.65	54.00
C & E Loss (ft)	0.58	Cum SA (acres)	23.93	166.00	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1092.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	4.11	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.45	Reach Len. (ft)	520.00	500.69	470.00
Crit W.S. (ft)	1086.81	Flow Area (sq ft)		10389.02	
E.G. Slope (ft/ft)	0.005277	Area (sq ft)		10389.02	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	854.81	Top Width (ft)		854.81	
Vel Total (ft/s)	16.27	Avg. Vel. (ft/s)		16.27	
Max Chl Dpth (ft)	14.85	Hydr. Depth (ft)		12.15	
Conv. Total (cfs)	2326448.0	Conv. (cfs)		2326448.0	
Length Wtd. (ft)	500.69	Wetted Per. (ft)		857.60	
Min Ch El (ft)	1073.60	Shear (lb/sq ft)		3.99	
Alpha	1.00	Stream Power (lb/ft s)		64.92	
Frctn Loss (ft)	1.51	Cum Volume (acre-ft)		3292.67	
C & E Loss (ft)	0.58	Cum SA (acres)		166.00	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.65

INPUT
Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17237.9	1100	17294.9	1096.4	17506.5	1098	17570	1097.1	17577.1	1095.1
17602.5	1096.9	17605.7	1096.1	17674.7	1096.1	17931.2	1097.4	17961.2	1099.7
18192.8	1099.1	18200.6	1096.9	18232.2	1096.2	18235	1095.4	19571.5	1095.4
19624.9	1079.1	19666.3	1071.3	19745.1	1071	19765.3	1069.6	19937	1074.4
19947.9	1074.8	19985.2	1069.8	20174.6	1072.1	20310.4	1071.3	20317.9	1069.1
20354.5	1069.6	20364.9	1068.3	20392.2	1069.1	20433.1	1070.7	20501.7	1094
20596.4	1094.2	20609.1	1096.1	21422	1096.1	21423.7	1096.4	21575	1098
21679	1097.1	21682	1100.7	21704.4	1100.7	21722.1	1093.9	21744.5	1094.6
21842.9	1093.7	22013.6	1093.5	22043.6	1093.5	22083.7	1091.8	22095.5	1090.2
22108.8	1092.3	22174.7	1093.2	22431	1094.3	22454	1092.8	22649.2	1092.4
22655.2	1091.7	22737.1	1093.4	22922.4	1093.5	23042.9	1093.2	23072.9	1091.9
23243.1	1091.8	23338.1	1092	23510.7	1093.7	23552.2	1093.6	23611.8	1095.2
23634.8	1117.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17237.9	.04	19571.5	.035	20501.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19571.5	20501.7	500	495.44	490	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17237.9	19571.5	1095.4	20501.7	23634.8	1094

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1090.46	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.27	Reach Len. (ft)	500.00	495.44	490.00
Crit W.S. (ft)	1082.38	Flow Area (sq ft)		14232.62	
E.G. Slope (ft/ft)	0.001959	Area (sq ft)		14232.62	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	890.00	Top Width (ft)		890.00	
Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)		11.87	
Max Chl Dpth (ft)	19.97	Hydr. Depth (ft)		15.99	
Conv. Total (cfs)	3818479.8	Conv. (cfs)		3818479.8	
Length Wtd. (ft)	495.44	Wetted Per. (ft)		895.92	
Min Ch El (ft)	1068.30	Shear (lb/sq ft)		1.94	
Alpha	1.00	Stream Power (lb/ft s)		23.07	
Frctn Loss (ft)	0.73	Cum Volume (acre-ft)	40.76	3150.17	54.00
C & E Loss (ft)	0.19	Cum SA (acres)	23.93	155.98	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1090.47	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.28	Reach Len. (ft)	500.00	495.44	490.00
Crit W.S. (ft)	1082.38	Flow Area (sq ft)		14237.18	
E.G. Slope (ft/ft)	0.001957	Area (sq ft)		14237.18	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	890.00	Top Width (ft)		890.00	
Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)		11.87	
Max Chl Dpth (ft)	19.98	Hydr. Depth (ft)		16.00	
Conv. Total (cfs)	3820484.5	Conv. (cfs)		3820484.5	
Length Wtd. (ft)	495.44	Wetted Per. (ft)		895.93	
Min Ch El (ft)	1068.30	Shear (lb/sq ft)		1.94	
Alpha	1.00	Stream Power (lb/ft s)		23.04	

Frctn Loss (ft)	0.73	Cum Volume (acre-ft)	3151.14
C & E Loss (ft)	0.19	Cum SA (acres)	155.97

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.56

INPUT
Description:
Station Elevation Data num= 59

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17244.5	1098.1	17272.8	1096	17490.4	1096.7	17563.5	1095.2	17636	1095.1
17908.7	1094.9	17949.5	1094.8	18148.7	1095.2	18255.9	1095.3	18329.2	1093.3
18342.1	1093.5	18349	1091.5	19576.8	1091.5	19646	1068.5	19758.9	1068.7
19783.4	1070.3	19891.8	1071.1	19918.1	1069.5	19960.4	1066.1	19980	1066.1
20229.6	1066.6	20268.2	1066.9	20299.5	1068.6	20316.3	1068.8	20323.7	1066.5
20361	1067.1	20366.3	1068.2	20406.8	1070.9	20445.6	1071.5	20469	1079.6
20510	1092.7	20617	1091.5	20632.4	1095.1	21437.6	1095.1	21444	1099.4
21597.8	1096.9	21664.2	1096.1	21674.8	1099.6	21689.5	1099.9	21706.3	1092.8
21832.1	1092.2	22077.5	1091.9	22106.9	1090.7	22148.1	1091.8	22286.4	1092
22419.1	1092.6	22464.2	1091.4	22630.1	1091.1	22636.8	1090.6	22754	1091.4
22759.4	1092.2	22832.1	1091.7	22984	1091.4	23017.5	1091.4	23054.9	1093
23104	1092.4	23477.4	1092.3	23608.9	1093.9	23646	1111.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17244.5	.04	19576.8	.035	20510	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19576.8	20510	500	498.23	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17244.5	19576.8	1091.5	20510	23646	1092.7

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1089.55	Element			
Vel Head (ft)	1.56	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.99	Reach Len. (ft)	500.00	498.23	500.00
Crit W.S. (ft)	1079.15	Flow Area (sq ft)		16859.61	
E.G. Slope (ft/ft)	0.001145	Area (sq ft)		16859.61	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	907.87	Top Width (ft)		907.87	
Vel Total (ft/s)	10.02	Avg. Vel. (ft/s)		10.02	
Max Chl Dpth (ft)	21.89	Hydr. Depth (ft)		18.57	
Conv. Total (cfs)	4995001.5	Conv. (cfs)		4995001.5	
Length Wtd. (ft)	498.23	Wetted Per. (ft)		914.55	
Min Ch El (ft)	1066.10	Shear (lb/sq ft)		1.32	
Alpha	1.00	Stream Power (lb/ft s)		13.21	
Frctn Loss (ft)	0.51	Cum Volume (acre-ft)	40.76	2973.36	54.00
C & E Loss (ft)	0.06	Cum SA (acres)	23.93	145.75	55.45

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1089.55	Element			
Vel Head (ft)	1.56	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.99	Reach Len. (ft)	500.00	498.23	500.00
Crit W.S. (ft)	1079.15	Flow Area (sq ft)		16864.71	
E.G. Slope (ft/ft)	0.001144	Area (sq ft)		16864.71	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	907.88	Top Width (ft)		907.88	
Vel Total (ft/s)	10.02	Avg. Vel. (ft/s)		10.02	
Max Chl Dpth (ft)	21.89	Hydr. Depth (ft)		18.58	
Conv. Total (cfs)	4997458.5	Conv. (cfs)		4997458.5	
Length Wtd. (ft)	498.23	Wetted Per. (ft)		914.56	
Min Ch El (ft)	1066.10	Shear (lb/sq ft)		1.32	
Alpha	1.00	Stream Power (lb/ft s)		13.19	

Frctn Loss (ft)	0.51	Cum Volume (acre-ft)	2974.27
C & E Loss (ft)	0.06	Cum SA (acres)	145.75

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.46

INPUT
Description:
Station Elevation Data num= 64

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17157.6	1097	17197.5	1096.6	17218.9	1095.4	17367.9	1095.7	17545.9	1094.6
17740.4	1094.3	17965.1	1094.4	18148.7	1093.9	18153.7	1093.7	18356.5	1094.4
18485.3	1095.5	18487.7	1094.7	18549.4	1094.8	18565.7	1098.7	18592.7	1095.4
18606.4	1087.7	18625.8	1094.7	18648.9	1093.4	18656.9	1091.5	18657.5	1090.8
19591	1090.8	19645.5	1070	19690.6	1068.5	19884.9	1068	19970.8	1067.7
20003.1	1064.6	20025.6	1064.6	20257.6	1065.1	20338.3	1065.3	20360.8	1069
20415.1	1068.3	20460.8	1066.1	20521.1	1089.5	20665.6	1090.6	20667	1089
21339.6	1089	21437	1088.7	21480.8	1089.5	21632.1	1087.7	21658.8	1098.3
21669	1098.1	21686	1091.3	21692.6	1092.4	21873.1	1090.1	21942.8	1090.1
21975.7	1091.4	22045.5	1090.4	22054.9	1090.9	22073.1	1090	22126.3	1089.8
22139.4	1091.2	22375.5	1090	22396.5	1089.8	22591.1	1088.8	22602.5	1088.7
22603.9	1089.5	22794	1090.1	22983.8	1090.8	23032.5	1092.7	23062.2	1092.6
23377	1091.1	23496.3	1091.1	23528.4	1091.9	23621.3	1105.3		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17157.6	.04	19591	.035	20521.1	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19591	20521.1	510	519.75	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17157.6	19591	1090.8	20521.1	23621.3	1089.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.97	Element			
Vel Head (ft)	1.37	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.61	Reach Len. (ft)	510.00	519.75	530.00
Crit W.S. (ft)	1077.65	Flow Area (sq ft)		18009.56	
E.G. Slope (ft/ft)	0.000932	Area (sq ft)		18009.56	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	916.86	Top Width (ft)		916.86	
Vel Total (ft/s)	9.38	Avg. Vel. (ft/s)		9.38	
Max Chl Dpth (ft)	23.01	Hydr. Depth (ft)		19.64	
Conv. Total (cfs)	5534893.0	Conv. (cfs)		5534893.0	
Length Wtd. (ft)	519.75	Wetted Per. (ft)		924.66	
Min Ch El (ft)	1064.60	Shear (lb/sq ft)		1.13	
Alpha	1.00	Stream Power (lb/ft s)		10.64	
Frctn Loss (ft)	0.42	Cum Volume (acre-ft)	40.76	2773.94	54.00
C & E Loss (ft)	0.06	Cum SA (acres)	23.93	135.32	55.45

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.98	Element			
Vel Head (ft)	1.37	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.61	Reach Len. (ft)	510.00	519.75	530.00
Crit W.S. (ft)	1077.65	Flow Area (sq ft)		18015.04	
E.G. Slope (ft/ft)	0.000931	Area (sq ft)		18015.04	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	916.85	Top Width (ft)		916.85	
Vel Total (ft/s)	9.38	Avg. Vel. (ft/s)		9.38	
Max Chl Dpth (ft)	23.01	Hydr. Depth (ft)		19.65	
Conv. Total (cfs)	5537668.5	Conv. (cfs)		5537668.5	
Length Wtd. (ft)	519.75	Wetted Per. (ft)		924.67	
Min Ch El (ft)	1064.60	Shear (lb/sq ft)		1.13	
Alpha	1.00	Stream Power (lb/ft s)		10.63	
Frctn Loss (ft)	0.42	Cum Volume (acre-ft)		2774.79	
C & E Loss (ft)	0.06	Cum SA (acres)		135.32	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.36

INPUT
Description:
Station Elevation Data num= 64

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17106.4	1095.4	17213.1	1093.4	17305.8	1093	17386.4	1093.9	17614.5	1092.9
17741.1	1093.2	17826.6	1091.9	17953.5	1092.2	17968	1091.5	17977.8	1092.7
18139.6	1091.8	18170.3	1091.2	18258.3	1093.1	18362.4	1091.3	18522.8	1092.1
18599.4	1092.9	18641.9	1094.1	18654.3	1087.1	19618	1087.1	19693.8	1066.8
19739.6	1066.6	19764.2	1064.8	19975	1063.2	20080.9	1063	20309.6	1064
20382.2	1064.8	20413.8	1065.9	20478.9	1065.5	20537	1086.8	21350.7	1086.8
21356.2	1089.5	21442.6	1086.9	21548.9	1086	21595	1088.3	21621.4	1088.7
21647.6	1094.8	21684.8	1088.3	21717.1	1090.1	21875.2	1088.9	21917	1089.2
22096.8	1089.1	22215.6	1086.1	22360.8	1085.8	22395.8	1085.8	22542	1086.6
22595.4	1085.7	22650.1	1086.5	22655.9	1087.2	22804.8	1086.6	22841.4	1086.7
22875	1086.4	22885	1088.1	22968.8	1087.7	23111.1	1087.6	23285.5	1087.4
23328.3	1087.9	23371.5	1087.5	23577	1087.6	23593.2	1090.2	23609.1	1088.9
23648.3	1097.3	23658.9	1096	23675.8	1090.6	23715.5	1101.6		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17106.4	.04	19618	.035	20537	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19618	20537	500	489.19	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17106.4	19618	1100	20537	23715.5	1100

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.49	Element			
Vel Head (ft)	1.15	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.34	Reach Len. (ft)	500.00	489.19	470.00
Crit W.S. (ft)	1075.36	Flow Area (sq ft)		19624.04	
E.G. Slope (ft/ft)	0.000701	Area (sq ft)	231.68	19624.04	1263.00
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	3559.77	Top Width (ft)	964.13	919.00	1676.65
Vel Total (ft/s)	8.61	Avg. Vel. (ft/s)		8.61	
Max Chl Dpth (ft)	24.34	Hydr. Depth (ft)		21.35	
Conv. Total (cfs)	6382255.0	Conv. (cfs)		6382255.0	
Length Wtd. (ft)	489.19	Wetted Per. (ft)		925.55	
Min Ch El (ft)	1063.00	Shear (lb/sq ft)		0.93	
Alpha	1.00	Stream Power (lb/ft s)		7.99	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)	39.40	2549.42	46.32
C & E Loss (ft)	0.01	Cum SA (acres)	18.29	124.36	45.25

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.50	Element			
Vel Head (ft)	1.15	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.35	Reach Len. (ft)	500.00	489.19	470.00
Crit W.S. (ft)	1075.36	Flow Area (sq ft)		19629.43	
E.G. Slope (ft/ft)	0.000701	Area (sq ft)		19629.43	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	919.00	Top Width (ft)		919.00	
Vel Total (ft/s)	8.61	Avg. Vel. (ft/s)		8.61	
Max Chl Dpth (ft)	24.35	Hydr. Depth (ft)		21.36	
Conv. Total (cfs)	6381531.0	Conv. (cfs)		6381531.0	
Length Wtd. (ft)	489.19	Wetted Per. (ft)		926.34	
Min Ch El (ft)	1063.00	Shear (lb/sq ft)		0.93	
Alpha	1.00	Stream Power (lb/ft s)		7.99	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)		2550.21	
C & E Loss (ft)	0.01	Cum SA (acres)		124.36	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.27

INPUT
Description:
Station Elevation Data num= 77

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17090.5	1092.5	17125.9	1091.8	17271.2	1091	17438.5	1089.2	17533.4	1088.9
17640	1089.9	17664.2	1089.2	17876.8	1089	17899.3	1089.2	18048.7	1090.8
18192.2	1092.2	18319.4	1092.6	18358.5	1091.5	18364.6	1092	18578.6	1091.7
18646.5	1091.7	18655.9	1091.3	18680.5	1096.9	18688.1	1094.3	18692.1	1091.9
18696.3	1090.6	18744.7	1089	18753.3	1083.4	19610.6	1083.4	19638.3	1081.9
19658.6	1082	19664.5	1078.4	19689.8	1074.5	19734.4	1072.4	19788.6	1068.1
19800.7	1064.5	19816.1	1063.5	19988.7	1063.7	20291.3	1064	20359.1	1064.8
20485.4	1064	20492.7	1064.5	20543.3	1084.9	20553.9	1085.3	20674.7	1084.1
20741.1	1082.7	20810.5	1083.9	20988.4	1084.7	21096.9	1085.3	21291.5	1086.3
21372.9	1086.6	21433.7	1087.4	21444.6	1088.4	21500.3	1090	21568.4	1090
21595.8	1088	21615.4	1088.1	21621.3	1086.5	21640.8	1086.3	21657.4	1087.6
21816	1087.7	21877.8	1087.7	22012.9	1086.8	22120.8	1086.1	22257	1086.3
22398.5	1085.7	22567.9	1085.3	22633.4	1085.1	22673	1086	22821.6	1086.1
22954.1	1086.7	22955.4	1086.7	23113.9	1086.3	23261	1086.3	23311.5	1086.2
23360.5	1088.2	23492.9	1089	23595.2	1089.4	23637	1094.2	23668.2	1090
23685.9	1088.4	23765.1	1104.7						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17090.5	.04	19610.6	.035	20553.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19610.6	20553.9	550	493.27	420	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17090.5	19610.6	1100	20553.9	23765.1	1100

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.10	Element			
Vel Head (ft)	1.26	Wt. n-Val.		0.035	
W.S. Elev (ft)	1086.84	Reach Len. (ft)	550.00	493.27	420.00
Crit W.S. (ft)	1076.00	Flow Area (sq ft)		18736.49	
E.G. Slope (ft/ft)	0.000846	Area (sq ft)	2959.30	18736.49	2611.68
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	3991.40	Top Width (ft)	862.58	943.30	2185.52
Vel Total (ft/s)	9.02	Avg. Vel. (ft/s)		9.02	
Max Chl Dpth (ft)	23.34	Hydr. Depth (ft)		19.86	
Conv. Total (cfs)	5809018.0	Conv. (cfs)		5809018.0	
Length Wtd. (ft)	493.27	Wetted Per. (ft)		949.42	
Min Ch El (ft)	1063.50	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.41	
Frctn Loss (ft)	0.82	Cum Volume (acre-ft)	21.09	2334.02	25.41
C & E Loss (ft)	0.38	Cum SA (acres)	7.81	113.91	24.41

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.11	Element			
Vel Head (ft)	1.26	Wt. n-Val.		0.035	
W.S. Elev (ft)	1086.85	Reach Len. (ft)	550.00	493.27	420.00
Crit W.S. (ft)	1076.00	Flow Area (sq ft)		18740.87	
E.G. Slope (ft/ft)	0.000852	Area (sq ft)		18740.87	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	

Top Width (ft)	943.30	Top Width (ft)	943.30
Vel Total (ft/s)	9.02	Avg. Vel. (ft/s)	9.02
Max Chl Dpth (ft)	23.35	Hydr. Depth (ft)	19.87
Conv. Total (cfs)	5790998.5	Conv. (cfs)	5790998.5
Length Wtd. (ft)	493.27	Wetted Per. (ft)	954.41
Min Ch El (ft)	1063.50	Shear (lb/sq ft)	1.04
Alpha	1.00	Stream Power (lb/ft s)	9.41
Frctn Loss (ft)	0.82	Cum Volume (acre-ft)	2334.75
C & E Loss (ft)	0.38	Cum SA (acres)	113.91

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.18

INPUT
Description:
Station Elevation Data num= 82

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17264.2	1090.8	17267.2	1089.3	17273	1087.3	17291.3	1090.2	17304	1090.3
17325	1088.7	17458.3	1088	17486.9	1086.8	17535	1086.4	17628.8	1087.9
17696.9	1090.1	17830.5	1089.7	17979.7	1089.7	18157.5	1090.9	18287.9	1091.3
18300.1	1090.7	18347.7	1091.3	18585.6	1090.1	18646.8	1090.3	18667.5	1089.9
18679.9	1092.5	18692.8	1096.2	18714.9	1089.4	18737.9	1089.2	18743.1	1085.6
19632.1	1085.6	19675.5	1084.4	19680.3	1082.6	19742.5	1067.1	19752.8	1067.2
19761.7	1067.9	19783.3	1067.4	19806.4	1062.2	19944.1	1062.7	20163.9	1063.5
20177.3	1063.5	20291.4	1084.5	20332.7	1088.4	20361.5	1080.3	20367.6	1077.9
20376.7	1078.6	20417.9	1079.6	20435.7	1084.6	20442.6	1085.5	20492.9	1084.1
20569.6	1084.3	20749.1	1084.6	20914.6	1084.5	21029.5	1083.7	21215.8	1083.6
21233.3	1083.6	21261.9	1088.4	21398.3	1089.8	21450.7	1091.6	21475.8	1079.6
21498.2	1082.4	21659.9	1084.5	21881.6	1084.7	22049.7	1085.2	22106.3	1085.4
22138.4	1086	22270.3	1086.2	22336.5	1086.7	22396.7	1085.4	22535.4	1085.6
22591.4	1086	22633	1087	22652.7	1088.3	22794.6	1088.5	23004.1	1088.8
23096.1	1088.2	23105.4	1089.3	23217.9	1088.7	23251.2	1087.2	23262.6	1087.5
23297	1086.7	23345.6	1087.8	23359.3	1088.6	23512.7	1088.2	23575.8	1087.7
23635.4	1088.2	23708.6	1103.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17264.2	.04	19632.1	.035	20332.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19632.1	20332.7	560	481.96	420	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17264.2	19632.1	1085.6	20332.7	23708.6	1088.4

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1086.91	Element	Left OB	Channel	Right OB
Vel Head (ft)	5.04	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.87	Reach Len. (ft)	560.00	481.96	420.00
Crit W.S. (ft)	1079.42	Flow Area (sq ft)		9382.04	
E.G. Slope (ft/ft)	0.004584	Area (sq ft)		9382.04	203.69
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	686.90	Top Width (ft)		593.90	93.00
Vel Total (ft/s)	18.01	Avg. Vel. (ft/s)		18.01	
Max Chl Dpth (ft)	19.67	Hydr. Depth (ft)		15.80	
Conv. Total (cfs)	2496246.8	Conv. (cfs)		2496246.8	
Length Wtd. (ft)	481.96	Wetted Per. (ft)		598.00	
Min Ch El (ft)	1062.20	Shear (lb/sq ft)		4.49	
Alpha	1.00	Stream Power (lb/ft s)		80.87	
Frctn Loss (ft)	1.73	Cum Volume (acre-ft)	2.41	2174.82	11.84
C & E Loss (ft)	0.41	Cum SA (acres)	2.36	105.20	13.43

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1086.91	Element	Left OB	Channel	Right OB
Vel Head (ft)	5.04	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.87	Reach Len. (ft)	560.00	481.96	420.00
Crit W.S. (ft)	1079.42	Flow Area (sq ft)		9382.77	
E.G. Slope (ft/ft)	0.004582	Area (sq ft)		9382.77	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	593.90	Top Width (ft)		593.90	
Vel Total (ft/s)	18.01	Avg. Vel. (ft/s)		18.01	
Max Chl Dpth (ft)	19.67	Hydr. Depth (ft)		15.80	
Conv. Total (cfs)	2496562.5	Conv. (cfs)		2496562.5	
Length Wtd. (ft)	481.96	Wetted Per. (ft)		598.00	
Min Ch El (ft)	1062.20	Shear (lb/sq ft)		4.49	
Alpha	1.00	Stream Power (lb/ft s)		80.85	
Frctn Loss (ft)	1.73	Cum Volume (acre-ft)		2175.52	
C & E Loss (ft)	0.41	Cum SA (acres)		105.20	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.09

INPUT
Description:
Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17408.5	1090.9	17416.6	1088.2	17421.3	1086	17442.5	1089.1	17476.3	1089.2
17546	1088.1	17558.7	1086.5	17572.7	1085.3	17703.3	1086	17806.6	1085.5
17909.6	1086.8	17924.4	1087.8	17983.8	1088.9	18162.6	1089.2	18175.2	1089.2
18515.9	1088.2	18545.9	1088.1	18607.3	1088.6	18713.9	1088.5	18807.7	1087.4
18955	1087.1	18958.8	1087.1	18981.5	1088.6	18992.5	1088.9	19625.7	1088.9
19652.2	1090.1	19661.5	1090.9	19663	1088.6	19671.4	1082.4	19701.2	1068.5
19706.6	1065.2	19710.4	1063.8	19728.4	1062.2	19740	1061.7	19850.6	1061.7
20037.2	1062.4	20199.1	1063	20266.5	1063.2	20300.4	1085.9	20376.8	1085
20573.3	1084.2	20754.5	1084.4	20797.5	1084.5	20844	1088.4	20895.9	1096.6
20944	1100	20968.9	1099.8	21092.4	1085.1	21164.6	1085.1	21295.4	1085.8
21349.7	1087.3	21430.1	1089	21447.6	1082.9	21471.4	1082.9	21513.2	1084.1
21561.7	1084	21748.6	1085.6	21846.1	1086.5	22044.7	1085.1	22068.2	1085.1
22104.8	1086.2	22198.3	1085.4	22331	1086.6	22392.4	1085.5	22427.1	1085.7
22569.2	1086.2	22579.3	1086.1	22596.4	1086.5	22617.4	1086.4	22634.7	1087.5
22750	1087.9	22789.2	1087.3	22835.4	1087.8	22986	1087.7	23133.3	1088.2
23240.2	1087.3	23275.3	1086.4	23337	1086.7	23342.5	1087.3	23353.1	1087.8
23397.8	1087.8	23559.8	1086.9	23602	1086.8	23694.4	1090.1	23776.7	1107.1

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17408.5	.04	19661.5	.035	20300.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19661.5	20300.4	510	506.22	510	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17408.5	19661.5	1090.9	20300.4	23776.7	1085.9

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1084.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.09	Reach Len. (ft)	510.00	506.22	510.00

Crit W.S. (ft)	1076.37	Flow Area (sq ft)			10986.08	
E.G. Slope (ft/ft)	0.002894	Area (sq ft)			10986.08	
Q Total (cfs)	169000.00	Flow (cfs)			169000.00	
Top Width (ft)	619.02	Top Width (ft)			619.02	
Vel Total (ft/s)	15.38	Avg. Vel. (ft/s)			15.38	
Max Chl Dpth (ft)	19.39	Hydr. Depth (ft)			17.75	
Conv. Total (cfs)	3141385.8	Conv. (cfs)			3141385.8	
Length Wtd. (ft)	506.22	Wetted Per. (ft)			628.51	
Min Ch El (ft)	1061.70	Shear (lb/sq ft)			3.16	
Alpha	1.00	Stream Power (lb/ft s)			48.58	
Frctn Loss (ft)	1.47	Cum Volume (acre-ft)		2.41	2062.14	10.86
C & E Loss (ft)	0.13	Cum SA (acres)		2.36	98.49	12.98

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1084.77	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.10	Reach Len. (ft)	510.00	506.22	510.00
Crit W.S. (ft)	1076.37	Flow Area (sq ft)		10987.06	
E.G. Slope (ft/ft)	0.002893	Area (sq ft)		10987.06	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	619.02	Top Width (ft)		619.02	
Vel Total (ft/s)	15.38	Avg. Vel. (ft/s)		15.38	
Max Chl Dpth (ft)	19.40	Hydr. Depth (ft)		17.75	
Conv. Total (cfs)	3141842.0	Conv. (cfs)		3141842.0	
Length Wtd. (ft)	506.22	Wetted Per. (ft)		628.52	
Min Ch El (ft)	1061.70	Shear (lb/sq ft)		3.16	
Alpha	1.00	Stream Power (lb/ft s)		48.57	
Frctn Loss (ft)	1.47	Cum Volume (acre-ft)		2062.83	
C & E Loss (ft)	0.13	Cum SA (acres)		98.49	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.99

INPUT
Description:
Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17407.8	1089.5	17423.9	1089.2	17429.3	1087.9	17485.8	1086.4	17505.6	1086.4
17523	1085.7	17609.3	1085.7	17618.9	1085.4	17743	1084.6	17878.9	1086.3
18005.4	1087.2	18122.3	1087.5	18136.6	1087.3	18144.6	1088.4	18167.8	1087.2
18307.7	1087.4	18356.8	1087.4	18518.3	1087.2	18532.6	1087.2	18670.1	1087.4
18800.7	1087	18814.1	1087.3	18841.1	1087	18876.6	1088.6	19535	1088.6
19537.3	1089.4	19576.5	1090	19647.7	1061.3	19774.3	1061.6	19811	1063.5
19862.3	1062.3	19880.7	1061.4	20041	1063.2	20098.1	1067.8	20122.6	1070.7
20129.8	1067.6	20144.8	1063.2	20173.6	1063.1	20299.7	1063	20317	1072.8
20339.8	1086.2	20525.1	1086.2	20650.8	1085.7	20674.7	1085.6	20699.2	1086.5
20716.1	1086.6	20846.1	1088.1	20861.2	1088.3	20978.5	1087.6	21008	1084.2
21091.3	1083.5	21285.7	1083.9	21419.6	1084.3	21479.2	1084.8	21650.3	1085.6
22046	1085.5	22169.3	1084.9	22233.7	1085.5	22353.8	1085.3	22372.2	1085.3
22392.8	1084.4	22402.3	1085	22421.9	1084.9	22433.5	1085.2	22439.7	1085.8
22461.8	1085.4	22651.2	1085.4	22691.6	1085.5	22821.4	1086.1	22866.5	1086.4
22987.8	1086.7	23105.7	1086.9	23132.5	1085	23156.1	1084.5	23177.8	1087
23227.7	1086.3	23297	1086	23335.6	1086.6	23474.8	1086.3	23490.7	1088.5
23517.5	1088.2	23570.5	1089.8	23652.7	1107.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17407.8	.04	19576.5	.035	20339.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19576.5	20339.8	480	505.18	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17407.8	19576.5	1090	20339.8	23652.7	1086.2

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1083.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.25	Wt. n-Val.		0.035	
W.S. Elev (ft)	1079.91	Reach Len. (ft)	480.00	505.18	530.00
Crit W.S. (ft)	1075.58	Flow Area (sq ft)		11672.67	
E.G. Slope (ft/ft)	0.002926	Area (sq ft)		11672.67	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	727.58	Top Width (ft)		727.58	
Vel Total (ft/s)	14.48	Avg. Vel. (ft/s)		14.48	
Max Chl Dpth (ft)	18.61	Hydr. Depth (ft)		16.04	
Conv. Total (cfs)	3124136.5	Conv. (cfs)		3124136.5	
Length Wtd. (ft)	505.18	Wetted Per. (ft)		737.43	
Min Ch El (ft)	1061.30	Shear (lb/sq ft)		2.89	
Alpha	1.00	Stream Power (lb/ft s)		41.87	
Frctn Loss (ft)	1.63	Cum Volume (acre-ft)	2.41	1930.48	10.86
C & E Loss (ft)	0.01	Cum SA (acres)	2.36	90.67	12.98

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1083.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.25	Wt. n-Val.		0.035	
W.S. Elev (ft)	1079.92	Reach Len. (ft)	480.00	505.18	530.00
Crit W.S. (ft)	1075.58	Flow Area (sq ft)		11674.45	
E.G. Slope (ft/ft)	0.002925	Area (sq ft)		11674.45	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	727.58	Top Width (ft)		727.58	
Vel Total (ft/s)	14.48	Avg. Vel. (ft/s)		14.48	
Max Chl Dpth (ft)	18.62	Hydr. Depth (ft)		16.05	
Conv. Total (cfs)	3124912.0	Conv. (cfs)		3124912.0	
Length Wtd. (ft)	505.18	Wetted Per. (ft)		737.44	
Min Ch El (ft)	1061.30	Shear (lb/sq ft)		2.89	
Alpha	1.00	Stream Power (lb/ft s)		41.85	
Frctn Loss (ft)	1.63	Cum Volume (acre-ft)		1931.15	
C & E Loss (ft)	0.01	Cum SA (acres)		90.67	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.9

INPUT
Description:
Station Elevation Data num= 90

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17273.7	1090.9	17286.3	1084.9	17295.6	1086.7	17304.6	1089	17343.3	1087.2
17361	1086.8	17420	1086.8	17464	1086.4	17476.4	1085.5	17563.2	1085.1
17570.1	1085.5	17695.7	1085.2	17812.7	1085.2	17858	1085.6	18002.1	1086.5
18035.5	1086.6	18055.5	1087.1	18135.4	1086.5	18262.5	1086	18362.4	1086
18497.3	1086.1	18624.5	1086.1	18665	1086.1	18714.4	1086.8	19289	1086.8
19292	1088	19353.9	1088.5	19494.2	1088.1	19537.4	1088	19609.3	1061.2
19764.9	1061.4	19806	1062.4	19829	1061.4	20013.5	1062.6	20062.9	1062.8
20089.1	1068.5	20158.2	1066.8	20297.6	1062.8	20315.9	1062.4	20373.4	1077.9
20419	1088.6	20423.3	1089	20466.5	1103.6	20501.8	1104.2	20532.8	1102.4
20550.3	1104.7	20579.1	1099.4	20585.2	1096.6	20607.1	1084.9	20640.5	1084.3
20667.3	1083	20680.5	1078.6	20687.2	1078	20808.2	1077.9	20840	1082.7
20852.6	1085.5	20855.2	1084.5	20889.3	1084.2	20907.9	1083.6	20920.2	1082.1
20931.6	1081.2	21060.7	1081.2	21142.3	1081.4	21160.5	1082.7	21218.3	1083.3
21443.8	1084.2	21688.5	1083.8	21722.5	1083.8	21848.4	1083.6	21865.2	1084.2
22041	1084.3	22200.7	1085.2	22219.2	1085	22278.4	1086	22363	1085
22451.4	1085.4	22567.2	1086.6	22662.3	1086.2	22753.5	1086.2	22924.8	1085
22954.2	1085.1	22991.2	1084.4	22997.7	1085.1	23004.4	1086.9	23029.6	1086.4

23200.8 1088.7 23354.3 1090.2 23416.1 1090.1 23433.4 1089.7 23466.2 1098.9

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17273.7	.04	19537.4	.035	20466.5	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19537.4	20466.5	340	568.44	730	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17273.7	19537.4	1088	20466.5	23466.2	1103.6

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1081.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.39	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.13	Reach Len. (ft)	340.00	568.44	730.00
Crit W.S. (ft)	1074.91	Flow Area (sq ft)		11434.89	
E.G. Slope (ft/ft)	0.003589	Area (sq ft)		11434.89	22.14
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	934.49	Top Width (ft)		810.50	123.99
Vel Total (ft/s)	14.78	Avg. Vel. (ft/s)		14.78	
Max Chl Dpth (ft)	16.93	Hydr. Depth (ft)		14.11	
Conv. Total (cfs)	2820910.8	Conv. (cfs)		2820910.8	
Length Wtd. (ft)	568.44	Wetted Per. (ft)		816.37	
Min Ch El (ft)	1061.20	Shear (lb/sq ft)		3.14	
Alpha	1.00	Stream Power (lb/ft s)		46.39	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)	2.41	1796.49	10.72
C & E Loss (ft)	0.59	Cum SA (acres)	2.36	81.75	12.23

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1081.53	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.39	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.14	Reach Len. (ft)	340.00	568.44	730.00
Crit W.S. (ft)	1074.91	Flow Area (sq ft)		11439.94	
E.G. Slope (ft/ft)	0.003584	Area (sq ft)		11439.94	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	810.50	Top Width (ft)		810.50	
Vel Total (ft/s)	14.77	Avg. Vel. (ft/s)		14.77	
Max Chl Dpth (ft)	16.94	Hydr. Depth (ft)		14.11	
Conv. Total (cfs)	2822963.0	Conv. (cfs)		2822963.0	
Length Wtd. (ft)	568.44	Wetted Per. (ft)		816.38	
Min Ch El (ft)	1061.20	Shear (lb/sq ft)		3.14	
Alpha	1.00	Stream Power (lb/ft s)		46.32	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)		1797.12	
C & E Loss (ft)	0.58	Cum SA (acres)		81.75	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.79

INPUT
Description: Upstream Face of 16th St. Bridge
Station Elevation Data num= 44

```
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03  1057.619728.16  1059.919809.02 1058.85
19813.85    1059   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19457.6820521.73           116.34  116.34  116.34             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1079.83   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.44   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1078.39   Reach Len. (ft)            26.17     26.17      26.17
  Crit W.S. (ft)            1070.68   Flow Area (sq ft)                 17557.55
  E.G. Slope (ft/ft)       0.001221   Area (sq ft)                      17557.55
  Q Total (cfs)           169000.00   Flow (cfs)                       169000.00
  Top Width (ft)            1056.41   Top Width (ft)                    1056.41
  Vel Total (ft/s)             9.63   Avg. Vel. (ft/s)                     9.63
  Max Chl Dpth (ft)           20.79   Hydr. Depth (ft)                    16.62
  Conv. Total (cfs)       4836428.5   Conv. (cfs)                      4836428.5
  Length Wtd. (ft)            26.17   Wetted Per. (ft)                  1062.34
  Min Ch El (ft)            1057.60   Shear (lb/sq ft)                     1.26
  Alpha                        1.00   Stream Power (lb/ft s)              12.13
  Frctn Loss (ft)              0.04   Cum Volume (acre-ft)         2.41  1607.32      10.54
  C & E Loss (ft)              0.02   Cum SA (acres)               2.36    69.57      11.19


CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1079.83   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.44   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1078.40   Reach Len. (ft)            26.17     26.17      26.17
  Crit W.S. (ft)            1070.68   Flow Area (sq ft)                 17564.39
  E.G. Slope (ft/ft)       0.001219   Area (sq ft)                      17564.39
  Q Total (cfs)           169000.00   Flow (cfs)                       169000.00
  Top Width (ft)            1056.41   Top Width (ft)                    1056.41
  Vel Total (ft/s)             9.62   Avg. Vel. (ft/s)                     9.62
  Max Chl Dpth (ft)           20.80   Hydr. Depth (ft)                    16.63
  Conv. Total (cfs)       4839537.0   Conv. (cfs)                      4839537.0
  Length Wtd. (ft)            26.17   Wetted Per. (ft)                  1062.35
  Min Ch El (ft)            1057.60   Shear (lb/sq ft)                     1.26
  Alpha                        1.00   Stream Power (lb/ft s)              12.11
  Frctn Loss (ft)              0.04   Cum Volume (acre-ft)              1607.87
  C & E Loss (ft)              0.02   Cum SA (acres)                      69.57


BRIDGE                    RIVER: Salt River
REACH: Reach 4               RS: 214.785

INPUT
Description: 16th Street
Distance from Upstream XS =    26.17
Deck/Roadway Width        =       64
Weir Coefficient          =      2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
```

```
   18602  1086.5  1086.519189.33    1088    108819457.59 1093.05 1093.05
19457.68 1093.05 1080.3419571.38 1095.18 1082.43 19690.2 1096.76 1084.02
19809.02 1097.88 1085.1519927.64 1098.32 1085.6320051.48 1098.32  1085.6
 20170.3  1097.7 1085.0320289.12 1096.59 1083.8620407.94 1094.99 1082.24
20521.73  1092.8 1080.12

Upstream Bridge Cross Section Data
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03  1057.619728.16  1059.919809.02 1058.85
19813.85    1059   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19457.6820521.73             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

Downstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18602  1086.5  1086.519189.33    1088    108819457.59 1093.05 1093.05
19457.68 1093.05 1080.3419571.38 1095.18 1082.43 19690.2 1096.76 1084.02
19809.02 1097.88 1085.1519927.64 1098.32 1085.6320051.48 1098.32  1085.6
 20170.3  1097.7 1085.0320289.12 1096.59 1083.8620407.94 1094.99 1082.24
20521.73  1092.8 1080.12

Downstream Bridge Cross Section Data
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03    105919728.16  1059.919809.02 1058.85
19813.85 1058.85   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19457.6820521.73             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8
```

```
Pier Data
Pier Station     Upstream= 19574.1    Downstream= 19574.1
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1058.8    4.83 1082.51
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1058.8    4.83 1082.51

Pier Data
Pier Station     Upstream= 19692.8    Downstream= 19692.8
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1057.6    4.83  1084.1
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1057.6    4.83  1084.1

Pier Data
Pier Station     Upstream= 19811.6    Downstream= 19811.6
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1058.85    4.83  1085.2
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1058.85    4.83  1085.2

Pier Data
Pier Station     Upstream= 19930.5    Downstream= 19930.5
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1060.3    4.83  1085.6
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1060.3    4.83  1085.6

Pier Data
Pier Station     Upstream= 20049.5    Downstream= 20049.5
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1059.85    4.83  1085.6
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1059.85    4.83  1085.6

Pier Data
Pier Station     Upstream= 20167.6    Downstream= 20167.6
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1062.5    4.83  1085.1
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1062.5    4.83  1085.1

Pier Data
Pier Station     Upstream= 20286.4    Downstream= 20286.4
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1062.95    4.83  1083.9
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1062.95    4.83  1083.9

Pier Data
Pier Station     Upstream= 20405.8    Downstream= 20405.8
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1063.9    4.83  1082.3
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1063.9    4.83  1082.3
```

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
Energy
Momentum Cd = 1.2
Yarnell KVal = 1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1079.83	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1078.39	E.G. Elev (ft)	1079.77	1079.65
Q Total (cfs)	169000.00	W.S. Elev (ft)	1078.17	1078.01
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1071.00	1071.00
Q Weir (cfs)		Max Chl Dpth (ft)	20.56	19.21
Weir Sta Lft (ft)		Vel Total (ft/s)	10.15	10.26
Weir Sta Rgt (ft)		Flow Area (sq ft)	16656.43	16472.73
Weir Submerg		Froude # Chl	0.44	0.45
Weir Max Depth (ft)		Specif Force (cu ft)	196198.91	193742.33
Min Top Rd (ft)	1080.12	Hydr Depth (ft)	16.39	16.22
Min El Prs (ft)	1085.63	W.P. Total (ft)	1301.74	1296.74
Delta EG (ft)	0.26	Conv. Total (cfs)	3868540.5	3807459.5
Delta WS (ft)	0.33	Top Width (ft)	1016.55	1015.56
BR Open Area (sq ft)	22419.11	Frctn Loss (ft)	0.12	0.04
BR Open Vel (ft/s)	10.26	C & E Loss (ft)	0.00	0.04
Coef of Q		Shear Total (lb/sq ft)	1.52	1.56
Br Sel Method	Energy only	Power Total (lb/ft s)	15.47	16.03

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1079.83	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1078.40	E.G. Elev (ft)	1079.78	1079.65
Q Total (cfs)	169000.00	W.S. Elev (ft)	1078.18	1078.02
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1071.00	1071.00
Q Weir (cfs)		Max Chl Dpth (ft)	20.57	19.22
Weir Sta Lft (ft)		Vel Total (ft/s)	10.14	10.25
Weir Sta Rgt (ft)		Flow Area (sq ft)	16663.08	16479.79
Weir Submerg		Froude # Chl	0.44	0.45
Weir Max Depth (ft)		Specif Force (cu ft)	196287.41	193833.88
Min Top Rd (ft)	1092.89	Hydr Depth (ft)	16.40	16.23
Min El Prs (ft)	1085.63	W.P. Total (ft)	1301.14	1296.89
Delta EG (ft)	0.26	Conv. Total (cfs)	3872308.5	3809880.0
Delta WS (ft)	0.33	Top Width (ft)	1015.88	1015.60
BR Open Area (sq ft)	22402.95	Frctn Loss (ft)	0.12	0.04
BR Open Vel (ft/s)	10.25	C & E Loss (ft)	0.00	0.04
Coef of Q		Shear Total (lb/sq ft)	1.52	1.56
Br Sel Method	Energy only	Power Total (lb/ft s)	15.45	16.01

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.78

INPUT
Description: Downstream Face of 16th St. Bridge
Station Elevation Data num= 44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18602	1086.5	19189.33	1088	19457.59	1093.05	19457.68	1080.34	19457.78	1078.84

```
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03    105919728.16  1059.919809.02 1058.85
19813.85 1058.85   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19457.6820521.73               520  310.05      80             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1079.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.50	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.06	Reach Len. (ft)	520.00	310.05	80.00
Crit W.S. (ft)	1070.73	Flow Area (sq ft)		17192.07	
E.G. Slope (ft/ft)	0.001306	Area (sq ft)		17192.07	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1054.44	Top Width (ft)		1054.44	
Vel Total (ft/s)	9.83	Avg. Vel. (ft/s)		9.83	
Max Chl Dpth (ft)	19.26	Hydr. Depth (ft)		16.30	
Conv. Total (cfs)	4676684.5	Conv. (cfs)		4676684.5	
Length Wtd. (ft)	310.05	Wetted Per. (ft)		1059.99	
Min Ch El (ft)	1058.80	Shear (lb/sq ft)		1.32	
Alpha	1.00	Stream Power (lb/ft s)		13.00	
Frctn Loss (ft)	0.40	Cum Volume (acre-ft)	2.41	1562.59	10.54
C & E Loss (ft)	0.02	Cum SA (acres)	2.36	66.83	11.19

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1079.57	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.50	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.07	Reach Len. (ft)	520.00	310.05	80.00
Crit W.S. (ft)	1070.73	Flow Area (sq ft)		17199.27	
E.G. Slope (ft/ft)	0.001304	Area (sq ft)		17199.27	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1054.44	Top Width (ft)		1054.44	
Vel Total (ft/s)	9.83	Avg. Vel. (ft/s)		9.83	
Max Chl Dpth (ft)	19.27	Hydr. Depth (ft)		16.31	
Conv. Total (cfs)	4679914.5	Conv. (cfs)		4679914.5	
Length Wtd. (ft)	310.05	Wetted Per. (ft)		1060.01	
Min Ch El (ft)	1058.80	Shear (lb/sq ft)		1.32	
Alpha	1.00	Stream Power (lb/ft s)		12.98	
Frctn Loss (ft)	0.40	Cum Volume (acre-ft)		1563.13	
C & E Loss (ft)	0.02	Cum SA (acres)		66.83	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.71

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16537.2	1088.3	16558.9	1085.9	16592.9	1085.9	16763.8	1086.2	16859.7	1086.5
16868.8	1087	17046.9	1087.1	17161.4	1088.2	17171.7	1082.1	17181.2	1086.1
17183.9	1086.7	17186.7	1087.9	17200.4	1088.1	17218.3	1086.4	17227.2	1087.1
17278.8	1086.7	17455.3	1086.4	17496.2	1085.4	17655	1084.9	17741.4	1083.4
17806.6	1083.9	18000.9	1084.3	18157.7	1083.7	18217.1	1085.5	18338.5	1084.8
18351.8	1084.1	18406.2	1083.5	18423.6	1082.7	18570.8	1083.4	18631.7	1082.3
18689.9	1082.2	18730.4	1083	18877.7	1084.3	18897.5	1084.2	18913.9	1085.7

19052.5	1085.8	19136.3	1086.3	19280	1085.5	19302.7	1085.3	19375.5	1086.5
19516.2	1085.3	19591.2	1085.2	19613	1086.9	19679.3	1064	19710.2	1055.3
19776.6	1057.1	19789.2	1055.6	19878.5	1055.1	19950.4	1058.1	19985.7	1058.8
20217.6	1058.8	20282.8	1058.4	20409.7	1059.5	20459.9	1062.1	20501.3	1063.5
20513.5	1067.4	20556	1082.5	20564.1	1082	20574.4	1082.3	20578.1	1079.7
20580.1	1079.2	20718.7	1080.6	20735	1083.7	20810.9	1083.1	21042.8	1082.6
21165.2	1083.1	21184.4	1080.5	21197	1079.9	21225.3	1082.8	21322.8	1082.6
21486.4	1082.2	21544.2	1082	21551.3	1081.1	21570.6	1084.8	21585.1	1084.6
21759.9	1083.1	21812.7	1083.8	21931.7	1084.3	22062.2	1085.4	22077.8	1085.4
22114.7	1086.6	22227.5	1086.1	22315.6	1086.8	22453.6	1087.2	22491.4	1087.2
22621.3	1087.6	22727.1	1088.5	22765.4	1088.2	22839.8	1088.5	23019.9	1089.1
23040.6	1089.4	23089.5	1088	23154	1089.2	23157.8	1090.1	23161.9	1089.9
23206.9	1107.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16537.2	.04	19613	.035	20556	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19613	20556	500	508.55	450	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16537.2	19613	1086.9	20556	23206.9	1082.5

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1079.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.48	Reach Len. (ft)	500.00	508.55	450.00
Crit W.S. (ft)	1069.29	Flow Area (sq ft)		16287.19	
E.G. Slope (ft/ft)	0.001272	Area (sq ft)		16287.19	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	901.57	Top Width (ft)		901.57	
Vel Total (ft/s)	10.38	Avg. Vel. (ft/s)		10.38	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		18.07	
Conv. Total (cfs)	4739388.0	Conv. (cfs)		4739388.0	
Length Wtd. (ft)	508.55	Wetted Per. (ft)		907.66	
Min Ch El (ft)	1055.10	Shear (lb/sq ft)		1.42	
Alpha	1.00	Stream Power (lb/ft s)		14.78	
Frctn Loss (ft)	0.48	Cum Volume (acre-ft)	2.41	1443.44	10.54
C & E Loss (ft)	0.11	Cum SA (acres)	2.36	59.87	11.19

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1079.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.48	Reach Len. (ft)	500.00	508.55	450.00
Crit W.S. (ft)	1069.29	Flow Area (sq ft)		16294.01	
E.G. Slope (ft/ft)	0.001270	Area (sq ft)		16294.01	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	901.57	Top Width (ft)		901.57	
Vel Total (ft/s)	10.37	Avg. Vel. (ft/s)		10.37	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		18.07	
Conv. Total (cfs)	4742644.5	Conv. (cfs)		4742644.5	
Length Wtd. (ft)	508.55	Wetted Per. (ft)		907.67	
Min Ch El (ft)	1055.10	Shear (lb/sq ft)		1.42	
Alpha	1.00	Stream Power (lb/ft s)		14.76	
Frctn Loss (ft)	0.48	Cum Volume (acre-ft)		1443.93	
C & E Loss (ft)	0.11	Cum SA (acres)		59.87	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.61

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19556.5	1090.7	19575.8	1083.7	19604	1083	19610.6	1082.9	19612.9	1082.9
19644.9	1083.1	19651.7	1083.5	19652	1083.3	19667.4	1082.4	19671.3	1082.1

19705.3	1070.2	19734.4	1059.9	19741.4	1059.3	19748	1058.8	19778	1052.1
19779.3	1051.9	19816.2	1051.8	20190.1	1050.7	20241.7	1050.4	20265.2	1051.1
20282.3	1051.7	20311.7	1051.9	20401.7	1053.1	20478.1	1077.4	20490.2	1081.3
20493	1081.2	20569.1	1081.3	20872.2	1081.7	21019.6	1081.8	21020.5	1080.9
21033.8	1081.6	21035.8	1081.5	21050.2	1081.5	21050.8	1082.2	21072	1081.6
21073.4	1082	21087.1	1081.8	21155	1081.6	21337.9	1081	21391.3	1080.8
21411.1	1080.4	21430.2	1082	21430.6	1082	21445.5	1082.7	21446.6	1082.9
21449.3	1082.9	21454.5	1082.8	21492.8	1083.2	21525.4	1083.8	21540.7	1083.8
21548.1	1083.8	21644.1	1084.5	21661.2	1084.7	21670.8	1084.7	21686.1	1084.9
21694.5	1085.5	21699.7	1086	21770.9	1085.7	21773.6	1085.7	21783.8	1085.6
21878	1085.1	21882	1085.2	21936.8	1086.2	21960.9	1085.7	21970.7	1085.5
21971.9	1085.8	21979.1	1086	21982.1	1086.2	21983.3	1086.4	22095.3	1085.7
22108.3	1085.5	22121.6	1085.5	22244.5	1085.6	22270	1085.6	22368.7	1085.5
22494.6	1085.6	22513.4	1085.6	22576.4	1085.9	22577.8	1085.9	22583	1086.1
22584.3	1086.1	22587.2	1086.2	22590.7	1086.2	22623.8	1086.6	22635.7	1086.6
22658.8	1086.7	22665.4	1086.7	22764.4	1087	22889.6	1087.5	22950.3	1086.7
22951.2	1086.5	22992.3	1087.4	22996.7	1087.5	22998	1087.5	23025.3	1087.8
23027	1089.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19556.5	.04	19651.7	.035	20490.2	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19651.7	20490.2	480	493.82	490	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19556.5	19651.7	1083.5	20490.2	23027	1081.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1078.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.32	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.25	Reach Len. (ft)	480.00	493.82	490.00
Crit W.S. (ft)	1064.26	Flow Area (sq ft)		18346.45	
E.G. Slope (ft/ft)	0.000723	Area (sq ft)		18346.45	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	792.44	Top Width (ft)		792.44	
Vel Total (ft/s)	9.21	Avg. Vel. (ft/s)		9.21	
Max Chl Dpth (ft)	26.85	Hydr. Depth (ft)		23.15	
Conv. Total (cfs)	6287221.5	Conv. (cfs)		6287221.5	
Length Wtd. (ft)	493.82	Wetted Per. (ft)		799.99	
Min Ch El (ft)	1050.40	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		9.53	
Frctn Loss (ft)	0.26	Cum Volume (acre-ft)	2.41	1241.27	10.54
C & E Loss (ft)	0.15	Cum SA (acres)	2.36	49.98	11.19

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1078.57	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.32	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.25	Reach Len. (ft)	480.00	493.82	490.00
Crit W.S. (ft)	1064.26	Flow Area (sq ft)		18352.64	
E.G. Slope (ft/ft)	0.000722	Area (sq ft)		18352.64	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	792.44	Top Width (ft)		792.44	
Vel Total (ft/s)	9.21	Avg. Vel. (ft/s)		9.21	
Max Chl Dpth (ft)	26.85	Hydr. Depth (ft)		23.16	
Conv. Total (cfs)	6290683.0	Conv. (cfs)		6290683.0	
Length Wtd. (ft)	493.82	Wetted Per. (ft)		800.00	
Min Ch El (ft)	1050.40	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		9.52	
Frctn Loss (ft)	0.26	Cum Volume (acre-ft)		1241.69	
C & E Loss (ft)	0.15	Cum SA (acres)		49.98	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for

additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.52

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18720.8	1088.9	18742	1088.8	18817.1	1087.2	18852.5	1085.6	18880.5	1085.2
18899.4	1085	18968.6	1084.4	18992.4	1084.1	19069.7	1083.1	19080.7	1083.1
19124.1	1083.4	19129.6	1083.4	19171.3	1083.5	19252.9	1082.9	19307.3	1082.4
19347.5	1082.2	19395	1080	19410	1078.6	19468.6	1078.3	19471.7	1078.3
19472.1	1078.4	19502.5	1082.1	19512.6	1081.9	19530.4	1075.5	19587.6	1058.3
19588.4	1058.2	19631.6	1049.1	19632.2	1049	19654.8	1048.9	20209.9	1048
20236.1	1049	20250.8	1050	20271.2	1049.9	20335.4	1050.8	20343.6	1050.6
20369.5	1059.1	20388.5	1060.2	20436.1	1072.8	20461.7	1079.5	20551.8	1079.4
20611.2	1079.6	20954.9	1080	20964	1080	20970.6	1080.1	20974.1	1080.7
20989.2	1081.9	20999.7	1081.1	21003	1080.5	21009.8	1081	21042.5	1081.5
21050.5	1081.8	21079.1	1083.3	21085.5	1083.5	21116.9	1082.1	21130.4	1081.5
21219.7	1082.4	21240.1	1082.6	21282.6	1084.4	21286	1083.5	21288.4	1082.3
21332.6	1082.1	21387.4	1082.6	21392.5	1082.4	21406.8	1081.5	21439.6	1083.8
21439.8	1083.8	21481	1083	21531.4	1083.5	21564.3	1083.6	21583	1083.6
21641	1083.6	21706.4	1084	21785.5	1084.9	21787.2	1084.8	21792.9	1084.7
21803.4	1084.8	21839.8	1084.4	21972.1	1084.1	21979.9	1084.1	22043.3	1084.2
22124	1084.1	22153.7	1084.1	22249.3	1084.2	22303.8	1084.1	22323.8	1084.2
22426.9	1084.1	22443.4	1085	22456.6	1085.2	22483.5	1085.4	22648.6	1085.7
22681.1	1085.7	22718.5	1085.6	22853.3	1085.1	22877.5	1085.6	22879.9	1087.3
22883.2	1089.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18720.8	.04	19502.5	.035	20461.7	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19502.5 20461.7 470 500.39 530 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18720.8	19502.5	1082.1	20461.7	22883.2	1079.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1078.15	Element			
Vel Head (ft)	0.80	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.35	Reach Len. (ft)	470.00	500.39	530.00
Crit W.S. (ft)	1060.59	Flow Area (sq ft)		23492.53	
E.G. Slope (ft/ft)	0.000391	Area (sq ft)		23492.53	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	928.22	Top Width (ft)		928.22	
Vel Total (ft/s)	7.19	Avg. Vel. (ft/s)		7.19	
Max Chl Dpth (ft)	29.35	Hydr. Depth (ft)		25.31	
Conv. Total (cfs)	8551625.0	Conv. (cfs)		8551625.0	
Length Wtd. (ft)	500.39	Wetted Per. (ft)		935.71	
Min Ch El (ft)	1048.00	Shear (lb/sq ft)		0.61	
Alpha	1.00	Stream Power (lb/ft s)		4.40	
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)	2.41	1004.12	10.54
C & E Loss (ft)	0.06	Cum SA (acres)	2.36	40.23	11.19

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1078.16	Element			
Vel Head (ft)	0.80	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.36	Reach Len. (ft)	470.00	500.39	530.00
Crit W.S. (ft)	1060.59	Flow Area (sq ft)		23499.67	
E.G. Slope (ft/ft)	0.000390	Area (sq ft)		23499.67	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	928.22	Top Width (ft)		928.22	
Vel Total (ft/s)	7.19	Avg. Vel. (ft/s)		7.19	
Max Chl Dpth (ft)	29.36	Hydr. Depth (ft)		25.32	
Conv. Total (cfs)	8555852.0	Conv. (cfs)		8555852.0	

Length Wtd. (ft)	500.39	Wetted Per. (ft)	935.73
Min Ch El (ft)	1048.00	Shear (lb/sq ft)	0.61
Alpha	1.00	Stream Power (lb/ft s)	4.40
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)	1004.45
C & E Loss (ft)	0.06	Cum SA (acres)	40.23

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.42

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18493.5	1089	18623	1088.7	18649.2	1088.3	18719.9	1086.7	18729.4	1086.4
18866.3	1084.6	18902.2	1083.9	18965.6	1081.6	19017.4	1081.3	19068.3	1081.3
19082.8	1081.1	19105.8	1080.5	19165.7	1079.2	19179.2	1079.1	19277.4	1079.4
19283.5	1079.5	19328.1	1079.3	19378	1077.9	19379.9	1078	19421	1065.1
19464.1	1052.5	19491.1	1052.2	19495.8	1051.2	19508.9	1049.2	20099.7	1048.5
20317.7	1048.3	20325.7	1048.2	20347.5	1054.7	20431.8	1079.7	20447.5	1078.7
20725.9	1079.2	20806.7	1079.3	20820.7	1074	20847.2	1077.8	20868.3	1075.7
20885.3	1074.7	20896.5	1075.4	20920.2	1076.4	20930.8	1076.7	20963.3	1076.8
20975	1077.5	21027	1078.5	21053	1078.5	21067.1	1078.7	21145.4	1078.8
21171.1	1078.5	21208	1078.9	21230.1	1079	21334.3	1080.4	21478.9	1080.2
21530.4	1080.1	21531.4	1080.2	21535.5	1080.2	21625.6	1081.4	21660.4	1081.5
21692.6	1081.9	21702.4	1082.4	21711.2	1083.1	21729.2	1083	21737.7	1083.2
21758.6	1083.2	21952.1	1083.8	22040.6	1083.1	22131.3	1083.1	22152.7	1083.7
22160.1	1082.9	22166.5	1082.7	22236.9	1082.7	22242.2	1082.8	22242.8	1082.7
22252.8	1083.3	22275.5	1084.3	22277.6	1083.8	22282.4	1082.9	22284.3	1082.9
22289.4	1082.5	22385	1082.7	22412	1082.8	22425.6	1083.3	22522.2	1083.2
22566.8	1083.5	22586.5	1083.4	22620.8	1084	22647.4	1084.9	22647.5	1085
22651.3	1085	22655.3	1084.8	22666.5	1085.2	22711.9	1084.8	22728.7	1084.5
22764.2	1084.3	22785.3	1084	22798.5	1084.7	22805.8	1085.4	22828.6	1085.6
22834	1088.8								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18493.5	.04	19379.9	.035	20431.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19379.9	20431.8	510	496.64	480	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18493.5	19379.9	1078	20431.8	22834	1079.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1077.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.61	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.32	Reach Len. (ft)	510.00	496.64	480.00
Crit W.S. (ft)	1059.39	Flow Area (sq ft)		26966.97	
E.G. Slope (ft/ft)	0.000288	Area (sq ft)		26966.97	189.82
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1193.48	Top Width (ft)		1041.69	151.79
Vel Total (ft/s)	6.27	Avg. Vel. (ft/s)		6.27	
Max Chl Dpth (ft)	29.12	Hydr. Depth (ft)		25.89	
Conv. Total (cfs)	9966912.0	Conv. (cfs)		9966912.0	
Length Wtd. (ft)	496.64	Wetted Per. (ft)		1049.86	
Min Ch El (ft)	1048.20	Shear (lb/sq ft)		0.46	
Alpha	1.00	Stream Power (lb/ft s)		2.89	
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)	2.41	714.29	9.38
C & E Loss (ft)	0.02	Cum SA (acres)	2.36	28.91	10.27

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1077.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.61	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.33	Reach Len. (ft)	510.00	496.64	480.00

Crit W.S. (ft)	1059.39	Flow Area (sq ft)	26975.11
E.G. Slope (ft/ft)	0.000287	Area (sq ft)	26975.11
Q Total (cfs)	169000.00	Flow (cfs)	169000.00
Top Width (ft)	1041.69	Top Width (ft)	1041.69
Vel Total (ft/s)	6.27	Avg. Vel. (ft/s)	6.27
Max Chl Dpth (ft)	29.13	Hydr. Depth (ft)	25.90
Conv. Total (cfs)	9971823.0	Conv. (cfs)	9971823.0
Length Wtd. (ft)	496.64	Wetted Per. (ft)	1049.87
Min Ch El (ft)	1048.20	Shear (lb/sq ft)	0.46
Alpha	1.00	Stream Power (lb/ft s)	2.89
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)	714.54
C & E Loss (ft)	0.02	Cum SA (acres)	28.91

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.33

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19133.3	1085.2	19150.1	1084.8	19166.8	1082.9	19183.1	1081.7	19209.9	1081.3
19301.3	1080.3	19344.7	1079.4	19434.1	1078.7	19465.4	1078.4	19483.8	1078.5
19487.4	1078.4	19523.4	1066.7	19566.6	1052.5	19603.1	1051.4	19616.9	1048.8
19618.9	1048.5	20162.4	1048.5	20297.1	1048.6	20328.4	1057.9	20398	1078.8
20412.3	1077.8	20446.7	1077.9	20657.5	1078.6	20676	1070.3	20677.2	1069.9
20699.8	1076	20737.1	1074.4	20751.7	1072.8	20760.5	1073.4	20805.9	1074.8
20836.7	1075.5	20869.8	1076.4	20918.3	1076.8	20949.1	1076.9	20987.3	1076.4
21007.5	1076	21018.5	1076.4	21020.1	1076.7	21036.8	1076.9	21114	1077.6
21129.5	1077.8	21152.8	1078.4	21167.5	1078.9	21188.3	1079	21274.4	1079
21283.2	1078.8	21287.2	1078.8	21339.5	1078.5	21371.1	1077.7	21383.5	1077.2
21417.4	1077.4	21422	1077.5	21453	1077.4	21457.4	1077.6	21484.4	1078.1
21507	1079	21536.8	1078.7	21546.2	1078.5	21548.8	1079	21562.6	1082.6
21570.5	1082.2	21584.1	1078.7	21599.4	1080.2	21608.1	1081.8	21609	1081.8
21686.1	1081.7	21711.3	1081.7	21759	1082.3	21794	1082.3	21961.8	1081.9
22070.5	1082.3	22107.7	1082.5	22117.3	1082.5	22139.1	1084.1	22245.2	1081.7
22259.2	1081.5	22311.2	1081.5	22328.9	1082.2	22367.6	1082.5	22412.4	1083
22434.9	1083.7	22480	1083.4	22488.3	1083.5	22501.1	1083.3	22505.8	1083.9
22523	1083.8	22534.2	1083.9	22540.3	1083.8	22556.6	1083.2	22675.7	1082.9
22714.1	1082.9	22740.7	1084.5	22763.1	1084.9	22765.9	1084.7	22770.5	1087.7
22776.7	1088								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19133.3	.04	19483.8	.035	20398	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19483.8	20398	440	507.15	560	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19133.3	19483.8	1078.5	20398	22776.7	1078.8

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1077.73	Element			
Vel Head (ft)	0.85	Wt. n-Val.		0.035	
W.S. Elev (ft)	1076.88	Reach Len. (ft)	440.00	507.15	560.00
Crit W.S. (ft)	1060.42	Flow Area (sq ft)		22823.58	
E.G. Slope (ft/ft)	0.000413	Area (sq ft)		22823.58	546.43
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1266.50	Top Width (ft)		899.54	366.96
Vel Total (ft/s)	7.40	Avg. Vel. (ft/s)		7.40	
Max Chl Dpth (ft)	28.38	Hydr. Depth (ft)		25.37	
Conv. Total (cfs)	8315551.0	Conv. (cfs)		8315551.0	
Length Wtd. (ft)	**507.15**	**Wetted Per. (ft)**		**907.85**	
Min Ch El (ft)	1048.50	Shear (lb/sq ft)		0.65	
Alpha	1.00	Stream Power (lb/ft s)		4.80	
Frctn Loss (ft)	0.28	Cum Volume (acre-ft)	2.41	430.45	5.33
C & E Loss (ft)	0.06	Cum SA (acres)	2.36	17.85	7.41

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1077.74	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.85	Wt. n-Val.		0.035	
W.S. Elev (ft)	1076.89	Reach Len. (ft)	440.00	507.15	560.00
Crit W.S. (ft)	1060.42	Flow Area (sq ft)		22830.94	
E.G. Slope (ft/ft)	0.000413	Area (sq ft)		22830.94	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	899.54	Top Width (ft)		899.54	
Vel Total (ft/s)	7.40	Avg. Vel. (ft/s)		7.40	
Max Chl Dpth (ft)	28.39	Hydr. Depth (ft)		25.38	
Conv. Total (cfs)	8319916.5	Conv. (cfs)		8319916.5	
Length Wtd. (ft)	507.15	Wetted Per. (ft)		907.87	
Min Ch El (ft)	1048.50	Shear (lb/sq ft)		0.65	
Alpha	1.00	Stream Power (lb/ft s)		4.80	
Frctn Loss (ft)	0.28	Cum Volume (acre-ft)		430.62	
C & E Loss (ft)	0.06	Cum SA (acres)		17.85	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.23

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18784.1	1083	18804.5	1082.7	18829.1	1082.8	18859.6	1082.2	18872.7	1082.1
18901.7	1080.8	18937.2	1079.1	18949.3	1078.7	18993.6	1076.9	19014.1	1076.2
19019.1	1076	19059.1	1075.3	19071.7	1075.2	19140.8	1074.8	19164.5	1074.3
19204	1074	19250.8	1076.3	19289.1	1078.8	19308.2	1079.3	19327.2	1079.4
19383.2	1079.8	19398.8	1080.2	19482.4	1079.4	19525.9	1078.7	19586	1078.4
19602.4	1078	19608.5	1078	19627.1	1071.4	19679	1054.8	19716.3	1049.1
19735.4	1049.5	19750.3	1050.1	19754.7	1049.9	19765.5	1049.7	19776.3	1048.7
19795	1048.7	20005.3	1048.9	20084.2	1049	20254.8	1049.1	20264.9	1051.9
20361.7	1078.5	20382.3	1076.8	20444.8	1077.5	20517.6	1077.1	20541.3	1077.2
20594	1077	20670.3	1076.8	20683.5	1076.6	20732.6	1075.7	20741.7	1076
20744	1076	20815.4	1076.1	20831.3	1076.5	20866.2	1076.8	20912.2	1077.1
20978	1077.2	20998.8	1076.9	21008.6	1077	21025.7	1076.4	21089	1076.5
21093.4	1076.5	21125.9	1078.5	21149.4	1077.2	21195.1	1075.3	21231.1	1074.6
21239	1074.6	21282.1	1075.3	21304.7	1075.4	21378.1	1077	21396.4	1078.6
21405.7	1079.3	21416.4	1077.7	21418.8	1077.6	21492.6	1079.6	21526.7	1079.8
21540.8	1080.1	21640.2	1080.5	21651.2	1077.8	21654.9	1076.6	21672.5	1076.5
21682.8	1076.7	21695	1077.7	21718.3	1079.8	21746.9	1079.9	21771.5	1079.8
21876.1	1080.4	21901.8	1080.5	21957.9	1080.4	22021.8	1080.6	22062.3	1081.1
22115.9	1081.6	22173.3	1082.2	22270.7	1082.8	22330.2	1082.8	22335	1083.1
22345.5	1083.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18784.1	.04	19608.5	.035	20361.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19608.5	20361.7	495	494.49	495	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18784.1	19608.5	1078	20361.7	22345.5	1078.5

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1077.39	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.46	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.93	Reach Len. (ft)	495.00	494.49	495.00
Crit W.S. (ft)	1062.84	Flow Area (sq ft)		17406.42	
E.G. Slope (ft/ft)	0.000784	Area (sq ft)	224.37	17406.42	114.05

Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1126.00	Top Width (ft)	219.92	737.99	168.09
Vel Total (ft/s)	9.71	Avg. Vel. (ft/s)		9.71	
Max Chl Dpth (ft)	27.23	Hydr. Depth (ft)		23.59	
Conv. Total (cfs)	6036928.5	Conv. (cfs)		6036928.5	
Length Wtd. (ft)	494.49	Wetted Per. (ft)		745.49	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.14	
Alpha	1.00	Stream Power (lb/ft s)		11.09	
Frctn Loss (ft)	0.39	Cum Volume (acre-ft)	1.27	196.26	1.08
C & E Loss (ft)	0.00	Cum SA (acres)	1.25	8.31	3.97

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1077.40	Element			
Vel Head (ft)	1.46	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.94	Reach Len. (ft)	495.00	494.49	495.00
Crit W.S. (ft)	1062.84	Flow Area (sq ft)		17413.27	
E.G. Slope (ft/ft)	0.000783	Area (sq ft)		17413.27	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	738.00	Top Width (ft)		738.00	
Vel Total (ft/s)	9.71	Avg. Vel. (ft/s)		9.71	
Max Chl Dpth (ft)	27.24	Hydr. Depth (ft)		23.60	
Conv. Total (cfs)	6040764.0	Conv. (cfs)		6040764.0	
Length Wtd. (ft)	494.49	Wetted Per. (ft)		745.51	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.14	
Alpha	1.00	Stream Power (lb/ft s)		11.08	
Frctn Loss (ft)	0.39	Cum Volume (acre-ft)		196.34	
C & E Loss (ft)	0.00	Cum SA (acres)		8.31	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.14

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18555.4	1082.6	18577.7	1082.5	18586.5	1082.5	18650.6	1082	18678.8	1082.1
18707.4	1081.7	18729.5	1082	18771.6	1082.1	18793.7	1081.8	18836	1080.9
18859.7	1080.3	18935.6	1078.9	19050.6	1077.2	19056.7	1077.2	19059.9	1077.1
19062.9	1076.9	19063.3	1077	19067.8	1077.1	19071.9	1077.1	19078.2	1077.1
19188.3	1078.1	19249.7	1079.4	19290.2	1080.1	19298.1	1080.2	19313.1	1080.4
19327.5	1080.7	19358.6	1080.6	19391.6	1080.5	19412.8	1080.3	19520.8	1077.9
19554.8	1077.5	19580.2	1077.3	19610.8	1076.5	19651.9	1076.7	19697.7	1058.7
19715.9	1051.7	19732.8	1050.2	19750.7	1048.7	20032.7	1049	20292.3	1049.2
20350.9	1065.9	20388.3	1077.5	20405.5	1075.6	20406	1075.6	20439.7	1075.6
20637.3	1075.5	20899.6	1075.4	20920.6	1075.5	20941.8	1075.4	20947.4	1075.5
20962	1075.5	20980	1075.4	20989.9	1075.4	21074.1	1075.4	21119.6	1075.7
21168.7	1076.8	21222	1076.6	21326.8	1076.2	21327.4	1076.2	21342.2	1075
21390.6	1075	21428.8	1075	21455.3	1075.3	21502.1	1076.4	21502.4	1076.2
21505.4	1076.4	21551.9	1077.5	21591.8	1077.6	21726.3	1078.4	21759.2	1078.5
21766.3	1078.3	21792.4	1078.4	21884.6	1078.9	22013	1079.1	22034.3	1079.5
22101.6	1079.7	22156.1	1080.1	22201.4	1080	22204.6	1079.9	22217.3	1080.5
22235	1081.3	22238.1	1081.3	22264.5	1081	22267.7	1080.9	22269.4	1080.7
22269.9	1080.6	22272.4	1080.4	22280.3	1079.8	22341.9	1080.2	22431	1080.6
22501.3	1081.2	22591.2	1081.8	22602.9	1082	22619.7	1083	22686.6	1082.9
22710.3	1082.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18555.4	.04	19651.9	.035	20388.3	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19651.9	20388.3	475	510.51	570	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18555.4	19651.9	1076.7	20388.3	22710.3	1077.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1076.99	Element			
Vel Head (ft)	1.50	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.49	Reach Len. (ft)			
Crit W.S. (ft)	1062.63	Flow Area (sq ft)		17171.67	
E.G. Slope (ft/ft)	0.000805	Area (sq ft)		17171.67	76.05
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1257.06	Top Width (ft)		726.84	530.22
Vel Total (ft/s)	9.84	Avg. Vel. (ft/s)		9.84	
Max Chl Dpth (ft)	26.79	Hydr. Depth (ft)		23.63	
Conv. Total (cfs)	5956564.5	Conv. (cfs)		5956564.5	
Length Wtd. (ft)		Wetted Per. (ft)		735.24	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.17	
Alpha	1.00	Stream Power (lb/ft s)		11.55	
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1077.00	Element			
Vel Head (ft)	1.50	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.50	Reach Len. (ft)			
Crit W.S. (ft)	1062.66	Flow Area (sq ft)		17178.94	
E.G. Slope (ft/ft)	0.000804	Area (sq ft)		17178.94	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	726.84	Top Width (ft)		726.84	
Vel Total (ft/s)	9.84	Avg. Vel. (ft/s)		9.84	
Max Chl Dpth (ft)	26.80	Hydr. Depth (ft)		23.64	
Conv. Total (cfs)	5960669.0	Conv. (cfs)		5960669.0	
Length Wtd. (ft)		Wetted Per. (ft)		735.26	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.17	
Alpha	1.00	Stream Power (lb/ft s)		11.54	
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

SUMMARY OF MANNING'S N VALUES

River:Salt River

Reach	River Sta.	n1	n2	n3
Reach 4	223.08	.05	.035	.05
Reach 4	223.02	.05	.035	.05
Reach 4	222.93	.05	.035	.05
Reach 4	222.83	.05	.035	.05
Reach 4	222.74	.05	.035	.05
Reach 4	222.65	.05	.035	.05
Reach 4	222.55	.04	.03	.04
Reach 4	222.45	.04	.03	.04
Reach 4	222.36	.04	.03	.04
Reach 4	222.27	.04	.03	.04
Reach 4	222.17	.04	.03	.04
Reach 4	222.09	.04	.03	.04
Reach 4	222.085	Bridge		
Reach 4	222.08	.04	.03	.04
Reach 4	221.99	.04	.03	.04
Reach 4	221.89	.04	.03	.04
Reach 4	221.80	.04	.03	.04
Reach 4	221.70	.04	.03	.04
Reach 4	221.61	.04	.03	.04
Reach 4	221.50	.04	.03	.04
Reach 4	221.40	.05	.035	.05
Reach 4	221.31	.05	.035	.05
Reach 4	221.26	.05	.035	.05

Reach 4	221.25	Bridge			
Reach 4	221.24		.05	.035	.05
Reach 4	221.2		.05	.035	.05
Reach 4	221.195	Bridge			
Reach 4	221.19		.05	.035	.05
Reach 4	221.06		.05	.035	.05
Reach 4	221.055	Bridge			
Reach 4	221.05		.035	.035	.035
Reach 4	221.02		.035	.035	.035
Reach 4	220.92		.035	.035	.035
Reach 4	220.82		.035	.035	.035
Reach 4	220.73		.035	.035	.035
Reach 4	220.63		.035	.035	.035
Reach 4	220.54		.035	.035	.035
Reach 4	220.45		.035	.035	.035
Reach 4	220.35		.035	.035	.035
Reach 4	220.25		.035	.035	.035
Reach 4	220.16		.035	.035	.035
Reach 4	220.06		.035	.035	.035
Reach 4	220.05	Bridge			
Reach 4	220.03		.035	.035	.035
Reach 4	219.88		.035	.035	.035
Reach 4	219.79		.035	.035	.035
Reach 4	219.70		.035	.035	.035
Reach 4	219.61		.035	.035	.035
Reach 4	219.51		.035	.035	.035
Reach 4	219.42		.035	.035	.035
Reach 4	219.33		.035	.035	.035
Reach 4	219.24		.035	.035	.035
Reach 4	219.14		.05	.035	.05
Reach 4	219.03		.05	.035	.05
Reach 4	219.02	Bridge			
Reach 4	219.01		.05	.035	.05
Reach 4	218.97		.05	.035	.05
Reach 4	218.965	Bridge			
Reach 4	218.96		.05	.035	.05
Reach 4	218.80		.05	.035	.05
Reach 4	218.71		.05	.035	.05
Reach 4	218.61		.05	.035	.05
Reach 4	218.52		.05	.035	.05
Reach 4	218.42		.05	.035	.05
Reach 4	218.33		.05	.035	.05
Reach 4	218.24		.05	.035	.05
Reach 4	218.14		.05	.035	.05
Reach 4	218.04		.035	.035	.035
Reach 4	217.95		.035	.035	.035
Reach 4	217.86		.035	.035	.035
Reach 4	217.76		.035	.035	.035
Reach 4	217.66		.035	.035	.035
Reach 4	217.57		.035	.035	.035
Reach 4	217.48		.035	.035	.035
Reach 4	217.38		.035	.035	.035
Reach 4	217.29		.035	.035	.035
Reach 4	217.19		.035	.035	.035
Reach 4	217.10		.035	.035	.035
Reach 4	217.00		.035	.035	.035
Reach 4	216.91		.035	.035	.035
Reach 4	216.81		.035	.035	.035
Reach 4	216.72		.035	.035	.035
Reach 4	216.62		.035	.035	.035
Reach 4	216.52		.04	.035	.04
Reach 4	216.505	Bridge			
Reach 4	216.49		.04	.035	.04
Reach 4	216.42		.04	.035	.04
Reach 4	216.33		.04	.035	.04
Reach 4	216.23		.04	.035	.04
Reach 4	216.13		.04	.035	.04
Reach 4	216.04		.04	.035	.04
Reach 4	215.94		.04	.035	.04
Reach 4	215.84		.04	.035	.04
Reach 4	215.82		.04	.035	.04

Reach 4	215.815	Bridge		
Reach 4	215.81	.04	.035	.04
Reach 4	215.75	.04	.035	.04
Reach 4	215.65	.04	.035	.04
Reach 4	215.56	.04	.035	.04
Reach 4	215.46	.04	.035	.04
Reach 4	215.36	.04	.035	.04
Reach 4	215.27	.04	.035	.04
Reach 4	215.18	.04	.035	.04
Reach 4	215.09	.04	.035	.04
Reach 4	214.99	.04	.035	.04
Reach 4	214.9	.04	.035	.04
Reach 4	214.79	.04	.035	.04
Reach 4	214.785	Bridge		
Reach 4	214.78	.04	.035	.04
Reach 4	214.71	.04	.035	.04
Reach 4	214.61	.04	.035	.04
Reach 4	214.52	.04	.035	.04
Reach 4	214.42	.04	.035	.04
Reach 4	214.33	.04	.035	.04
Reach 4	214.23	.04	.035	.04
Reach 4	214.14	.04	.035	.04

SUMMARY OF REACH LENGTHS

River: Salt River

Reach	River Sta.	Left	Channel	Right
Reach 4	223.08	170	268.54	370
Reach 4	223.02	500	494.97	480
Reach 4	222.93	470	502.27	520
Reach 4	222.83	497.11	497.11	497.11
Reach 4	222.74	482.71	482.71	482.71
Reach 4	222.65	525	522.87	470
Reach 4	222.55	530	514.6	510
Reach 4	222.45	420	480.98	550
Reach 4	222.36	630	487.06	380
Reach 4	222.27	580	492.86	420
Reach 4	222.17	410	381.57	360
Reach 4	222.09	154.01	154.01	154.01
Reach 4	222.085	Bridge		
Reach 4	222.08	580	440.56	330
Reach 4	221.99	560	510.5	470
Reach 4	221.89	520	490.84	460
Reach 4	221.80	520	512.31	500
Reach 4	221.70	480	491.61	500
Reach 4	221.61	420	571.5	760
Reach 4	221.50	510	506.96	520
Reach 4	221.40	460	504.7	540
Reach 4	221.31	220	262.31	780
Reach 4	221.26	101.04	101.04	101.04
Reach 4	221.25	Bridge		
Reach 4	221.24	185.11	185.11	185.11
Reach 4	221.2	91.95	91.95	91.95
Reach 4	221.195	Bridge		
Reach 4	221.19	790	650.87	300
Reach 4	221.06	84.74	84.74	84.74
Reach 4	221.055	Bridge		
Reach 4	221.05	210	167.68	80
Reach 4	221.02	530	503.55	450
Reach 4	220.92	560	518.52	450
Reach 4	220.82	500	494.93	490
Reach 4	220.73	510	501.55	490
Reach 4	220.63	490	501.08	510
Reach 4	220.54	470	492.46	510
Reach 4	220.45	500	506.77	520
Reach 4	220.35	490	500.81	520

Reach 4	220.25	500	500.83	490
Reach 4	220.16	480	495.84	550
Reach 4	220.06	176.4	176.4	176.4
Reach 4	220.05	Bridge		
Reach 4	220.03	840	799.9	720
Reach 4	219.88	460	484.7	520
Reach 4	219.79	420	490.52	550
Reach 4	219.70	460	477.05	540
Reach 4	219.61	470	499.49	550
Reach 4	219.51	450	497.52	570
Reach 4	219.42	410	470.96	560
Reach 4	219.33	380	467.92	590
Reach 4	219.24	510	511.34	500
Reach 4	219.14	760	550.34	260
Reach 4	219.03	190.12	190.12	190.12
Reach 4	219.02	Bridge		
Reach 4	219.01	111.97	111.97	111.97
Reach 4	218.97	138.88	138.88	138.88
Reach 4	218.965	Bridge		
Reach 4	218.96	570	812.27	860
Reach 4	218.80	480	483.7	500
Reach 4	218.71	508.24	508.24	508.24
Reach 4	218.61	510	503.43	503.43
Reach 4	218.52	520	496.02	460
Reach 4	218.42	520	502.97	490
Reach 4	218.33	540	490.24	430
Reach 4	218.24	530	499.8	460
Reach 4	218.14	570	508.89	460
Reach 4	218.04	540	508.91	460
Reach 4	217.95	480	489.76	489.76
Reach 4	217.86	470	512.67	540
Reach 4	217.76	440	496.98	560
Reach 4	217.66	450	512.72	610
Reach 4	217.57	440	481.39	550
Reach 4	217.48	440	502.74	570
Reach 4	217.38	480	491.58	500
Reach 4	217.29	511.81	511.81	520
Reach 4	217.19	490	502.45	520
Reach 4	217.10	481.37	481.37	481.37
Reach 4	217.00	510	506.49	506.49
Reach 4	216.91	503.44	503.44	503.44
Reach 4	216.81	498.18	498.18	498.18
Reach 4	216.72	500	508.39	520
Reach 4	216.62	470	499.71	570
Reach 4	216.52	256.5	256.5	256.5
Reach 4	216.505	Bridge		
Reach 4	216.49	23.25	23.25	23.25
Reach 4	216.42	510	488.7	410
Reach 4	216.33	600	490.24	380
Reach 4	216.23	590	517.61	450
Reach 4	216.13	550	500.46	390
Reach 4	216.04	540	507.78	500
Reach 4	215.94	560	540.02	520
Reach 4	215.84	120	123.82	130
Reach 4	215.82	115.96	115.96	115.96
Reach 4	215.815	Bridge		
Reach 4	215.81	300	264.36	230
Reach 4	215.75	520	500.69	470
Reach 4	215.65	500	495.44	490
Reach 4	215.56	500	498.23	500
Reach 4	215.46	510	519.75	530
Reach 4	215.36	500	489.19	470
Reach 4	215.27	550	493.27	420
Reach 4	215.18	560	481.96	420
Reach 4	215.09	510	506.22	510
Reach 4	214.99	480	505.18	530
Reach 4	214.9	340	568.44	730
Reach 4	214.79	116.34	116.34	116.34
Reach 4	214.785	Bridge		
Reach 4	214.78	520	310.05	80
Reach 4	214.71	500	508.55	450

Reach 4	214.61	480	493.82	490
Reach 4	214.52	470	500.39	530
Reach 4	214.42	510	496.64	480
Reach 4	214.33	440	507.15	560
Reach 4	214.23	495	494.49	495
Reach 4	214.14	475	510.51	570

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Salt River

Reach	River Sta.		Contr.	Expan.
Reach 4	223.08		.1	.3
Reach 4	223.02		.1	.3
Reach 4	222.93		.1	.3
Reach 4	222.83		.1	.3
Reach 4	222.74		.1	.3
Reach 4	222.65		.1	.3
Reach 4	222.55		.1	.3
Reach 4	222.45		.1	.3
Reach 4	222.36		.1	.3
Reach 4	222.27		.1	.3
Reach 4	222.17		.1	.3
Reach 4	222.09		.1	.3
Reach 4	222.085	Bridge		
Reach 4	222.08		.1	.3
Reach 4	221.99		.1	.3
Reach 4	221.89		.1	.3
Reach 4	221.80		.1	.3
Reach 4	221.70		.1	.3
Reach 4	221.61		.1	.3
Reach 4	221.50		.1	.3
Reach 4	221.40		.1	.3
Reach 4	221.31		.1	.3
Reach 4	221.26		.1	.3
Reach 4	221.25	Bridge		
Reach 4	221.24		.1	.3
Reach 4	221.2		.1	.3
Reach 4	221.195	Bridge		
Reach 4	221.19		.1	.3
Reach 4	221.06		.1	.3
Reach 4	221.055	Bridge		
Reach 4	221.05		.1	.3
Reach 4	221.02		.1	.3
Reach 4	220.92		.1	.3
Reach 4	220.82		.1	.3
Reach 4	220.73		.1	.3
Reach 4	220.63		.1	.3
Reach 4	220.54		.1	.3
Reach 4	220.45		.1	.3
Reach 4	220.35		.1	.3
Reach 4	220.25		.1	.3
Reach 4	220.16		.1	.3
Reach 4	220.06		.1	.3
Reach 4	220.05	Bridge		
Reach 4	220.03		.1	.3
Reach 4	219.88		.1	.3
Reach 4	219.79		.1	.3
Reach 4	219.70		.1	.3
Reach 4	219.61		.1	.3
Reach 4	219.51		.1	.3
Reach 4	219.42		.1	.3
Reach 4	219.33		.1	.3
Reach 4	219.24		.1	.3
Reach 4	219.14		.1	.3
Reach 4	219.03		.1	.3
Reach 4	219.02	Bridge		

Reach 4	219.01		.1	.3
Reach 4	218.97		.1	.3
Reach 4	218.965	Bridge		
Reach 4	218.96		.1	.3
Reach 4	218.80		.1	.3
Reach 4	218.71		.1	.3
Reach 4	218.61		.1	.3
Reach 4	218.52		.1	.3
Reach 4	218.42		.1	.3
Reach 4	218.33		.1	.3
Reach 4	218.24		.1	.3
Reach 4	218.14		.1	.3
Reach 4	218.04		.1	.3
Reach 4	217.95		.1	.3
Reach 4	217.86		.1	.3
Reach 4	217.76		.1	.3
Reach 4	217.66		.1	.3
Reach 4	217.57		.1	.3
Reach 4	217.48		.1	.3
Reach 4	217.38		.1	.3
Reach 4	217.29		.1	.3
Reach 4	217.19		.1	.3
Reach 4	217.10		.1	.3
Reach 4	217.00		.1	.3
Reach 4	216.91		.1	.3
Reach 4	216.81		.1	.3
Reach 4	216.72		.1	.3
Reach 4	216.62		.1	.3
Reach 4	216.52		.1	.3
Reach 4	216.505	Bridge		
Reach 4	216.49		.1	.3
Reach 4	216.42		.1	.3
Reach 4	216.33		.1	.3
Reach 4	216.23		.1	.3
Reach 4	216.13		.1	.3
Reach 4	216.04		.1	.3
Reach 4	215.94		.1	.3
Reach 4	215.84		.1	.3
Reach 4	215.82		.1	.3
Reach 4	215.815	Bridge		
Reach 4	215.81		.1	.3
Reach 4	215.75		.1	.3
Reach 4	215.65		.1	.3
Reach 4	215.56		.1	.3
Reach 4	215.46		.1	.3
Reach 4	215.36		.1	.3
Reach 4	215.27		.1	.3
Reach 4	215.18		.1	.3
Reach 4	215.09		.1	.3
Reach 4	214.99		.1	.3
Reach 4	214.9		.1	.3
Reach 4	214.79		.1	.3
Reach 4	214.785	Bridge		
Reach 4	214.78		.1	.3
Reach 4	214.71		.1	.3
Reach 4	214.61		.1	.3
Reach 4	214.52		.1	.3
Reach 4	214.42		.1	.3
Reach 4	214.33		.1	.3
Reach 4	214.23		.1	.3
Reach 4	214.14		.1	.3

Profile Output Table - Standard Table 1

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach 4	214.14	169000.00	1048.70	1075.49	1062.63	1076.99	0.000805	9.84	17171.67	1257.06	0.36
Reach 4	214.14	169000.00	1048.70	1075.50	1062.66	1077.00	0.000804	9.84	17178.94	726.84	0.36
Reach 4	214.23	169000.00	1048.70	1075.93	1062.84	1077.39	0.000784	9.71	17406.42	1126.00	0.35
Reach 4	214.23	169000.00	1048.70	1075.94	1062.84	1077.40	0.000783	9.71	17413.27	738.00	0.35
Reach 4	214.33	169000.00	1048.50	1076.88	1060.42	1077.73	0.000413	7.40	22823.58	1266.50	0.26
Reach 4	214.33	169000.00	1048.50	1076.89	1060.42	1077.74	0.000413	7.40	22830.94	899.54	0.26
Reach 4	214.42	169000.00	1048.20	1077.32	1059.39	1077.93	0.000288	6.27	26966.97	1193.48	0.22
Reach 4	214.42	169000.00	1048.20	1077.33	1059.39	1077.93	0.000287	6.27	26975.11	1041.69	0.22
Reach 4	214.52	169000.00	1048.00	1077.35	1060.59	1078.15	0.000391	7.19	23492.53	928.22	0.25
Reach 4	214.52	169000.00	1048.00	1077.36	1060.59	1078.16	0.000390	7.19	23499.67	928.22	0.25
Reach 4	214.61	169000.00	1050.40	1077.25	1064.26	1078.56	0.000723	9.21	18346.45	792.44	0.34
Reach 4	214.61	169000.00	1050.40	1077.25	1064.26	1078.57	0.000722	9.21	18352.64	792.44	0.34
Reach 4	214.71	169000.00	1055.10	1077.48	1069.29	1079.15	0.001272	10.38	16287.19	901.57	0.43
Reach 4	214.71	169000.00	1055.10	1077.48	1069.29	1079.15	0.001270	10.37	16294.01	901.57	0.43
Reach 4	214.78	169000.00	1058.80	1078.06	1070.73	1079.56	0.001306	9.83	17192.07	1054.44	0.43
Reach 4	214.78	169000.00	1058.80	1078.07	1070.73	1079.57	0.001304	9.83	17199.27	1054.44	0.43
Reach 4	214.785	Bridge									
Reach 4	214.79	169000.00	1057.60	1078.39	1070.68	1079.83	0.001221	9.63	17557.55	1056.41	0.42
Reach 4	214.79	169000.00	1057.60	1078.40	1070.68	1079.83	0.001219	9.62	17564.39	1056.41	0.42
Reach 4	214.9	169000.00	1061.20	1078.13	1074.91	1081.52	0.003589	14.78	11434.89	934.49	0.69
Reach 4	214.9	169000.00	1061.20	1078.14	1074.91	1081.53	0.003584	14.77	11439.94	810.50	0.69
Reach 4	214.99	169000.00	1061.30	1079.91	1075.58	1083.17	0.002926	14.48	11672.67	727.58	0.64
Reach 4	214.99	169000.00	1061.30	1079.92	1075.58	1083.17	0.002925	14.48	11674.45	727.58	0.64
Reach 4	215.09	169000.00	1061.70	1081.09	1076.37	1084.77	0.002894	15.38	10986.08	619.02	0.64
Reach 4	215.09	169000.00	1061.70	1081.10	1076.37	1084.77	0.002893	15.38	10987.06	619.02	0.64
Reach 4	215.18	169000.00	1062.20	1081.87	1079.42	1086.91	0.004584	18.01	9382.04	686.90	0.80
Reach 4	215.18	169000.00	1062.20	1081.87	1079.42	1086.91	0.004582	18.01	9382.77	593.90	0.80
Reach 4	215.27	169000.00	1063.50	1086.84	1076.00	1088.10	0.000846	9.02	18736.49	3991.40	0.36
Reach 4	215.27	169000.00	1063.50	1086.85	1076.00	1088.11	0.000852	9.02	18740.87	943.30	0.36
Reach 4	215.36	169000.00	1063.00	1087.34	1075.36	1088.49	0.000701	8.61	19624.04	3559.77	0.33
Reach 4	215.36	169000.00	1063.00	1087.35	1075.36	1088.50	0.000701	8.61	19629.43	919.00	0.33
Reach 4	215.46	169000.00	1064.60	1087.61	1077.65	1088.97	0.000932	9.38	18009.56	916.86	0.37
Reach 4	215.46	169000.00	1064.60	1087.61	1077.65	1088.98	0.000931	9.38	18015.04	916.85	0.37
Reach 4	215.56	169000.00	1066.10	1087.99	1079.15	1089.55	0.001145	10.02	16859.61	907.87	0.41
Reach 4	215.56	169000.00	1066.10	1087.99	1079.15	1089.55	0.001144	10.02	16864.71	907.88	0.41
Reach 4	215.65	169000.00	1068.30	1088.27	1082.38	1090.46	0.001959	11.87	14232.62	890.00	0.52

Reach 4	215.65	169000.00	1068.30	1088.28	1082.38	1090.47	0.001957	11.87	14237.18	890.00	0.52
Reach 4	215.75	169000.00	1073.60	1088.44	1086.81	1092.56	0.005283	16.27	10385.16	854.81	0.82
Reach 4	215.75	169000.00	1073.60	1088.45	1086.81	1092.56	0.005277	16.27	10389.02	854.81	0.82
Reach 4	215.81	169000.00	1076.00	1090.81	1087.03	1093.71	0.003024	13.67	12363.67	860.84	0.64
Reach 4	215.81	169000.00	1076.00	1090.81	1087.03	1093.71	0.003023	13.67	12364.51	860.84	0.64
Reach 4	215.815	Bridge									
Reach 4	215.82	169000.00	1076.00	1091.84	1087.02	1094.37	0.002409	12.76	13249.11	860.86	0.57
Reach 4	215.82	169000.00	1076.00	1091.85	1087.02	1094.37	0.002405	12.75	13254.68	860.86	0.57
Reach 4	215.84	169000.00	1075.80	1091.71	1088.70	1094.94	0.003651	14.42	11719.46	870.81	0.69
Reach 4	215.84	169000.00	1075.80	1091.72	1088.70	1094.94	0.003644	14.41	11725.41	870.81	0.69
Reach 4	215.94	169000.00	1077.80	1093.70	1090.81	1097.08	0.004117	14.74	11461.59	983.97	0.73
Reach 4	215.94	169000.00	1077.80	1093.70	1090.81	1097.08	0.004113	14.74	11464.57	906.67	0.73
Reach 4	216.04	169000.00	1077.50	1096.93	1088.52	1098.22	0.001041	9.13	18515.97	1448.65	0.39
Reach 4	216.04	169000.00	1077.50	1096.93	1088.52	1098.22	0.001041	9.13	18517.14	1069.84	0.39
Reach 4	216.13	169000.00	1078.00	1097.54	1088.70	1098.73	0.000954	8.75	19303.70	2129.80	0.37
Reach 4	216.13	169000.00	1078.00	1097.54	1088.70	1098.73	0.000954	8.75	19304.79	1113.68	0.37
Reach 4	216.23	169000.00	1078.50	1097.99	1089.39	1099.28	0.001058	9.13	18502.08	1738.50	0.39
Reach 4	216.23	169000.00	1078.50	1097.99	1089.39	1099.28	0.001059	9.13	18503.28	1083.71	0.39
Reach 4	216.33	169000.00	1080.80	1098.35	1091.37	1099.99	0.001446	10.25	16489.69	1473.62	0.45
Reach 4	216.33	169000.00	1080.80	1098.36	1091.37	1099.99	0.001445	10.25	16490.95	1026.33	0.45
Reach 4	216.42	169000.00	1082.00	1098.86	1093.10	1100.93	0.001943	11.57	14613.30	1034.14	0.52
Reach 4	216.42	169000.00	1082.00	1098.86	1093.10	1100.93	0.001943	11.56	14614.20	946.84	0.52
Reach 4	216.49	169000.00	1083.20	1098.53	1094.27	1101.15	0.002871	12.99	13010.51	949.03	0.62
Reach 4	216.49	169000.00	1083.20	1098.53	1094.27	1101.15	0.002870	12.99	13011.78	949.02	0.62
Reach 4	216.505	Bridge									
Reach 4	216.52	169000.00	1083.20	1100.20	1094.26	1102.27	0.002072	11.53	14652.61	999.71	0.53
Reach 4	216.52	169000.00	1083.20	1100.20	1094.26	1102.27	0.002072	11.53	14653.22	999.72	0.53
Reach 4	216.62	169000.00	1078.33	1101.44	1093.62	1103.15	0.001429	10.52	16067.80	1054.35	0.45
Reach 4	216.62	169000.00	1078.33	1101.44	1093.62	1103.15	0.001429	10.52	16066.40	951.16	0.45
Reach 4	216.72	169000.00	1080.17	1102.29	1093.15	1103.80	0.001078	9.88	17099.27	897.91	0.40
Reach 4	216.72	169000.00	1080.17	1102.29	1093.15	1103.80	0.001078	9.88	17098.18	897.91	0.40
Reach 4	216.81	169000.00	1079.55	1102.78	1094.35	1104.41	0.001230	10.27	16455.12	1747.47	0.42
Reach 4	216.81	169000.00	1079.55	1102.77	1094.37	1104.41	0.001231	10.27	16454.13	895.20	0.42
Reach 4	216.91	169000.00	1082.32	1103.31	1096.30	1105.17	0.001545	10.97	15408.17	1820.47	0.47
Reach 4	216.91	169000.00	1082.32	1103.30	1096.31	1105.17	0.001545	10.97	15407.28	904.44	0.47
Reach 4	217.00	169000.00	1081.30	1104.25	1096.14	1105.90	0.001261	10.32	16376.45	1667.39	0.43
Reach 4	217.00	169000.00	1081.30	1104.25	1096.12	1105.90	0.001261	10.32	16375.79	905.09	0.43
Reach 4	217.10	169000.00	1083.00	1104.84	1097.07	1106.55	0.001360	10.50	16093.27	1512.06	0.44
Reach 4	217.10	169000.00	1083.00	1104.83	1097.08	1106.55	0.001360	10.50	16092.72	909.80	0.44

Reach 4	217.19	169000.00	1086.43	1105.11	1101.53	1107.84	0.003099	13.26	12740.54	1366.69	0.64
Reach 4	217.19	169000.00	1086.43	1105.11	1101.53	1107.84	0.003099	13.26	12740.54	949.31	0.64
Reach 4	217.29	169000.00	1089.70	1107.06	1102.31	1109.25	0.002291	11.87	14234.06	1216.42	0.55
Reach 4	217.29	169000.00	1089.70	1107.06	1102.31	1109.25	0.002291	11.87	14234.06	998.99	0.55
Reach 4	217.38	169000.00	1090.70	1108.36	1103.09	1110.33	0.002000	11.25	15019.71	1099.53	0.52
Reach 4	217.38	169000.00	1090.70	1108.36	1103.08	1110.33	0.002001	11.25	15018.44	1034.46	0.52
Reach 4	217.48	169000.00	1090.80	1109.42	1103.96	1111.32	0.001901	11.04	15312.30	1523.56	0.51
Reach 4	217.48	169000.00	1090.80	1109.42	1103.96	1111.31	0.001902	11.04	15311.27	1045.77	0.51
Reach 4	217.57	169000.00	1089.90	1110.29	1105.33	1112.33	0.002135	11.45	14759.05	1041.01	0.54
Reach 4	217.57	169000.00	1089.90	1110.29	1105.33	1112.33	0.002136	11.45	14758.29	1041.00	0.54
Reach 4	217.66	169000.00	1088.14	1111.41	1106.01	1113.39	0.001973	11.27	14996.01	1096.23	0.52
Reach 4	217.66	169000.00	1088.14	1111.41	1106.01	1113.39	0.001973	11.27	14995.52	1020.69	0.52
Reach 4	217.76	169000.00	1092.19	1111.71		1115.14	0.003729	14.86	11373.31	823.68	0.70
Reach 4	217.76	169000.00	1092.19	1111.71		1115.14	0.003729	14.86	11373.01	823.68	0.70
Reach 4	217.86	169000.00	1088.60	1114.82	1108.27	1116.48	0.001533	10.35	16329.44	1206.90	0.46
Reach 4	217.86	169000.00	1088.60	1114.82	1108.27	1116.48	0.001533	10.35	16329.32	1043.82	0.46
Reach 4	217.95	169000.00	1092.47	1115.56	1109.16	1117.24	0.001556	10.41	16240.07	1042.14	0.46
Reach 4	217.95	169000.00	1092.47	1115.56	1109.16	1117.24	0.001556	10.41	16240.07	1042.14	0.46
Reach 4	218.04	169000.00	1095.51	1116.27	1110.88	1118.20	0.001946	11.15	15159.76	1038.69	0.51
Reach 4	218.04	169000.00	1095.51	1116.27	1110.88	1118.20	0.001946	11.15	15159.63	1038.69	0.51
Reach 4	218.14	169000.00	1096.58	1117.25	1111.91	1119.21	0.001977	11.23	15052.31	1392.06	0.52
Reach 4	218.14	169000.00	1096.58	1117.25	1111.91	1119.21	0.001977	11.23	15052.18	1032.39	0.52
Reach 4	218.24	169000.00	1097.97	1118.20	1113.34	1120.30	0.002218	11.62	14549.39	1209.33	0.55
Reach 4	218.24	169000.00	1097.97	1118.20	1113.34	1120.29	0.002218	11.62	14549.26	1034.85	0.55
Reach 4	218.33	169000.00	1099.30	1119.49	1113.65	1121.29	0.001773	10.78	15672.82	1051.45	0.49
Reach 4	218.33	169000.00	1099.30	1119.49	1113.65	1121.29	0.001773	10.78	15672.70	1051.45	0.49
Reach 4	218.42	169000.00	1101.56	1120.20	1115.71	1122.48	0.002468	12.11	13954.61	1630.02	0.57
Reach 4	218.42	169000.00	1101.56	1120.20	1115.71	1122.48	0.002468	12.11	13954.61	1007.80	0.57
Reach 4	218.52	169000.00	1101.37	1121.59	1116.20	1123.62	0.002038	11.43	14789.69	2019.27	0.53
Reach 4	218.52	169000.00	1101.37	1121.59	1116.20	1123.62	0.002039	11.43	14788.33	1008.12	0.53
Reach 4	218.61	169000.00	1101.91	1122.61	1117.10	1124.63	0.001987	11.40	14827.63	3020.79	0.52
Reach 4	218.61	169000.00	1101.91	1122.61	1117.08	1124.63	0.001988	11.40	14824.96	994.24	0.52
Reach 4	218.71	169000.00	1105.38	1123.63	1118.10	1125.63	0.001939	11.35	14891.65	3165.42	0.51
Reach 4	218.71	169000.00	1105.38	1123.63	1118.10	1125.63	0.001939	11.35	14889.72	986.76	0.51
Reach 4	218.80	169000.00	1105.70	1124.77	1118.20	1126.50	0.001572	10.55	16024.96	2479.19	0.47
Reach 4	218.80	169000.00	1105.70	1124.77	1118.22	1126.50	0.001573	10.55	16023.35	1011.73	0.47
Reach 4	218.96	169000.00	1106.31	1126.03	1120.64	1128.02	0.002010	11.32	14931.02	1096.74	0.52
Reach 4	218.96	169000.00	1106.31	1126.03	1120.67	1128.02	0.002011	11.32	14930.15	1020.44	0.52
Reach 4	218.965	Bridge									

Reach 4	218.97	169000.00	1106.45	1126.74	1120.31	1128.50	0.001620	10.65	15870.60	1056.96	0.47
Reach 4	218.97	169000.00	1106.45	1126.74	1120.31	1128.50	0.001620	10.65	15869.73	1009.80	0.47
Reach 4	219.01	169000.00	1112.90	1126.36	1123.16	1129.03	0.003271	13.10	12899.76	1022.15	0.65
Reach 4	219.01	169000.00	1112.90	1126.36	1123.16	1129.03	0.003272	13.10	12898.88	1022.15	0.65
Reach 4	219.02	Bridge									
Reach 4	219.03	169000.00	1112.90	1127.80	1123.15	1129.94	0.002299	11.76	14369.09	1026.67	0.55
Reach 4	219.03	169000.00	1112.90	1127.79	1123.15	1129.94	0.002300	11.76	14367.08	1026.66	0.55
Reach 4	219.14	169000.00	1110.40	1129.20	1123.56	1131.11	0.001887	11.10	15229.76	2551.49	0.51
Reach 4	219.14	169000.00	1110.40	1129.20	1123.56	1131.11	0.001888	11.10	15228.51	1023.27	0.51
Reach 4	219.24	169000.00	1112.10	1130.16	1124.65	1132.12	0.001989	11.23	15051.38	2682.75	0.52
Reach 4	219.24	169000.00	1112.10	1130.16	1124.65	1132.12	0.001989	11.23	15050.38	1032.44	0.52
Reach 4	219.33	169000.00	1113.40	1131.10	1125.53	1133.03	0.001929	11.17	15131.52	2726.06	0.51
Reach 4	219.33	169000.00	1113.40	1131.10	1125.53	1133.03	0.001929	11.17	15130.65	1024.85	0.51
Reach 4	219.42	169000.00	1111.83	1132.00	1126.37	1133.94	0.001898	11.18	15121.63	2400.89	0.51
Reach 4	219.42	169000.00	1111.83	1132.00	1126.37	1133.94	0.001898	11.18	15120.89	1010.17	0.51
Reach 4	219.51	169000.00	1111.64	1132.93	1127.37	1134.90	0.001942	11.27	14993.73	1910.40	0.51
Reach 4	219.51	169000.00	1111.64	1132.93	1127.37	1134.90	0.001943	11.27	14993.11	1006.15	0.51
Reach 4	219.61	169000.00	1112.39	1133.86	1128.49	1135.93	0.002051	11.54	14649.74	2912.62	0.53
Reach 4	219.61	169000.00	1112.39	1133.86	1128.49	1135.93	0.002051	11.54	14649.25	988.76	0.53
Reach 4	219.70	169000.00	1115.81	1134.63	1130.64	1137.22	0.002805	12.91	13091.68	2045.78	0.61
Reach 4	219.70	169000.00	1115.81	1134.63	1130.64	1137.22	0.002806	12.91	13091.33	945.15	0.61
Reach 4	219.79	169000.00	1119.30	1135.96	1132.24	1138.69	0.003008	13.26	12747.50	2039.42	0.63
Reach 4	219.79	169000.00	1119.30	1135.96	1132.24	1138.69	0.003008	13.26	12747.28	931.90	0.63
Reach 4	219.88	169000.00	1119.50	1137.44	1133.46	1140.11	0.002850	13.11	12889.63	2003.65	0.62
Reach 4	219.88	169000.00	1119.50	1137.44	1133.46	1140.11	0.002850	13.11	12889.52	918.51	0.62
Reach 4	220.03	169000.00	1122.90	1139.74	1135.40	1142.32	0.002656	12.90	13097.09	906.62	0.60
Reach 4	220.03	169000.00	1122.90	1139.73	1135.40	1142.32	0.002656	12.90	13096.98	906.62	0.60
Reach 4	220.05	Bridge									
Reach 4	220.06	169000.00	1122.90	1140.72	1135.39	1142.99	0.002141	12.08	13992.86	909.54	0.54
Reach 4	220.06	169000.00	1122.90	1140.72	1135.39	1142.99	0.002142	12.08	13991.64	909.53	0.54
Reach 4	220.16	169000.00	1124.58	1141.74	1136.90	1144.14	0.002357	12.43	13591.57	1469.89	0.57
Reach 4	220.16	169000.00	1124.58	1141.74	1136.90	1144.14	0.002358	12.44	13590.57	912.67	0.57
Reach 4	220.25	169000.00	1124.01	1143.14	1137.06	1145.23	0.001890	11.59	14576.74	1743.60	0.51
Reach 4	220.25	169000.00	1124.01	1143.14	1137.06	1145.23	0.001890	11.59	14576.18	919.65	0.51
Reach 4	220.35	169000.00	1123.99	1144.24	1137.09	1146.10	0.001554	10.95	15436.37	1375.54	0.47
Reach 4	220.35	169000.00	1123.99	1144.24	1137.09	1146.10	0.001554	10.95	15435.92	915.58	0.47
Reach 4	220.45	169000.00	1125.43	1144.97	1138.52	1146.99	0.001759	11.39	14836.82	1293.58	0.50
Reach 4	220.45	169000.00	1125.43	1144.97	1138.52	1146.99	0.001759	11.39	14836.49	908.82	0.50

Reach 4	220.54	169000.00	1127.32	1145.84	1139.51	1147.86	0.001789	11.42	14796.15	1107.01	0.50
Reach 4	220.54	169000.00	1127.32	1145.84	1139.51	1147.86	0.001790	11.42	14795.70	915.24	0.50
Reach 4	220.63	169000.00	1127.10	1146.74	1140.24	1148.75	0.001734	11.37	14857.16	981.94	0.49
Reach 4	220.63	169000.00	1127.10	1146.74	1140.24	1148.75	0.001735	11.38	14856.83	903.29	0.49
Reach 4	220.73	169000.00	1127.69	1147.59	1141.05	1149.62	0.001715	11.43	14782.77	1018.38	0.49
Reach 4	220.73	169000.00	1127.69	1147.59	1141.05	1149.62	0.001716	11.43	14782.43	884.55	0.49
Reach 4	220.82	169000.00	1129.56	1148.53	1141.72	1150.47	0.001688	11.19	15100.60	1082.87	0.49
Reach 4	220.82	169000.00	1129.56	1148.53	1141.72	1150.47	0.001688	11.19	15100.27	920.30	0.49
Reach 4	220.92	169000.00	1129.16	1149.39	1142.46	1151.35	0.001666	11.22	15058.51	1072.33	0.49
Reach 4	220.92	169000.00	1129.16	1149.39	1142.46	1151.34	0.001666	11.22	15058.18	906.20	0.49
Reach 4	221.02	169000.00	1130.06	1150.36	1142.60	1152.13	0.001403	10.69	15806.92	1161.10	0.45
Reach 4	221.02	169000.00	1130.06	1150.36	1142.60	1152.13	0.001403	10.69	15806.59	900.19	0.45
Reach 4	221.05	169000.00	1126.00	1150.84	1140.99	1152.36	0.001100	9.90	17070.64	1318.35	0.40
Reach 4	221.05	169000.00	1126.00	1150.84	1140.99	1152.36	0.001100	9.90	17070.31	908.64	0.40
Reach 4	221.055	Bridge									
Reach 4	221.06	169000.00	1126.00	1151.07	1140.98	1152.56	0.001076	9.78	17282.71	1351.93	0.40
Reach 4	221.06	169000.00	1126.00	1151.07	1140.98	1152.56	0.001076	9.78	17282.38	921.95	0.40
Reach 4	221.19	169000.00	1128.00	1151.80	1142.33	1153.28	0.001134	9.75	17340.64	1048.37	0.41
Reach 4	221.19	169000.00	1128.00	1151.80	1142.33	1153.28	0.001134	9.75	17340.17	968.91	0.41
Reach 4	221.195	Bridge									
Reach 4	221.2	169000.00	1128.00	1152.10	1142.32	1153.53	0.001079	9.59	17628.11	1103.28	0.40
Reach 4	221.2	169000.00	1128.00	1152.10	1142.32	1153.53	0.001079	9.59	17627.75	972.40	0.40
Reach 4	221.24	169000.00	1124.29	1152.32	1142.61	1153.73	0.001029	9.50	17796.79	1067.96	0.39
Reach 4	221.24	169000.00	1124.29	1152.32	1142.61	1153.72	0.001030	9.50	17796.44	954.69	0.39
Reach 4	221.25	Bridge									
Reach 4	221.26	169000.00	1124.29	1152.66	1142.60	1154.01	0.000973	9.33	18112.34	1082.89	0.38
Reach 4	221.26	169000.00	1124.29	1152.65	1142.60	1154.01	0.000973	9.33	18111.99	955.90	0.38
Reach 4	221.31	172000.00	1131.43	1152.25	1146.78	1154.73	0.002427	12.65	13599.09	1145.99	0.58
Reach 4	221.31	172000.00	1131.43	1152.25	1146.78	1154.73	0.002427	12.65	13599.21	909.14	0.58
Reach 4	221.40	172000.00	1133.21	1153.64	1147.84	1155.93	0.002259	12.16	14146.43	1059.83	0.55
Reach 4	221.40	172000.00	1133.21	1153.64	1147.84	1155.93	0.002258	12.16	14146.66	948.27	0.55
Reach 4	221.50	172000.00	1134.08	1154.56	1149.15	1156.97	0.001754	12.48	13787.19	1331.36	0.57
Reach 4	221.50	172000.00	1134.08	1154.56	1149.15	1156.97	0.001754	12.48	13787.42	928.44	0.57
Reach 4	221.61	172000.00	1133.98	1155.65	1149.68	1157.94	0.001604	12.15	14158.12	1386.91	0.55
Reach 4	221.61	172000.00	1133.98	1155.65	1149.68	1157.94	0.001604	12.15	14158.23	925.98	0.55
Reach 4	221.70	172000.00	1134.30	1156.69	1149.59	1158.68	0.001289	11.32	15198.66	1464.75	0.50
Reach 4	221.70	172000.00	1134.30	1156.69	1149.59	1158.68	0.001289	11.32	15198.66	939.54	0.50
Reach 4	221.80	172000.00	1136.35	1157.34	1150.59	1159.36	0.001324	11.42	15060.97	1211.48	0.50
Reach 4	221.80	172000.00	1136.35	1157.34	1150.59	1159.36	0.001324	11.42	15060.97	935.34	0.50

Reach 4	221.89	172000.00	1136.20	1158.06	1151.65	1160.02	0.001355	11.25	15286.40	1149.80	0.50
Reach 4	221.89	172000.00	1136.20	1158.06	1151.65	1160.02	0.001355	11.25	15286.40	986.31	0.50
Reach 4	221.99	172000.00	1138.14	1158.98	1151.29	1160.67	0.001087	10.44	16469.70	1183.24	0.46
Reach 4	221.99	172000.00	1138.14	1158.98	1151.29	1160.67	0.001087	10.44	16469.70	1012.25	0.46
Reach 4	222.08	172000.00	1136.00	1159.92	1148.80	1161.07	0.000589	8.60	20004.27	1231.02	0.35
Reach 4	222.08	172000.00	1136.00	1159.92	1148.80	1161.07	0.000589	8.60	20004.27	1039.22	0.35
Reach 4	222.085	Bridge									
Reach 4	222.09	172000.00	1136.00	1160.13	1148.79	1161.26	0.000569	8.50	20225.98	1233.80	0.34
Reach 4	222.09	172000.00	1136.00	1160.13	1148.79	1161.26	0.000569	8.50	20225.98	1041.15	0.34
Reach 4	222.17	172000.00	1137.16	1160.19	1151.21	1161.60	0.000795	9.52	18063.67	1226.07	0.40
Reach 4	222.17	172000.00	1137.16	1160.19	1151.21	1161.60	0.000795	9.52	18063.54	1009.85	0.40
Reach 4	222.27	172000.00	1139.19	1160.63	1152.19	1162.00	0.000823	9.38	18345.77	1213.59	0.40
Reach 4	222.27	172000.00	1139.19	1160.63	1152.19	1162.00	0.000823	9.38	18345.63	1077.17	0.40
Reach 4	222.36	172000.00	1138.87	1161.28	1151.87	1162.38	0.000649	8.41	20453.24	1414.46	0.36
Reach 4	222.36	172000.00	1138.87	1161.28	1151.87	1162.38	0.000649	8.41	20453.09	1182.76	0.36
Reach 4	222.45	172000.00	1139.54	1161.92	1151.04	1162.66	0.000417	6.91	24907.24	1643.53	0.29
Reach 4	222.45	172000.00	1139.54	1161.92	1151.04	1162.66	0.000417	6.91	24907.07	1387.97	0.29
Reach 4	222.55	172000.00	1139.60	1162.09	1151.35	1162.91	0.000434	7.24	23754.05	1817.97	0.30
Reach 4	222.55	172000.00	1139.60	1162.09	1151.35	1162.91	0.000444	7.24	23757.15	1270.53	0.30
Reach 4	222.65	172000.00	1138.75	1162.22	1151.59	1163.26	0.000707	8.16	21086.55	2093.03	0.33
Reach 4	222.65	172000.00	1140.14	1162.23	1151.59	1163.27	0.000722	8.15	21096.56	1079.50	0.33
Reach 4	222.74	172000.00	1134.16	1162.58	1150.45	1163.58	0.000642	8.03	21410.34	2043.37	0.31
Reach 4	222.74	172000.00	1134.16	1162.60	1150.47	1163.60	0.000641	8.03	21423.52	1038.09	0.31
Reach 4	222.83	172000.00	1127.92	1162.89	1149.43	1163.89	0.000579	8.01	21470.34	2187.03	0.30
Reach 4	222.83	172000.00	1127.92	1162.90	1149.43	1163.90	0.000578	8.01	21481.87	963.41	0.30
Reach 4	222.93	172000.00	1137.70	1163.05	1152.09	1164.32	0.000836	9.04	19031.57	2119.81	0.36
Reach 4	222.93	172000.00	1137.70	1163.06	1152.09	1164.33	0.000835	9.03	19042.54	945.76	0.35
Reach 4	223.02	172000.00	1140.00	1163.54	1154.21	1164.76	0.000944	8.86	19413.85	1524.13	0.37
Reach 4	223.02	172000.00	1140.00	1163.55	1154.21	1164.77	0.000942	8.85	19425.71	1092.69	0.37
Reach 4	223.08	172000.00	1146.30	1163.07	1163.07	1167.91	0.008376	17.64	9747.96	1001.37	1.00
Reach 4	223.08	172000.00	1146.30	1163.07	1163.07	1167.91	0.008376	17.64	9747.96	1001.37	1.00

Profile Output Table - Standard Table 2

Reach	River Sta	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
Reach 4	214.14	1076.99	1075.49	1.50				169000.00		1257.06
Reach 4	214.14	1077.00	1075.50	1.50				169000.00		726.84
Reach 4	214.23	1077.39	1075.93	1.46	0.39	0.00		169000.00		1126.00
Reach 4	214.23	1077.40	1075.94	1.46	0.39	0.00		169000.00		738.00

Reach 4	214.33	1077.73	1076.88	0.85	0.28	0.06	169000.00	1266.50
Reach 4	214.33	1077.74	1076.89	0.85	0.28	0.06	169000.00	899.54
Reach 4	214.42	1077.93	1077.32	0.61	0.17	0.02	169000.00	1193.48
Reach 4	214.42	1077.93	1077.33	0.61	0.17	0.02	169000.00	1041.69
Reach 4	214.52	1078.15	1077.35	0.80	0.17	0.06	169000.00	928.22
Reach 4	214.52	1078.16	1077.36	0.80	0.17	0.06	169000.00	928.22
Reach 4	214.61	1078.56	1077.25	1.32	0.26	0.15	169000.00	792.44
Reach 4	214.61	1078.57	1077.25	1.32	0.26	0.15	169000.00	792.44
Reach 4	214.71	1079.15	1077.48	1.67	0.48	0.11	169000.00	901.57
Reach 4	214.71	1079.15	1077.48	1.67	0.48	0.11	169000.00	901.57
Reach 4	214.78	1079.56	1078.06	1.50	0.40	0.02	169000.00	1054.44
Reach 4	214.78	1079.57	1078.07	1.50	0.40	0.02	169000.00	1054.44
Reach 4	214.785	Bridge						
Reach 4	214.79	1079.83	1078.39	1.44	0.04	0.02	169000.00	1056.41
Reach 4	214.79	1079.83	1078.40	1.44	0.04	0.02	169000.00	1056.41
Reach 4	214.9	1081.52	1078.13	3.39	1.11	0.59	169000.00	934.49
Reach 4	214.9	1081.53	1078.14	3.39	1.11	0.58	169000.00	810.50
Reach 4	214.99	1083.17	1079.91	3.25	1.63	0.01	169000.00	727.58
Reach 4	214.99	1083.17	1079.92	3.25	1.63	0.01	169000.00	727.58
Reach 4	215.09	1084.77	1081.09	3.67	1.47	0.13	169000.00	619.02
Reach 4	215.09	1084.77	1081.10	3.67	1.47	0.13	169000.00	619.02
Reach 4	215.18	1086.91	1081.87	5.04	1.73	0.41	169000.00	686.90
Reach 4	215.18	1086.91	1081.87	5.04	1.73	0.41	169000.00	593.90
Reach 4	215.27	1088.10	1086.84	1.26	0.82	0.38	169000.00	3991.40
Reach 4	215.27	1088.11	1086.85	1.26	0.82	0.38	169000.00	943.30
Reach 4	215.36	1088.49	1087.34	1.15	0.38	0.01	169000.00	3559.77
Reach 4	215.36	1088.50	1087.35	1.15	0.38	0.01	169000.00	919.00
Reach 4	215.46	1088.97	1087.61	1.37	0.42	0.06	169000.00	916.86
Reach 4	215.46	1088.98	1087.61	1.37	0.42	0.06	169000.00	916.85
Reach 4	215.56	1089.55	1087.99	1.56	0.51	0.06	169000.00	907.87
Reach 4	215.56	1089.55	1087.99	1.56	0.51	0.06	169000.00	907.88
Reach 4	215.65	1090.46	1088.27	2.19	0.73	0.19	169000.00	890.00
Reach 4	215.65	1090.47	1088.28	2.19	0.73	0.19	169000.00	890.00
Reach 4	215.75	1092.56	1088.44	4.11	1.52	0.58	169000.00	854.81
Reach 4	215.75	1092.56	1088.45	4.11	1.51	0.58	169000.00	854.81
Reach 4	215.81	1093.71	1090.81	2.90	1.04	0.12	169000.00	860.84
Reach 4	215.81	1093.71	1090.81	2.90	1.04	0.12	169000.00	860.84
Reach 4	215.815	Bridge						

Reach 4	215.82	1094.37	1091.84	2.53	0.08	0.04		169000.00	860.86
Reach 4	215.82	1094.37	1091.85	2.52	0.08	0.04		169000.00	860.86
Reach 4	215.84	1094.94	1091.71	3.23	0.36	0.21		169000.00	870.81
Reach 4	215.84	1094.94	1091.72	3.23	0.36	0.21		169000.00	870.81
Reach 4	215.94	1097.08	1093.70	3.38	2.09	0.04		169000.00	983.97
Reach 4	215.94	1097.08	1093.70	3.37	2.09	0.04		169000.00	906.67
Reach 4	216.04	1098.22	1096.93	1.29	0.94	0.21		169000.00	1448.65
Reach 4	216.04	1098.22	1096.93	1.29	0.94	0.21		169000.00	1069.84
Reach 4	216.13	1098.73	1097.54	1.19	0.50	0.01		169000.00	2129.80
Reach 4	216.13	1098.73	1097.54	1.19	0.50	0.01		169000.00	1113.68
Reach 4	216.23	1099.28	1097.99	1.30	0.52	0.03		169000.00	1738.50
Reach 4	216.23	1099.28	1097.99	1.30	0.52	0.03		169000.00	1083.71
Reach 4	216.33	1099.99	1098.35	1.63	0.60	0.10		169000.00	1473.62
Reach 4	216.33	1099.99	1098.36	1.63	0.60	0.10		169000.00	1026.33
Reach 4	216.42	1100.93	1098.86	2.08	0.81	0.13	0.04	168999.95	1034.14
Reach 4	216.42	1100.93	1098.86	2.08	0.81	0.13		169000.00	946.84
Reach 4	216.49	1101.15	1098.53	2.62	0.05	0.16		169000.00	949.03
Reach 4	216.49	1101.15	1098.53	2.62	0.05	0.16		169000.00	949.02
Reach 4	216.505	Bridge							
Reach 4	216.52	1102.27	1100.20	2.07	0.06	0.04		169000.00	999.71
Reach 4	216.52	1102.27	1100.20	2.07	0.06	0.04		169000.00	999.72
Reach 4	216.62	1103.15	1101.44	1.72	0.85	0.03		169000.00	1054.35
Reach 4	216.62	1103.15	1101.44	1.72	0.85	0.03		169000.00	951.16
Reach 4	216.72	1103.80	1102.29	1.52	0.63	0.02		169000.00	897.91
Reach 4	216.72	1103.80	1102.29	1.52	0.63	0.02		169000.00	897.91
Reach 4	216.81	1104.41	1102.78	1.64	0.57	0.04		169000.00	1747.47
Reach 4	216.81	1104.41	1102.77	1.64	0.57	0.04		169000.00	895.20
Reach 4	216.91	1105.17	1103.31	1.87	0.69	0.07		169000.00	1820.47
Reach 4	216.91	1105.17	1103.30	1.87	0.69	0.07		169000.00	904.44
Reach 4	217.00	1105.90	1104.25	1.65	0.71	0.02		169000.00	1667.39
Reach 4	217.00	1105.90	1104.25	1.65	0.71	0.02		169000.00	905.09
Reach 4	217.10	1106.55	1104.84	1.71	0.63	0.02		169000.00	1512.06
Reach 4	217.10	1106.55	1104.83	1.71	0.63	0.02		169000.00	909.80
Reach 4	217.19	1107.84	1105.11	2.73	0.99	0.31		169000.00	1366.69
Reach 4	217.19	1107.84	1105.11	2.73	0.99	0.31		169000.00	949.31
Reach 4	217.29	1109.25	1107.06	2.19	1.36	0.05		169000.00	1216.42
Reach 4	217.29	1109.25	1107.06	2.19	1.36	0.05		169000.00	998.99
Reach 4	217.38	1110.33	1108.36	1.97	1.05	0.02		169000.00	1099.53
Reach 4	217.38	1110.33	1108.36	1.97	1.05	0.02		169000.00	1034.46

Reach 4	217.48	1111.32	1109.42	1.89	0.98	0.01	169000.00	1523.56
Reach 4	217.48	1111.31	1109.42	1.89	0.98	0.01	169000.00	1045.77
Reach 4	217.57	1112.33	1110.29	2.04	0.97	0.04	169000.00	1041.01
Reach 4	217.57	1112.33	1110.29	2.04	0.97	0.04	169000.00	1041.00
Reach 4	217.66	1113.39	1111.41	1.97	1.05	0.01	169000.00	1096.23
Reach 4	217.66	1113.39	1111.41	1.97	1.05	0.01	169000.00	1020.69
Reach 4	217.76	1115.14	1111.71	3.43	1.31	0.44	169000.00	823.68
Reach 4	217.76	1115.14	1111.71	3.43	1.31	0.44	169000.00	823.68
Reach 4	217.86	1116.48	1114.82	1.66	1.17	0.18	169000.00	1206.90
Reach 4	217.86	1116.48	1114.82	1.66	1.17	0.18	169000.00	1043.82
Reach 4	217.95	1117.24	1115.56	1.68	0.76	0.01	169000.00	1042.14
Reach 4	217.95	1117.24	1115.56	1.68	0.76	0.01	169000.00	1042.14
Reach 4	218.04	1118.20	1116.27	1.93	0.88	0.07	169000.00	1038.69
Reach 4	218.04	1118.20	1116.27	1.93	0.88	0.07	169000.00	1038.69
Reach 4	218.14	1119.21	1117.25	1.96	1.00	0.01	169000.00	1392.06
Reach 4	218.14	1119.21	1117.25	1.96	1.00	0.01	169000.00	1032.39
Reach 4	218.24	1120.30	1118.20	2.10	1.05	0.04	169000.00	1209.33
Reach 4	218.24	1120.29	1118.20	2.10	1.05	0.04	169000.00	1034.85
Reach 4	218.33	1121.29	1119.49	1.81	0.97	0.03	169000.00	1051.45
Reach 4	218.33	1121.29	1119.49	1.81	0.97	0.03	169000.00	1051.45
Reach 4	218.42	1122.48	1120.20	2.28	1.05	0.14	169000.00	1630.02
Reach 4	218.42	1122.48	1120.20	2.28	1.05	0.14	169000.00	1007.80
Reach 4	218.52	1123.62	1121.59	2.03	1.11	0.03	169000.00	2019.27
Reach 4	218.52	1123.62	1121.59	2.03	1.11	0.02	169000.00	1008.12
Reach 4	218.61	1124.63	1122.61	2.02	1.01	0.00	169000.00	3020.79
Reach 4	218.61	1124.63	1122.61	2.02	1.01	0.00	169000.00	994.24
Reach 4	218.71	1125.63	1123.63	2.00	1.00	0.00	169000.00	3165.42
Reach 4	218.71	1125.63	1123.63	2.00	1.00	0.00	169000.00	986.76
Reach 4	218.80	1126.50	1124.77	1.73	0.84	0.03	169000.00	2479.19
Reach 4	218.80	1126.50	1124.77	1.73	0.84	0.03	169000.00	1011.73
Reach 4	218.96	1128.02	1126.03	1.99	1.44	0.08	169000.00	1096.74
Reach 4	218.96	1128.02	1126.03	1.99	1.44	0.08	169000.00	1020.44
Reach 4	218.965	Bridge						
Reach 4	218.97	1128.50	1126.74	1.76	0.02	0.03	169000.00	1056.96
Reach 4	218.97	1128.50	1126.74	1.76	0.02	0.03	169000.00	1009.80
Reach 4	219.01	1129.03	1126.36	2.67	0.25	0.27	169000.00	1022.15
Reach 4	219.01	1129.03	1126.36	2.67	0.25	0.27	169000.00	1022.15
Reach 4	219.02	Bridge						
Reach 4	219.03	1129.94	1127.80	2.15	0.09	0.04	169000.00	1026.67

Reach 4	219.03	1129.94	1127.79	2.15	0.09	0.04	169000.00	1026.66
Reach 4	219.14	1131.11	1129.20	1.91	1.14	0.02	169000.00	2551.49
Reach 4	219.14	1131.11	1129.20	1.91	1.14	0.02	169000.00	1023.27
Reach 4	219.24	1132.12	1130.16	1.96	0.99	0.01	169000.00	2682.75
Reach 4	219.24	1132.12	1130.16	1.96	0.99	0.01	169000.00	1032.44
Reach 4	219.33	1133.03	1131.10	1.94	0.92	0.00	169000.00	2726.06
Reach 4	219.33	1133.03	1131.10	1.94	0.92	0.00	169000.00	1024.85
Reach 4	219.42	1133.94	1132.00	1.94	0.90	0.00	169000.00	2400.89
Reach 4	219.42	1133.94	1132.00	1.94	0.90	0.00	169000.00	1010.17
Reach 4	219.51	1134.90	1132.93	1.97	0.95	0.01	169000.00	1910.40
Reach 4	219.51	1134.90	1132.93	1.97	0.95	0.01	169000.00	1006.15
Reach 4	219.61	1135.93	1133.86	2.07	1.00	0.03	169000.00	2912.62
Reach 4	219.61	1135.93	1133.86	2.07	1.00	0.03	169000.00	988.76
Reach 4	219.70	1137.22	1134.63	2.59	1.14	0.16	169000.00	2045.78
Reach 4	219.70	1137.22	1134.63	2.59	1.14	0.16	169000.00	945.15
Reach 4	219.79	1138.69	1135.96	2.73	1.43	0.04	169000.00	2039.42
Reach 4	219.79	1138.69	1135.96	2.73	1.43	0.04	169000.00	931.90
Reach 4	219.88	1140.11	1137.44	2.67	1.42	0.01	169000.00	2003.65
Reach 4	219.88	1140.11	1137.44	2.67	1.42	0.01	169000.00	918.51
Reach 4	220.03	1142.32	1139.74	2.59	2.20	0.01	169000.00	906.62
Reach 4	220.03	1142.32	1139.73	2.59	2.20	0.01	169000.00	906.62
Reach 4	220.05	Bridge						
Reach 4	220.06	1142.99	1140.72	2.27	0.00	0.02	169000.00	909.54
Reach 4	220.06	1142.99	1140.72	2.27	0.00	0.02	169000.00	909.53
Reach 4	220.16	1144.14	1141.74	2.40	1.11	0.04	169000.00	1469.89
Reach 4	220.16	1144.14	1141.74	2.40	1.11	0.04	169000.00	912.67
Reach 4	220.25	1145.23	1143.14	2.09	1.05	0.03	169000.00	1743.60
Reach 4	220.25	1145.23	1143.14	2.09	1.05	0.03	169000.00	919.65
Reach 4	220.35	1146.10	1144.24	1.86	0.86	0.02	169000.00	1375.54
Reach 4	220.35	1146.10	1144.24	1.86	0.86	0.02	169000.00	915.58
Reach 4	220.45	1146.99	1144.97	2.01	0.84	0.05	169000.00	1293.58
Reach 4	220.45	1146.99	1144.97	2.01	0.84	0.05	169000.00	908.82
Reach 4	220.54	1147.86	1145.84	2.03	0.87	0.00	169000.00	1107.01
Reach 4	220.54	1147.86	1145.84	2.03	0.87	0.00	169000.00	915.24
Reach 4	220.63	1148.75	1146.74	2.01	0.88	0.00	169000.00	981.94
Reach 4	220.63	1148.75	1146.74	2.01	0.88	0.00	169000.00	903.29
Reach 4	220.73	1149.62	1147.59	2.03	0.87	0.01	169000.00	1018.38
Reach 4	220.73	1149.62	1147.59	2.03	0.87	0.01	169000.00	884.55
Reach 4	220.82	1150.47	1148.53	1.94	0.84	0.01	169000.00	1082.87

Reach 4	220.82	1150.47	1148.53	1.94	0.84	0.01	169000.00	920.30
Reach 4	220.92	1151.35	1149.39	1.96	0.87	0.00	169000.00	1072.33
Reach 4	220.92	1151.34	1149.39	1.96	0.87	0.00	169000.00	906.20
Reach 4	221.02	1152.13	1150.36	1.77	0.77	0.02	169000.00	1161.10
Reach 4	221.02	1152.13	1150.36	1.78	0.77	0.02	169000.00	900.19
Reach 4	221.05	1152.36	1150.84	1.52	0.21	0.03	169000.00	1318.35
Reach 4	221.05	1152.36	1150.84	1.52	0.21	0.03	169000.00	908.64
Reach 4	221.055	Bridge						
Reach 4	221.06	1152.56	1151.07	1.48	0.04	0.02	169000.00	1351.93
Reach 4	221.06	1152.56	1151.07	1.48	0.04	0.02	169000.00	921.95
Reach 4	221.19	1153.28	1151.80	1.47	0.72	0.00	169000.00	1048.37
Reach 4	221.19	1153.28	1151.80	1.47	0.72	0.00	169000.00	968.91
Reach 4	221.195	Bridge						
Reach 4	221.2	1153.53	1152.10	1.43	0.03	0.03	169000.00	1103.28
Reach 4	221.2	1153.53	1152.10	1.43	0.03	0.03	169000.00	972.40
Reach 4	221.24	1153.73	1152.32	1.40	0.19	0.00	169000.00	1067.96
Reach 4	221.24	1153.72	1152.32	1.40	0.20	0.00	169000.00	954.69
Reach 4	221.25	Bridge						
Reach 4	221.26	1154.01	1152.66	1.35	0.03	0.03	169000.00	1082.89
Reach 4	221.26	1154.01	1152.65	1.35	0.03	0.03	169000.00	955.90
Reach 4	221.31	1154.73	1152.25	2.48	0.38	0.34	172000.00	1145.99
Reach 4	221.31	1154.73	1152.25	2.48	0.38	0.34	172000.00	909.14
Reach 4	221.40	1155.93	1153.64	2.30	1.18	0.02	172000.00	1059.83
Reach 4	221.40	1155.93	1153.64	2.30	1.18	0.02	172000.00	948.27
Reach 4	221.50	1156.97	1154.56	2.42	1.01	0.04	172000.00	1331.36
Reach 4	221.50	1156.97	1154.56	2.42	1.00	0.04	172000.00	928.44
Reach 4	221.61	1157.94	1155.65	2.29	0.96	0.01	172000.00	1386.91
Reach 4	221.61	1157.94	1155.65	2.29	0.96	0.01	172000.00	925.98
Reach 4	221.70	1158.68	1156.69	1.99	0.70	0.03	172000.00	1464.75
Reach 4	221.70	1158.68	1156.69	1.99	0.70	0.03	172000.00	939.54
Reach 4	221.80	1159.36	1157.34	2.03	0.67	0.01	172000.00	1211.48
Reach 4	221.80	1159.36	1157.34	2.03	0.67	0.01	172000.00	935.34
Reach 4	221.89	1160.02	1158.06	1.97	0.66	0.01	172000.00	1149.80
Reach 4	221.89	1160.02	1158.06	1.97	0.66	0.01	172000.00	986.31
Reach 4	221.99	1160.67	1158.98	1.69	0.62	0.03	172000.00	1183.24
Reach 4	221.99	1160.67	1158.98	1.69	0.62	0.03	172000.00	1012.25
Reach 4	222.08	1161.07	1159.92	1.15	0.34	0.05	172000.00	1231.02
Reach 4	222.08	1161.07	1159.92	1.15	0.34	0.05	172000.00	1039.22

Reach 4	222.085	Bridge						
Reach 4	222.09	1161.26	1160.13	1.12	0.02	0.01	172000.00	1233.80
Reach 4	222.09	1161.26	1160.13	1.12	0.02	0.01	172000.00	1041.15
Reach 4	222.17	1161.60	1160.19	1.41	0.25	0.09	172000.00	1226.07
Reach 4	222.17	1161.60	1160.19	1.41	0.25	0.09	172000.00	1009.85
Reach 4	222.27	1162.00	1160.63	1.36	0.40	0.00	172000.00	1213.59
Reach 4	222.27	1162.00	1160.63	1.36	0.40	0.00	172000.00	1077.17
Reach 4	222.36	1162.38	1161.28	1.10	0.35	0.03	172000.00	1414.46
Reach 4	222.36	1162.38	1161.28	1.10	0.35	0.03	172000.00	1182.76
Reach 4	222.45	1162.66	1161.92	0.74	0.25	0.04	172000.00	1643.53
Reach 4	222.45	1162.66	1161.92	0.74	0.25	0.04	172000.00	1387.97
Reach 4	222.55	1162.91	1162.09	0.81	0.22	0.02	172000.00	1817.97
Reach 4	222.55	1162.91	1162.09	0.81	0.22	0.02	172000.00	1270.53
Reach 4	222.65	1163.26	1162.22	1.03	0.29	0.07	172000.00	2093.03
Reach 4	222.65	1163.27	1162.23	1.03	0.29	0.07	172000.00	1079.50
Reach 4	222.74	1163.58	1162.58	1.00	0.32	0.00	172000.00	2043.37
Reach 4	222.74	1163.60	1162.60	1.00	0.33	0.00	172000.00	1038.09
Reach 4	222.83	1163.89	1162.89	1.00	0.30	0.00	172000.00	2187.03
Reach 4	222.83	1163.90	1162.90	1.00	0.30	0.00	172000.00	963.41
Reach 4	222.93	1164.32	1163.05	1.27	0.35	0.08	172000.00	2119.81
Reach 4	222.93	1164.33	1163.06	1.27	0.35	0.08	172000.00	945.76
Reach 4	223.02	1164.76	1163.54	1.22	0.44	0.00	172000.00	1524.13
Reach 4	223.02	1164.77	1163.55	1.22	0.44	0.00	172000.00	1092.69
Reach 4	223.08	1167.91	1163.07	4.83	0.57	1.08	172000.00	1001.37
Reach 4	223.08	1167.91	1163.07	4.83	0.57	1.09	172000.00	1001.37

Profile Output Table - Encroachment 3

Reach	River Sta	Top Wdth Act (ft)	Area (sq ft)	Vel Total (ft/s)	W.S. Elev (ft)	Base WS (ft)	Prof Delta WS (ft)
Reach 4	214.14	726.84	17247.72	9.84	1075.49	1075.49	
Reach 4	214.14	726.84	17178.94	9.84	1075.50	1075.49	0.01
Reach 4	214.23	737.99	17744.84	9.71	1075.93	1075.93	
Reach 4	214.23	738.00	17413.27	9.71	1075.94	1075.93	0.01
Reach 4	214.33	899.54	23370.01	7.40	1076.88	1076.88	
Reach 4	214.33	899.54	22830.94	7.40	1076.89	1076.88	0.01
Reach 4	214.42	1041.69	27156.79	6.27	1077.32	1077.32	
Reach 4	214.42	1041.69	26975.11	6.27	1077.33	1077.32	0.01
Reach 4	214.52	928.22	23492.53	7.19	1077.35	1077.35	
Reach 4	214.52	928.22	23499.67	7.19	1077.36	1077.35	0.01
Reach 4	214.61	792.44	18346.45	9.21	1077.25	1077.25	
Reach 4	214.61	792.44	18352.64	9.21	1077.25	1077.25	0.01
Reach 4	214.71	901.57	16287.19	10.38	1077.48	1077.48	
Reach 4	214.71	901.57	16294.01	10.37	1077.48	1077.48	0.01
Reach 4	214.78	1054.44	17192.07	9.83	1078.06	1078.06	
Reach 4	214.78	1054.44	17199.27	9.83	1078.07	1078.06	0.01
Reach 4	214.785 BR D	1015.56	16472.73	10.26	1078.01	1078.01	
Reach 4	214.785 BR D	1015.60	16479.79	10.25	1078.02	1078.01	0.01
Reach 4	214.785 BR U	1016.55	16656.43	10.15	1078.17	1078.17	
Reach 4	214.785 BR U	1015.88	16663.08	10.14	1078.18	1078.17	0.01
Reach 4	214.79	1056.41	17557.55	9.63	1078.39	1078.39	
Reach 4	214.79	1056.41	17564.39	9.62	1078.40	1078.39	0.01
Reach 4	214.9	810.50	11457.03	14.78	1078.13	1078.13	
Reach 4	214.9	810.50	11439.94	14.77	1078.14	1078.13	0.01
Reach 4	214.99	727.58	11672.67	14.48	1079.91	1079.91	
Reach 4	214.99	727.58	11674.45	14.48	1079.92	1079.91	0.00
Reach 4	215.09	619.02	10986.08	15.38	1081.09	1081.09	
Reach 4	215.09	619.02	10987.06	15.38	1081.10	1081.09	0.00
Reach 4	215.18	593.90	9585.73	18.01	1081.87	1081.87	
Reach 4	215.18	593.90	9382.77	18.01	1081.87	1081.87	0.00
Reach 4	215.27	943.30	24307.47	9.02	1086.84	1086.84	
Reach 4	215.27	943.30	18740.87	9.02	1086.85	1086.84	0.00
Reach 4	215.36	919.00	21118.73	8.61	1087.34	1087.34	
Reach 4	215.36	919.00	19629.43	8.61	1087.35	1087.34	0.01
Reach 4	215.46	916.86	18009.56	9.38	1087.61	1087.61	
Reach 4	215.46	916.85	18015.04	9.38	1087.61	1087.61	0.01
Reach 4	215.56	907.87	16859.61	10.02	1087.99	1087.99	
Reach 4	215.56	907.88	16864.71	10.02	1087.99	1087.99	0.01
Reach 4	215.65	890.00	14232.62	11.87	1088.27	1088.27	
Reach 4	215.65	890.00	14237.18	11.87	1088.28	1088.27	0.01
Reach 4	215.75	854.81	10385.16	16.27	1088.44	1088.44	
Reach 4	215.75	854.81	10389.02	16.27	1088.45	1088.44	0.00
Reach 4	215.81	860.84	12363.67	13.67	1090.81	1090.81	

Reach 4	215.81	860.84	12364.51	13.67	1090.81	1090.81	0.00
Reach 4	215.815 BR D	827.84	11791.49	14.33	1090.71	1090.71	
Reach 4	215.815 BR D	827.84	11792.30	14.33	1090.71	1090.71	0.00
Reach 4	215.815 BR U	827.85	12274.94	13.77	1091.30	1091.30	
Reach 4	215.815 BR U	827.85	12281.21	13.76	1091.30	1091.30	0.01
Reach 4	215.82	860.86	13249.11	12.76	1091.84	1091.84	
Reach 4	215.82	860.86	13254.68	12.75	1091.85	1091.84	0.01
Reach 4	215.84	870.81	11719.46	14.42	1091.71	1091.71	
Reach 4	215.84	870.81	11725.41	14.41	1091.72	1091.71	0.01
Reach 4	215.94	906.67	11554.85	14.74	1093.70	1093.70	
Reach 4	215.94	906.67	11464.57	14.74	1093.70	1093.70	0.00
Reach 4	216.04	1069.83	19363.15	9.13	1096.93	1096.93	
Reach 4	216.04	1069.84	18517.14	9.13	1096.93	1096.93	0.00
Reach 4	216.13	1113.68	20958.01	8.75	1097.54	1097.54	
Reach 4	216.13	1113.68	19304.79	8.75	1097.54	1097.54	0.00
Reach 4	216.23	1083.71	19708.01	9.13	1097.99	1097.99	
Reach 4	216.23	1083.71	18503.28	9.13	1097.99	1097.99	0.00
Reach 4	216.33	1026.33	16896.88	10.25	1098.35	1098.35	
Reach 4	216.33	1026.33	16490.95	10.25	1098.36	1098.35	0.00
Reach 4	216.42	956.04	14635.06	11.56	1098.86	1098.86	
Reach 4	216.42	946.84	14614.20	11.56	1098.86	1098.86	0.00
Reach 4	216.49	949.03	13010.51	12.99	1098.53	1098.53	
Reach 4	216.49	949.02	13011.78	12.99	1098.53	1098.53	0.00
Reach 4	216.505 BR D	899.64	12267.22	13.78	1098.38	1098.38	
Reach 4	216.505 BR D	899.71	12268.43	13.78	1098.38	1098.38	0.00
Reach 4	216.505 BR U	955.95	13544.36	12.48	1099.75	1099.75	
Reach 4	216.505 BR U	955.95	13545.18	12.48	1099.75	1099.75	0.00
Reach 4	216.52	999.71	14652.61	11.53	1100.20	1100.20	
Reach 4	216.52	999.72	14653.22	11.53	1100.20	1100.20	0.00
Reach 4	216.62	951.32	16261.33	10.52	1101.44	1101.44	
Reach 4	216.62	951.16	16066.40	10.52	1101.44	1101.44	0.00
Reach 4	216.72	897.91	17099.27	9.88	1102.29	1102.29	
Reach 4	216.72	897.91	17098.18	9.88	1102.29	1102.29	0.00
Reach 4	216.81	895.21	54659.97	10.27	1102.78	1102.78	
Reach 4	216.81	895.20	16454.13	10.27	1102.77	1102.78	0.00
Reach 4	216.91	904.45	58401.64	10.97	1103.31	1103.31	
Reach 4	216.91	904.44	15407.28	10.97	1103.30	1103.31	0.00
Reach 4	217.00	905.09	51459.11	10.32	1104.25	1104.25	
Reach 4	217.00	905.09	16375.79	10.32	1104.25	1104.25	0.00
Reach 4	217.10	909.81	42181.37	10.50	1104.84	1104.84	
Reach 4	217.10	909.80	16092.72	10.50	1104.83	1104.84	0.00
Reach 4	217.19	949.31	27561.17	13.26	1105.11	1105.11	
Reach 4	217.19	949.31	12740.54	13.26	1105.11	1105.11	0.00
Reach 4	217.29	999.00	17729.38	11.87	1107.06	1107.06	
Reach 4	217.29	998.99	14234.06	11.87	1107.06	1107.06	0.00
Reach 4	217.38	1034.47	15260.15	11.25	1108.36	1108.36	
Reach 4	217.38	1034.46	15018.44	11.25	1108.36	1108.36	0.00

Reach 4	217.48	1045.77	19742.83	11.04	1109.42	1109.42	
Reach 4	217.48	1045.77	15311.27	11.04	1109.42	1109.42	0.00
Reach 4	217.57	1041.01	14759.05	11.45	1110.29	1110.29	
Reach 4	217.57	1041.00	14758.29	11.45	1110.29	1110.29	0.00
Reach 4	217.66	1020.69	15023.02	11.27	1111.41	1111.41	
Reach 4	217.66	1020.69	14995.52	11.27	1111.41	1111.41	0.00
Reach 4	217.76	823.68	11373.31	14.86	1111.71	1111.71	
Reach 4	217.76	823.68	11373.01	14.86	1111.71	1111.71	0.00
Reach 4	217.86	1043.83	17762.10	10.35	1114.82	1114.82	
Reach 4	217.86	1043.82	16329.32	10.35	1114.82	1114.82	0.00
Reach 4	217.95	1042.14	16240.07	10.41	1115.56	1115.56	
Reach 4	217.95	1042.14	16240.07	10.41	1115.56	1115.56	0.00
Reach 4	218.04	1038.69	15159.76	11.15	1116.27	1116.27	
Reach 4	218.04	1038.69	15159.63	11.15	1116.27	1116.27	0.00
Reach 4	218.14	1032.39	15677.60	11.23	1117.25	1117.25	
Reach 4	218.14	1032.39	15052.18	11.23	1117.25	1117.25	0.00
Reach 4	218.24	1034.85	15006.16	11.62	1118.20	1118.20	
Reach 4	218.24	1034.85	14549.26	11.62	1118.20	1118.20	0.00
Reach 4	218.33	1051.45	15672.82	10.78	1119.49	1119.49	
Reach 4	218.33	1051.45	15672.70	10.78	1119.49	1119.49	0.00
Reach 4	218.42	1007.80	17017.32	12.11	1120.20	1120.20	
Reach 4	218.42	1007.80	13954.61	12.11	1120.20	1120.20	0.00
Reach 4	218.52	1008.12	24062.26	11.43	1121.59	1121.59	
Reach 4	218.52	1008.12	14788.33	11.43	1121.59	1121.59	0.00
Reach 4	218.61	994.32	31877.28	11.40	1122.61	1122.61	
Reach 4	218.61	994.24	14824.96	11.40	1122.61	1122.61	0.00
Reach 4	218.71	986.77	31489.75	11.35	1123.63	1123.63	
Reach 4	218.71	986.76	14889.72	11.35	1123.63	1123.63	0.00
Reach 4	218.80	1011.74	26192.89	10.55	1124.77	1124.77	
Reach 4	218.80	1011.73	16023.35	10.55	1124.77	1124.77	0.00
Reach 4	218.96	1020.45	15115.24	11.32	1126.03	1126.03	
Reach 4	218.96	1020.44	14930.15	11.32	1126.03	1126.03	0.00
Reach 4	218.965 BR D	974.29	14274.18	11.99	1125.89	1125.89	
Reach 4	218.965 BR D	974.29	14273.15	11.99	1125.88	1125.89	0.00
Reach 4	218.965 BR U	962.83	14877.87	11.39	1126.44	1126.44	
Reach 4	218.965 BR U	962.82	14877.01	11.39	1126.44	1126.44	0.00
Reach 4	218.97	1009.80	15927.84	10.65	1126.74	1126.74	
Reach 4	218.97	1009.80	15869.73	10.65	1126.74	1126.74	0.00
Reach 4	219.01	1022.15	12899.76	13.10	1126.36	1126.36	
Reach 4	219.01	1022.15	12898.88	13.10	1126.36	1126.36	0.00
Reach 4	219.02 BR D	976.61	12238.13	13.81	1126.28	1126.28	
Reach 4	219.02 BR D	976.61	12237.29	13.81	1126.28	1126.28	0.00
Reach 4	219.02 BR U	979.73	13208.41	12.79	1127.27	1127.27	
Reach 4	219.02 BR U	976.88	13204.26	12.80	1127.27	1127.27	0.00
Reach 4	219.03	1026.67	14369.09	11.76	1127.80	1127.80	
Reach 4	219.03	1026.66	14367.08	11.76	1127.79	1127.80	0.00
Reach 4	219.14	1023.28	25190.96	11.10	1129.20	1129.20	
Reach 4	219.14	1023.27	15228.51	11.10	1129.20	1129.20	0.00

Reach 4	219.24		1032.45	28923.74	11.23	1130.16	1130.16	
Reach 4	219.24		1032.44	15050.38	11.23	1130.16	1130.16	0.00
Reach 4	219.33		1024.85	30438.71	11.17	1131.10	1131.10	
Reach 4	219.33		1024.85	15130.65	11.17	1131.10	1131.10	0.00
Reach 4	219.42		1010.17	24562.27	11.18	1132.00	1132.00	
Reach 4	219.42		1010.17	15120.89	11.18	1132.00	1132.00	0.00
Reach 4	219.51		1006.16	20045.29	11.27	1132.93	1132.93	
Reach 4	219.51		1006.15	14993.11	11.27	1132.93	1132.93	0.00
Reach 4	219.61		988.76	21837.39	11.54	1133.86	1133.86	
Reach 4	219.61		988.76	14649.25	11.54	1133.86	1133.86	0.00
Reach 4	219.70		945.15	18428.70	12.91	1134.63	1134.63	
Reach 4	219.70		945.15	13091.33	12.91	1134.63	1134.63	0.00
Reach 4	219.79		931.90	16026.95	13.26	1135.96	1135.96	
Reach 4	219.79		931.90	12747.28	13.26	1135.96	1135.96	0.00
Reach 4	219.88		918.51	16226.75	13.11	1137.44	1137.44	
Reach 4	219.88		918.51	12889.52	13.11	1137.44	1137.44	0.00
Reach 4	220.03		906.62	13097.09	12.90	1139.74	1139.74	
Reach 4	220.03		906.62	13096.98	12.90	1139.73	1139.74	0.00
Reach 4	220.05	BR D	879.02	12799.20	13.20	1139.87	1139.87	
Reach 4	220.05	BR D	878.62	12798.85	13.20	1139.87	1139.87	0.00
Reach 4	220.05	BR U	880.77	13320.24	12.69	1140.46	1140.46	
Reach 4	220.05	BR U	878.62	13317.63	12.69	1140.46	1140.46	0.00
Reach 4	220.06		909.54	13992.86	12.08	1140.72	1140.72	
Reach 4	220.06		909.53	13991.64	12.08	1140.72	1140.72	0.00
Reach 4	220.16		912.67	14589.52	12.43	1141.74	1141.74	
Reach 4	220.16		912.67	13590.57	12.44	1141.74	1141.74	0.00
Reach 4	220.25		919.66	15597.48	11.59	1143.14	1143.14	
Reach 4	220.25		919.65	14576.18	11.59	1143.14	1143.14	0.00
Reach 4	220.35		915.59	16185.76	10.95	1144.24	1144.24	
Reach 4	220.35		915.58	15435.92	10.95	1144.24	1144.24	0.00
Reach 4	220.45		908.83	15901.78	11.39	1144.97	1144.97	
Reach 4	220.45		908.82	14836.49	11.39	1144.97	1144.97	0.00
Reach 4	220.54		915.24	15746.86	11.42	1145.84	1145.84	
Reach 4	220.54		915.24	14795.70	11.42	1145.84	1145.84	0.00
Reach 4	220.63		903.29	15110.65	11.37	1146.74	1146.74	
Reach 4	220.63		903.29	14856.83	11.38	1146.74	1146.74	0.00
Reach 4	220.73		884.55	15033.77	11.43	1147.59	1147.59	
Reach 4	220.73		884.55	14782.43	11.43	1147.59	1147.59	0.00
Reach 4	220.82		920.30	15228.46	11.19	1148.53	1148.53	
Reach 4	220.82		920.30	15100.27	11.19	1148.53	1148.53	0.00
Reach 4	220.92		906.20	15230.03	11.22	1149.39	1149.39	
Reach 4	220.92		906.20	15058.18	11.22	1149.39	1149.39	0.00
Reach 4	221.02		900.19	16257.47	10.69	1150.36	1150.36	
Reach 4	221.02		900.19	15806.59	10.69	1150.36	1150.36	0.00
Reach 4	221.05		908.67	18354.31	9.90	1150.84	1150.84	
Reach 4	221.05		908.64	17070.31	9.90	1150.84	1150.84	0.00
Reach 4	221.055	BR D	853.77	17307.82	10.46	1150.76	1150.76	

Reach 4	221.055 BR D	853.74	16149.58	10.46	1150.76	1150.76	0.00
Reach 4	221.055 BR U	857.61	17365.43	10.44	1150.80	1150.80	
Reach 4	221.055 BR U	857.58	16189.58	10.44	1150.80	1150.80	0.00
Reach 4	221.06	921.95	18663.55	9.78	1151.07	1151.07	
Reach 4	221.06	921.95	17282.38	9.78	1151.07	1151.07	0.00
Reach 4	221.19	968.92	17433.98	9.75	1151.80	1151.80	
Reach 4	221.19	968.91	17340.17	9.75	1151.80	1151.80	0.00
Reach 4	221.195 BR D	903.72	16163.24	10.51	1151.67	1151.67	
Reach 4	221.195 BR D	903.72	16086.21	10.51	1151.67	1151.67	0.00
Reach 4	221.195 BR U	905.12	16266.19	10.44	1151.78	1151.78	
Reach 4	221.195 BR U	905.11	16182.05	10.44	1151.77	1151.78	0.00
Reach 4	221.2	972.41	17752.77	9.59	1152.10	1152.10	
Reach 4	221.2	972.40	17627.75	9.59	1152.10	1152.10	0.00
Reach 4	221.24	954.69	18154.09	9.50	1152.32	1152.32	
Reach 4	221.24	954.69	17796.44	9.50	1152.32	1152.32	0.00
Reach 4	221.25 BR D	876.95	16467.83	10.45	1152.15	1152.15	
Reach 4	221.25 BR D	876.90	16175.27	10.45	1152.15	1152.15	0.00
Reach 4	221.25 BR U	884.47	16575.98	10.39	1152.26	1152.26	
Reach 4	221.25 BR U	884.46	16272.54	10.39	1152.26	1152.26	0.00
Reach 4	221.26	955.91	18509.33	9.33	1152.66	1152.66	
Reach 4	221.26	955.90	18111.99	9.33	1152.65	1152.66	0.00
Reach 4	221.31	909.14	13991.58	12.65	1152.25	1152.25	
Reach 4	221.31	909.14	13599.21	12.65	1152.25	1152.25	0.00
Reach 4	221.40	948.27	14783.23	12.16	1153.64	1153.64	
Reach 4	221.40	948.27	14146.66	12.16	1153.64	1153.64	0.00
Reach 4	221.50	928.44	16864.42	12.48	1154.56	1154.56	
Reach 4	221.50	928.44	13787.42	12.48	1154.56	1154.56	0.00
Reach 4	221.61	925.98	18169.90	12.15	1155.65	1155.65	
Reach 4	221.61	925.98	14158.23	12.15	1155.65	1155.65	0.00
Reach 4	221.70	939.54	19313.77	11.32	1156.69	1156.69	
Reach 4	221.70	939.54	15198.66	11.32	1156.69	1156.69	0.00
Reach 4	221.80	935.34	16672.86	11.42	1157.34	1157.34	
Reach 4	221.80	935.34	15060.97	11.42	1157.34	1157.34	0.00
Reach 4	221.89	986.31	16023.52	11.25	1158.06	1158.06	
Reach 4	221.89	986.31	15286.40	11.25	1158.06	1158.06	0.00
Reach 4	221.99	1012.25	16606.97	10.44	1158.98	1158.98	
Reach 4	221.99	1012.25	16469.70	10.44	1158.98	1158.98	0.00
Reach 4	222.08	1039.22	20672.34	8.60	1159.92	1159.92	
Reach 4	222.08	1039.22	20004.27	8.60	1159.92	1159.92	0.00
Reach 4	222.085 BR D	990.59	19590.60	9.07	1159.85	1159.85	
Reach 4	222.085 BR D	990.59	19590.60	9.07	1159.85	1159.85	0.00
Reach 4	222.085 BR U	991.54	19714.14	9.02	1159.96	1159.96	
Reach 4	222.085 BR U	991.54	19714.14	9.02	1159.96	1159.96	0.00
Reach 4	222.09	1041.15	20935.01	8.50	1160.13	1160.13	
Reach 4	222.09	1041.15	20225.98	8.50	1160.13	1160.13	0.00
Reach 4	222.17	1009.85	18569.62	9.52	1160.19	1160.19	
Reach 4	222.17	1009.85	18063.54	9.52	1160.19	1160.19	0.00

Reach 4	222.27	1077.17	18526.40	9.38	1160.63	1160.63	
Reach 4	222.27	1077.17	18345.63	9.38	1160.63	1160.63	0.00
Reach 4	222.36	1182.76	21929.07	8.41	1161.28	1161.28	
Reach 4	222.36	1182.76	20453.09	8.41	1161.28	1161.28	0.00
Reach 4	222.45	1387.97	26890.74	6.91	1161.92	1161.92	
Reach 4	222.45	1387.97	24907.07	6.91	1161.92	1161.92	0.00
Reach 4	222.55	1270.52	30952.47	7.24	1162.09	1162.09	
Reach 4	222.55	1270.53	23757.15	7.24	1162.09	1162.09	0.00
Reach 4	222.65	1079.48	33109.38	8.16	1162.22	1162.22	
Reach 4	222.65	1079.50	21096.56	8.15	1162.23	1162.22	0.01
Reach 4	222.74	1038.06	27669.34	8.03	1162.58	1162.58	
Reach 4	222.74	1038.09	21423.52	8.03	1162.60	1162.58	0.01
Reach 4	222.83	963.38	27676.32	8.01	1162.89	1162.89	
Reach 4	222.83	963.41	21481.87	8.01	1162.90	1162.89	0.01
Reach 4	222.93	945.74	29435.45	9.04	1163.05	1163.05	
Reach 4	222.93	945.76	19042.54	9.03	1163.06	1163.05	0.01
Reach 4	223.02	1092.65	19689.82	8.86	1163.54	1163.54	
Reach 4	223.02	1092.69	19425.71	8.85	1163.55	1163.54	0.01
Reach 4	223.08	1001.37	9747.96	17.64	1163.07	1163.07	
Reach 4	223.08	1001.37	9747.96	17.64	1163.07	1163.07	0.00

ERRORS WARNINGS AND NOTES
Errors Warnings and Notes for Plan : Method 1 FW

River: Salt River Reach: Reach 4 RS: 223.08 Profile: PF#1
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was
used.
River: Salt River Reach: Reach 4 RS: 223.08 Profile: PF#2
Warning:The energy equation could not be balanced within the specified number of iterations. The program used critical depth
for the water surface and continued on with the calculations.
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

Warning:During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated
water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The
program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was
used.
River: Salt River Reach: Reach 4 RS: 223.02 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.93 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.83 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.74 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.65 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.55 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.45 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.36 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.27 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.17 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.09 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 222.085 Profile: PF#1
Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum
answer has been disregarded.
River: Salt River Reach: Reach 4 RS: 222.085 Profile: PF#2
Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum
answer has been disregarded.
River: Salt River Reach: Reach 4 RS: 222.08 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 222.08 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.99 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.89 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.80 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.70 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.61 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.50 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.50 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.40 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.40 Profile: PF#2

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.31 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.31 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 221.26 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.24 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.2 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.19 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.06 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.05 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 221.02 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.92 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.82 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.73 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.63 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.63 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.54 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.45 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.45 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.35 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.35 Profile: PF#2
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 220.25 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.25 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.16 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.16 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.03 Profile: PF#1

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 220.03 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.88 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.88 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.79 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.79 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.70 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.70 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.61 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.61 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.51 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 219.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 219.33 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 219.24 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.24 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.14 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.14 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.

River: Salt River Reach: Reach 4 RS: 219.01 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 219.01 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.97 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
River: Salt River Reach: Reach 4 RS: 218.965 Profile: PF#1
Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum
answer has been disregarded.
River: Salt River Reach: Reach 4 RS: 218.965 Profile: PF#2
Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum
answer has been disregarded.
River: Salt River Reach: Reach 4 RS: 218.96 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The cross-section end points had to be extended vertically for the computed water surface.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.96 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.80 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 218.71 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 218.61 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.61 Profile: PF#2
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.52 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.52 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.42 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.24 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.24 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.14 Profile: PF#1
Warning:Divided flow computed for this cross-section.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 218.14 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.86 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.86 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.76 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.76 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.66 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.66 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.57 Profile: PF#1
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.57 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.48 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 217.38 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.38 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.29 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.29 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.19 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.19 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 217.10 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 217.00 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.91 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.81 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.62 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.505 Profile: PF#1 Upstream
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.505 Profile: PF#2 Upstream
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.49 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.49 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.33 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.23 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.13 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 216.04 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 216.04 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.94 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.94 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.84 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.84 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.81 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.81 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.75 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.75 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.65 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.65 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.36 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 215.27 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.27 Profile: PF#2

Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.18 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.18 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.09 Profile: PF#1
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 215.09 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.99 Profile: PF#1
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.99 Profile: PF#2
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.9 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.9 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning:The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4.
This may indicate the need for additional cross sections.
Warning:The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate
the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.61 Profile: PF#1
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.61 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.42 Profile: PF#1
Warning:Divided flow computed for this cross-section.
River: Salt River Reach: Reach 4 RS: 214.33 Profile: PF#1
Warning:Divided flow computed for this cross-section.
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
River: Salt River Reach: Reach 4 RS: 214.33 Profile: PF#2
Warning:The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

```
River: Salt River  Reach: Reach 4     RS: 214.23     Profile: PF#1
     Warning:Divided flow computed for this cross-section.
River: Salt River  Reach: Reach 4     RS: 214.14     Profile: PF#1
     Warning:Divided flow computed for this cross-section.
```

Print-Out for HEC-RAS Model South.prj

HEC-RAS September 1998 Version 2.2
U.S. Army Corp of Engineers
Hydrologic Engineering Center
609 Second Street, Suite D
Davis, California 95616-4687
(916) 756-1104

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: Final CLOMR
Project File : south.prj
Run Date and Time: 2/17/99 3:32:14 PM

Project in English units

PLAN DATA

Plan Title: Method 1 FW
Plan File : C:\TEMPE\soclomr\final\south.p05

Geometry Title: Reach 4
Geometry File : C:\TEMPE\soclomr\final\south.g01

Flow Title : Imported Flow 02
Flow File : C:\TEMPE\soclomr\final\south.f02

Plan Summary Information:
Number of: Cross Sections = 116 Mulitple Openings = 0
Culverts = 0 Inline Weirs = 0
Bridges = 12

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculaton tolerance = 0.01
Maximum number of interations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

Encroachment Data
Equal Conveyance = True
Left Offset = 0
Right Offset = 0

River = Salt River Reach = Reach 4

RS	Profile	Method	Value1	Value2
223.08	PF#2	1	19332	20356
223.02	PF#2	119353.5	720446.57	
222.93	PF#2	119406.3	820352.33	
222.83	PF#2	119479.6	820443.27	
222.74	PF#2	119531.3	120569.62	
222.70	PF#2	119591.7	520559.75	
222.695	PF#2	119591.7	520559.75	
222.69	PF#2	119591.7	520559.75	
222.67	PF#2	119591.7	520559.75	
222.66	PF#2	119591.7	520559.75	
222.65	PF#2	119561.4	120640.75	
222.55	PF#2	119524.82	20795	
222.45	PF#2	119473.2	120860.59	
222.36	PF#2	119467.0	420649.46	

222.27	PF#2	119515.4420592.52
222.17	PF#2	119489.1420498.83
222.09	PF#2	119483.5920524.35
222.08	PF#2	119484.8120523.66
221.99	PF#2	119415.5920427.83
221.89	PF#2	119381.2920367.66
221.80	PF#2	119421.4720357.31
221.70	PF#2	119451.3720391.39
221.61	PF#2	119472.9520399.29
221.50	PF#2	119527.5120456.38
221.40	PF#2	119511.6620460.87
221.31	PF#2	119574.2620507.95
221.26	PF#2	119535.06 20417
221.24	PF#2	119524.2820423.14
221.2	PF#2	119496.8820375.14
221.19	PF#2	119495.0720368.44
221.06	PF#2	1 19561.320390.29
221.05	PF#2	119574.7620388.81
221.02	PF#2	119511.5820381.47
220.92	PF#2	119547.3220410.59
220.82	PF#2	119505.8420374.17
220.756	PF#2	1 19547 20453
220.755	PF#2	1 19547 20453
220.752	PF#2	1 19547 20453
220.75	PF#2	1 19547 20453
220.74	PF#2	1 19547 20453
220.735	PF#2	1 19547 20453
220.73	PF#2	119490.1120495.14
220.63	PF#2	119531.1820437.64
220.54	PF#2	119531.3720446.62
220.45	PF#2	119539.67 20451.8
220.35	PF#2	119544.1320460.75
220.25	PF#2	119549.1220468.77
220.16	PF#2	119561.2420473.91
220.06	PF#2	119565.9120475.44
220.05	PF#2	119567.2120473.83
220.03	PF#2	119567.2120473.83
219.88	PF#2	119562.9620481.47
219.79	PF#2	119514.2320446.13
219.70	PF#2	119566.9120512.06
219.61	PF#2	119564.3220553.08
219.51	PF#2	119541.3920547.55
219.42	PF#2	119488.9720499.14
219.33	PF#2	119430.3720455.23
219.24	PF#2	119468.0920500.54
219.14	PF#2	119481.8420505.11
219.03	PF#2	119340.4520367.12
219.02	PF#2	119342.4120364.57
219.01	PF#2	119342.4120364.57
218.97	PF#2	119490.0620499.86
218.96	PF#2	119477.8720498.31
218.80	PF#2	119492.0120503.75
218.71	PF#2	119509.9120496.68
218.61	PF#2	119503.38 20500.7
218.52	PF#2	119500.4720508.59
218.42	PF#2	119506.7820514.58
218.33	PF#2	119490.0520541.51
218.24	PF#2	119418.1720453.03
218.14	PF#2	119389.5120421.91
218.04	PF#2	119390.1220428.81
217.95	PF#2	119437.7320479.87
217.86	PF#2	119497.4120541.23
217.76	PF#2	1 19555.720379.38
217.66	PF#2	119569.8920590.58
217.57	PF#2	119521.5120562.51
217.48	PF#2	119436.4220482.19
217.38	PF#2	119463.0120497.48
217.29	PF#2	119510.7820509.77
217.19	PF#2	119562.0520511.37
217.10	PF#2	119607.3520517.16
217.00	PF#2	119612.3420517.43
216.91	PF#2	119604.8920509.34
216.81	PF#2	1 19606.320501.51
216.72	PF#2	119596.8720494.78
216.62	PF#2	1 19591.620542.92
216.52	PF#2	1 19519.920519.62
216.49	PF#2	119567.4420516.46
216.42	PF#2	1 19535.320482.14
216.33	PF#2	119399.9120426.24

```
216.23  PF#2                    1 19329.520413.21
216.13  PF#2                    1 19324.320437.98
216.04  PF#2                    119397.8520467.69
215.94  PF#2                    119572.3520479.02
215.84  PF#2                    119571.9820442.79
215.82  PF#2                    119550.04 20410.9
215.81  PF#2                    119550.06 20410.9
215.75  PF#2                    1 19576.720431.51
215.65  PF#2                    119594.8420484.84
215.56  PF#2                    119587.3720495.25
215.46  PF#2                    119599.3720516.22
215.36  PF#2                    1   19618   20537
215.27  PF#2                    1 19610.6 20553.9
215.18  PF#2                    119683.2220277.12
215.09  PF#2                    1 19674.220293.22
214.99  PF#2                    119601.52 20329.1
214.9   PF#2                    119563.8820374.38
214.79  PF#2                    119461.7320518.14
214.785 PF#2                    119462.6420517.08
214.78  PF#2                    119462.6420517.08
214.71  PF#2                    119640.2920541.86
214.61  PF#2                    119685.1720477.61
214.52  PF#2                    119525.2620453.48
214.42  PF#2                    119382.0820423.77
214.33  PF#2                    119492.0720391.61
214.23  PF#2                    119614.3420352.34
214.14  PF#2                    119654.9820381.82
```

FLOW DATA

Flow Title: Imported Flow 02
Flow File : C:\TEMPE\soclomr\final\south.f02

Flow Data (cfs)

River	Reach	RS	PF#1	PF#2
Salt River	Reach 4	223.08	172000	172000
Salt River	Reach 4	221.26	169000	169000

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Salt River	Reach 4	PF#1		Known WS = 1075.49
Salt River	Reach 4	PF#2		Known WS = 1075.5

GEOMETRY DATA

Geometry Title: Reach 4
Geometry File : C:\TEMPE\soclomr\final\south.g01

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 223.08

INPUT
Description: Downstream face of McClintock bridge

Station Elevation Data num= 40

```
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18410  1166.318957.34  1171.8190 60.89  117219241.27  1180.719241.37    1172
19241.46    117219348.67  1161.519354.58  1161.519408.63  1149.519465.04    1148
19470.96    114819527.96  1165.719581.41  1155.119587.33  1155.119651.04  1146.3
19697.78  1151.5 19703.7  1151.5 19767.7  1151.919814.15    115219820.07    1152
19929.73    115219936.44    115220000.94    115220046.89    115220052.81    1152
20111.49    115220163.27  1153.120169.18  1153.120226.78  1156.420279.64  1156.2
20285.56  1156.220306.86  1156.420363.17  1164.120394.43  1169.320394.53 1173.82
20394.63  1180.720648.67    117420914.95  1166.421053.02  1168.421565.84  1170.2
```

Manning's n Values num= 3

```
     Sta   n Val     Sta   n Val     Sta   n Val
```

18410 .0519241.37 .03520394.53 .05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19241.3	720394.53	170	268.54	370	.1	.3

Ineffective Flow num= 1

Sta L	Sta R	Elev
18410	19241.37	1180

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1167.91	Element			
Vel Head (ft)	4.83	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.07	Reach Len. (ft)	170.00	268.54	370.00
Crit W.S. (ft)	1163.07	Flow Area (sq ft)		9747.96	
E.G. Slope (ft/ft)	0.008376	Area (sq ft)		9747.96	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1001.37	Top Width (ft)		1001.37	
Vel Total (ft/s)	17.64	Avg. Vel. (ft/s)		17.64	
Max Chl Dpth (ft)	16.77	Hydr. Depth (ft)		9.73	
Conv. Total (cfs)	1879353.6	Conv. (cfs)		1879353.6	
Length Wtd. (ft)	268.54	Wetted Per. (ft)		1007.31	
Min Ch El (ft)	1146.30	Shear (lb/sq ft)		5.06	
Alpha	1.00	Stream Power (lb/ft s)		89.29	
Frctn Loss (ft)	0.57	Cum Volume (acre-ft)	2903.76	17329.48	1341.59
C & E Loss (ft)	1.09	Cum SA (acres)	279.90	1036.89	260.51

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1167.91	Element			
Vel Head (ft)	4.83	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.07	Reach Len. (ft)	170.00	268.54	370.00
Crit W.S. (ft)	1163.07	Flow Area (sq ft)		9747.96	
E.G. Slope (ft/ft)	0.008376	Area (sq ft)		9747.96	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1001.37	Top Width (ft)		1001.37	
Vel Total (ft/s)	17.64	Avg. Vel. (ft/s)		17.64	
Max Chl Dpth (ft)	16.77	Hydr. Depth (ft)		9.73	
Conv. Total (cfs)	1879353.6	Conv. (cfs)		1879353.6	
Length Wtd. (ft)	268.54	Wetted Per. (ft)		1007.31	
Min Ch El (ft)	1146.30	Shear (lb/sq ft)		5.06	
Alpha	1.00	Stream Power (lb/ft s)		89.29	
Frctn Loss (ft)	0.57	Cum Volume (acre-ft)	2.44	17214.06	2.35
C & E Loss (ft)	1.09	Cum SA (acres)	1.03	1029.97	0.84

Warning: The energy equation could not be balanced within the specified number of iterations. The program used critical depth for the water surface and continued on with the calculations.
Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.
Warning: During the standard step iterations, when the assumed water surface was set equal to critical depth, the calculated water surface came back below critical depth. This indicates that there is not a valid subcritical answer. The program defaulted to critical depth.
Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, water surface was used.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 223.02

INPUT
Description:
Station Elevation Data num= 168

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17971.69	1171.417	974.78	1171.5	318010.57	1170.2	418044.22	1168.5	18064.14	1167.67
18117.68	1167.718	156.47	1167.7	518175.38	1167.3	618188.46	1167.8	918215.48	1168.55
18228.44	1168.718	240.95	1168.7	918256.37	1169.1	118274.54	1168.7	418301.38	1169.89
18315.99	1171.718	333.85	1173.0	118341.31	1172.3	318347.67	1171.5	418366.61	1169.89
18371.85	1169.218	375.45	1168.5	618412.76	1169.8	818439.92	1170.3	518447.07	1169.88
18465.53	1168.518	484.53	1166.94	18497	1167.8	118511.43	1167.2	818522.44	1167.45
18523.02	1167.318	528.81	1168.4	18559.96	1167.4	818569.11	1167.3	418590.71	1166.71
18612.75	1165.918	633.07	1163.4	618644.79	1162.9	218665.56	1162.6	818699.39	1162.56
18713.58	1162.918	754.75	1162.9	518762.54	1163.3	718767.23	1162.9	618771.67	1163.35
18781.15	1163.618	823.15	1163.7	518836.52	1163.8	718854.62	1163.7	818858.39	1164.47
18889.29	116518	899.81	1166.4	18906.1	1167.4	218924.93	1163.4	18926.38	1162.97
18967.55	116319	008.72	1162.9	19114.49	1162.91	19116.9	1163.3	319120.76	1163.4
19129.15	1163.219	165.22	1162.4	419183.62	1162.4	219185.96	1162.58	19204.6	1163.18
19228.85	1165.119	254.14	1167.3	819267.45	1166.7	819280.62	1166.2	719289.14	1167.6
19307.19	1170.919	329.31	1172.9	719341.36	1168.3	519389.13	1149.67	19412.4	1148.34
19418.76	1148.119	445.72	1147.9	619454.69	1147.6	719514.54	1147.1	19556.29	1146.76
19592.78	1146.8	19612.2	1146.3	619666.81	1145.3	819701.26	1145.06	19723.7	1144.6
19765.05	1143.819	775.01	1143.1	619791.43	1142.6	419821.12	1140.0	619834.25	1140.2
19839.35	114019	849.98	1140.1	519925.51	1141.5	719940.87	1140.8	719972.41	1141.21
19982.15	1141.2	20026.2	1141.7	520050.74	1142.1	520062.44	1142.2	920115.32	1142.8
20138.82	1142.720	209.03	1143.1	320260.66	1144.1	620276.37	1145.8	420306.63	1146.7
20313.92	1147.420	324.74	1147.3	620401.47	1157.9	220438.92	1162.6	20513.5	1172.12
20538.9	1176.620	545.23	1177.3	220556.91	1177.5	20567.11	1177.5	120588.99	1179.51
20606.17	117920	612.09	1179.0	920623.35	1181.2	420638.78	1185.3	320642.52	1186.06
20655.98	1186.6	20662.2	1186.5	520689.46	1180.9	820704.25	1178.1	320714.55	1174.88
20730.77	1169.620	741.14	1167.7	20748.35	1165.2	520751.64	1163.7	120761.41	1165.54
20766.25	1165.620	816.03	1166.2	420831.05	1166.3	320909.51	1166.1	820963.96	1166.38
21009.27	1166.721	081.39	1167.3	121099.05	1167.4	221158.92	1167.5	821181.89	1167.61
21196.89	1167.721	236.98	1167.9	21249.56	1168.1	21284.25	1167.8	221288.35	1167.89
21321.62	1168.121	331.66	1168.0	521361.53	1168.3	521377.75	1168.3	721399.11	1168.2
21407.41	1168.121	438.42	1168.4	21470.92	116921	541.91	1168.7	721656.73	1168.69
21674.4	1168.921	749.08	1169.8	621815.71	1170.0	621880.09	1170.2	21923.59	1170.87
21933.59	1170.8	21941.3	1171.3	621971.17	1171.9	521984.85	117222	018.46	1174.38
22045.18	1174.922	071.91	1174.3	522094.13	1172.35				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17971.69	.05	19329.31	.035	20513.5	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19329.31	20513.5	500	494.97	480	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17971.69	19329.31	1172.97	20513.5	22094.13	1172.12

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1164.79	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.21	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.58	Reach Len. (ft)	500.00	494.97	480.00
Crit W.S. (ft)	1154.21	Flow Area (sq ft)		19450.79	
E.G. Slope (ft/ft)	0.000938	Area (sq ft)	290.60	19450.79	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1526.63	Top Width (ft)	433.63	1093.00	
Vel Total (ft/s)	8.84	Avg. Vel. (ft/s)		8.84	
Max Chl Dpth (ft)	23.58	Hydr. Depth (ft)		17.80	
Conv. Total (cfs)	5614646.0	Conv. (cfs)		5614646.0	
Length Wtd. (ft)	494.97	Wetted Per. (ft)		1097.11	
Min Ch El (ft)	1140.00	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.19	
Frctn Loss (ft)	0.44	Cum Volume (acre-ft)	2903.20	17239.48	1341.59
C & E Loss (ft)	0.00	Cum SA (acres)	279.05	1030.44	260.51

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1164.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.21	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.58	Reach Len. (ft)	500.00	494.97	480.00
Crit W.S. (ft)	1154.21	Flow Area (sq ft)		19460.27	
E.G. Slope (ft/ft)	0.000937	Area (sq ft)		19460.27	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1093.00	Top Width (ft)		1093.00	

Vel Total (ft/s)	8.84	Avg. Vel. (ft/s)		8.84	
Max Chl Dpth (ft)	23.58	Hydr. Depth (ft)		17.80	
Conv. Total (cfs)	5619140.0	Conv. (cfs)		5619140.0	
Length Wtd. (ft)	494.97	Wetted Per. (ft)		1097.13	
Min Ch El (ft)	1140.00	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.17	
Frctn Loss (ft)	0.44	Cum Volume (acre-ft)	2.44	17124.03	2.35
C & E Loss (ft)	0.00	Cum SA (acres)	1.03	1023.52	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.93

INPUT
Description:
Station Elevation Data num= 194

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18044.81	1170.318	059.54	1170.08	18082.34	1171.84	18085.02	1170.83	18112.24	1167.63
18113.9	1167.218	124.59	1162.91	18127.16	1162.29	18130.08	1161.99	18135.27	1162.21
18172.95	1160.6	18181.4	1160.56	18188.17	1159.96	18203.15	1159.35	18206.38	1159.06
18221.12	115	918234.64	1158.86	18250.81	1158.84	18258.55	1159.01	18270.09	1159.07
18289.38	1159.718	302.61	1159.92	18311.85	1159.42	18323.82	1159.58	18333.46	1158.91
18349.35	1158.118	374.85	1152.51	8386.38	1150.79	18392.15	1149.56	18410.64	1144.97
18415.62	1144.618	434.07	1143.97	18463.53	1143.62	18486.43	1143.11	8515.51	1142.98
18525.12	1142.318	542.97	1142.23	18577.36	1141.49	18587.91	1141.55	18619.96	1142.75
18644.69	114	418653.36	1144.18	18666.31	1144.95	18693.59	1147.21	18698.21	1147.82
18709.45	1149.918	719.21	1152.24	18725.67	1153.13	18738.09	1155.02	18743.38	1156
18748.91	1158.118	756.46	1158.08	18770	1157.01	18787.62	1156.87	18791.91	1157.25
18813.17	1156.318	841.62	1154.66	18858.76	115	618881.49	1158.02	18897.61	1159.83
18907.73	1161.618	909.57	1161.22	18921.66	1160.53	18925.78	1160.08	18936.53	1160.16
18944.94	115	818951.65	1157.84	18969.72	1157.21	8987.28	1156.44	18997.79	1156.43
19026.88	1157.9	19036.5	1157.89	19047.12	1157.66	19058.92	1157.59	19099.8	1158.02
19108.79	1158.619	147.63	1165.07	19162.91	1165.11	19177.51	1164.69	19182.74	1164.85
19226.65	1158.519	240.77	1157.47	19252.37	1157.08	19268.47	1157.31	19289.85	1157.28
19305.64	1155.8	19315.5	1154.61	9327.75	1157.38	19348.09	1162.91	9351.76	1161.42
19354.63	1160.619	361.43	1165.5	19371.1	1172.11	19387.15	1171.47	19415.35	1159.17
19419.6	1157	19427.4	1156.46	19448.81	1147.05	19451.67	1145.84	19453.7	1145.59
19465.43	1145.919	470.76	1143.85	19475.04	1143.46	19484.7	1142.08	19505.7	1138.91
19533.01	1138.519	591.33	1137.71	9639.73	1142.14	19644.95	1142.57	19647.95	1142.49
19700.44	1142.119	806.44	1140.17	19818.97	114	019871.09	1139.54	19936.2	1140.13
19958.66	1140.120	036.35	1140.82	0049.41	1140.84	20133.62	1142.21	20146.15	1142.34
20182.57	1142.620	225.98	1142.62	20260.54	1143.97	20280.58	1149.62	20311.81	1158.03
20316.46	1157.720	329.75	1157.05	20377.76	1169.88	20403.92	1170.72	0412.11	1171.64
20443.67	1176.420	455.16	1176.33	20541.87	1191.42	20595.84	1199.65	20620.14	1198.6
20626.95	1198.220	640.27	1196.88	20653.4	1196.49	20663.01	1196.69	20672.83	1196.69
20685.41	1194.6	20691.5	1193.87	20704.53	1189.73	20740.62	1178.12	20759.66	1171.95
20775.41	116	720783.88	1166.34	20787.5	1166.11	20791.24	1165.37	20793.55	1164.63
20801.17	1163.120	802.77	1165.41	20807.08	1165.44	20811.98	1165.17	20812.34	1166.76
20813.33	1165.3	20817	1166.67	20827.62	1166.56	20840.67	1164.81	20874.4	1164.69
20892.67	1165.120	934.23	1165.22	0939.07	1165.25	20976.51	1169.73	20985.15	1166.37
21017.72	1166.921	088.07	1167.97	21131.31	1168.58	21159.63	1168.56	21210.47	1169.22
21255.35	1169.821	264.52	1169.94	21268.88	1170.01	21318.21	1172.22	1357.38	1170.99
21473.22	1172.221	515.36	1172.51	21548.08	1172.92	21704.73	1174.14	21756.14	1174.3
21889.34	117	521937.15	1175.26	22053.19	1175.76	22078.57	1175.52	22104.77	1176.51
22117.89	1176.922	127.78	1177.06	22139.5	1176.87	22174.8	1177.13	22183.4	1176.84
22201.98	1177.122	206.83	1177.28	22210.88	1176.49	22214.67	1176.4		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18044.81	.05	19371.1	.035	20412.11	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19371.12	0412.11	470	502.27	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18044.81	19371.1	1172.11	20412.11	22214.67	1171.64

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1164.35	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.26	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.08	Reach Len. (ft)	470.00	502.27	520.00
Crit W.S. (ft)	1152.09	Flow Area (sq ft)		19065.74	
E.G. Slope (ft/ft)	0.000832	Area (sq ft)	10446.32	19065.74	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	2120.64	Top Width (ft)	1174.69	945.96	
Vel Total (ft/s)	9.02	Avg. Vel. (ft/s)		9.02	
Max Chl Dpth (ft)	25.38	Hydr. Depth (ft)		20.16	
Conv. Total (cfs)	5963900.0	Conv. (cfs)		5963900.0	

Length Wtd. (ft)	502.27	Wetted Per. (ft)		953.30	
Min Ch El (ft)	1137.70	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.37	
Frctn Loss (ft)	0.34	Cum Volume (acre-ft)	2841.57	17020.65	1341.59
C & E Loss (ft)	0.08	Cum SA (acres)	269.82	1018.85	260.51

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1164.36	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.26	Wt. n-Val.		0.035	
W.S. Elev (ft)	1163.09	Reach Len. (ft)	470.00	502.27	520.00
Crit W.S. (ft)	1152.09	Flow Area (sq ft)		19074.64	
E.G. Slope (ft/ft)	0.000830	Area (sq ft)		19074.64	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	945.95	Top Width (ft)		945.95	
Vel Total (ft/s)	9.02	Avg. Vel. (ft/s)		9.02	
Max Chl Dpth (ft)	25.39	Hydr. Depth (ft)		20.16	
Conv. Total (cfs)	5968474.5	Conv. (cfs)		5968474.5	
Length Wtd. (ft)	502.27	Wetted Per. (ft)		953.31	
Min Ch El (ft)	1137.70	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.35	
Frctn Loss (ft)	0.34	Cum Volume (acre-ft)	2.44	16905.10	2.35
C & E Loss (ft)	0.08	Cum SA (acres)	1.03	1011.93	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.83

INPUT
Description:
Station Elevation Data num= 207

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17961.21	1167.41	7965.29	1167.52	17987.09	1167.58	18016.31	1168.35	18040.57	1169.48
18053.27	1169.81	8089.71	1170.39	18126.28		117018156.09	1168.54	18167.04	1167.63
18184.34	1171.61	8186.48	1172.05	18190.33	1167.59	18199.7	1166.17	18221.05	1165.01
18241.73	1162.91	8253.01	1160.72	18263.42	1158.09	18272.82	1155.91	8277.84	1154
18292.96	1152.51	8294.53	1150.19	18295.7	1149.94	18308.08	1149.93	18322.22	1151.36
18337.36	1152.51	8345.61	1155.01	18380.53	1155.01	18393.59	1155.71	8410.52	1155.78
18435.11	1158.11	8479.88	1158.07	18495.4	1160.39	18515.38	1160.65	18532.28	1159.17
18538.83	1159.11	8555.97	1159.18	18562.6	1159.57	18579.85	1162.83	18588.81	1162.83
18605.21		116118618.77	1158.06	18626.76	1155.65	18628.35	1154.99	18639.46	1153.77
18647.65	1152.5	18657.1	1152.1	18666.6	1152.51	8686.41	1152.51	8700.37	1154.08
18709.28		115518722.91	1155.66	18741.07	1156.14	18775.85	1156.87	18780	1156.86
18789.49	1157.31	8814.28	1158.05	18831.01	1162.15	18842.81	1162.92	18853.6	1162.92
18905.71	1169.21	8910.16	1169.14	18924.78	1170.06	18934.46	1170.16	18936.54	1169.63
18959.52	1162.91	8971.38	1162.59	18975.93	1162.32	19001.94	1161.21	9037.07	1161.69
19059.59	1161.71	9094.58	1162.28	19115.59	1162.91	9122.44	1165.64	19126.84	1167.22
19129.27	1165.61	9134.29	1162.91	19144.01	1158.71	9145.23	1157.93	19202.96	1157.93
19225.71	1158.71	9235.33	1158.8	19252	1158.47	19266.38	1157.92	19299.83	1155.09
19334.93	1153.91	9365.14	1154.07	19380.63	1156.55	19394.72	1157.15	19409.5	1157.99
19412.49	1158.11	9414.28	1157.42	19419.84	1158.41	9427.45	1161.36	19450.79	1169.94
19465.83	1170.1	19478.7	1163.45	19491.02	1156.91	19505.27	1156.44	19516.1	1150.04
19549.08	1128.41	9573.13	1128.39	19583.62	1127.92	19586.27	1128.41	19598.27	1129.07
19619.16	1130.41	9643.43	1135.88	19649.42	1137.54	19659.21	1137.72	19711.71	1140.3
19717.47	1141	19755.3	1140.56	19854.38	1140.27	19898.28	1140.02	19981.21	1139.71
19989.54	1139.62	0009.71	1139.67	20095.91	1139.63	20129.9	1139.52	20175.64	1139.06
20247.52	1138.42	0271.76	1138.25	20345.97	1140.31	20363.76	1146.07	20370.31	1148.11
20401.04	1156.52	0419.29	1156.53	20461.53	1167.82	0466.01	1169.04	20477.75	1170.03
20509.81	1177.32	0549.27	1185.18	20554.87	1186.39	20557.9	1186.3	20575	1186.24
20609.25		118720613.63	1186.93	20631.69	1187.73	20662.3	1189.66	20676.58	1188.95
20684.69	1188.52	0698.98	1188.44	20708.31	1188.55	20744.71	1187.77	20760.91	1187.78
20790.04	1189.22	0803.44	1185.59	20833.92	1177.48	20865.39	1167.16	20866.62	1167.15
20901.79	1165.72	0913.97	1164.62	20923.87	1164.44	20936.75	1166.84	20944.23	1166.96
21041.84	1172.6	21060.9	1172.04	21077.54	1171.95	21146.04	1170.48	21231.63	1170.86
21288.53		117221290.92	1171.56	21309.06	1171.54	21320.45	1172.45	21339.54	1171.72
21345.9	1169.72	1363.31	1166.58	21373.76	1166.44	21399.93	1166.67	21408.61	1169.34
21416.67	1172	21433.8	1172.01	21461.03	1171.91	21465.67	1172.02	21467.08	1171.64
21505.24	1164.42	1510.85	1164.36	21522.52	1165.71	21538.01	1165.26	21590.57	1165.64
21602.98	1163.22	1619.14	1159.19	21627.31	1158.43	21649.11	1159.42	21673.25	1158.82
21704.37		115821712.13	1157.87	21751.87	1158.57	21787.6	1165.41	21817.59	1163.77
21841.71	1163.52	1855.88	1163.74	21924.9	1164.47	21939.97	1164.41	21947.94	1164.52
22001.19	1163.92	2058.68	1165.79	22101.69	1171.91	22109.78	1173.18	22111.55	1173.13
22121.15		117422125.94	1172.67	22132.03	1171.31	22144.69	1171.95	22165.48	1171.51
22179.43	1171.22	2216.33	1170.96						

Manning's n Values num= 3

```
     Sta    n Val      Sta    n Val      Sta    n Val
17961.21      .0519465.83     .03520477.75      .05

Bank Sta: Left   Right     Lengths: Left Channel   Right      Coeff Contr.    Expan.
      19465.8320477.75            497.11  497.11  497.11              .1        .3
Ineffective Flow      num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17961.2119465.83  1170.120477.7522216.33 1170.03
```

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1163.92	Element			
Vel Head (ft)	0.99	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.93	Reach Len. (ft)	497.11	497.11	497.11
Crit W.S. (ft)	1149.43	Flow Area (sq ft)		21506.10	
E.G. Slope (ft/ft)	0.000576	Area (sq ft)	5593.83	21506.10	657.70
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	2200.12	Top Width (ft)	1065.96	963.59	170.57
Vel Total (ft/s)	8.00	Avg. Vel. (ft/s)		8.00	
Max Chl Dpth (ft)	35.01	Hydr. Depth (ft)		22.32	
Conv. Total (cfs)	7168410.0	Conv. (cfs)		7168410.0	
Length Wtd. (ft)	497.11	Wetted Per. (ft)		977.60	
Min Ch El (ft)	1127.92	Shear (lb/sq ft)		0.79	
Alpha	1.00	Stream Power (lb/ft s)		6.32	
Frctn Loss (ft)	0.30	Cum Volume (acre-ft)	2755.04	16786.74	1337.66
C & E Loss (ft)	0.00	Cum SA (acres)	257.74	1007.84	259.49

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1163.93	Element			
Vel Head (ft)	0.99	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.94	Reach Len. (ft)	497.11	497.11	497.11
Crit W.S. (ft)	1149.43	Flow Area (sq ft)		21515.38	
E.G. Slope (ft/ft)	0.000575	Area (sq ft)		21515.38	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	963.59	Top Width (ft)		963.59	
Vel Total (ft/s)	7.99	Avg. Vel. (ft/s)		7.99	
Max Chl Dpth (ft)	35.02	Hydr. Depth (ft)		22.33	
Conv. Total (cfs)	7173490.0	Conv. (cfs)		7173490.0	
Length Wtd. (ft)	497.11	Wetted Per. (ft)		977.61	
Min Ch El (ft)	1127.92	Shear (lb/sq ft)		0.79	
Alpha	1.00	Stream Power (lb/ft s)		6.31	
Frctn Loss (ft)	0.30	Cum Volume (acre-ft)	2.44	16671.09	2.35
C & E Loss (ft)	0.00	Cum SA (acres)	1.03	1000.92	0.84

```
CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.74

INPUT
Description:
Station Elevation Data    num=     161
     Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev      Sta    Elev
17982.09  1170.817992.53 1169.9617996.32 1169.8618032.69 1167.4518053.23 1168.73
18067.98  1172.7 18074.2 1171.33 18096.5 1177.1318098.56 1176.8218122.76 1171.53
18132.05    117018158.62  1168.518174.89 1167.3818208.93  1167.218216.61 1167.33
18232.17  1167.418267.41 1167.7518317.51 1168.8618334.53 1169.2118358.54 1170.24
18373.22  1168.218411.05 1162.7418436.87 1163.4118463.27 1164.0218480.46 1167.03
18508.28  1172.718515.09 1173.8818533.45 1172.14 18583.6 1166.2918588.28 1165.63
18605.22  1165.118653.94 1163.22 18673.1 1167.1918710.22 1173.45 18720.1 1174.09
18730.18  1170.318745.53 1167.3318755.93 1167.6618773.24 1166.6818779.21 1166.25
18799.28  1166.818826.98 1173.5218847.47 1178.5118872.64 1172.5318901.41 1166.37
18909.22  1166.818942.54 1167.8218959.71 1167.7718964.66 1169.7318972.24 1170.59
18980.05  1169.618988.04 1168.9319017.16 1173.3919090.23 1158.9919099.73 1158.44
19164.68    115619180.85 1155.0919200.88 1154.0519220.13  1153.119233.74 1153.84
19241.42  1153.8 19245.8 1154.3219257.91 1151.9919276.54 1155.7819292.29 1156.72
19301.43  1157.819319.12 1160.7419322.64 1161.5719341.09 1154.4719364.63 1145.65
19395.57  1144.519411.84 1144.8219474.07 1165.07 19487.8 1169.3919506.54 1171.93
19522.71  1165.919549.67 1155.6219563.25 1156.0219596.55 1136.4419598.23 1135.69
19629.09  1135.119639.29 1134.16 19653.9 1137.4219659.49  1138.119700.97 1138.67
19764.93  1139.319836.78 1140.5119894.72 1141.7119925.21 1140.4420018.05 1140.13
20037.37  1140.420062.45 1140.51 20167.3 1140.7420257.17 1140.8420313.38 1140.87
20371.73    114120391.45 1140.8620450.23 1139.7720455.53 1139.7120466.88 1141.52
20477.89  1143.520491.97    1145 20500.5 1149.8220505.97 1152.6120520.94 1152.55
20531.04  1156.820535.25 1156.83 20546.8 1156.5420591.55 1168.4720603.24 1168.78
20618.71    116920672.42 1173.0820694.37 1174.0620708.79 1175.5620722.38 1177.07
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20727.88  1177.6 20764.4 1181.2920774.47  1182.520786.38 1183.7720818.82 1183.97
20847.26    1184 20877.3  1183.220881.97  1183.220885.59  1182.520892.04 1183.45
20900.03  1180.520903.33 1177.6720951.64 1161.29 20972.4 1162.0121006.74 1157.56
21022.81  1157.321045.77 1157.2221073.73 1157.6321119.61 1157.9821142.99 1158.06
21210.54  1157.421242.07 1156.91 21264.3 1156.46 21271.2 1156.4621311.68 1156.11
21335.69    115621344.52  1156.321396.55 1156.8421419.85 1157.2921471.72 1157.82
21481.43  1157.921517.63 1158.2921527.65 1158.3221541.52 1159.0321547.73 1159.45
21551.84  1160.621587.19  1170.8 21595.8 1169.7621601.57 1169.38   21616 1166.14
21620.18  1164.621633.88 1165.5621667.59 1167.3121681.23 1168.8721731.75 1169.61
21738.87  1169.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17982.09     .0519506.54    .03520603.24     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19506.5420603.24           216.81  216.81  216.81             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17982.0919506.54 1171.9320603.2421738.87 1168.78
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1163.62	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.00	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.62	Reach Len. (ft)	216.81	216.81	216.81
Crit W.S. (ft)	1150.41	Flow Area (sq ft)		21451.15	
E.G. Slope (ft/ft)	0.000638	Area (sq ft)	3295.00	21451.15	3003.52
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	2044.20	Top Width (ft)	394.75	1038.31	611.14
Vel Total (ft/s)	8.02	Avg. Vel. (ft/s)		8.02	
Max Chl Dpth (ft)	28.46	Hydr. Depth (ft)		20.66	
Conv. Total (cfs)	6807582.0	Conv. (cfs)		6807582.0	
Length Wtd. (ft)	216.81	Wetted Per. (ft)		1049.61	
Min Ch El (ft)	1134.16	Shear (lb/sq ft)		0.81	
Alpha	1.00	Stream Power (lb/ft s)		6.53	
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	2704.32	16541.63	1316.77
C & E Loss (ft)	0.02	Cum SA (acres)	249.40	996.42	255.03

Warning: Divided flow computed for this cross-section.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1163.63	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.00	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.63	Reach Len. (ft)	216.81	216.81	216.81
Crit W.S. (ft)	1150.41	Flow Area (sq ft)		21461.92	
E.G. Slope (ft/ft)	0.000637	Area (sq ft)		21461.92	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1038.31	Top Width (ft)		1038.31	
Vel Total (ft/s)	8.01	Avg. Vel. (ft/s)		8.01	
Max Chl Dpth (ft)	28.47	Hydr. Depth (ft)		20.67	
Conv. Total (cfs)	6813190.0	Conv. (cfs)		6813190.0	
Length Wtd. (ft)	216.81	Wetted Per. (ft)		1049.63	
Min Ch El (ft)	1134.16	Shear (lb/sq ft)		0.81	
Alpha	1.00	Stream Power (lb/ft s)		6.52	
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	2.44	16425.86	2.35
C & E Loss (ft)	0.02	Cum SA (acres)	1.03	989.50	0.84

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

```
CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.70

INPUT
Description: Upstream End of Apron
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19591.75 1166.3319591.75 1158.3319610.75 1141.7520539.25 1141.7520559.75 1158.33
20559.75 1166.33

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19591.75    .01519591.75    .01520559.75    .015
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Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19591.7520559.75               25      25      25             .1       .3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1163.54   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.19   Wt. n-Val.                           0.015
  W.S. Elev (ft)            1162.35   Reach Len. (ft)            25.00     25.00      25.00
  Crit W.S. (ft)                      Flow Area (sq ft)                  19612.14
  E.G. Slope (ft/ft)       0.000146   Area (sq ft)                       19612.14
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)             968.00   Top Width (ft)                       968.00
  Vel Total (ft/s)             8.77   Avg. Vel. (ft/s)                       8.77
  Max Chl Dpth (ft)           20.60   Hydr. Depth (ft)                      20.26
  Conv. Total (cfs)       14242047.0   Conv. (cfs)                       14242047.0
  Length Wtd. (ft)            25.00   Wetted Per. (ft)                     988.12
  Min Ch El (ft)            1141.75   Shear (lb/sq ft)                       0.18
  Alpha                        1.00   Stream Power (lb/ft s)                 1.58
  Frctn Loss (ft)              0.00   Cum Volume (acre-ft)      2696.12  16439.44    1309.30
  C & E Loss (ft)              0.02   Cum SA (acres)             248.42    991.43     253.51

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1163.55   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.19   Wt. n-Val.                           0.015
  W.S. Elev (ft)            1162.36   Reach Len. (ft)            25.00     25.00      25.00
  Crit W.S. (ft)                      Flow Area (sq ft)                  19622.66
  E.G. Slope (ft/ft)       0.000146   Area (sq ft)                       19622.66
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)             968.00   Top Width (ft)                       968.00
  Vel Total (ft/s)             8.77   Avg. Vel. (ft/s)                       8.77
  Max Chl Dpth (ft)           20.61   Hydr. Depth (ft)                      20.27
  Conv. Total (cfs)       14254569.0   Conv. (cfs)                       14254569.0
  Length Wtd. (ft)            25.00   Wetted Per. (ft)                     988.14
  Min Ch El (ft)            1141.75   Shear (lb/sq ft)                       0.18
  Alpha                        1.00   Stream Power (lb/ft s)                 1.58
  Frctn Loss (ft)              0.00   Cum Volume (acre-ft)         2.44  16323.61       2.35
  C & E Loss (ft)              0.02   Cum SA (acres)               1.03    984.51       0.84

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.695

INPUT
Description:
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19591.75 1166.3319591.75 1158.3319610.75 1143.3320539.25 1143.3320559.75 1158.33
20559.75 1166.33

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19591.75    .01519591.75    .01520559.75    .015

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19591.7520559.75               3.4     3.4     3.4             .1       .3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1163.51   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.44   Wt. n-Val.                           0.015
  W.S. Elev (ft)            1162.07   Reach Len. (ft)             3.40      3.40       3.40
  Crit W.S. (ft)                      Flow Area (sq ft)                  17845.60
  E.G. Slope (ft/ft)       0.000199   Area (sq ft)                       17845.60
  Q Total (cfs)           172000.00   Flow (cfs)                        172000.00
  Top Width (ft)             968.00   Top Width (ft)                       968.00
  Vel Total (ft/s)             9.64   Avg. Vel. (ft/s)                       9.64
  Max Chl Dpth (ft)           18.74   Hydr. Depth (ft)                      18.44
  Conv. Total (cfs)       12189639.0   Conv. (cfs)                       12189639.0
  Length Wtd. (ft)             3.40   Wetted Per. (ft)                     985.59
  Min Ch El (ft)            1143.33   Shear (lb/sq ft)                       0.23
  Alpha                        1.00   Stream Power (lb/ft s)                 2.17
  Frctn Loss (ft)              0.00   Cum Volume (acre-ft)      2696.12  16428.69    1309.30
  C & E Loss (ft)              0.00   Cum SA (acres)             248.42    990.87     253.51

CROSS SECTION OUTPUT    Profile #PF#2
```

E.G. Elev (ft)	1163.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.44	Wt. n-Val.		0.015	
W.S. Elev (ft)	1162.08	Reach Len. (ft)	3.40	3.40	3.40
Crit W.S. (ft)		Flow Area (sq ft)		17856.70	
E.G. Slope (ft/ft)	0.000199	Area (sq ft)		17856.70	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	968.00	Top Width (ft)		968.00	
Vel Total (ft/s)	9.63	Avg. Vel. (ft/s)		9.63	
Max Chl Dpth (ft)	18.75	Hydr. Depth (ft)		18.45	
Conv. Total (cfs)	12202095.0	Conv. (cfs)		12202095.0	
Length Wtd. (ft)	3.40	Wetted Per. (ft)		985.62	
Min Ch El (ft)	1143.33	Shear (lb/sq ft)		0.22	
Alpha	1.00	Stream Power (lb/ft s)		2.16	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	2.44	16312.86	2.35
C & E Loss (ft)	0.00	Cum SA (acres)	1.03	983.95	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.69

INPUT
Description: Upstream Dam
Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19591.75	1166.33	19591.75	1158.33	19610.75	1143.33	20539.25	1143.33	20559.75	1158.33
20559.75	1166.33								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19591.75	.015	19591.75	.015	20559.75	.015

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19591.75	20559.75	30	30	30	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1163.51	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.44	Wt. n-Val.		0.015	
W.S. Elev (ft)	1162.07	Reach Len. (ft)	1.00	1.00	1.00
Crit W.S. (ft)	1153.49	Flow Area (sq ft)		17844.89	
E.G. Slope (ft/ft)	0.000199	Area (sq ft)		17844.89	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	968.00	Top Width (ft)		968.00	
Vel Total (ft/s)	9.64	Avg. Vel. (ft/s)		9.64	
Max Chl Dpth (ft)	18.74	Hydr. Depth (ft)		18.43	
Conv. Total (cfs)	12188844.0	Conv. (cfs)		12188844.0	
Length Wtd. (ft)	1.00	Wetted Per. (ft)		985.59	
Min Ch El (ft)	1143.33	Shear (lb/sq ft)		0.23	
Alpha	1.00	Stream Power (lb/ft s)		2.17	
Frctn Loss (ft)		Cum Volume (acre-ft)	2696.12	16427.29	1309.30
C & E Loss (ft)		Cum SA (acres)	248.42	990.80	253.51

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1163.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.44	Wt. n-Val.		0.015	
W.S. Elev (ft)	1162.08	Reach Len. (ft)	1.00	1.00	1.00
Crit W.S. (ft)	1153.49	Flow Area (sq ft)		17855.99	
E.G. Slope (ft/ft)	0.000199	Area (sq ft)		17855.99	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	968.00	Top Width (ft)		968.00	
Vel Total (ft/s)	9.63	Avg. Vel. (ft/s)		9.63	
Max Chl Dpth (ft)	18.75	Hydr. Depth (ft)		18.45	
Conv. Total (cfs)	12201299.0	Conv. (cfs)		12201299.0	
Length Wtd. (ft)	1.00	Wetted Per. (ft)		985.61	
Min Ch El (ft)	1143.33	Shear (lb/sq ft)		0.22	
Alpha	1.00	Stream Power (lb/ft s)		2.17	
Frctn Loss (ft)		Cum Volume (acre-ft)	2.44	16311.46	2.35
C & E Loss (ft)		Cum SA (acres)	1.03	983.88	0.84

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 222.68

INPUT
Description:
Distance from Upstream XS = 1

```
Deck/Roadway Width        =      28
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19591.75    1180    117920559.75    1180    1179

Upstream Bridge Cross Section Data
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19591.75 1166.3319591.75 1158.3319610.75 1143.3320539.25 1143.3320559.75 1158.33
20559.75 1166.33

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19591.75    .01519591.75    .01520559.75    .015

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19591.7520559.75             .1       .3

Downstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19591.75    1180    117920559.75    1180    1179

Downstream Bridge Cross Section Data
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19591.75 1166.3319591.75 1158.3319610.75 1143.3320539.25 1143.3320559.75 1158.33
20559.75 1166.33

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19591.75    .01519591.75    .01520559.75    .015

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19591.7520559.75             .1       .3

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  3

Pier Data
Pier Station     Upstream=   19847    Downstream=   19847
Upstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
      18 1143.33       6 1155.33       6 1160.83
Downstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
      18 1143.33       6 1155.33       6 1160.83

Pier Data
Pier Station     Upstream=   20075    Downstream=   20075
Upstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
      18 1143.33       6 1155.33       6 1160.83
Downstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
      18 1143.33       6 1155.33       6 1160.83

Pier Data
Pier Station     Upstream=   20310    Downstream=   20310
Upstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
      18 1143.33       6 1155.33       6 1160.83
Downstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
      18 1143.33       6 1155.33       6 1160.83

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
```

```
        Energy
        Momentum                Cd   =      1.6
        Yarnell                 KVal =       .9
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
        Energy Only

Additional Bridge Parameters
        Add Friction component to Momentum
        Do not add Weight component to Momentum
        Class B flow critical depth computations use critical depth
            inside the bridge at the upstream end
        Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1163.51   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1162.07   E.G. Elev (ft)               1163.53       1163.53
  Q Total (cfs)              172000.00   W.S. Elev (ft)               1161.99       1161.99
  Q Bridge (cfs)             172000.00   Crit W.S. (ft)               1153.84       1153.83
  Q Weir (cfs)                           Max Chl Dpth (ft)              18.66         18.66
  Weir Sta Lft (ft)                      Vel Total (ft/s)               9.98          9.98
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           17230.93      17230.93
  Weir Submerg                           Froude # Chl                   0.42          0.42
  Weir Max Depth (ft)                    Specif Force (cu ft)       211428.39     211428.39
  Min Top Rd (ft)              1180.00   Hydr Depth (ft)                17.80         17.80
  Min El Prs (ft)              1179.00   W.P. Total (ft)              1062.92       1062.92
  Delta EG (ft)                   0.07   Conv. Total (cfs)         10933321.0    10933321.0
  Delta WS (ft)                   0.09   Top Width (ft)               968.00        968.00
  BR Open Area (sq ft)        33701.35   Frctn Loss (ft)
  BR Open Vel (ft/s)              9.98   C & E Loss (ft)
  Coef of Q                              Shear Total (lb/sq ft)         0.25          0.25
  Br Sel Method                Yarnell   Power Total (lb/ft s)          2.50          2.50


BRIDGE OUTPUT    Profile #PF#2
Opening : Bridge #1

  E.G. US. (ft)                1163.52   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1162.08   E.G. Elev (ft)               1163.54       1163.54
  Q Total (cfs)              172000.00   W.S. Elev (ft)               1162.00       1162.00
  Q Bridge (cfs)             172000.00   Crit W.S. (ft)               1153.84       1153.83
  Q Weir (cfs)                           Max Chl Dpth (ft)              18.67         18.67
  Weir Sta Lft (ft)                      Vel Total (ft/s)               9.98          9.98
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           17242.28      17242.28
  Weir Submerg                           Froude # Chl                   0.42          0.42
  Weir Max Depth (ft)                    Specif Force (cu ft)       211595.31     211595.31
  Min Top Rd (ft)              1180.00   Hydr Depth (ft)                17.81         17.81
  Min El Prs (ft)              1179.00   W.P. Total (ft)              1062.94       1062.94
  Delta EG (ft)                   0.07   Conv. Total (cfs)         10945160.0    10945160.0
  Delta WS (ft)                   0.09   Top Width (ft)               968.00        968.00
  BR Open Area (sq ft)        33701.35   Frctn Loss (ft)
  BR Open Vel (ft/s)              9.98   C & E Loss (ft)
  Coef of Q                              Shear Total (lb/sq ft)         0.25          0.25
  Br Sel Method                Yarnell   Power Total (lb/ft s)          2.49          2.49


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 222.67

INPUT
Description: Upstream Dam
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19591.75 1166.3319591.75 1158.3319610.75 1143.3320539.25 1143.3320559.75 1158.33
20559.75 1166.33

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19591.75    .01519591.75    .01520559.75    .015

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19591.7520559.75              21.5    21.5    21.5             .1       .3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)             1163.44   Element                    Left OB    Channel   Right OB
```

Vel Head (ft)	1.46	Wt. n-Val.		0.015	
W.S. Elev (ft)	1161.99	Reach Len. (ft)	21.50	21.50	21.50
Crit W.S. (ft)		Flow Area (sq ft)		17761.94	
E.G. Slope (ft/ft)	0.000202	Area (sq ft)		17761.94	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	968.00	Top Width (ft)		968.00	
Vel Total (ft/s)	9.68	Avg. Vel. (ft/s)		9.68	
Max Chl Dpth (ft)	18.66	Hydr. Depth (ft)		18.35	
Conv. Total (cfs)	12095958.0	Conv. (cfs)		12095958.0	
Length Wtd. (ft)	21.50	Wetted Per. (ft)		985.42	
Min Ch El (ft)	1143.33	Shear (lb/sq ft)		0.23	
Alpha	1.00	Stream Power (lb/ft s)		2.20	
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	2696.12	16415.41	1309.30
C & E Loss (ft)	0.07	Cum SA (acres)	248.42	990.13	253.51

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1163.45	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.45	Wt. n-Val.		0.015	
W.S. Elev (ft)	1162.00	Reach Len. (ft)	21.50	21.50	21.50
Crit W.S. (ft)		Flow Area (sq ft)		17773.28	
E.G. Slope (ft/ft)	0.000202	Area (sq ft)		17773.28	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	968.00	Top Width (ft)		968.00	
Vel Total (ft/s)	9.68	Avg. Vel. (ft/s)		9.68	
Max Chl Dpth (ft)	18.67	Hydr. Depth (ft)		18.36	
Conv. Total (cfs)	12108644.0	Conv. (cfs)		12108644.0	
Length Wtd. (ft)	21.50	Wetted Per. (ft)		985.44	
Min Ch El (ft)	1143.33	Shear (lb/sq ft)		0.23	
Alpha	1.00	Stream Power (lb/ft s)		2.20	
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	2.44	16299.57	2.35
C & E Loss (ft)	0.07	Cum SA (acres)	1.03	983.21	0.84

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.66

INPUT
Description: Downstream End of Apron
Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19591.75	1166.33	19591.75	1158.33	19610.75	1141.75	20539.25	1141.75	20559.75	1158.33
20559.75	1166.33								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19591.75	.05	19591.75	.03	20559.75	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19591.75	20559.75	186	186	186	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1163.36	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.22	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.14	Reach Len. (ft)	186.00	186.00	186.00
Crit W.S. (ft)		Flow Area (sq ft)		19412.44	
E.G. Slope (ft/ft)	0.000821	Area (sq ft)		19412.44	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	968.00	Top Width (ft)		968.00	
Vel Total (ft/s)	8.86	Avg. Vel. (ft/s)		8.86	
Max Chl Dpth (ft)	20.39	Hydr. Depth (ft)		20.05	
Conv. Total (cfs)	6002173.5	Conv. (cfs)		6002173.5	
Length Wtd. (ft)	186.00	Wetted Per. (ft)		987.71	
Min Ch El (ft)	1141.75	Shear (lb/sq ft)		1.01	
Alpha	1.00	Stream Power (lb/ft s)		8.93	
Frctn Loss (ft)	0.14	Cum Volume (acre-ft)	2696.12	16406.24	1309.30
C & E Loss (ft)	0.05	Cum SA (acres)	248.42	989.65	253.51

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1163.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.22	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.15	Reach Len. (ft)	186.00	186.00	186.00
Crit W.S. (ft)		Flow Area (sq ft)		19423.55	
E.G. Slope (ft/ft)	0.000820	Area (sq ft)		19423.55	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	968.00	Top Width (ft)		968.00	
Vel Total (ft/s)	8.86	Avg. Vel. (ft/s)		8.86	
Max Chl Dpth (ft)	20.40	Hydr. Depth (ft)		20.07	
Conv. Total (cfs)	6007805.5	Conv. (cfs)		6007805.5	
Length Wtd. (ft)	186.00	Wetted Per. (ft)		987.73	
Min Ch El (ft)	1141.75	Shear (lb/sq ft)		1.01	
Alpha	1.00	Stream Power (lb/ft s)		8.91	
Frctn Loss (ft)	0.15	Cum Volume (acre-ft)	2.44	16290.39	2.35
C & E Loss (ft)	0.05	Cum SA (acres)	1.03	982.73	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.65

INPUT
Description:
Station Elevation Data num= 163

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17404.99	1171.717	455.15	1171.35	17594.58	1170.59	17610.45	1172.77	17630.6	1178.06
17638.11	1176.917	712.52	1163.47	17721.07	1165.12	17728.33	1166.28	17752.53	1167.31
17771.9	1166.817	779.32	1167.51	17803.99	1167.69	17814.02	1166.82	17816.45	1166.34
17824.79	1165.317	834.91	1163.46	17861.4	1159.34	17873.47	1161.25	17930.08	1172.25
17936.15	1171.717	941.52	1171.76	17965.96	1171.21	17984.66	1169.67	18000.74	1167.89
18014.08	1167.418	065.91	1162.05	18071.71	1161.34	18101.15	1164.63	18108.42	1165.55
18123.61	1167.118	134.43	1167.55	18155.83	1167.73	18233.81	1168.21	18246.71	1168.88
18272.02	1170.118	285.58	1171.06	18324.19	1172.13	18330.8	1170.44	18373.38	1166.99
18419	1167.618	428.86	1167.66	18485.85	1168.31	18500.56	1170.06	18513.19	1168.65
18535.63	1165.5	18556	1163.11	18580.9	1163.74	18595.32	1164.03	18603.14	1165.8
18637.29	1174.118	661.17	1167.18	18678.19	1161.93	18682.19	1162.05	18707.41	1163.23
18713.37	116	418740.98	1166.61	8748.05	1165.92	18762.86	1163.95	18780.67	1162.7
18809.79	116	518837.54	1169.27	18852.87	1169.77	18873.86	1171.36	18881.29	1170.69
18926.37	1163.818	934.97	1163.76	18985.26	1163.68	18991.65	1164.46	19036.98	1171.26
19041.3	1171.619	060.89	1169.15	19075.83	1164.35	19108.82	1163.17	19143.06	1161.62
19162.71	1156.519	197.45	1154.58	19213.69	1153.45	19241.35	1154.58	19286.86	1154.2
19320.75	1152.919	351.72	1153.09	19400.99	1151.71	19440.57	1151.66	19449.53	1151.38
19485.79	1163.119	496.37	1164.32	19518.27	1171.04	19534.96	1170.89	19551.91	1165.46
19576.64	1156.75	19606.27	1156.75	19606.27	1157.75	19608.27	1157.75	19608.27	1155.75
19611.42	1146.33	19612.92	1146.33	19624.13	1141.58	19658.7	1141.45	19665.28	1141.5
19673.04	1144.54	19673.96	1144.21	9688.76	1140.18	19698.97	1141.24	19764	1142.5
19808.2	1143.35	19938.09	1141.32	19942.81	1141.19	20064.62	1140.14	20179.57	1141.2
20212.29	1141.25	20266.54	1142.48	20341.2	1144.32	20378.62	1143.45	20399.95	1142.7
20414.25	1142.32	20445.28	1142.09	20453.86	1141.62	20485.29	1141.76	20511.56	1141.6
20521.79	1141.38	20543.11	1143.73	20548.38	1143.62	20567.92	1143.82	20575.16	1143.7
20588.35	1143.39	20613.27	1143.25	20632.9	1143	20668.5	1143.04	20713.81	1142.2
20780.36	1141.75	20805.06	1141.32	0883.73	1139.35	20935.22	1138.75	21003.81	1160.4
21126.11	1163.68	21192.48	1143.63	21221.17	1143.72	1231.48	1143.84	21245.6	1144.3
21256.9	1148.82	21270.39	1155.48	21279.83	1154.46	21286.15	1154.08	21286.15	1155.46
21288.15	1155.46	21288.15	1153.95	21291.04	1153.78	21301.04	1162.8	21310.2	1169.13
21321.95	1168.48	21323.69	1168.04	21347.73	1165.04	21353.28	1164.92	1374.94	1165.53
21404.93	1166.72	1441.38	1168.37	21454.58	1169.63	21464.01	1169.82	1488.71	1169.52
21502.48	1169.24	21543.81	1168.72	1549.79	1168.8				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17404.99	.05	19518.27	.03	21126.11	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19518.27	21126.11	525	522.87	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17404.99	19518.27	1171.04	20640.75	21549.79	1168

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1163.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.05	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.11	Reach Len. (ft)	525.00	522.87	470.00
Crit W.S. (ft)	1151.58	Flow Area (sq ft)		20877.25	
E.G. Slope (ft/ft)	0.000737	Area (sq ft)	2789.44	27955.34	2041.43
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	2079.47	Top Width (ft)	404.20	1506.28	168.98
Vel Total (ft/s)	8.24	Avg. Vel. (ft/s)		8.24	
Max Chl Dpth (ft)	23.36	Hydr. Depth (ft)		19.34	

Conv. Total (cfs)	6335333.5	Conv. (cfs)		6335333.5	
Length Wtd. (ft)	522.87	Wetted Per. (ft)		1092.50	
Min Ch El (ft)	1138.75	Shear (lb/sq ft)		0.88	
Alpha	1.00	Stream Power (lb/ft s)		7.24	
Frctn Loss (ft)	0.30	Cum Volume (acre-ft)	2690.17	16305.11	1304.94
C & E Loss (ft)	0.07	Cum SA (acres)	247.56	984.37	253.15

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1163.18	Element			
Vel Head (ft)	1.05	Wt. n-Val.		0.035	
W.S. Elev (ft)	1162.12	Reach Len. (ft)	525.00	522.87	470.00
Crit W.S. (ft)	1151.58	Flow Area (sq ft)		20887.53	
E.G. Slope (ft/ft)	0.000753	Area (sq ft)		20887.53	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1079.34	Top Width (ft)		1079.34	
Vel Total (ft/s)	8.23	Avg. Vel. (ft/s)		8.23	
Max Chl Dpth (ft)	21.98	Hydr. Depth (ft)		19.35	
Conv. Total (cfs)	6267598.5	Conv. (cfs)		6267598.5	
Length Wtd. (ft)	522.87	Wetted Per. (ft)		1111.62	
Min Ch El (ft)	1140.14	Shear (lb/sq ft)		0.88	
Alpha	1.00	Stream Power (lb/ft s)		7.27	
Frctn Loss (ft)	0.30	Cum Volume (acre-ft)	2.44	16204.33	2.35
C & E Loss (ft)	0.07	Cum SA (acres)	1.03	978.36	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.55

INPUT
Description:
Station Elevation Data num= 124

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17744.06	1173.817	756.47	1173.151	7762.55	1172.981	7806.58	1172.661	7834.02	1172.37
17897.72	1171.517	912.67	1171.421	7936.16	1172.211	7971.06	1177.081	8016.62	1169.19
18043.32	1170.818	075.87	1171.83	18095.2	1170.011	8100.43	1170.821	8121.15	1171.17
18122.99	1171.4	18128.9	1175.841	8143.27	1173.571	8171.07	1168.871	8204.45	1169.61
18211.64	1170.11	8243.71	1176.16	18293.5	1170.141	8308.83	1168.781	8326.93	1167.37
18356.47	1166.21	8528.14	1168.031	8566.48	1168.471	8595.99	1169.92	18646.3	1170.82
18668.09	1170.91	8678.44	1170.91	18698.5	1167.11	8705.62	1166.511	8755.44	1164.83
18759.49	1165.71	8768.93	1166.081	8777.73	1165.841	8801.44	1165.591	8860.97	1164.39
19004.58	1164.11	9009.16	1164.241	9013.63	1164.031	9062.68	1163.531	9076.86	1164.4
19103.91	1164.5	19151.9	1164.991	9161.32	1164.921	9209.63	1165.311	9216.64	1165.2
19241.21	1159.61	9298.08	1147.671	9394.55	1147.281	9419.11	1147.311	9448.19	1156.85
19489.95	1170.91	9493.48	1170.421	9501.76	1169.741	9533.66	1159	19546.5	1154.48
19566.54	1155.51	9569.57	1156.321	9572.55	1154.461	9580.23	1154.671	9580.23	1155.67
19582.23	1155.671	9582.23	1153.671	9585.38	1146.331	9586.88	1146.331	9593.28	1144.58
19627.97	1145.41	9680.55	1145.571	9710.26	1145.91	9719.38	1147.751	9726.64	1148.8
19742.6	1143.81	9747.24	1142.721	9752.29	1143.881	9769.32	1147.471	9781.32	1145.45
19790.31	1145.41	9861.96	1145.141	9905.92	1144.281	9999.24	1141.62	0018.77	1141.24
20134.34	1140.52	0140.11	1140.672	0204.62	1143.022	0265.64	1144	20342.6	1143.15
20404.82	1142.72	0491.58	1142.572	0531.64	1142.25	20539.7	1142.282	0651.51	1140.19
20679.09	1139.62	0708.14	1139.712	0819.91	1140.092	0839.79	1140.692	0881.49	1142.31
20944.38	1143.82	0948.55	1143.72	20963.9	1142.882	1044.03	1146.332	1045.53	1146.33
21048.68	1155.52	1048.68	1157.52	1050.68	1157.52	1050.68	1156.52	1066.82	1156.5
21069.25	1157.242	1091.25	1164.762	1110.23	1170.122	1117.13	1169.22	1127.04	1167.03
21154.97	1157.042	1158.21	1157.472	1163.21	1157.1	21174.3	1174.72	1180.73	1177.3
21182.91	1177.662	1220.99	1166.852	1236.18	1173.932	1239.44	1174.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17744.06	.04	19489.95	.03	21110.23	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19489.95	21110.23	530	514.6	510	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17744.06	19489.95	1170.9	20795	21239.44	1170

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1162.80	Element			
Vel Head (ft)	0.83	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.98	Reach Len. (ft)	530.00	514.60	510.00
Crit W.S. (ft)	1151.35	Flow Area (sq ft)		23556.78	
E.G. Slope (ft/ft)	0.000448	Area (sq ft)	2572.95	28531.29	80.30

Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1816.03	Top Width (ft)	232.64	1558.28	25.11
Vel Total (ft/s)	7.30	Avg. Vel. (ft/s)		7.30	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		18.55	
Conv. Total (cfs)	8124056.0	Conv. (cfs)		8124056.0	
Length Wtd. (ft)	514.60	Wetted Per. (ft)		1282.16	
Min Ch El (ft)	1139.60	Shear (lb/sq ft)		0.51	
Alpha	1.00	Stream Power (lb/ft s)		3.75	
Frctn Loss (ft)	0.22	Cum Volume (acre-ft)	2657.85	15966.09	1293.49
C & E Loss (ft)	0.03	Cum SA (acres)	243.72	965.98	252.10

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1162.81	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.83	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.98	Reach Len. (ft)	530.00	514.60	510.00
Crit W.S. (ft)	1151.35	Flow Area (sq ft)		23559.88	
E.G. Slope (ft/ft)	0.000458	Area (sq ft)		23559.88	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1270.18	Top Width (ft)		1270.18	
Vel Total (ft/s)	7.30	Avg. Vel. (ft/s)		7.30	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		18.55	
Conv. Total (cfs)	8034290.0	Conv. (cfs)		8034290.0	
Length Wtd. (ft)	514.60	Wetted Per. (ft)		1304.13	
Min Ch El (ft)	1139.60	Shear (lb/sq ft)		0.52	
Alpha	1.00	Stream Power (lb/ft s)		3.77	
Frctn Loss (ft)	0.22	Cum Volume (acre-ft)	2.44	15937.57	2.35
C & E Loss (ft)	0.03	Cum SA (acres)	1.03	964.26	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.45

INPUT
Description:
Station Elevation Data num= 138

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17826.14	1166.117	847.35	1165.83	17867.83	1165.71	17896.5	1165.81	7909.57	1166.58
17929.22	1167	17933.44	1166.61	7945.88	1166.54	17964.38	1166.38	18000.7	1166.35
18014.83	1166.61	8040.52	1166.57	18066.47	1166.65	18080.29	1166.73	8123.92	1167.09
18131.62	1167.41	8134.38	1168.08	18154	1167.21	8212.81	1167.96	18217.63	1168.17
18231.89	1169.91	8236.14	1167.11	8313.15	1166.84	18357.54	1167.01	18365.31	1167.61
18405.52	1168.81	8432.68	1169.38	18458.94	1174.25	18467.92	1175.33	18491.25	1168.94
18506.43	1165.61	8562.53	1166.51	8570.92	1166.69	18593.26	1167.46	18623.09	1171.06
18651.32	1179.51	8666.72	1172.85	18692.67	1169.59	18721.79	1167.81	18740.05	1168.35
18748.81	1168.51	8764.51	1169.22	18770.88	1168.66	18786.1	1167.02	18853.5	1167.63
18866.83	1168	18869.66	1167.51	8875.57	1166.15	18880.81	1164.61	8907.18	1158.03
18921.75	1161.71	8935.89	1165.41	8956.79	1166.34	18982.03	1172.31	9015.99	1169.97
19048.41	1170.41	9075.35	1171.83	19087.5	1171.43	19130.27	1170.78	19142.75	1166.75
19154.41	1162.81	9163.56	1164	19175.09	1163.51	9201.66	1158.04	19213.04	1156.88
19233.35	1153.6	19253	1150.81	9268.39	1150.96	19365.44	1151.25	19368.91	1148.97
19388.71	1155.71	9435.01	1171.24	19444.85	1169.76	19461.47	1164.91	19477.62	1160.68
19495.51	1155.41	9502.85	1155.34	19515.29	1155.57	19522.32	1155	19522.32	1156
19524.32	1155	19524.32	1154	19527.47	1146.33	19528.97	1146.33	19535.78	1145.59
19536.81	1145.61	9644.25	1143.03	19648.81	1142.95	19707.18	1143.44	19783.36	1144.02
19789.94	1143.41	9797.04	1145.66	19802.38	1147.15	19813.62	1144.81	9828.92	1141.14
19844.54	1143.11	9893.28	1142.11	19913.38	1141.43	19993.19	1139.61	20050.51	1139.54
20076.37	1141.32	0156.81	1143.66	20186.3	1143.57	20259.79	1142.42	20320.2	1141.63
20357.92	1141.42	0420.64	1142.17	20455.71	1142.47	20504.95	1142.45	20589.88	1142.33
20612.55	1142.52	0668.97	1143.15	20725.94	1143.71	20759.88	1144.45	20827.53	1146.33
20829.03	1146.33	20832.18	1155.18	20832.18	1157.18	20834.18	1157.18	20834.18	1156.18
20847.23	1157.11	20863.63	1162.91	20877.99	1163.67	20879.89	1163.92	20893.74	1169.14
20896.64	1170.08	20908.16	1169.35	20922.96	1165.23	20941.89	1165.82	20980.46	1167.05
21028.71	1166.84	21064.77	1166.66	21080.34	1166.69	21162.91	1167	21209.22	1166.82
21232.13	1166.52	1248.59	1166.73	21260.16	1166.65				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17826.14	.04	19435.01	.03	20896.64	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19435.01	20896.64	420	480.98	550	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17826.14	19435.01	1171.24	20896.64	21260.16	1170.08

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1162.55	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.72	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.83	Reach Len. (ft)	420.00	480.98	550.00
Crit W.S. (ft)	1150.87	Flow Area (sq ft)		25277.04	
E.G. Slope (ft/ft)	0.000402	Area (sq ft)	1960.39	25277.04	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1641.51	Top Width (ft)	254.13	1387.37	
Vel Total (ft/s)	6.80	Avg. Vel. (ft/s)		6.80	
Max Chl Dpth (ft)	22.29	Hydr. Depth (ft)		18.22	
Conv. Total (cfs)	8583065.0	Conv. (cfs)		8583065.0	
Length Wtd. (ft)	480.98	Wetted Per. (ft)		1408.20	
Min Ch El (ft)	1139.54	Shear (lb/sq ft)		0.45	
Alpha	1.00	Stream Power (lb/ft s)		3.06	
Frctn Loss (ft)	0.24	Cum Volume (acre-ft)	2630.27	15648.26	1293.02
C & E Loss (ft)	0.03	Cum SA (acres)	240.76	948.58	251.95

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1162.55	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.72	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.83	Reach Len. (ft)	420.00	480.98	550.00
Crit W.S. (ft)	1150.87	Flow Area (sq ft)		25276.87	
E.G. Slope (ft/ft)	0.000402	Area (sq ft)		25276.87	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1387.37	Top Width (ft)		1387.37	
Vel Total (ft/s)	6.80	Avg. Vel. (ft/s)		6.80	
Max Chl Dpth (ft)	22.29	Hydr. Depth (ft)		18.22	
Conv. Total (cfs)	8582970.0	Conv. (cfs)		8582970.0	
Length Wtd. (ft)	480.98	Wetted Per. (ft)		1408.20	
Min Ch El (ft)	1139.54	Shear (lb/sq ft)		0.45	
Alpha	1.00	Stream Power (lb/ft s)		3.06	
Frctn Loss (ft)	0.24	Cum Volume (acre-ft)	2.44	15649.10	2.35
C & E Loss (ft)	0.03	Cum SA (acres)	1.03	948.56	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.36

INPUT
Description:
Station Elevation Data num= 121

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17829.74	1165.617	834.64	1166.451	7859.39	1168.06	17874.8	1167.851	7883.61	1166.44
17891.32	116617	905.68	1166.71	7910.66	1166.85	17931.6	1166.651	7963.15	1169.29
17976.79	1170.11	8020.15	1178.951	8025.61	1179.871	8030.98	1181.171	8059.18	1173.76
18085.25	1171.31	8126.63	1168.31	8145.23	1167.811	8183.43	1166.891	8206.06	1168.14
18216.67	1168.51	8225.99	1167.341	8227.08	1166.841	8279.16	1166.921	8386.63	1167.36
18397.83	1167.31	8401.63	1167.411	8496.65	1169.131	8505.92	1167.211	8516.61	1167.44
18531.18	1166.51	8559.17	1173.471	8574.35	1178.251	8597.15	1175.831	8610.09	1170.58
18625.22	1169.11	8658.09	1168.461	8725.52	1165.371	8730.59	1166.061	8743.89	1167.52
18764.11	1170	18779.5	1169.11	8793.72	1168.441	8798.51	1167.51	8801.48	1167.39
18877.88	1165.51	8888.14	1165.51	8925.88	1165.031	8973.11	1165.631	8993.98	1165.86
19007.51	1166.21	9014.24	1165.071	9037.42	1159.221	9048.71	1156.31	9055.17	1158.31
19074.18	1164.51	9172.16	1164.271	9211.16	1163.981	9222.42	1164.721	9247.58	1157.64
19271.77	1151.11	9306.63	1151.031	9368.58	1151.061	9434.45	1169.551	9443.83	1168.82
19449.19	116719	486.22	1155.051	9507.55	1155.54	19519.4	1154.75	19519.4	1155.75
19521.4	1155.75	19521.4	1153.751	9524.55	1146.331	9526.05	1146.331	9563.69	1145.6
19661.39	1144.761	9678.04	1144.711	9753.28	1142.071	9759.31	1141.881	9766.05	1143.5
19782	1138.871	9785.96	1139.51	9802.48	1141.81	9806.33	1140.931	9809.02	1140
19818.13	1140.811	9874.46	1142.111	9940.87	1143.561	9953.56	1143.822	0023.18	1142.2
20089.25	1140.612	0110.35	1140.732	0205.36	1141.67	20230.2	1141.432	0341.82	1141.3
20370.04	1141.42	0462.13	1141.152	0507.39	1140.932	0520.17	1141.922	0552.46	1143
20615.85	1146.332	0617.35	1146.33	20620.5	1154.65	20620.5	1156.65	20622.5	1156.65
20622.5	1155.652	0628.64	1156.472	0643.46	1159.872	0682.64	1168.82	0693.89	1169.31
20706.91	1164.32	0710.69	1164.332	0728.15	1164.122	0754.56	116120	763.64	1159.48
20765.36	116020	778.51	1161.292	0813.26	1163.382	0835.33	1163.72	0851.05	1162.95
20893.86	1163.81								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17829.74	.04	19434.45	.03	20693.89	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19434.45	20693.89	630	487.06	380	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17829.74	19434.45	1169.55	20693.89	20893.86	1169.31

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1162.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.05	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.24	Reach Len. (ft)	630.00	487.06	380.00
Crit W.S. (ft)	1151.57	Flow Area (sq ft)		20953.76	
E.G. Slope (ft/ft)	0.000608	Area (sq ft)	1445.78	20953.76	19.70
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1412.66	Top Width (ft)	204.79	1182.42	25.45
Vel Total (ft/s)	8.21	Avg. Vel. (ft/s)		8.21	
Max Chl Dpth (ft)	22.37	Hydr. Depth (ft)		17.72	
Conv. Total (cfs)	6976428.0	Conv. (cfs)		6976428.0	
Length Wtd. (ft)	487.06	Wetted Per. (ft)		1202.31	
Min Ch El (ft)	1138.87	Shear (lb/sq ft)		0.66	
Alpha	1.00	Stream Power (lb/ft s)		5.43	
Frctn Loss (ft)	0.33	Cum Volume (acre-ft)	2613.85	15393.02	1292.90
C & E Loss (ft)	0.03	Cum SA (acres)	238.54	934.39	251.79

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1162.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.05	Wt. n-Val.		0.030	
W.S. Elev (ft)	1161.24	Reach Len. (ft)	630.00	487.06	380.00
Crit W.S. (ft)	1151.57	Flow Area (sq ft)		20953.62	
E.G. Slope (ft/ft)	0.000608	Area (sq ft)		20953.62	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1182.42	Top Width (ft)		1182.42	
Vel Total (ft/s)	8.21	Avg. Vel. (ft/s)		8.21	
Max Chl Dpth (ft)	22.37	Hydr. Depth (ft)		17.72	
Conv. Total (cfs)	6976362.0	Conv. (cfs)		6976362.0	
Length Wtd. (ft)	487.06	Wetted Per. (ft)		1202.31	
Min Ch El (ft)	1138.87	Shear (lb/sq ft)		0.66	
Alpha	1.00	Stream Power (lb/ft s)		5.43	
Frctn Loss (ft)	0.33	Cum Volume (acre-ft)	2.44	15393.87	2.35
C & E Loss (ft)	0.03	Cum SA (acres)	1.03	934.37	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.27

INPUT
Description:
Station Elevation Data num= 141

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18229.32	1166.11	18250.05	1166.75	18278.94	1167.58	18285.44	1167.14	18297.52	1168.12
18329.34	1169.81	18330.87	1169.76	18339.83	1170.51	18364.66	1170.43	18371	1171.75
18375.68	1170.91	18417.64	1164.16	18452.44	1163.98	18464.69	1164.15	18471.17	1164.1
18538.67	1164.51	18554.41	1164.48	18587.27	1164.43	18589.89	1164.63	18615.02	1165.44
18625.91	1165.4	18650.9	1164.15	18657.49	1164.05	18668.84	1165.59	18673.08	1165.44
18717.3	1164.8	18741.7	1164.13	18764.17	1164.97	18767.26	1164.89	18812.34	1163.32
18834.79	1163	18851.48	1162.47	18861.98	1163.45	18904.93	1165.07	18912.29	1164.97
18927.38	1164.51	18950.33	1164.24	18972.81	1163.31	18980.73	1164.27	18986.42	1165.36
19008.46	1169.81	19012.93	1169.23	19029.55	1168.09	19075.71	1163.68	19120.33	1161.85
19137.67	1160.3	19201.2	1163.08	19216.26	1164.63	19218.15	1164.65	19257.26	1163.95
19328.26	1165.9	19358.6	1166.39	19374.56	1166.11	19385.2	1165.64	19399.5	1166.09
19430.27	1167	19454.16	1164.58	19474.54	1169.68	19486.26	1168.12	19517.16	1160.18
19533.88	1155.71	19549.79	1153.75	19559.24	1153.75	19559.24	1154.75	19561.24	1154.75
19561.24	1152.75	19564.39	1146.33	19565.89	1146.33	19588.86	1146.31	19597.05	1144.76
19600.22	1144.02	19651.54	1142.91	19713.94	1142.41	19735.4	1142.33	19787.27	1141.45
19800.41	1145.55	19820.21	1140.41	19825.33	1139.19	19845.23	1141.91	19852.13	1140.94
19867.25	1141.67	19999.63	1141.42	20113.28	1142.64	20129.11	1142.79	20164.57	1142.08
20258.07	1140.03	20342.57	1140.82	20392.03	1141.39	20476.1	1142.52	20488.7	1142.75
20556.95	1146.33	20558.45	1146.33	20561.6	1153	20561.6	1155	20563.6	1155
20563.6	1154	20568.05	1156.18	20577.97	1156.62	20605.05	1164.09	20624.27	1169.12
20636.35	1168.9	20655.6	1164.03	20690.53	1162.26	20715.35	1160.34	20740.17	1158.79
20753.58	1158.72	20785.62	1158.86	20816.23	1159.19	20824	1159.46	20842.81	1161.22
20855.55	1162.52	20868.51	1162.14	20883.38	1163.09	20895.84	1162.99	20931.13	1163.95
21041.27	1165.92	21067.94	1165.85	21130.05	1165.74	21136.02	1165.84	21184.06	1165.94
21195.48	1165.92	21255.31	1165.82	21260.95	1165.74	21313.65	1166.04	21421.15	1165.43
21464.35	1165.42	21495.94	1171.41	21510.65	1171.64	21536.01	1172.25	21550.81	1175.26
21574.05	1179.72	21595.71	1180.74	21599.29	1180.85	21685.97	1184.08	21687.38	1183.98
21734.88	1179.82	21743.24	1176.77	21756.8	1171.04	21769.18	1168.25	21771.73	1168.4

21818.53 1171.7

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18229.32	.041	9474.54	.032	0624.27	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19474.542	0624.27	580	492.86	420	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18229.32	19474.54	1169.68	20624.272	1818.53	1169.12

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1161.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.30	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.62	Reach Len. (ft)	580.00	492.86	420.00
Crit W.S. (ft)	1151.87	Flow Area (sq ft)		18775.86	
E.G. Slope (ft/ft)	0.000774	Area (sq ft)	1.78	18775.86	177.25
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1212.82	Top Width (ft)	10.99	1077.08	124.74
Vel Total (ft/s)	9.16	Avg. Vel. (ft/s)		9.16	
Max Chl Dpth (ft)	21.43	Hydr. Depth (ft)		17.43	
Conv. Total (cfs)	6183083.5	Conv. (cfs)		6183083.5	
Length Wtd. (ft)	492.86	Wetted Per. (ft)		1095.22	
Min Ch El (ft)	1139.19	Shear (lb/sq ft)		0.83	
Alpha	1.00	Stream Power (lb/ft s)		7.59	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)	2603.38	15170.91	1292.04
C & E Loss (ft)	0.01	Cum SA (acres)	236.98	921.76	251.14

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1161.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.30	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.62	Reach Len. (ft)	580.00	492.86	420.00
Crit W.S. (ft)	1151.87	Flow Area (sq ft)		18775.72	
E.G. Slope (ft/ft)	0.000774	Area (sq ft)		18775.72	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1077.08	Top Width (ft)		1077.08	
Vel Total (ft/s)	9.16	Avg. Vel. (ft/s)		9.16	
Max Chl Dpth (ft)	21.43	Hydr. Depth (ft)		17.43	
Conv. Total (cfs)	6183022.5	Conv. (cfs)		6183022.5	
Length Wtd. (ft)	492.86	Wetted Per. (ft)		1095.22	
Min Ch El (ft)	1139.19	Shear (lb/sq ft)		0.83	
Alpha	1.00	Stream Power (lb/ft s)		7.59	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)	2.44	15171.75	2.35
C & E Loss (ft)	0.01	Cum SA (acres)	1.03	921.74	0.84

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.17

INPUT
Description:
Station Elevation Data num= 241

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16001.28	1173.21	6010.24	1172.96	16032.2	1172.62	16044.46	1172.74	16072.51	1173.58
16077.13	1173.81	6081.42	1173.421	6085.11	1173.551	6102.83	1172.381	6202.06	1169.35
16236.12	1169.11	6281.24	1169.31	6375.72	1169.591	6406.04	1169.031	6421.21	1168.99
16455.41	1168.51	6471.91	1168.341	6489.06	1167.991	6504.99	1166.921	6518.22	1166.52
16523.56	1165.91	6529.35	1166.081	6581.29	1167.86	16593	1168.231	6595.27	1167.94
16606.1	1167.9	16637.2	1166.961	6661.28	1167.171	6722.46	1167.011	6768.48	1166.99
16797.65	1166.21	6858.29	1166.21	16905.4	1167.52	16963.1	1167.781	6968.54	1167.39
16979.96	1167.61	7062.68	1167.42	17168	1167.021	7184.94	1166.131	7202.21	1164.72
17215.82	1164.81	7241.17	1164.99	17254.1	1164.371	7271.04	116417	305.87	1164.04
17427.69	1163.41	7492.61	1163.271	7565.11	1163.281	7704.21	1163.27	17771.8	1163.04
17801.01	116417	904.68	1163.911	7988.14	1163.531	8058.06	1162.921	8197.72	1162.68
18243.48	1162.51	8253.17	1162.691	8287.07	1163.711	8315.46	1164.631	8341.15	1163.04
18367.15	1163.51	8377.33	1163.981	8386.58	1168.451	8398.81	1173.351	8402.08	1174.3
18404.07	1174.31	8449.38	1168.48	18475.7	1163.741	8505.44	1161.561	8520.42	1160.36
18528.89	1160.71	8554.16	1160.691	8559.77	1160.771	8579.21	1160.561	8623.02	1160.19
18690.01	1172.8	18697.1	1173.81	8744.97	1164.34	18791.4	1166.481	8805.54	1165.03
18818.85	1165	18868.9	1165.31	8908.37	1164.761	8934.23	1164.221	8949.94	1163.61
18964.81	1163.91	8985.69	1163.861	9046.21	1163.041	9063.07	1163.721	9072.52	1163.62
19091.14	1163.91	9152.99	1164.111	9189.83	1164.11	9253.84	1162.671	9285.42	1161.92
19297.98	1161.81	9313.24	1162.041	9363.42	1163.021	9379.89	1155.461	9381.52	1154.82

```
19388.63  1155.919408.47  1157.119420.26 1160.5319436.44 1166.8519443.16 1169.64
19461.81  1167.819499.77  1157.219509.91 1154.5319525.88 1153.2519525.88 1154.25
19527.88 1154.2519527.88 1152.2519531.03 1146.3319532.53 1146.3319570.72 1143.58
19641.21  1141.919649.85 1141.6419696.84 1139.5119716.44  1139.119786.79 1138.18
 19811.5  1139.519819.37 1140.9519834.32 1137.1619843.55 1138.8819905.75 1140.12
19917.22  1140.319949.02 1140.1320048.18 1139.4920083.29 1139.8120176.26 1140.46
 20216.1  1140.520303.83 1140.69 20341.8 1141.4720409.23 1142.9820454.45 1146.33
20455.62 1146.3320458.77    115420458.77    115620460.77    115620460.77     1155
 20483.6  1156.420519.65 1165.3220529.27 1167.7320541.18    116920556.34 1163.19
20598.89  1161.120612.54 1160.1720659.27 1156.8520687.65 1156.8120732.69 1158.03
 20775.8    116020806.38 1161.8220818.05 1161.0420822.41 1162.9320838.59 1164.49
20840.87  1164.5   20852 1167.2720871.21 1171.6120891.26 1170.5920977.83  1170.8
20998.33    117121023.94 1170.7621097.19 1170.8221115.39 1170.4521133.64 1165.82
21147.36  1162.621177.14  1162.921179.91 1162.8621213.22 1163.11   21250 1161.44
21259.45  1163.721274.23 1167.4921297.37 1165.7621362.64 1165.2921368.24 1165.41
21391.63  1166.121412.38    116721432.43 1166.4921488.36 1164.9321512.65 1166.08
21558.53  1165.721608.54 1183.1421613.67 1184.1721627.01 1186.0321673.59 1186.66
21700.29  1186.621715.78 1186.2121747.01 1184.71 21759.1 1180.3921769.12 1172.95
21779.93  1168.4 21788.9 1166.3621797.62 1164.23 21808.8 1163.7321825.05 1163.92
21856.54  1163.721864.78    116221873.76  1160.821886.62 1163.2921926.57 1163.46
   21986  1165.621987.67 1165.6322058.41 1165.7222082.99 1165.8822150.65 1164.38
22157.49  1164.322190.04 1164.83 22237.4 1164.83 22269.6 1165.0222339.21 1165.01
22414.64  1163.622484.43 1163.5922534.23 1163.4722604.52 1163.0822624.87 1162.71
22673.28  1162.622727.45 1162.8122784.46 1165.9122800.58  1166.522818.56 1166.73
22879.81  1167.822900.34 1168.2922918.49 1168.9622970.85 1170.4223041.65 1171.11
23054.92  1171.423065.88 1171.5323088.44 1171.9323135.78 1172.4123169.17 1173.16
23181.67  1172.923198.65 1173.03 23265.1 1173.7623291.59 1174.0323297.34 1174.22
 23306.8  1174.323381.41 1174.9923408.83 1175.24 23411.3 1175.13 23431.3 1173.63
23439.11  1173.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
16001.28     .0419443.16     .0320541.18     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19443.1620541.18              410  381.57     360             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
16001.2819443.16 1169.6420541.1823439.11    1169

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1161.54   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.37   Wt. n-Val.                              0.030
  W.S. Elev (ft)            1160.17   Reach Len. (ft)            410.00     381.57     360.00
  Crit W.S. (ft)            1150.99   Flow Area (sq ft)                   18318.73
  E.G. Slope (ft/ft)       0.000771   Area (sq ft)               155.51   18318.73     346.04
  Q Total (cfs)           172000.00   Flow (cfs)                          172000.00
  Top Width (ft)            1225.15   Top Width (ft)              49.38    1009.69     166.08
  Vel Total (ft/s)             9.39   Avg. Vel. (ft/s)                        9.39
  Max Chl Dpth (ft)           23.01   Hydr. Depth (ft)                       18.14
  Conv. Total (cfs)       6194822.5   Conv. (cfs)                         6194822.5
  Length Wtd. (ft)           381.57   Wetted Per. (ft)                     1026.85
  Min Ch El (ft)            1137.16   Shear (lb/sq ft)                        0.86
  Alpha                        1.00   Stream Power (lb/ft s)                  8.06
  Frctn Loss (ft)              0.25   Cum Volume (acre-ft)      2602.34   14961.05    1289.52
  C & E Loss (ft)              0.07   Cum SA (acres)             236.58     909.95     249.74


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1161.54   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.37   Wt. n-Val.                              0.030
  W.S. Elev (ft)            1160.17   Reach Len. (ft)            410.00     381.57     360.00
  Crit W.S. (ft)            1150.99   Flow Area (sq ft)                   18318.60
  E.G. Slope (ft/ft)       0.000771   Area (sq ft)                        18318.60
  Q Total (cfs)           172000.00   Flow (cfs)                          172000.00
  Top Width (ft)            1009.69   Top Width (ft)                       1009.69
  Vel Total (ft/s)             9.39   Avg. Vel. (ft/s)                        9.39
  Max Chl Dpth (ft)           23.01   Hydr. Depth (ft)                       18.14
  Conv. Total (cfs)       6194765.0   Conv. (cfs)                         6194765.0
  Length Wtd. (ft)           381.57   Wetted Per. (ft)                     1026.84
  Min Ch El (ft)            1137.16   Shear (lb/sq ft)                        0.86
  Alpha                        1.00   Stream Power (lb/ft s)                  8.06
  Frctn Loss (ft)              0.25   Cum Volume (acre-ft)         2.44   14961.90       2.35
  C & E Loss (ft)              0.07   Cum SA (acres)               1.03     909.94       0.84
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CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.09

INPUT
Description: Upstream face of Rural Road Bridge

Station Elevation Data num= 68

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19537.69	1153	19537.69	1154	19539.69	1154
19539.69	1152	19542.84	1146.33	19544.34	1146.33	19635.4	1138.8	19692.9	1136.4
19698.9	1136.4	19736.9	1136	19745.9	1136	19764.9	1136.2	19792.4	1137
19813.9	1136.7	19819.9	1136.7	19839.9	1136.2	19859.9	1136.2	19890.9	1136.7
19913.4	1137	19934.9	1137.1	19940.9	1137.1	19998.4	1137.1	20055.9	1136.9
20061.9	1136.9	20092.9	1137.6	20102.9	1137.8	20106.9	1137.8	20131.9	1138
20146.9	1138	20176.9	1138	20182.9	1138	20240.4	1138.9	20297.9	1139
20303.9	1139	20361.4	1139.4	20418.9	1140.8	20424.9	1140.8	20443.81	1146.33
20445.33	1146.33	20448.48	1154	20448.48	1156	20450.48	1156	20450.48	1155
20495.84	1155	20515.9	1157.5	20530.9	1162.1	20539.9	1166.7	20545.9	1166.7
20564.4	1165.4	20580.4	1162.3	20601.4	1157	20660.9	1156	20666.9	1156
20669.9	1156	20728.9	1156.4	20769.9	1155.9	20781.6	1157.4	20781.7	1165
20781.8	1171.7	21050	1168	21220	1164				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19457.3	20545.9	154.01	154.01	154.01	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1161.21	Element			
Vel Head (ft)	1.12	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.09	Reach Len. (ft)	30.00	30.00	30.00
Crit W.S. (ft)	1148.70	Flow Area (sq ft)		20247.59	
E.G. Slope (ft/ft)	0.000574	Area (sq ft)		20247.59	700.64
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1233.23	Top Width (ft)		1040.76	192.48
Vel Total (ft/s)	8.49	Avg. Vel. (ft/s)		8.49	
Max Chl Dpth (ft)	24.09	Hydr. Depth (ft)		19.45	
Conv. Total (cfs)	7177655.0	Conv. (cfs)		7177655.0	
Length Wtd. (ft)	30.00	Wetted Per. (ft)		1057.48	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.69	
Alpha	1.00	Stream Power (lb/ft s)		5.83	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	2601.60	14792.14	1285.19
C & E Loss (ft)	0.01	Cum SA (acres)	236.35	900.97	248.25

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1161.21	Element			
Vel Head (ft)	1.12	Wt. n-Val.		0.030	
W.S. Elev (ft)	1160.09	Reach Len. (ft)	30.00	30.00	30.00
Crit W.S. (ft)	1148.70	Flow Area (sq ft)		20247.47	
E.G. Slope (ft/ft)	0.000574	Area (sq ft)		20247.47	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1040.76	Top Width (ft)		1040.76	
Vel Total (ft/s)	8.49	Avg. Vel. (ft/s)		8.49	
Max Chl Dpth (ft)	24.09	Hydr. Depth (ft)		19.45	
Conv. Total (cfs)	7177589.0	Conv. (cfs)		7177589.0	
Length Wtd. (ft)	30.00	Wetted Per. (ft)		1057.47	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.69	
Alpha	1.00	Stream Power (lb/ft s)		5.83	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	2.44	14792.99	2.35
C & E Loss (ft)	0.01	Cum SA (acres)	1.03	900.96	0.84

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 222.085

INPUT
Description: Rural Road
Distance from Upstream XS = 30
Deck/Roadway Width = 94
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 15

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19030	1164	1164	19200	1168	1168	19457.2	1171.8	1171.8
19457.3	1171.81	1165.1	19571.9	1174.22	1167.6	19692.9	1176.2	1169.53
19813.9	1177.62	1170.95	19934.9	1178.62	1171.95	20055.9	1179.06	1172.39
20176.9	1179.11	1172.44	20297.9	1178.63	1172	20418.9	1177.57	1170.9
20539.9	1176.12	1169.45	20660.9	1174.15	1167.5	20781.6	1171.74	1165.07

Upstream Bridge Cross Section Data
Station Elevation Data num= 68

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19537.69	1153	19537.69	1154	19539.69	1152
19542.84	1146.33	19544.34	1146.33	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4
19736.9	1136	19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7
19819.9	1136.7	19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137
19934.9	1137.1	19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9
20092.9	1137.6	20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138
20176.9	1138	20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139
20361.4	1139.4	20418.9	1140.8	20424.9	1140.8	20443.81	1146.33	20445.33	1146.33
20448.48	1154	20448.48	1154	20450.48	1156	20450.48	1155	20495.84	1155
20515.9	1157.5	20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4
20580.4	1162.3	20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156
20728.9	1156.4	20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7
21050	1168	21220	1164						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Coeff Contr.	Expan.
19457.3	20545.9	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

Downstream Deck/Roadway Coordinates
num= 15

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19030	1164	1164	19200	1168	1168	19457.2	1171.8	1171.8
19457.3	1171.81	1165.1	19571.9	1174.22	1167.6	19692.9	1176.2	1169.53
19813.9	1177.62	1170.95	19934.9	1178.62	1171.95	20055.9	1179.06	1172.39
20176.9	1179.11	1172.44	20297.9	1178.63	1172	20418.9	1177.57	1170.9
20539.9	1176.12	1169.45	20660.9	1174.15	1167.5	20781.6	1171.74	1165.07

Downstream Bridge Cross Section Data
Station Elevation Data num= 70

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19551.15	1154	19553.15	1154
19556.3	1146.33	19557.8	1146.33	19635.4	1138.8	19692.9	1136.4	19698.9	1136.4
19736.9	1136	19745.9	1136	19764.9	1136.2	19792.4	1137	19813.9	1136.7
19819.9	1136.7	19839.9	1136.2	19859.9	1136.2	19890.9	1136.7	19913.4	1137
19934.9	1137.1	19940.9	1137.1	19998.4	1137.1	20055.9	1136.9	20061.9	1136.9
20092.9	1137.6	20102.9	1137.8	20106.9	1137.8	20131.9	1138	20146.9	1138
20176.9	1138	20182.9	1138	20240.4	1138.9	20297.9	1139	20303.9	1139
20361.4	1139.4	20418.9	1140.8	20424.9	1140.8	20448.4	1141.12	20450.31	1146.33
20451.81	1146.33	20454.96	1154	20456.96	1154	20479.65	1153	20515.9	1157.5
20530.9	1162.1	20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3
20601.4	1157	20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4
20769.9	1155.9	20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168
21220	1164								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Coeff Contr.	Expan.
19457.3	20545.9	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

```
Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  10

Pier Data
Pier Station     Upstream= 19574.9    Downstream= 19574.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1151.6       6  1167.6
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1151.6       6  1167.6

Pier Data
Pier Station     Upstream= 19695.9    Downstream= 19695.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1136.4       6 1169.53
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1136.4       6 1169.53

Pier Data
Pier Station     Upstream= 19816.9    Downstream= 19816.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1136.7       6    1171
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1136.7       6    1171

Pier Data
Pier Station     Upstream= 19937.9    Downstream= 19937.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1137.1       6 1171.95
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1137.1       6 1171.95

Pier Data
Pier Station     Upstream= 20058.9    Downstream= 20058.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1136.9       6 1172.39
Downstream     num=       2
    Width   Elev    Width   Elev
       6  1136.9       6 1172.39

Pier Data
Pier Station     Upstream= 20179.9    Downstream= 20179.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1138       6  1172.4
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1138       6  1172.4

Pier Data
Pier Station     Upstream= 20300.9    Downstream= 20300.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1139       6    1172
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1139       6    1172

Pier Data
Pier Station     Upstream= 20421.9    Downstream= 20421.9
Upstream     num=       2
    Width   Elev    Width   Elev
       6  1140.8       6  1170.9
```

```
Downstream     num=        2
    Width   Elev    Width   Elev
       6  1140.8       6  1170.9

Pier Data
Pier Station     Upstream= 20542.9    Downstream= 20542.9
Upstream     num=        2
    Width   Elev    Width   Elev
       6  1166.7       6  1169.5
Downstream     num=        2
    Width   Elev    Width   Elev
       6  1166.7       6  1169.5

Pier Data
Pier Station     Upstream= 20663.9    Downstream= 20663.9
Upstream     num=        2
    Width   Elev    Width   Elev
       6    1156       6  1167.5
Downstream     num=        2
    Width   Elev    Width   Elev
       6    1156       6  1167.5

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1161.21   Element                  Inside BR US  Inside BR DS
  W.S. US. (ft)                1160.09   E.G. Elev (ft)               1161.17       1161.08
  Q Total (cfs)              172000.00   W.S. Elev (ft)               1159.91       1159.81
  Q Bridge (cfs)             172000.00   Crit W.S. (ft)               1149.10       1149.06
  Q Weir (cfs)                           Max Chl Dpth (ft)              23.91         23.81
  Weir Sta Lft (ft)                      Vel Total (ft/s)                9.04          9.05
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           19032.41      19001.40
  Weir Submerg                           Froude # Chl                    0.36          0.36
  Weir Max Depth (ft)                    Specif Force (cu ft)       250910.20     249740.89
  Min Top Rd (ft)              1165.10   Hydr Depth (ft)                19.20         19.19
  Min El Prs (ft)              1172.44   W.P. Total (ft)              1348.81       1346.85
  Delta EG (ft)                   0.19   Conv. Total (cfs)          5504642.0     5495034.5
  Delta WS (ft)                   0.21   Top Width (ft)               1176.79       1175.54
  BR Open Area (sq ft)        32108.68   Frctn Loss (ft)                 0.09          0.02
  BR Open Vel (ft/s)              9.05   C & E Loss (ft)                 0.00          0.04
  Coef of Q                              Shear Total (lb/sq ft)          0.86          0.86
  Br Sel Method            Energy only   Power Total (lb/ft s)           7.77          7.81


Note:    Momentum answer is not valid if the water surface is above the low chord or if there is weir
         flow.  The momentum answer has been disregarded.

BRIDGE OUTPUT    Profile #PF#2
Opening : Bridge #1

  E.G. US. (ft)                1161.21   Element                  Inside BR US  Inside BR DS
  W.S. US. (ft)                1160.09   E.G. Elev (ft)               1161.17       1161.08
  Q Total (cfs)              172000.00   W.S. Elev (ft)               1159.91       1159.81
  Q Bridge (cfs)             172000.00   Crit W.S. (ft)               1149.10       1149.06
  Q Weir (cfs)                           Max Chl Dpth (ft)              23.91         23.81
  Weir Sta Lft (ft)                      Vel Total (ft/s)                9.04          9.05
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           19032.29      19001.28
  Weir Submerg                           Froude # Chl                    0.36          0.36
  Weir Max Depth (ft)                    Specif Force (cu ft)       250908.19     249738.88
  Min Top Rd (ft)              1165.10   Hydr Depth (ft)                19.20         19.19
  Min El Prs (ft)              1172.44   W.P. Total (ft)              1348.81       1346.85
```

Delta EG (ft)	0.19	Conv. Total (cfs)	5504589.0	5494981.0
Delta WS (ft)	0.21	Top Width (ft)	1176.79	1175.53
BR Open Area (sq ft)	32108.68	Frctn Loss (ft)	0.09	0.02
BR Open Vel (ft/s)	9.05	C & E Loss (ft)	0.00	0.04
Coef of Q		Shear Total (lb/sq ft)	0.86	0.86
Br Sel Method	Energy only	Power Total (lb/ft s)	7.77	7.81

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 222.08

INPUT
Description: Downstream face of Rural Road Bridge

Station Elevation Data num= 70

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18210	1164	19030	1164	19200	1168	19457.2	1171.8	19457.3	1165.1
19457.3	1164.6	19498.1	1157.6	19551.1	1152	19551.15	1153	19551.15	1154
19553.15	1154	19553.15	1152	19556.3	1146.33	19557.8	1146.33	19635.4	1138.8
19692.9	1136.4	19698.9	1136.4	19736.9	1136	19745.9	1136	19764.9	1136.2
19792.4	1137	19813.9	1136.7	19819.9	1136.7	19839.9	1136.2	19859.9	1136.2
19890.9	1136.7	19913.4	1137	19934.9	1137.1	19940.9	1137.1	19998.4	1137.1
20055.9	1136.9	20061.9	1136.9	20092.9	1137.6	20102.9	1137.8	20106.9	1137.8
20131.9	1138	20146.9	1138	20176.9	1138	20182.9	1138	20240.4	1138.9
20297.9	1139	20303.9	1139	20361.4	1139.4	20418.9	1140.8	20424.9	1140.8
20448.4	1141.12	20450.31	1146.33	20451.81	1146.33	20454.96	1152	20454.96	1154
20456.96	1154	20456.96	1153	20479.65	1153	20515.9	1157.5	20530.9	1162.1
20539.9	1166.7	20545.9	1166.7	20564.4	1165.4	20580.4	1162.3	20601.4	1157
20660.9	1156	20666.9	1156	20669.9	1156	20728.9	1156.4	20769.9	1155.9
20781.6	1157.4	20781.7	1165	20781.8	1171.7	21050	1168	21220	1164

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18210	.04	19457.3	.03	20545.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19457.3	20545.9	580	440.56	330	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18210	19457.3	1165.1	20545.9	21220	1166.7

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1161.02	Element			
Vel Head (ft)	1.14	Wt. n-Val.		0.030	
W.S. Elev (ft)	1159.88	Reach Len. (ft)	580.00	440.56	330.00
Crit W.S. (ft)	1148.68	Flow Area (sq ft)		20088.99	
E.G. Slope (ft/ft)	0.000590	Area (sq ft)		20088.99	660.43
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1230.50	Top Width (ft)		1038.85	191.65
Vel Total (ft/s)	8.56	Avg. Vel. (ft/s)		8.56	
Max Chl Dpth (ft)	23.88	Hydr. Depth (ft)		19.34	
Conv. Total (cfs)	7083014.0	Conv. (cfs)		7083014.0	
Length Wtd. (ft)	440.56	Wetted Per. (ft)		1057.74	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.70	
Alpha	1.00	Stream Power (lb/ft s)		5.99	
Frctn Loss (ft)	0.34	Cum Volume (acre-ft)	2601.60	14724.11	1282.92
C & E Loss (ft)	0.05	Cum SA (acres)	236.35	897.43	247.59

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1161.02	Element			
Vel Head (ft)	1.14	Wt. n-Val.		0.030	
W.S. Elev (ft)	1159.88	Reach Len. (ft)	580.00	440.56	330.00
Crit W.S. (ft)	1148.68	Flow Area (sq ft)		20088.87	
E.G. Slope (ft/ft)	0.000590	Area (sq ft)		20088.87	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1038.85	Top Width (ft)		1038.85	
Vel Total (ft/s)	8.56	Avg. Vel. (ft/s)		8.56	

Max Chl Dpth (ft)	23.88	Hydr. Depth (ft)		19.34	
Conv. Total (cfs)	7082952.0	Conv. (cfs)		7082952.0	
Length Wtd. (ft)	440.56	Wetted Per. (ft)		1057.74	
Min Ch El (ft)	1136.00	Shear (lb/sq ft)		0.70	
Alpha	1.00	Stream Power (lb/ft s)		5.99	
Frctn Loss (ft)	0.34	Cum Volume (acre-ft)	2.44	14724.96	0.55
C & E Loss (ft)	0.05	Cum SA (acres)	1.03	897.42	0.31

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.99

INPUT
Description:
Station Elevation Data num= 210

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17228.1	1167.317	258.96	1166.117	291.63	1169.221	7293.52	1169.291	7354.45	1166.5
17358.04	1166.517	386.91	1165.941	7430.53	1165.451	7465.42	1164.771	7504.19	1164.11
17517.7	1163.817	557.37	1163.117	568.46	1162.991	7596.15	1163.231	7646.22	1163.04
17664.33	1162.917	731.94	1162.771	7764.84	1162.531	7842.88	1162.381	7895.13	1162.14
17950	1161.817	992.32	1161.618	008.74	1161.471	8042.78	1161.318	085.64	1161.18
18095.78	1161.218	181.67	1161.618	206.63	1161.581	8296.43	1161.391	8335.79	1161.37
18389.47	1161.418	419.45	1161.321	8459.39	1161.051	8508.93	1160.991	8618.73	1161.02
18725.56	1160.9	18734.5	1160.861	8810.21	1161.351	8837.68	1161.38	18936.6	1161.27
18955.95	1161.3	19027.2	1161.591	9072.68	1161.651	9091.72	1161.781	9107.22	1161.43
19117.15	116	119125.19	1161.431	9167.72	1161.181	9170.23	1161.22	19204.7	1160.86
19214.48	1160.41	9272.73	1160.3	19280.4	1159.861	9312.77	1158.41	9334.57	1157.04
19362.41	116	519375.13	1168.781	9387.53	1170.49	19423.3	1155.811	9424.11	1155.59
19444.1	1156.81	9466.76	1156.061	9473.13	1155.671	9487.21	1154.341	9498.52	1154.09
19508.24	115	219508.24	115	319510.24	115	319510.24	115	119513.39	1146.33
19514.89	1146.331	9522.21	1145.731	9526.03	1145.91	9542.04	1145.981	9548.13	1143.76
19549.74	1142.81	9578.31	1142.721	9608.92	1142.31	9622.35	1142.55	19625.8	1142.43
19629.95	1141.91	9662.92	1140.93	19757.8	1138.141	9790.37	1138.341	9889.34	1139.22
20013.16	1138.7	20021.4	1138.682	0046.59	1139.272	0150.57	1141.482	0168.42	1141.41
20279.22	1139.72	0311.82	1140.852	0339.33	1142.08	20388	1146.33	20389.5	1146.33
20392.65	115	220392.65	115	420394.65	115	420394.65	115	320398.23	1153.34
20408.91	115	520451.75	116	420464.34	1166.74	20474.1	1168.582	0520.34	1161.8
20524.22	1161.5	20551.1	1161.72	20569	1158.542	0579.56	1158.192	0581.69	1157.82
20619.68	1158.12	0624.32	1158.272	0636.26	1158.242	0682.65	1158.222	0708.27	1159.65
20747.43	1165.12	0810.38	1169.092	0865.53	1168.612	0878.38	1168.592	0925.02	1169.04
20977.87	1168.52	0990.49	1168.512	1017.94	1163.912	1020.96	1162.222	1027.69	1160.11
21041.39	1160.22	1048.88	1164.462	1051.31	1164.732	1103.84	1164.332	1113.72	1164.2
21167.12	1164.32	1199.72	1164.332	1238.15	1164.72	1244.69	1165.512	1250.07	1165.47
21255.82	1165.12	1263.75	1162.592	1273.81	1162.532	1441.29	1161.922	1461.92	1162.62
21468.87	1162.72	1483.54	1163.622	1530.74	1164.782	1532.64	1165.612	1578.49	1184.47
21580.42	1185.3	21583.3	1185.152	1603.14	1184.67	21614.3	1183.992	1640.68	1182.58
21655.09	1182.32	1667.69	1183.072	1684.27	1183.812	1707.08	1185.462	1717.84	1185.84
21729.19	1185.72	1758.49	1174.32	1786.72	1161.732	1788.91	1161.412	1814.08	1161.25
21824.13	1161.62	1829.11	1162.382	1843.37	1161.532	1858.77	1161.612	1885.49	1161.81
21909.83	1161.92	1920.48	1162.572	1936.69	1162.972	1976.35	1162.162	2029.88	1162.27
22120.51	1161.82	2128.67	1161.812	2133.27	1161.72	2196.18	1161.72	2222.92	1162.51
22230.32	1162.32	2238.27	1161.412	2269.18	1161.322	2332.41	1161.212	2339.87	1161.48
22350.41	1161.22	2441.19	1161.62	22490	1162.062	2504.47	1163.38	22519.1	1163.04
22613.27	1163.22	2638.03	1163.152	2664.13	1163.022	2668.84	1163.152	2699.98	1163.56
22742.99	1164.12	2775.57	1163.962	2823.75	1164.122	2840.56	1164.362	2888.81	1164.88
22942.19	1167.3	22960.9	1168.082	2991.37	1168.892	3023.13	1170.192	3043.49	1170.56
23080.41	1171.5	23092.3	1171.882	3129.53	1172.752	3168.04	1173.242	3174.01	1173.4
23188.8	1174.12	3254.98	1175.052	3286.26	1175.362	3307.91	1175.312	3338.46	1175.78

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17228.1	.041	9387.53	.03	20474.1	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19387.53	20474.1	560	510.5	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17228.1	19387.53	1170.49	20474.1	23338.46	1168.58

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1160.63	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.65	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.97	Reach Len. (ft)	560.00	510.50	470.00
Crit W.S. (ft)	1151.13	Flow Area (sq ft)		16673.81	
E.G. Slope (ft/ft)	0.001055	Area (sq ft)	37.57	16673.81	99.51

Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1183.17	Top Width (ft)	41.31	1012.24	129.62
Vel Total (ft/s)	10.32	Avg. Vel. (ft/s)		10.32	
Max Chl Dpth (ft)	20.83	Hydr. Depth (ft)		16.47	
Conv. Total (cfs)	5296328.0	Conv. (cfs)		5296328.0	
Length Wtd. (ft)	510.50	Wetted Per. (ft)		1026.68	
Min Ch El (ft)	1138.14	Shear (lb/sq ft)		1.07	
Alpha	1.00	Stream Power (lb/ft s)		11.03	
Frctn Loss (ft)	0.60	Cum Volume (acre-ft)	2601.35	14538.21	1280.04
C & E Loss (ft)	0.03	Cum SA (acres)	236.07	887.06	246.38

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1160.63	Element			
Vel Head (ft)	1.65	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.97	Reach Len. (ft)	560.00	510.50	470.00
Crit W.S. (ft)	1151.13	Flow Area (sq ft)		16673.69	
E.G. Slope (ft/ft)	0.001055	Area (sq ft)		16673.69	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1012.24	Top Width (ft)		1012.24	
Vel Total (ft/s)	10.32	Avg. Vel. (ft/s)		10.32	
Max Chl Dpth (ft)	20.83	Hydr. Depth (ft)		16.47	
Conv. Total (cfs)	5296262.0	Conv. (cfs)		5296262.0	
Length Wtd. (ft)	510.50	Wetted Per. (ft)		1026.68	
Min Ch El (ft)	1138.14	Shear (lb/sq ft)		1.07	
Alpha	1.00	Stream Power (lb/ft s)		11.03	
Frctn Loss (ft)	0.60	Cum Volume (acre-ft)	2.44	14539.06	0.55
C & E Loss (ft)	0.03	Cum SA (acres)	1.03	887.05	0.31

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.89

INPUT
Description:
Station Elevation Data num= 177

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18161.32	118918	182.36	1186.3	18272.19	1173.4	18277.68	1174.37	18296.84	1174.62
18327.04	1175.4	18351.63	1176.53	18365.81	1176.47	18388.58	1173.45	18404.71	1171.92
18446.03	1166.1	18461.79	1165.99	18502.06	1164.72	18528.23	1163.66	18553.47	1163.24
18598.41	1161.8	18644.49	1161.03	18701.92	1161.27	18748.85	1160.91	18822.97	1160.98
18837.4	1160.8	18915.81	1159.63	18968.45	1158.74	18983.15	1158.67	18996.08	1157.52
19009.62	1160.3	19015.83	1160.08	19057.14	1158.81	19066.94	1159.51	19089.99	1160.29
19119.06	1159.2	19179.93	1157.89	19232.08	1150.49	19251.46	1147.8	19253.61	1147.74
19274.36	1149.4	19275.56	1149.69	19289.33	1154.42	19294.75	1154.76	19323.57	1162.64
19337.79	1166.8	19346.18	1170.33	19348.98	1171.32	19356.76	1167.87	19392.1	1153.75
19419.99	115	19429.76	115	19442.34	1151.99	19445.01	1151.31	19459.64	1155.29
19467.05	1151.67	19467.05	1152.67	19469.05	1152.67	19469.05	1150.67	19472.2	1146.33
19473.7	1146.33	19483.77	1143.02	19487.24	1139.72	19528.76	1138.45	19558.85	1136.2
19601.29	1140.08	19609.97	1140.89	19619.19	1141.2	19633.53	1141.98	19640.82	1141.4
19722.43	1138.77	19766.05	1141.13	19851.35	1141.23	19899.11	1141.41	19971.6	1141.8
20028.47	1142.1	20089.74	1140.24	20162.05	1138.75	20164.13	1138.79	20287.09	1142.3
20291.34	1143.12	20323.06	1146.33	20324.56	1146.33	20327.71	1151.25	20327.71	1153.25
20329.71	1153.25	20329.71	1152.25	20349.67	1152.25	20368.68	1158.4	20396.08	1167.75
20399.15	1167.06	20418.06	1166.15	20493.63	1157.15	20555.01	1161.6	20570.26	1159.68
20578.82	1159.49	20608.46	1159.22	20621.68	1159.42	20638.74	1159.6	20651.79	1161.38
20659.22	1161.86	20698.49	1161.62	20728.25	1161.37	20744.67	1160.9	20770.67	1161.38
20785	1161.51	20804.72	1162.26	20819.52	1162.09	20838.48	1161.4	20858.28	1161.15
20886.14	1161.63	20893.59	1161.66	20905.54	1163.3	20935.3	1163.7	21015.06	1163.96
21093.11	1165.01	21110.98	1164.82	21127.65	1165.42	21134.25	1164.6	21296.92	1164.59
21311.66	1164.54	21316.66	1164.72	21334.9	1164.56	21355.48	1175.6	21391.39	1177.23
21394.96	1177.28	21400.07	1178.56	21427.55	1188.09	21450.73	1186.8	21483.68	1187.7
21495.96	1188.66	21508.88	1189.36	21573.43	1189.8	21580.3	1189.8	21592.27	1188.1
21680.11	1173.12	21681.99	1169.97	21688.73	1162.25	21708.44	1162.3	21714.52	1160.28
21755.73	1161.19	21799.28	1163.71	21812.85	1164.18	21862.85	1163.6	21920.72	1164.52
21934.83	1164.55	21954.46	1164.74	22023.38	1165.15	22048.76	1165.3	22090.36	1165.29
22124.89	1164.71	22171.39	1164.94	22212.98	1165.03	22233.83	1164.1	22262.05	1162.59
22302.38	1163.95	22321.75	1164.42	22378.71	1165.58	22439.74	1166.4	22445.13	1166.39
22478.45	1167.17	22486.73	1167.2	22585.5	1167.34	22634.36	1167.4	22668.78	1167.28
22679.97	116	22713.73	1166.4	22753.65	1173.52	22759.09	1173.5	22832.7	1173.25
23002.71	1173.84	23015.32	1173.79	23050.61	1173.31	23077.36	1174.2	23124.52	1175.36
23128.21	1175.6	23147.58	1177.8	23156.31	1178.95	23182.18	1179.2	23220.56	1178.54
23281.93	1178.46	23334.21	1178.64						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

18161.32 .0419348.98 .0320396.08 .04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19348.9820396.08 520 490.84 460 .1 .3
Ineffective Flow num= 2
Sta L Sta R Elev Sta L Sta R Elev
18161.3219348.98 1171.3220396.0823334.21 1167.75

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1160.00	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.93	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.07	Reach Len. (ft)	520.00	490.84	460.00
Crit W.S. (ft)	1151.48	Flow Area (sq ft)		15436.00	
E.G. Slope (ft/ft)	0.001323	Area (sq ft)	729.68	15436.00	9.38
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1150.91	Top Width (ft)	144.13	986.37	20.41
Vel Total (ft/s)	11.14	Avg. Vel. (ft/s)		11.14	
Max Chl Dpth (ft)	21.87	Hydr. Depth (ft)		15.65	
Conv. Total (cfs)	4729470.0	Conv. (cfs)		4729470.0	
Length Wtd. (ft)	490.84	Wetted Per. (ft)		1003.30	
Min Ch El (ft)	1136.20	Shear (lb/sq ft)		1.27	
Alpha	1.00	Stream Power (lb/ft s)		14.16	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)	2596.42	14350.05	1279.46
C & E Loss (ft)	0.00	Cum SA (acres)	234.88	875.35	245.57

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1160.00	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.93	Wt. n-Val.		0.030	
W.S. Elev (ft)	1158.07	Reach Len. (ft)	520.00	490.84	460.00
Crit W.S. (ft)	1151.48	Flow Area (sq ft)		15436.00	
E.G. Slope (ft/ft)	0.001323	Area (sq ft)		15436.00	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	986.37	Top Width (ft)		986.37	
Vel Total (ft/s)	11.14	Avg. Vel. (ft/s)		11.14	
Max Chl Dpth (ft)	21.87	Hydr. Depth (ft)		15.65	
Conv. Total (cfs)	4729468.5	Conv. (cfs)		4729468.5	
Length Wtd. (ft)	490.84	Wetted Per. (ft)		1003.30	
Min Ch El (ft)	1136.20	Shear (lb/sq ft)		1.27	
Alpha	1.00	Stream Power (lb/ft s)		14.16	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)	2.44	14350.90	0.55
C & E Loss (ft)	0.00	Cum SA (acres)	1.03	875.34	0.31

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.80

INPUT
Description:
Station Elevation Data num= 197

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18195.87	1210.618206.33	1210.0618268.65		1207.718276.94		1206.4918283.96		1202.79	
18294.72	1196.1	18328	1195.6 18348.1	1194.8518356.04		1193.3918362.14		1191.1	
18363.55	1190.418376.79	1190.8918403.03		1190.6118417.69		1191.3818420.16		1190.98	
18433.12	1187.718482.24	1174.0618510.47		1165.9118531.57		1164.6418556.08		1164.03	
18589.61	1163.318608.83	1162.9318655.29		1161.9618713.56		1162.2 18738.5		1162.31	
18742.4	1162.318799.21	1161.8518835.11		1161.9618846.72		1157.9818857.05		1160.4	
18899.99	1159.618937.49	1161.0518945.96		1158.9318992.28		1157.1618998.83		1156.99	
19066.83	1148.419070.07	1148.4619150.04		1151.3119165.16		1159.1819179.04		1164.33	
19192.16	1166.319195.49	1166.4219232.95		1150.4219238.01		1148.57 19280.9		1149.18	
19284.1	1149.219286.96	1149.8819309.57		1154.62 19343.5		1164.43	19350	1166.39	
19358.97	1169.619377.34	1161.6319390.65		1162.2319400.98		1162.0819440.36		1153.1	
19442.53	1152.619470.25	1155.07 19479.8		1151 19479.8		1152 19481.8		1152	
19481.8	115019484.95	1146.3319486.45		1146.3319502.11		1140.4419505.02		1138.54	
19552.6	1138.419570.23	1136.3519606.09		1141.819612.72		1142.8419636.74		1140.36	
19648.42	1139.419749.09	1138.8419776.44		1138.3319782.55		1138.4319887.19		1138.83	
19912.95	113920001.53	1137.4320047.61		1136.6720132.52		1139.6820179.34		1141.16	
20233.4	1141.520271.09	1141.6720287.08		1145.2820317.36		1146.3320318.86		1146.33	
20322.01	115120322.01	115320324.01		115320324.01		115220343.75		1152.3	
20373.84	1163.6320381.57	1166.2920391.18		1165.1620399.13		1164.6320408.31		1165.3	
20429.06	1164.8320451.18	1164.1920458.79		1162.2720470.36		1159.8520477.35		1159.8	
20491.93	1160.07 20518.7	1160.9620526.46		1161.0320538.42		1161.44 20552.5		1161.8	
20568.77	1161.75 20595.3	1161.5320629.76		1161.6620662.92		1161.5320708.54		1161.5	
20747.81	1161.5320775.58	1161.73 20798.6		1161.5520821.58		1161.6520884.34		1161.3	
20914.55	1161.0420959.94	1159.8621031.24		1160.4221040.75		1160.4521059.65		1160.3	

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21087.69 1159.5921099.74  1159.821116.21 1161.7621127.28 1162.6621137.95    1163
21140.46 1163.6321200.32 1166.2921210.81 1167.1421271.48 1170.4121287.77  1171.8
21295.81 1172.3821342.69 1174.3721350.38 1174.6321426.93 1178.5421434.63  1178.5
 21457.9 1171.0921479.51 1164.5221490.56 1163.8421503.06 1162.7821513.46  1162.7
21527.74 1162.0521536.21 1161.2321562.56 1160.8921573.78    1161 21584.6  1161.7
21591.93 1162.0521606.96 1162.16 21640.1 1163.16 21656.9 1163.5321703.98  1163.9
21707.22 1164.0321726.09 1163.98 21805.8    116321849.97 1162.2321891.14  1161.8
21947.27 1161.3421979.38 1161.2621998.69 1160.9922060.89 1162.3422079.78  1162.4
22113.99 1163.1622118.49 1161.5122131.71  1162.422155.67  1162.822201.25  1163.7
22220.21 1164.2622245.94 1164.9722262.29 1166.2322281.29 1165.8122306.73  1166.2
22343.14 1166.6422360.44 1166.5522371.75 1165.9922383.67 1165.0222420.14  1165.8
22446.45 1166.5522468.98 1166.7222538.97 1167.4122578.44 1167.76 22579.7  1168.1
 22607.9 1172.3422616.63 1172.59 22677.7 1173.5722730.96 1173.31   22777  1173.7
22794.36 1173.9222872.47 1174.3122927.16 1174.42 22933.6  1174.923008.51  1175.1
23039.74 1174.8823081.93  1176.123090.79  1176.523108.08 1178.4323114.74    1179
23130.35 1178.9223148.09 1179.07

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
18195.87     .0419358.97     .0320381.57     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19358.9720381.57              520  512.31     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18195.8719358.97  1169.620381.5723148.09 1166.29

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1159.36   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.030
  W.S. Elev (ft)            1157.41   Reach Len. (ft)            520.00     512.31     500.00
  Crit W.S. (ft)            1150.48   Flow Area (sq ft)                   15325.47
  E.G. Slope (ft/ft)       0.001262   Area (sq ft)              1631.49   15325.47
  Q Total (cfs)           172000.00   Flow (cfs)                         172000.00
  Top Width (ft)            1214.37   Top Width (ft)             278.53     935.84
  Vel Total (ft/s)            11.22   Avg. Vel. (ft/s)                       11.22
  Max Chl Dpth (ft)           21.06   Hydr. Depth (ft)                       16.38
  Conv. Total (cfs)       4841719.0   Conv. (cfs)                        4841719.0
  Length Wtd. (ft)           512.31   Wetted Per. (ft)                      951.36
  Min Ch El (ft)            1136.35   Shear (lb/sq ft)                       1.27
  Alpha                        1.00   Stream Power (lb/ft s)                14.24
  Frctn Loss (ft)              0.65   Cum Volume (acre-ft)      2582.33   14176.74    1279.41
  C & E Loss (ft)              0.00   Cum SA (acres)             232.36     864.52     245.46


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1159.36   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.030
  W.S. Elev (ft)            1157.41   Reach Len. (ft)            520.00     512.31     500.00
  Crit W.S. (ft)            1150.48   Flow Area (sq ft)                   15325.47
  E.G. Slope (ft/ft)       0.001262   Area (sq ft)                        15325.47
  Q Total (cfs)           172000.00   Flow (cfs)                         172000.00
  Top Width (ft)             935.84   Top Width (ft)                        935.84
  Vel Total (ft/s)            11.22   Avg. Vel. (ft/s)                       11.22
  Max Chl Dpth (ft)           21.06   Hydr. Depth (ft)                       16.38
  Conv. Total (cfs)       4841718.5   Conv. (cfs)                        4841718.5
  Length Wtd. (ft)           512.31   Wetted Per. (ft)                      951.36
  Min Ch El (ft)            1136.35   Shear (lb/sq ft)                       1.27
  Alpha                        1.00   Stream Power (lb/ft s)                14.24
  Frctn Loss (ft)              0.65   Cum Volume (acre-ft)         2.44   14177.59       0.55
  C & E Loss (ft)              0.00   Cum SA (acres)               1.03     864.51       0.31


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.70

INPUT
Description:
Station Elevation Data    num=     187
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 18313.4  1207.718331.21 1190.5518353.07  1178.818357.74 1176.4918383.22 1173.02
18388.14  1172.318425.75 1170.5818484.17 1168.7218551.42 1167.0518573.43 1166.72
18584.11  1166.418612.02  1166.118666.45 1165.1418709.95 1164.5718726.98 1164.56
18729.96  1164.218733.93 1163.2518741.54 1162.5318742.43 1162.1818754.36 1163.08
18794.42  1162.618812.28 1162.6918870.65 1154.7118917.38 1147.9218947.73 1148.51
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18977.47  1147.618991.82 1147.9819043.31 1149.0519071.02 1149.34 19075.1 1149.34
19218.77  1147.519309.85 1147.1419357.44 1148.89 19370.6 1153.0119374.03 1154.48
19383.37  1157.319409.57 1165.8719416.32 1167.3919421.68 1168.7419441.88 1160.62
19459.38  1153.519474.54 1154.2519485.11 1154.6919494.75 1154.6919501.02 1152.62
19518.83  1152.919535.86 1153.5819540.26 1151.6719540.26 1152.6719542.26 1152.67
19542.26 1150.6719545.41 1146.3319546.91 1146.3319565.71 1139.8519619.86 1137.57
19624.35  1137.419634.06 1138.1619660.31 1140.4219662.96 1140.1519791.68  1137.6
19926.34  1134.319979.53  1136.720001.72 1137.3420058.56 1139.0320103.44 1138.63
20193.46  1137.320218.21 1137.9220297.42 1140.9920315.77 1140.8320327.65 1141.87
20331.56  1143.420336.16 1143.5320352.08 1146.3320353.58 1146.3320356.73 1150.75
20356.73 1152.7520358.73 1152.7520358.73 1151.7520366.55 1151.7520376.48 1153.55
20406.45    116020424.35 1163.9820429.66 1164.0320438.47 1163.4820446.38 1162.45
20476.02    115920483.23  1158.6 20515.8 1158.9820530.06 1159.9620558.19 1161.28
20591.52  1160.420616.24 1159.9120664.46 1158.5620680.13 1158.6420702.62 1158.97
20737.58    115920784.83 1158.7320829.13 1157.4720912.47 1159.31 20933.1 1159.79
20954.93  1168.120977.63 1177.37 20995.9 1178.3420999.53 1178.6321081.63 1178.23
21083.63  1178.321093.55 1179.7221128.13 1178.7621190.62 1177.2721209.18 1169.86
21229.58  1162.821237.19 1161.4921239.52  1160.521268.55 1159.9721291.89 1164.94
21301.26  1164.621306.68 1160.4621324.48 1162.9221348.89 1164.3721402.27 1165.51
21434.96  1171.321449.56  1172.621463.69 1174.8121490.56 1175.2421526.24 1176.75
21542.59  1176.9 21555.5 1177.5721594.85 1177.4521622.38 1182.0421629.26 1182.57
21641.43  1185.221667.39 1189.6221680.98 1193.8521697.93 1199.2921733.38 1207.61
21756.81  1212.3 21768.5    120821815.78  1183.421825.94 1181.6921855.64 1176.17
21869.96  1173.421875.52 1172.6721880.58 1172.5221930.63 1170.1321938.76 1170.01
 22003.3  1170.822072.34 1170.32 22089.3 1170.2822143.78 1170.4722201.32 1171.17
22221.23  1171.122291.67 1171.4622308.03 1171.6122363.53  1171.522371.52 1171.81
22441.39  1173.922459.63 1172.9122477.06 1172.7122511.23  1172.422515.43 1172.41
22546.13  1171.8 22567.5 1171.8222627.63 1172.7922675.51 1172.3122686.47 1172.26
22704.37  1171.522733.97 1171.2722742.09 1170.6222760.68 1176.4922765.21 1177.15
22771.49    117722794.55  1175.722832.55 1176.3922848.45 1175.4222869.41 1174.44
22880.16  1176.522885.04 1177.5922896.93 1177.4722930.49 1176.9222938.35 1177.12
22981.95  1177.623029.34 1178.5123071.34 1179.2223088.16 1179.47 23096.5  1179.4
23160.94  1179.423225.52 1179.55

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 18313.4     .0419421.68     .0320429.66     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19421.6820429.66              480  491.61     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 18313.419421.68 1168.7420429.6623225.52 1164.03

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1158.71   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.95   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1156.76   Reach Len. (ft)           480.00     491.61     500.00
  Crit W.S. (ft)            1149.52   Flow Area (sq ft)                  15328.98
  E.G. Slope (ft/ft)        0.001267  Area (sq ft)             4150.40   15328.98
  Q Total (cfs)            172000.00  Flow (cfs)                        172000.00
  Top Width (ft)            1465.94   Top Width (ft)            525.92     940.02
  Vel Total (ft/s)            11.22   Avg. Vel. (ft/s)                     11.22
  Max Chl Dpth (ft)           22.46   Hydr. Depth (ft)                     16.31
  Conv. Total (cfs)        4832887.5  Conv. (cfs)                       4832887.5
  Length Wtd. (ft)           491.61   Wetted Per. (ft)                    954.52
  Min Ch El (ft)            1134.30   Shear (lb/sq ft)                      1.27
  Alpha                        1.00   Stream Power (lb/ft s)               14.25
  Frctn Loss (ft)              0.70   Cum Volume (acre-ft)     2547.82   13996.47    1279.41
  C & E Loss (ft)              0.03   Cum SA (acres)            227.56     853.49     245.46


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1158.71   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.95   Wt. n-Val.                           0.030
  W.S. Elev (ft)            1156.76   Reach Len. (ft)           480.00     491.61     500.00
  Crit W.S. (ft)            1149.52   Flow Area (sq ft)                  15328.98
  E.G. Slope (ft/ft)        0.001267  Area (sq ft)                       15328.98
  Q Total (cfs)            172000.00  Flow (cfs)                        172000.00
  Top Width (ft)             940.02   Top Width (ft)                      940.02
  Vel Total (ft/s)            11.22   Avg. Vel. (ft/s)                     11.22
  Max Chl Dpth (ft)           22.46   Hydr. Depth (ft)                     16.31
  Conv. Total (cfs)        4832893.5  Conv. (cfs)                       4832893.5
  Length Wtd. (ft)           491.61   Wetted Per. (ft)                    954.52
  Min Ch El (ft)            1134.30   Shear (lb/sq ft)                      1.27
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Alpha	1.00	Stream Power (lb/ft s)		14.25	
Frctn Loss (ft)	0.70	Cum Volume (acre-ft)	2.44	13997.33	0.55
C & E Loss (ft)	0.03	Cum SA (acres)	1.03	853.48	0.31

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.61

INPUT
Description:
Station Elevation Data num= 202

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18678.5	1212.418	683.01	1211.0318	689.82	1208.6518	703.07	1203.7518	715.48	1197.08
18718.55	1195.818	720.66	1195.518	744.02	1195.4518	748.36	1194.6518	750.08	1194.6
18759.03	1190.218	792.02	1157.918	804.93	1145.3418	829.12	1143.2718	856.12	1158.13
18869.54	1164.718	908.36	1164.2118	915.11	1164.0518	951.93	1163.4818	960.49	1163.42
18973.47	1163.718	982.88	1159.4319	016.44	1146.2119	049.87	1145.7719	063.08	1145.72
19079.13	1146.119	082.86	1146.0219	107.73	1144.8919	133.21	1145.2419	143.93	1145.87
19188.53	1147.319	247.86	1145.4819	284.38	1143.8519	314.17	1148.4419	314.76	1148.92
19372.29	1147.9	19392.3	1154.35	19397.5	1156.1319	421.34	1162.4519	434.25	1166.14
19434.8	1165.419	438.93	1168.4219	443.22	1166.7919	476.46	1154.419	486.31	1154.09
19501.93	1153.419	519.36	115419	529.18	1153.9119	533.42	1152.29	19542.7	1151.89
19551.94	1152.419	558.35	1151.9819	562.84	115119	562.84	115219	564.84	1152
19564.84	115019	567.99	1146.3319	569.49	1146.3319	583.11	1139.9319	591.56	1134.39
19648.21	1136.719	677.11	1137.8119	809.86	1133.9819	916.35	1134.7919	935.06	1134.9
19990.46	113920	010.96	1140.7420	062.96	1140.820	076.44	1140.7	20137.2	1140.74
20205.46	1141.5	20305.7	1140.7320	341.53	1140.2220	343.81	1140.6620	353.78	1143.7
20361.52	1146.3320	363.02	1146.3320	366.17	1149.6720	366.17	1151.6720	368.17	1151.67
20368.17	1150.6720	380.41	115220	388.69	1152.720	419.66	1161.520	433.82	1165.46
20447.28	1164.4220	458.72	1163.620	475.45	1161.0720	499.06	1157.2720	531.49	1159.46
20545.4	1157.9820	571.87	1157.520	578.81	1157.4320	606.24	1157.4420	616.16	1157.32
20640.05	1157.820	691.04	1159.220	694.58	1159.3920	702.31	1160.6720	707.85	1161.26
20714.52	1162.1820	723.12	1167.320	734.57	1173.620	755.69	1173.7420	780.53	1173.75
20796.22	1174.0120	840.73	1174.2	20850.6	1174.0920	857.79	1173.8920	868.54	1174.31
20895.56	1174.7820	907.19	1172.420	920.14	1169.14	20926.2	1169.7520	939.07	1165.52
20960.36	1163.3220	975.48	1163.420	989.85	1161.321	006.64	1160.321	028.57	1158.06
21060.5	1158.4421	092.06	1158.421	120.46	1158.39	21145.3	1158.321	150.14	1158.44
21173.57	1162.2921	204.33	1166.621	232.66	1165.1321	234.44	1163.821	241.62	1161.2
21250.13	1163.07	21260.5	1164.121	290.65	1165.0921	299.98	1165.7321	315.94	1168.17
21326.38	1170.7221	348.18	117421	409.65	1182.721	454.08	1187.7721	464.71	1188.7
21505.76	1190.3721	573.42	1179.921	596.51	1181.6	21602.4	1181.9321	622.23	1184.82
21655.45	1189.3221	671.98	1191.621	711.23	1194.45	21728.2	1197.1321	777.27	1203.83
21788.71	1204.2621	819.26	1205.621	841.15	1206.0321	867.01	1203.1921	903.18	1197.41
21932.3	1194.88	21945.8	119321	985.87	1185.7222	004.02	1184.45	22027	1184.14
22057.67	1187.79	22075.1	1189.922	085.84	1188.5622	113.34	1185.4522	115.25	1184.1
22125.69	1182.8322	154.69	1179.7	22155.4	1179.7422	176.65	1181.88	22200	1182.56
22220.51	1182.0322	230.57	1181.222	264.92	1177.4222	278.13	1178.0922	302.74	1178.97
22350.33	1177.4322	381.18	1175.522	383.12	1176.0522	397.28	1175.3622	403.14	1174.68
22437.65	1172.3822	439.41	1172.422	472.76	1174.72	22494.1	1175.0622	505.84	1175.93
22516.42	1175.1422	553.24	1180.522	562.01	1180.8922	577.08	1180.9622	612.44	1183.2
22617.73	1183.3822	632.53	118522	658.81	1185.2322	669.56	1185.0522	713.55	1181.84
22715.82	1182.1722	718.59	1183.922	723.52	1182.7522	735.39	1183.0422	743.11	1182.41
22776.65	1180.9922	777.91	1181						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18678.5	.04	19438.93	.03	20433.82	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19438.9	20433.82	420	571.5	760	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18678.5	19438.93	1168.42	20433.82	22777.91	1165.46

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1157.98	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.27	Wt. n-Val.		0.030	
W.S. Elev (ft)	1155.71	Reach Len. (ft)	420.00	571.50	760.00
Crit W.S. (ft)	1149.61	Flow Area (sq ft)		14214.60	
E.G. Slope (ft/ft)	0.001598	Area (sq ft)	4038.42	14214.60	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1387.75	Top Width (ft)	461.41	926.34	
Vel Total (ft/s)	12.10	Avg. Vel. (ft/s)		12.10	
Max Chl Dpth (ft)	21.73	Hydr. Depth (ft)		15.34	
Conv. Total (cfs)	4302122.5	Conv. (cfs)		4302122.5	
Length Wtd. (ft)	571.50	Wetted Per. (ft)		941.07	
Min Ch El (ft)	1133.98	Shear (lb/sq ft)		1.51	
Alpha	1.00	Stream Power (lb/ft s)		18.24	

Frctn Loss (ft)	0.95	Cum Volume (acre-ft)	2502.70	13829.76	1279.41
C & E Loss (ft)	0.01	Cum SA (acres)	222.12	842.96	245.46

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1157.98	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.27	Wt. n-Val.		0.030	
W.S. Elev (ft)	1155.71	Reach Len. (ft)	420.00	571.50	760.00
Crit W.S. (ft)	1149.61	Flow Area (sq ft)		14214.71	
E.G. Slope (ft/ft)	0.001598	Area (sq ft)		14214.71	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	926.34	Top Width (ft)		926.34	
Vel Total (ft/s)	12.10	Avg. Vel. (ft/s)		12.10	
Max Chl Dpth (ft)	21.73	Hydr. Depth (ft)		15.35	
Conv. Total (cfs)	4302186.0	Conv. (cfs)		4302186.0	
Length Wtd. (ft)	571.50	Wetted Per. (ft)		941.07	
Min Ch El (ft)	1133.98	Shear (lb/sq ft)		1.51	
Alpha	1.00	Stream Power (lb/ft s)		18.24	
Frctn Loss (ft)	0.95	Cum Volume (acre-ft)	2.44	13830.61	0.55
C & E Loss (ft)	0.01	Cum SA (acres)	1.03	842.94	0.31

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.50

INPUT
Description:
Station Elevation Data num= 111

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18724.69	1224.318	736.78	1219.591	8740.72	1217.941	8746.27	1217.041	8762.15	1207.06
18762.87	1206.718	779.35	1201.531	8780.37	1201.441	8804.96	1196.581	8807.77	1195.77
18813.4	1193.418	835.21	1186.218	863.88	1163.371	8883.84	1146.59	18910.1	1145.79
18943.52	1162.218	976.58	1161.231	9025.23	1159.811	9050.06	1159.051	9062.67	1155.45
19088.81	1148.419	103.99	1147.871	9122.88	1146.981	9152.74	1146.241	9167.01	1146.34
19212.01	1146	19222.05	1145.91	9247.66	1143.791	9287.05	1144.041	9295.73	1144.26
19308.12	1145	19350.49	1146.95	19384.7	1147.381	9388.07	1147.381	9414.13	1154.24
19421.77	1156.319	446.99	1162.691	9452.98	1164.431	9460.46	1168.131	9464.91	1166.3
19478.02	1160.419	495.41	1160.521	9508.22	1160.441	9514.49	1158.731	9535.89	1151.98
19549.16	1150.819	564.95	1151.31	19579.7	1152.191	9584.23	1151	19584.23	1152
19586.23	1152	19586.23	1150	19589.38	1146.331	9590.88	1146.331	9590.95	1145.02
19596.41	1141.221	9623.73	1140.81	9639.47	1140.611	9660.34	1139.681	9721.27	1136.87
19768.9	1134.081	9897.56	1136.11	9971.91	1135.112	0028.81	1134.252	0038.11	1134.6
20049.15	1134.862	0117.01	1139.22	0150.41	1141.012	0157.19	1142.552	0260.17	1138.98
20290.02	1138.352	0365.62	1141.32	0376.07	1141.72	0395.01	1146.332	0396.51	1146.33
20399.66	1149.62	0399.66	1151.62	0401.66	1151.62	0401.66	1150.62	0405.82	1151.54
20446.21	1151.942	0448.54	1152.352	0489.79	1164.32	0506.63	1164.732	0509.77	1164.73
20520.6	1162.922	0538.53	1168.662	0542.37	1169.82	0552.68	1169.072	0605.25	1166.09
20627.64	1167.662	0657.69	1167.362	0681.46	1166.72	0690.88	1166.462	0703.82	1164.01
20710.31	1162.192	0726.22	1162.62	20744.7	1162.72	0753.41	1160.042	0774.01	1167.28
20778.57	1169.312	0780.54	1169.822	0811.33	1168.3	20827.3	1167.942	0859.08	1166.63
20875.49	1164.42	0883.33	1165.772	0891.67	1168.62	0906.56	1171.642	0926.89	1172.53
20993.81	1186.59								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18724.69	.041	9460.46	.032	0506.63	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19460.46	20506.63	510	506.96	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18724.69	19460.46	1168.132	0506.63	20993.81	1164.73

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1157.02	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.40	Wt. n-Val.		0.030	
W.S. Elev (ft)	1154.62	Reach Len. (ft)	510.00	506.96	520.00
Crit W.S. (ft)	1149.12	Flow Area (sq ft)		13849.34	
E.G. Slope (ft/ft)	0.001747	Area (sq ft)	3103.47	13849.34	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	1332.48	Top Width (ft)	403.61	928.87	
Vel Total (ft/s)	12.42	Avg. Vel. (ft/s)		12.42	
Max Chl Dpth (ft)	20.54	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	4114554.5	Conv. (cfs)		4114554.5	
Length Wtd. (ft)	506.96	Wetted Per. (ft)		942.76	

Min Ch El (ft)	1134.08	Shear (lb/sq ft)		1.60	
Alpha	1.00	Stream Power (lb/ft s)		19.90	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)	2468.27	13645.67	1279.41
C & E Loss (ft)	0.03	Cum SA (acres)	217.95	830.79	245.46

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1157.02	Element			
Vel Head (ft)	2.39	Wt. n-Val.		0.030	
W.S. Elev (ft)	1154.62	Reach Len. (ft)	510.00	506.96	520.00
Crit W.S. (ft)	1149.12	Flow Area (sq ft)		13849.68	
E.G. Slope (ft/ft)	0.001747	Area (sq ft)		13849.68	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	928.87	Top Width (ft)		928.87	
Vel Total (ft/s)	12.42	Avg. Vel. (ft/s)		12.42	
Max Chl Dpth (ft)	20.54	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	4114719.8	Conv. (cfs)		4114719.8	
Length Wtd. (ft)	506.96	Wetted Per. (ft)		942.76	
Min Ch El (ft)	1134.08	Shear (lb/sq ft)		1.60	
Alpha	1.00	Stream Power (lb/ft s)		19.90	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)	2.44	13646.51	0.55
C & E Loss (ft)	0.03	Cum SA (acres)	1.03	830.77	0.31

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.40

INPUT
Description:
Station Elevation Data num= 266

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18652.1	120	518671.59	1200.55	18699.2	1192.23	18707.99	1189.41	18714.68	1186.79
18723.36	118	518763.39	1171.93	18779.65	1168.31	8828.27	1168.41	8858.97	1168.65
18906.14	1168.71	8911.84	1168.8	18935.5	1168.31	8948.16	1164.53	18978.02	1157.09
18991.43	1153.91	8993.58	1154.14	19033.37	1154.69	19043.37	1154.27	19048.94	1154.21
19058.77	1155.4	19061	1155.43	19072.37	1156.37	19083.23	1155.71	19097.13	1154.73
19138.46	1157.51	9155.07	1158.69	19166.8	1160.48	19213.05	1159.54	19241.37	1159.48
19249.06	1159.71	9254.05	1160.32	19283.37	1155.52	19311.47	1150.07	19324	1147.37
19346.26	114	319354.28	1142.16	19356.11	1143.03	19383.67	1149.55	19407.07	1154.11
19408.59	1154.51	9441.58	1164.73	19445	1164.18	19449.43	1164.89	19456.36	1167
19480.62	1155.81	9493.16	1155.26	19503.91	1155.09	19516.58	1152.81	19532.23	1150.2
19549.14	1149.41	9559.75	1150.49	19570.58	1151.73	19577.91	1151.26	19580.88	1151
19580.88	115	219582.88	115	219582.88	115	019586.03	1146.33	19587.53	1146.33
19594.37	1142.49	19600.79	1143.51	9607.14	1144.83	19609.31	1143.89	19614.57	1142.9
19642.3	1142.55	19646.34	1142.31	19655.98	1142.23	19677.03	1141.26	19785.47	1136.2
19807.92	1135.83	19895.92	1136.15	19914.19	1136.14	20045.5	1133.76	20050.59	1133.8
20171.35	1133.21	20255.63	1134.79	20306.82	1135.79	20337.14	1138.04	20387.05	1141.8
20396.05	1145.87	20405.2	1146.33	20406.7	1146.33	20409.85	1149.52	0409.85	1151.5
20411.85	1151.52	0411.85	1150.52	0422.65	1151.32	20452.05	1152.87	20470.54	1154.6
20487.47	1155.92	0500.27	1157.37	20515.11	1158.72	20540.48	1158.55	20565.02	1164.5
20574.62	1165.24	20584.25	1172.17	20634.72	1172.06	20641.89	1172.43	20707.14	1172.3
20716.33	1172.37	20721.03	1172.32	0750.05	1170.12	0764.44	1169.42	0772.33	1167.6
20776.01	1167.44	20794.23	1162.01	20800.86	1161.7	20810.3	1161.98	20838.2	1163.3
20845.54	1160.17	20866.66	1166.59	20871.05	1167.99	20875.8	1166.22	0899.66	1165.7
20912.01	1164.92	20916.66	1164.93	20938.55	1165.68	20948.58	1166.45	20975.14	1171.2
21020.84	1175.82	21052.25	1177.77	21102.75	1181.25	21116.56	1182.68	21155.53	1188.3
21201.77	1195.65	21207.52	1195.97	21276.43	1202.88	21289.39	1204.13	21317.85	1200.1
21330.02	1198.31	21339.16	1199.11	21370.97	1200.87	21397.84	1202.14	21460.04	1212.6
21461.59	1212.93	21511.7	1221.68	21546.9	1227.78	21568.77	1231.32	21596.38	1236.7
21640.13	1248.99	21665.43	1254.46	21692.78	1259.56	21697.2	1261.03	21707.51	1262.8
21716.32	1264.14	21791.55	1258.97	21850.25	1252.02	21857.65	1251.19	21863.4	1250.9
21873.08	1249.52	21962.35	1236.3	21967.51	1234.88	22016.88	1223.25	22023.23	1221
22031.27	1218.58	22051.75	1221.39	22060.31	1222.41	22065.8	1221.88	22075.24	1221.8
22110.52	1220.62	2144.58	1217.8	22155.42	1217.21	22158.53	1218.51	22163.19	1217.9
22183.22	1217.38	22190.13	1217.55	22193.29	1217.31	22226.28	1216.97	22232.43	1216.4
22242.46	1216.52	2284.81	1216.13	22320.94	1222.53	22333.23	1223.12	22342.68	1222.8
22351.29	1224.67	22382.67	1218.26	22390.51	1216.77	22398.53	1216.19	22438.98	1212
22481.19	1205.96	22485.17	1205.84	22495.98	1207.01	22527.13	1211.09	22538.15	1210.5
22559.76	1210.64	22596.84	1207.23	22607.16	1206.64	22631.18	1207.75	22642.13	1208.9
22661.99	1211.49	22692.22	1215.96	22711.98	1218.99	22736.36	1222.44	22759.23	1226.6
22790.77	1230.61	22805.91	1232.96	22825.04	1233.15	22836.73	1232.68	22882.49	1227

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   22887  1226.622917.78 1225.0722938.05 1223.2122955.82 1221.4922986.03  1220.1
22992.72 1219.9423006.88 1220.1423022.46 1219.8223026.55 1219.5423080.52  1217.3
23088.12 1216.7923104.31 1216.5723143.27 1215.0623148.76 1213.0923210.02  1216.3
23269.57 1218.8923283.38  1221.523289.05 1222.3223321.66 1224.7923339.03  1223.9
23382.95 1229.7323387.74 1229.7423463.23  1228.723483.01 1229.1223493.93  1229.1
23502.63 1230.1723505.14 1230.0323546.35 1228.46 23548.8 1228.3923564.58  1228.6
23601.96 1229.2423609.11 1229.5323678.59 1231.4823685.07    1231 23726.3  1231.6
23727.36 1231.35 23756.2 1229.7323766.62 1230.4923771.63 1230.4423785.18  1231.5
23801.99 1230.46 23826.7 1232.6923886.44 1237.0223911.27 1238.2223924.45  1235.9
23934.49 1236.5723940.75 1237.1523973.91 1242.3323982.18  1242.124021.62    1242
24040.01 1246.7524072.75 1251.9524101.71 1252.04 24161.4 1253.5524168.61  1253.7
24171.81 1255.3924181.98 1263.1424201.38  1262.624227.48 1260.6424240.14  1254.9
24260.47 1254.1824287.05 1247.7624294.26 1248.0924294.86 1247.7524296.66  1255.9
 24312.7 1255.49

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 18652.1     .0519456.36    .03520584.25     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19456.3620584.25              460   504.7     540             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 18652.119456.36    116720584.25 24312.7 1172.17

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1155.98   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.29   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1153.69   Reach Len. (ft)             460.00     504.70     540.00
  Crit W.S. (ft)            1147.88   Flow Area (sq ft)                    14174.48
  E.G. Slope (ft/ft)       0.002260   Area (sq ft)                643.26   14174.48
  Q Total (cfs)           172000.00   Flow (cfs)                          172000.00
  Top Width (ft)            1061.37   Top Width (ft)              112.16     949.21
  Vel Total (ft/s)            12.13   Avg. Vel. (ft/s)                        12.13
  Max Chl Dpth (ft)           20.48   Hydr. Depth (ft)                        14.93
  Conv. Total (cfs)       3617753.0   Conv. (cfs)                         3617753.0
  Length Wtd. (ft)           504.70   Wetted Per. (ft)                       961.61
  Min Ch El (ft)            1133.21   Shear (lb/sq ft)                         2.08
  Alpha                        1.00   Stream Power (lb/ft s)                  25.24
  Frctn Loss (ft)              1.15   Cum Volume (acre-ft)       2446.34   13482.59    1279.41
  C & E Loss (ft)              0.01   Cum SA (acres)              214.93     819.86     245.46


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1155.98   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.29   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1153.70   Reach Len. (ft)             460.00     504.70     540.00
  Crit W.S. (ft)            1147.88   Flow Area (sq ft)                    14175.05
  E.G. Slope (ft/ft)       0.002260   Area (sq ft)                         14175.05
  Q Total (cfs)           172000.00   Flow (cfs)                          172000.00
  Top Width (ft)             949.21   Top Width (ft)                         949.21
  Vel Total (ft/s)            12.13   Avg. Vel. (ft/s)                        12.13
  Max Chl Dpth (ft)           20.49   Hydr. Depth (ft)                        14.93
  Conv. Total (cfs)       3617988.0   Conv. (cfs)                         3617988.0
  Length Wtd. (ft)           504.70   Wetted Per. (ft)                       961.62
  Min Ch El (ft)            1133.21   Shear (lb/sq ft)                         2.08
  Alpha                        1.00   Stream Power (lb/ft s)                  25.24
  Frctn Loss (ft)              1.15   Cum Volume (acre-ft)          2.44   13483.43       0.55
  C & E Loss (ft)              0.01   Cum SA (acres)                1.03     819.84       0.31


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 221.31

INPUT
Description:
Station Elevation Data    num=     267
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14992.66    116815026.77 1165.5815030.91 1165.4315037.28 1165.7915069.86 1165.82
15070.88  1165.415076.04 1166.05 15112.2 1165.5615117.18 1165.4215176.25 1165.01
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15268.31  1164.915278.91 1164.6415310.35 1164.4715385.32 1164.7515490.94 1165.08
15609.05  1165.415625.53 1165.2915743.82 1165.4515753.35 1165.4515780.48 1165.01
15782.39    116515782.71 1165.6115787.31  1165.615811.68 1165.0215873.21 1164.99
15876.97  1165.215893.61 1165.5815958.36 1166.1215987.66 1165.4815998.23  1165.4
16040.32  1164.616069.32 1164.2116070.86  1164.116186.62  1164.716236.42  1164.9
16259.59  1165.216271.17 1164.7416276.84 1164.6116297.25 1164.4116321.85 1164.32
16329.32  1164.416345.93 1164.9116406.44 1165.3116457.25 1164.3716498.72 1164.04
16502.17  1164.416544.29 1164.36 16621.4 1164.5616666.91  1163.616685.69 1163.52
 16694.4  1163.816717.07 1164.3616743.19 1164.8116765.72 1164.1516823.31 1163.91
 16851.5  1163.816935.43 1163.8416940.48 1163.7917003.31 1163.5117032.32 1163.48
17077.17  1163.317096.38 1163.1517107.31 1163.3917112.64 1163.2117125.84 1163.24
17161.34  1163.517169.83 1163.4217179.29 1163.5617207.69 1163.2117221.38 1162.96
17239.25  1163.117363.03 1164.3317429.76 1164.3517603.57 1163.9817646.95 1164.09
17662.19  1163.417722.37 1164.3217801.03 1165.3117825.03 1166.6117856.64 1166.07
17901.38  1165.317920.15  1165.317958.22 1165.9118003.49 1166.1918024.75  1170.8
18038.49  1173.918053.57 1174.2818097.69 1178.8118109.61 1179.78 18124.8 1180.63
18152.51  1181.818164.97 1181.25 18180.7 1181.3718206.05 1183.77 18213.6 1183.47
 18219.9  1182.118233.66 1176.7818241.03  1176.418270.87 1176.4518283.06  1176.9
18335.33  1176.818373.63 1176.5118418.06 1176.2318454.07 1175.5818466.72 1174.93
18495.09  1174.418504.69 1173.4118523.54 1171.2718563.58 1165.3718572.61 1163.79
18588.35  1162.818593.96 1161.4218608.67 1160.4218622.35 1160.4518651.41 1161.09
18709.57  1159.218728.59 1158.67 18749.8 1157.6618796.71 1157.2618803.75 1157.23
18846.73  1156.118868.26 1155.6818901.47 1155.89   18906 1156.0818912.34 1155.78
18948.25  1154.718955.06 1155.9418961.51 1156.8218967.74 1155.5618980.99 1153.68
19023.11  1154.319073.86 1154.52   19114 1153.94 19122.7 1153.8519156.14 1152.27
19180.43  1151.519195.14 1153.55 19209.9 1154.8619219.29  1153.919227.23 1151.53
19234.54  1149.819264.72 1148.6119301.88 1149.1819312.66 1149.2419321.63 1153.07
19345.79  1160.519359.34 1163.9319372.89 1160.0119413.94 1149.2719424.31 1150.02
19429.24  1151.419449.21 1156.05 19463.2 1155.7519470.75 1155.3719482.11 1155.91
19490.16  1156.519515.24 1157.13 19531.2 1156.8519538.57 1156.7519557.52 1156.05
19569.37  1154.319572.26    115319572.26    115419574.26    115419574.26    1152
19577.41 1146.3319578.91 1146.3319621.52 1135.6919639.77 1137.6619664.83 1138.36
19683.76  1139.619696.55  1140.219792.75 1135.9519801.48 1135.6319809.81 1135.64
19930.61  1135.6 19952.6 1135.0220048.27 1131.9820062.35 1131.4320118.13 1132.03
20188.61  1132.820256.01 1133.8320328.23 1134.9920344.49 1135.7320377.75 1143.58
 20388.1 1142.9420393.85 1146.3320395.35 1146.33 20398.5  1149.5 20398.5  1151.5
 20400.5  1151.5 20400.5  1150.520469.34  1150.5   20504  1151.220521.88 1157.01
20586.22 1159.9120592.78 1160.9720601.99 1167.9620608.04  1168.520623.32  1170.4
20633.95 1185.3520664.73 1188.4320691.02  1193.520695.44  1193.7 20731.2 1194.65
20757.37 1194.1520802.53 1193.12 20875.7 1170.62 20935.8  1151.821005.31 1151.38
21015.06  1151.421032.49 1159.2121042.59 1162.2821067.91  1162.121078.72 1162.04
21087.43 1159.8321108.55 1164.4321119.27 1166.3721136.51  1168.821156.97 1171.78
21181.55 1173.1721224.13 1174.0921225.45 1174.0321237.16  1172.621259.28 1173.37
21263.15  1173.921265.76 1174.5421290.93  1181.321294.11  1181.721307.93  1184.1
21311.44 1183.8721323.42 1186.2721330.86    1188 21350.2  1190.6 21383.8 1193.88
21398.66  1195.921412.73 1196.4821457.15 1199.4621465.59  1200.321472.67  1200.3
21494.72 1199.7621504.66 1199.8721507.38 1199.5221513.07  1199.421550.52 1198.95
21556.04 1198.42 21565.5    119721600.52 1193.2121641.91  1195.521657.62 1196.55
21668.48 1196.7721700.06 1197.98 21737.6  1200.921761.14  1203.221776.72 1202.99
21809.75 1199.2721823.95 1196.4121841.35 1193.7221860.33  1190.621870.81 1190.21
 21876.3 1189.2721877.32 1189.73 21886.4 1182.7921889.31  1181.921924.92 1198.54
 21961.7 1215.7921975.74 1215.31

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14992.66     .0519515.24    .03520521.88     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19515.2420521.88              220  262.31     780              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14992.6619515.24 1157.1320522.2321975.74 1160.02

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1154.82   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.34   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1152.48   Reach Len. (ft)            220.00     262.31     780.00
  Crit W.S. (ft)            1146.72   Flow Area (sq ft)                    14008.63
  E.G. Slope (ft/ft)       0.002299   Area (sq ft)               373.71   14008.63      74.85
  Q Total (cfs)           172000.00   Flow (cfs)                         172000.00
  Top Width (ft)            1181.89   Top Width (ft)             164.34     933.69      83.86
  Vel Total (ft/s)            12.28   Avg. Vel. (ft/s)                        12.28
  Max Chl Dpth (ft)           21.05   Hydr. Depth (ft)                        15.00
  Conv. Total (cfs)       3587448.8   Conv. (cfs)                        3587448.8
  Length Wtd. (ft)           262.31   Wetted Per. (ft)                       945.59
  Min Ch El (ft)            1131.43   Shear (lb/sq ft)                         2.13
  Alpha                        1.00   Stream Power (lb/ft s)                  26.10
  Frctn Loss (ft)              0.39   Cum Volume (acre-ft)      2440.97   13319.32    1278.94
```

C & E Loss (ft)	0.26	Cum SA (acres)	213.47	808.95	244.94

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1154.83	Element			
Vel Head (ft)	2.34	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.48	Reach Len. (ft)	220.00	262.31	780.00
Crit W.S. (ft)	1146.72	Flow Area (sq ft)		14009.54	
E.G. Slope (ft/ft)	0.002298	Area (sq ft)		14009.54	
Q Total (cfs)	172000.00	Flow (cfs)		172000.00	
Top Width (ft)	933.69	Top Width (ft)		933.69	
Vel Total (ft/s)	12.28	Avg. Vel. (ft/s)		12.28	
Max Chl Dpth (ft)	21.05	Hydr. Depth (ft)		15.00	
Conv. Total (cfs)	3587836.0	Conv. (cfs)		3587836.0	
Length Wtd. (ft)	262.31	Wetted Per. (ft)		945.59	
Min Ch El (ft)	1131.43	Shear (lb/sq ft)		2.13	
Alpha	1.00	Stream Power (lb/ft s)		26.10	
Frctn Loss (ft)	0.39	Cum Volume (acre-ft)	2.44	13320.16	0.55
C & E Loss (ft)	0.26	Cum SA (acres)	1.03	808.94	0.31

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.26

INPUT
Description: Upstream face of New Mill Ave Bridge

Station Elevation Data num= 103

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18929.8	1153.31	8961.36	1153.05	18978.03	1153.26	19015.15	1152.74	19033.39	1152.96
19054.85	1152.71	9066.41	1152.58	19083.79	1152.99	19109.33	1152.52	19128.66	1151.78
19139.43	1152.21	9175.53	1152.26	19186.22	1151.52	19196.19	1150.37	19200.65	1149.88
19210.93	1153.51	9221.32	1155.76	19243.17	1159.16	19248.85	1160	19281.3	1160
19297	1157.41	9321.56	1153.48	19326.46	1152.66	19341.45	1150	19362.38	1149.76
19387.78	1148.41	9403.37	1148	19420.53	1148	19431.08	1150.03	19439.29	1151
19457.74	1151.71	9474.83	1152.27	19503.16	1153	19512.68	1153	19522.93	1153.56
19524.34	1154	19533.18	1153	19533.18	1154	19535.06	1154	19535.06	1152
19537.97	1146.33	19539.38	1146.33	19563.1	1136.95	19641.28	1134.4	19688.2	1134.81
19787.1	1134.03	19835.67	1132.66	19929.08	1131.17	19982.57	1130.01	20059.41	1129.66
20132.81	1129.24	20168.05	1130.17	20215.61	1131.51	20269.26	1131.4	20316.63	1134.36
20387.64	1136.47	20412.67	1146.33	20414.08	1146.33	20417	1149	20417	1151
20418.88	1151	20418.88	1150	20450.13	1150	20458.81	1152.68	20489.52	1160.85
20498.91	1160.92	20576.83	1159.21	20584.83	1159.35	20599.93	1159.21	20648.73	1159.1
20693.51	1157.92	20698.38	1157.69	20706.17	1157.41	20719.65	1159.73	20857.84	1178.63
20870.91	1193.2	20877.1	1193.42	20922.7	1195.33	20935.7	1195.44	20945.54	1192.59
20947.95	1191.22	20959.18	1189.46	20983.86	1186.14	21006.11	1177.39	21024.17	1173.15
21040	1169.82	21056.36	1174.03	21066.18	1175.33	21088.59	1175.91	21100.47	1178.77
21145.34	1184.62	21172.67	1187.71	21203.2	1190.59	21220.52	1192.73	21225.66	1193.22
21234.93	1193.92	21270.81	1194.45	21301.72	1194.35	21306.81	1194.49	21373.56	1186.64
21402.68	1182.82	21418.97	1183	21436.65	1182.98				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18929.8	.05	19535.06	.035	20417	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19535.06	20417	101.04	101.04	101.04	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18929.8	19534.06	1156.97	20417	21436.65	1161.32

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1154.18	Element			
Vel Head (ft)	1.49	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.69	Reach Len. (ft)	26.50	26.50	26.50
Crit W.S. (ft)	1143.39	Flow Area (sq ft)		17251.77	

E.G. Slope (ft/ft)	0.001027	Area (sq ft)	503.24	17251.77	98.99
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1212.63	Top Width (ft)	288.84	881.94	41.85
Vel Total (ft/s)	9.80	Avg. Vel. (ft/s)		9.80	
Max Chl Dpth (ft)	23.45	Hydr. Depth (ft)		19.56	
Conv. Total (cfs)	5273153.5	Conv. (cfs)		5273153.5	
Length Wtd. (ft)	26.50	Wetted Per. (ft)		893.04	
Min Ch El (ft)	1129.24	Shear (lb/sq ft)		1.24	
Alpha	1.00	Stream Power (lb/ft s)		12.14	
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	2438.75	13225.20	1277.39
C & E Loss (ft)	0.03	Cum SA (acres)	212.32	803.48	243.81

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1154.18	Element			
Vel Head (ft)	1.49	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.69	Reach Len. (ft)	26.50	26.50	26.50
Crit W.S. (ft)	1143.41	Flow Area (sq ft)		17251.98	
E.G. Slope (ft/ft)	0.001030	Area (sq ft)		17251.98	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	881.94	Top Width (ft)		881.94	
Vel Total (ft/s)	9.80	Avg. Vel. (ft/s)		9.80	
Max Chl Dpth (ft)	23.45	Hydr. Depth (ft)		19.56	
Conv. Total (cfs)	5266614.0	Conv. (cfs)		5266614.0	
Length Wtd. (ft)	26.50	Wetted Per. (ft)		894.73	
Min Ch El (ft)	1129.24	Shear (lb/sq ft)		1.24	
Alpha	1.00	Stream Power (lb/ft s)		12.14	
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	2.44	13226.03	0.55
C & E Loss (ft)	0.03	Cum SA (acres)	1.03	803.47	0.31

Note: Multiple critical depths were found at this location. The critical depth with the lowest, valid, energy was used.

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 221.25

INPUT
Description: New Mill Avenue Bridge (North Bound)
Distance from Upstream XS = 26.5
Deck/Roadway Width = 48
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 23

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
19250.65	1175	1150	19250.66	1175	1164	19321.13	1175.65	1170.65
19391.61	1175.95	1164	19462.08	1176.25	1171.25	19532.56	1176.55	1164.8
19603.04	1176.85	1171.85	19673.52	1177.15	1165.2	19743.99	1177.45	1172.45
19814.47	1177.82	1165.8	19884.95	1177.52	1172.52	19955.43	1177.22	1165.2
20025.9	1176.92	1171.92	20096.38	1176.62	1164.8	20166.86	1176.32	1171.32
20237.34	1176.02	1164	20307.81	1175.72	1170.72	20378.29	1175.42	1163.5
20448.77	1175.12	1170.12	20519.25	1174.82	1163	20589.72	1174.52	1169.52
20660.19	1174.22	1163	20660.2	1174.22	1150			

Upstream Bridge Cross Section Data
Station Elevation Data num= 103

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18929.8	1153.3	18961.36	1153.05	18978.03	1153.26	19019.15	1152.74	19033.39	1152.96
19054.85	1152.7	19066.41	1152.58	19083.79	1152.99	19109.33	1152.52	19128.66	1151.78
19139.43	1152.2	19175.53	1152.26	19186.22	1151.52	19196.19	1150.37	19200.65	1149.88
19210.93	1153.5	19221.32	1155.76	19243.17	1159.16	19248.85	1160	19281.3	1160
19297	1157.4	19321.56	1153.48	19326.46	1152.66	19341.45	1150	19362.38	1149.76
19387.78	1148.4	19403.37	1148	19420.53	1148	19431.08	1150.03	19439.29	1151
19457.74	1151.7	19474.83	1152.27	19503.16	1153	19512.68	1153	19522.93	1153.56
19524.34	1154	19533.18	1153	19533.18	1154	19533.06	1154	19535.06	1152
19537.97	1146.33	19539.38	1146.33	19563.1	1136.95	19641.28	1134.4	19688.2	1134.81
19787.1	1134.03	19835.67	1132.66	19929.08	1131.17	19982.57	1130.01	20059.41	1129.66
20132.81	1129.24	20168.05	1130.17	20215.61	1131.51	20269.26	1131.4	20316.63	1134.36
20387.64	1136.47	20412.67	1146.33	20414.08	1146.33	20417	1149	20417	1151
20418.88	1151	20418.88	1150	20450.13	1150	20458.81	1152.68	20489.52	1160.85
20498.91	1160.9	20576.83	1159.21	20584.83	1159.35	20599.93	1159.21	20648.73	1159.1
20693.51	1157.9	20698.38	1157.69	20706.17	1157.41	20719.65	1159.73	20857.84	1178.63
20870.91	1193.2	20877.1	1193.42	20922.7	1195.33	20935.7	1195.44	20945.54	1192.59
20947.95	1191.2	20959.18	1189.46	20983.86	1186.14	21006.11	1177.39	21024.17	1173.15
21040	1169.8	21056.36	1174.03	21066.18	1175.33	21088.59	1175.91	21100.47	1178.77

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21145.34  1184.621172.67 1187.71 21203.2 1190.5921220.52 1192.7321225.66 1193.22
21234.93  1193.921270.81 1194.4521301.72 1194.3521306.81 1194.4921373.56 1186.64
21402.68  1182.821418.97    118321436.65 1182.98

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 18929.8     .0519535.06    .035   20417     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19535.06   20417             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 18929.819534.06 1156.97   2041721436.65 1161.32

Downstream  Deck/Roadway Coordinates
    num=      23
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19250.65    1175    115019250.66    1175    116419321.13 1175.65 1170.65
19391.61 1175.95    116419462.08 1176.25 1171.2519532.56 1176.55  1164.8
19603.04 1176.85 1171.8519673.52 1177.15  1165.219743.99 1177.45 1172.45
19814.47 1177.82  1165.819884.95 1177.52 1172.5219955.43 1177.22  1165.2
 20025.9 1176.92 1171.9220096.38 1176.62  1164.820166.86 1176.32 1171.32
20237.34 1176.02    116420307.81 1175.72 1170.7220378.29 1175.42  1163.5
20448.77 1175.12 1170.1220519.25 1174.82    116320589.72 1174.52 1169.52
20660.19 1174.22    1163 20660.2 1174.22    1150

Downstream Bridge Cross Section Data
Station Elevation Data    num=      71
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19219.56  1159.119225.73 1157.3819241.06 1152.6919254.27    115019296.34    1150
19348.38    115019381.62 1150.5519383.91 1150.4419401.56    1151 19412.2  1151.6
19418.91    115219468.67    115219488.25 1152.3819518.57 1153.7719522.28  1152.9
19522.28  1153.919524.28  1153.919524.28  1151.919527.19 1146.33 19528.6 1146.33
19528.92 1144.09 19563.1 1136.9519641.28  1134.4 19688.2 1134.81 19787.1 1134.03
19835.67 1132.6619929.08 1131.1719982.57 1130.0120059.41 1129.6620132.81 1129.24
20168.05 1130.1720215.61 1131.5120269.26  1131.420316.63 1134.3620387.64 1136.47
20418.82 1146.3320420.23 1146.3320423.14    114920423.14    115120425.02    1151
20425.02    115020437.06 1149.35 20459.3  1155.820466.02 1157.26 20479.7 1157.84
20485.05 1158.7720512.66 1157.1720515.42  1157.5 20522.2  1158.520557.48 1158.22
20582.92 1156.09 20653.4 1155.3920723.84  1154.620730.99 1155.6220765.68 1194.16
20778.45  1194.520834.04 1195.4420850.47  1195.620883.86 1195.6620913.36 1195.59
20930.14 1195.55 20943.4  1195.420974.45  1189.220979.37 1183.4120988.19 1177.01
20997.96    117620998.93 1175.7921017.46  1174.421043.85  1175.321079.14 1175.57
21086.63 1176.03

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19219.56     .0519524.28    .03520423.14     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19524.2820423.14             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19219.5619524.28 1155.1420423.1421086.63 1160.13

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  9

Pier Data
Pier Station     Upstream=19391.61    Downstream=19391.61
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165

Pier Data
Pier Station     Upstream=19532.56    Downstream=19532.56
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165
```

```
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1140      10    1165

Pier Data
Pier Station     Upstream=19673.52    Downstream=19673.52
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166

Pier Data
Pier Station     Upstream=19814.47    Downstream=19814.47
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1130      10    1166

Pier Data
Pier Station     Upstream=19955.43    Downstream=19955.43
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1028      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1028      10    1166

Pier Data
Pier Station     Upstream=20096.38    Downstream=20096.38
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1025      10    1166
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1025      10    1166

Pier Data
Pier Station     Upstream=20237.34    Downstream=20237.34
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165

Pier Data
Pier Station     Upstream=20378.29    Downstream=20378.29
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1128      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1128      10    1165

Pier Data
Pier Station     Upstream=20519.25    Downstream=20519.25
Upstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165
Downstream     num=       2
    Width   Elev    Width   Elev
      10    1125      10    1165

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
```

Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1154.18	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1152.69	E.G. Elev (ft)	1154.12	1154.03
Q Total (cfs)	169000.00	W.S. Elev (ft)	1152.33	1152.25
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1143.95	1143.91
Q Weir (cfs)		Max Chl Dpth (ft)	23.09	23.01
Weir Sta Lft (ft)		Vel Total (ft/s)	10.74	10.68
Weir Sta Rgt (ft)		Flow Area (sq ft)	15739.66	15818.22
Weir Submerg		Froude # Chl	0.43	0.43
Weir Max Depth (ft)		Specif Force (cu ft)	212051.72	211651.88
Min Top Rd (ft)	1156.97	Hydr Depth (ft)	19.21	19.08
Min El Prs (ft)	1172.52	W.P. Total (ft)	1068.67	1089.57
Delta EG (ft)	0.28	Conv. Total (cfs)	4015031.5	3996564.8
Delta WS (ft)	0.28	Top Width (ft)	998.74	1073.82
BR Open Area (sq ft)	35095.42	Frctn Loss (ft)	0.09	0.04
BR Open Vel (ft/s)	10.74	C & E Loss (ft)	0.01	0.08
Coef of Q		Shear Total (lb/sq ft)	1.63	1.62
Br Sel Method	Energy only	Power Total (lb/ft s)	17.49	17.32

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1154.18	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1152.69	E.G. Elev (ft)	1154.12	1154.03
Q Total (cfs)	169000.00	W.S. Elev (ft)	1152.33	1152.25
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1143.95	1143.91
Q Weir (cfs)		Max Chl Dpth (ft)	23.09	23.01
Weir Sta Lft (ft)		Vel Total (ft/s)	10.74	10.68
Weir Sta Rgt (ft)		Flow Area (sq ft)	15739.76	15818.32
Weir Submerg		Froude # Chl	0.43	0.43
Weir Max Depth (ft)		Specif Force (cu ft)	212053.28	211653.44
Min Top Rd (ft)	1156.97	Hydr Depth (ft)	19.21	19.08
Min El Prs (ft)	1172.52	W.P. Total (ft)	1068.68	1089.57
Delta EG (ft)	0.28	Conv. Total (cfs)	4015070.3	3996602.5
Delta WS (ft)	0.28	Top Width (ft)	998.75	1073.83
BR Open Area (sq ft)	35095.42	Frctn Loss (ft)	0.09	0.04
BR Open Vel (ft/s)	10.74	C & E Loss (ft)	0.01	0.08
Coef of Q		Shear Total (lb/sq ft)	1.63	1.62
Br Sel Method	Energy only	Power Total (lb/ft s)	17.49	17.31

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.24

INPUT
Description: Downstream face of New Mill Ave Bridge

Station Elevation Data num= 71

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19219.56	1159.119	225.73	1157.38	19241.06	1152.69	19254.27	1150	19296.34	1150
19348.38	1150	19381.62	1150.55	19383.91	1150.44	19401.56	1151	19412.2	1151.6
19418.91	1152	19468.67	1152	19488.25	1152.38	19518.57	1153.77	19522.28	1152.9
19522.28	1153.9	19524.28	1153.9	19524.28	1151.9	19527.19	1146.33	19528.6	1146.33
19528.92	1144.09	19563.1	1136.95	19641.28	1134.4	19688.2	1134.81	19787.1	1134.03
19835.67	1132.66	19929.08	1131.17	19982.57	1130.01	20059.41	1129.66	20132.81	1129.24
20168.05	1130.17	20215.61	1131.51	20269.26	1131.42	20316.63	1134.36	20387.64	1136.47
20418.82	1146.33	20420.23	1146.33	20423.14	1149	20423.14	1152	20425.02	1151
20425.02	1150	20437.06	1149.35	20459.3	1155.8	20466.02	1157.26	20479.7	1157.84
20485.05	1158.77	20512.66	1157.17	20515.42	1157.5	20522.2	1158.5	20557.48	1158.22
20582.92	1156.09	20653.4	1155.39	20723.84	1154.6	20730.99	1155.62	20765.68	1194.16
20778.45	1194.5	20834.04	1195.44	20850.47	1195.6	20883.86	1195.66	20913.36	1195.59
20930.14	1195.55	20943.4	1195.4	20974.45	1189.2	20979.37	1183.41	20988.19	1177.01
20997.96	1176	20998.93	1175.79	21017.46	1174.4	21043.85	1175.3	21079.14	1175.57

21086.63 1176.03

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19219.56	.05	19524.28	.035	20423.14	.05

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

19524.28	20423.14	185.11	185.11	185.11	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19219.56	19524.28	1155.14	20423.14	21086.63	1160.13

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1153.91	Element			
Vel Head (ft)	1.49	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.41	Reach Len. (ft)	185.11	185.11	185.11
Crit W.S. (ft)	1143.40	Flow Area (sq ft)		17226.21	
E.G. Slope (ft/ft)	0.001059	Area (sq ft)	387.15	17226.21	51.75
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1169.84	Top Width (ft)	246.50	898.86	24.47
Vel Total (ft/s)	9.81	Avg. Vel. (ft/s)		9.81	
Max Chl Dpth (ft)	23.17	Hydr. Depth (ft)		19.16	
Conv. Total (cfs)	5193669.0	Conv. (cfs)		5193669.0	
Length Wtd. (ft)	185.11	Wetted Per. (ft)		910.24	
Min Ch El (ft)	1129.24	Shear (lb/sq ft)		1.25	
Alpha	1.00	Stream Power (lb/ft s)		12.27	
Frctn Loss (ft)	0.19	Cum Volume (acre-ft)	2437.93	13187.71	1277.23
C & E Loss (ft)	0.02	Cum SA (acres)	211.85	801.53	243.74

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1153.91	Element			
Vel Head (ft)	1.49	Wt. n-Val.		0.035	
W.S. Elev (ft)	1152.41	Reach Len. (ft)	185.11	185.11	185.11
Crit W.S. (ft)	1143.40	Flow Area (sq ft)		17226.43	
E.G. Slope (ft/ft)	0.001061	Area (sq ft)		17226.43	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	898.86	Top Width (ft)		898.86	
Vel Total (ft/s)	9.81	Avg. Vel. (ft/s)		9.81	
Max Chl Dpth (ft)	23.17	Hydr. Depth (ft)		19.16	
Conv. Total (cfs)	5188416.0	Conv. (cfs)		5188416.0	
Length Wtd. (ft)	185.11	Wetted Per. (ft)		911.65	
Min Ch El (ft)	1129.24	Shear (lb/sq ft)		1.25	
Alpha	1.00	Stream Power (lb/ft s)		12.28	
Frctn Loss (ft)	0.19	Cum Volume (acre-ft)	1.89	13188.54	0.44
C & E Loss (ft)	0.02	Cum SA (acres)	0.72	801.52	0.26

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.2

INPUT
Description: Upstream face of Old Mill Ave Bridge

Station Elevation Data num= 102

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19150.02	1165.7	19152.8	1165.2	19161.02	1163.2	19176.48	1155	19191.21	1151.73
19204.43	1150.1	19206.12	1150	19231.38	1150	19235.12	1150	19267.03	1150.28
19312.74	1152.5	19347.99	1151	19365.24	1151	19379.4	1151.17	19409.14	1151.52
19438.54	1151.6	19471.81	1152.53	19495.07	1152.4	19495.07	1153.4	19496.88	1153.4
19496.88	1151.4	19499.69	1146.3	19501.05	1146.3	19510.34	1140	19518.41	1138.4
19520.86	1138.3	19530.74	1135.8	19541.7	1135	19562.09	1133.1	19589.92	1132
19604.42	1131.8	19611.22	1131.4	19619.1	1131.5	19649.46	1131	19658.43	1131
19682.63	1131	19704.66	1131	19713.07	1131	19754.5	1131	19776.89	1131
19797.37	1131	19817.4	1130.1	19836.52	1130	19839.42	1130	19861.27	1129.4
19867.06	1129.4	19900.87	1129	19922.35	1129	19945.55	1129	19963.49	1128.2
19984.25	1128	20003.37	1128.7	20014.97	1128.8	20036.9	1129	20062.37	1129.2
20084.03	1129.4	20099.26	1129.8	20128.71	1130	20145.21	1130	20161.79	1131.1
20183.09	1132	20199.13	1132.8	20227.41	1133.4	20254.78	1134.4	20274.45	1135.1
20298.28	1136	20315.23	1137.3	20321.57	1138	20342.6	1143.7	20347.59	1145
20352.93	1146	20370.97	1146.33	20372.33	1146.33	20375.14	1151	20375.14	1153
20376.95	1153	20376.95	1152	20408.78	1152	20427.99	1159.38	20441.18	1159.19
20443.35	1158.98	20466.36	1154.74	20468.58	1154.7	20482.42	1153.49	20490.68	1152.71
20527.43	1153.18	20539.68	1153.01	20556.67	1159.5	20609.9	1162.36	20617.41	1163.52
20629.18	1164.44	20705.63	1170.37	20709.49	1170.7	20740.31	1172.13	20747.1	1172.14

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20813.79 1173.6620827.11 1173.9320876.18  1174.920885.58 1174.9720935.47 1176.61
20939.65 1176.6420963.78 1176.08

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19150.02     .0519496.88    .03520375.14     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19496.8820375.14            91.95   91.95   91.95             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19150.0219496.88 1157.2620375.1420963.78 1155.01

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1153.70   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.43   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1152.27   Reach Len. (ft)              22.98     22.98      22.98
  Crit W.S. (ft)            1142.32   Flow Area (sq ft)                   17587.27
  E.G. Slope (ft/ft)       0.000959   Area (sq ft)                310.23  17587.27       8.60
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1174.15   Top Width (ft)              263.36    878.26      32.53
  Vel Total (ft/s)             9.61   Avg. Vel. (ft/s)                      9.61
  Max Chl Dpth (ft)           24.27   Hydr. Depth (ft)                     20.03
  Conv. Total (cfs)       5457871.5   Conv. (cfs)                        5457871.5
  Length Wtd. (ft)            22.98   Wetted Per. (ft)                    889.92
  Min Ch El (ft)            1128.00   Shear (lb/sq ft)                      1.18
  Alpha                        1.00   Stream Power (lb/ft s)               11.37
  Frctn Loss (ft)              0.03   Cum Volume (acre-ft)      2436.44  13113.74    1277.10
  C & E Loss (ft)              0.03   Cum SA (acres)             210.77    797.76     243.62


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1153.70   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.43   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1152.27   Reach Len. (ft)              22.98     22.98      22.98
  Crit W.S. (ft)            1142.32   Flow Area (sq ft)                   17587.16
  E.G. Slope (ft/ft)       0.000959   Area (sq ft)                        17587.16
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             878.26   Top Width (ft)                       878.26
  Vel Total (ft/s)             9.61   Avg. Vel. (ft/s)                      9.61
  Max Chl Dpth (ft)           24.27   Hydr. Depth (ft)                     20.03
  Conv. Total (cfs)       5457818.5   Conv. (cfs)                        5457818.5
  Length Wtd. (ft)            22.98   Wetted Per. (ft)                    889.92
  Min Ch El (ft)            1128.00   Shear (lb/sq ft)                      1.18
  Alpha                        1.00   Stream Power (lb/ft s)               11.37
  Frctn Loss (ft)              0.03   Cum Volume (acre-ft)         1.89  13114.57       0.44
  C & E Loss (ft)              0.03   Cum SA (acres)               0.72    797.74       0.26


BRIDGE                  RIVER: Salt River
REACH: Reach 4             RS: 221.195

INPUT
Description: Old Mill Avenue Bridge (South Bound)
Distance from Upstream XS =   22.98
Deck/Roadway Width        =      46
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       23
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19154.58 1175.53 1149.4919191.08 1175.69 1149.4919266.08 1175.87 1159.67
19341.58 1176.15 1149.9519415.83 1176.42 1170.2219490.08 1176.69 1150.49
19560.06 1176.89 1170.6919628.48 1177.19 1150.9919696.46 1177.25 1171.05
19764.16 1177.31 1151.1119831.22 1177.35 1171.1519897.65  1177.4  1151.2
19964.72 1177.37 1171.0420031.61 1177.35 1151.1520099.31 1177.24 1171.04
20167.28 1177.18 1150.9820234.62 1176.89 1170.6920301.87 1176.72 1150.52
20371.22 1176.45 1170.2520444.72 1176.18 1149.9820519.22 1175.92 1169.72
20593.72 1175.66 1149.4620631.92 1175.54 1149.46

Upstream Bridge Cross Section Data
Station Elevation Data    num=     102
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19150.02  1165.7 19152.8  1165.219161.02 1163.2619176.48    115519191.21 1151.73
19204.43  1150.119206.12    115019231.38    115019235.12    115019267.03 1150.28
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19312.74  1152.519347.99    115119365.24    1151 19379.4 1151.1719409.14 1151.52
19438.54  1151.619471.81 1152.5319495.07  1152.419495.07  1153.419496.88  1153.4
19496.88  1151.419499.69  1146.319501.05  1146.319510.34    114019518.41  1138.4
19520.86  1138.319530.74  1135.8 19541.7    113519562.09  1133.119589.92    1132
19604.42  1131.819611.22  1131.4 19619.1  1131.519649.46    113119658.43    1131
19682.63    113119704.66    113119713.07    1131 19754.5    113119776.89    1131
19797.37    1131 19817.4  1130.119836.52    113019839.42    113019861.27  1129.4
19867.06  1129.419900.87    112919922.35    112919945.55    112919963.49  1128.2
19984.25    112820003.37  1128.720014.97  1128.8 20036.9    112920062.37  1129.2
20084.03  1129.420099.26  1129.820128.71    113020145.21    113020161.79  1131.1
20183.09    113220199.13  1132.820227.41  1133.420254.78  1134.420274.45  1135.1
20298.28    113620315.23  1137.320321.57    1138 20342.6  1143.720347.59    1145
20352.93    114620370.97 1146.3320372.33 1146.3320375.14    115120375.14    1153
20376.95    115320376.95    115220408.78    115220427.99 1159.3820441.18 1159.19
20443.35 1158.9820466.36 1154.7420468.58  1154.720482.42 1153.4920490.68 1152.71
20527.43 1153.1820539.68 1153.0120556.67  1159.5 20609.9 1162.3620617.41 1163.52
20629.18 1164.4420705.63 1170.3720709.49  1170.720740.31 1172.13 20747.1 1172.14
20813.79 1173.6620827.11 1173.9320876.18  1174.920885.58 1174.9720935.47 1176.61
20939.65 1176.6420963.78 1176.08

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19150.02     .0519496.88    .03520375.14     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19496.8820375.14             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19150.0219496.88 1157.2620375.1420963.78 1155.01

Downstream  Deck/Roadway Coordinates
    num=      23
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19154.58 1175.53 1149.4919191.08 1175.69 1149.4919266.08 1175.87 1159.67
19341.58 1176.15 1149.9519415.83 1176.42 1170.2219490.08 1176.69 1150.49
19560.06 1176.89 1170.6919628.48 1177.19 1150.9919696.46 1177.25 1171.05
19764.16 1177.31 1151.1119831.22 1177.35 1171.1519897.65  1177.4  1151.2
19964.72 1177.37 1171.0420031.61 1177.35 1151.1520099.31 1177.24 1171.04
20167.28 1177.18 1150.9820234.62 1176.89 1170.6920301.87 1176.72 1150.52
20371.22 1176.45 1170.2520444.72 1176.18 1149.9820519.22 1175.92 1169.72
20593.72 1175.66 1149.4620631.92 1175.54 1149.46

Downstream Bridge Cross Section Data
Station Elevation Data    num=     152
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
18809.75  1162.718820.39 1162.6418831.85 1162.5318857.82 1163.8118877.18 1164.27
18888.32  1163.518900.49 1163.6518919.16    116418937.36 1164.3418946.61 1164.15
18950.27  1163.318954.81 1162.9518960.79 1163.3718965.21 1163.2518972.45 1162.61
18982.18    116318988.86 1162.9418996.22 1162.0519006.32 1162.0219025.23 1162.29
19044.39  1162.619078.37  1162.3 19098.6 1164.3319105.58  1164.119115.02 1162.75
19130.31    1155 19133.8 1154.5319144.84 1154.3419150.64 1153.8119167.48 1153.29
 19179.2  1151.719182.62    115119191.01    115019238.27    115019254.74 1153.88
19260.54    115519291.77 1153.8919319.64 1152.92   19353 1150.5819371.19    1151
19383.74    115119410.81 1150.3419426.92 1149.8419444.75 1151.85 19459.7 1152.23
19474.59  1152.619490.12 1153.1319493.26 1151.6719493.26 1152.6719495.07 1152.67
19495.07 1150.6719497.88 1146.3319499.24 1146.3319510.34    114019518.41  1138.4
19520.86  1138.319530.74  1135.8 19541.7    113519562.09  1133.119589.92    1132
19604.42  1131.819611.22  1131.4 19619.1  1131.519649.46    113119658.43    1131
19682.63    113119704.66    113119713.07    1131 19754.5    113119776.89    1131
19797.37    1131 19817.4  1130.119836.52    113019839.42    113019861.27  1129.4
19867.06  1129.419900.87    112919922.35    112919945.55    112919963.49  1128.2
19984.25    112820003.37  1128.720014.97  1128.8 20036.9    112920062.37  1129.2
20084.03  1129.420099.26  1129.820128.71    113020145.21    113020161.79  1131.1
20183.09    113220199.13  1132.820227.41  1133.420254.78  1134.420274.45  1135.1
20298.28    113620315.23  1137.320321.57    1138 20342.6  1143.720347.59    1145
20352.93    114620364.27 1146.3320365.63 1146.3320368.44  1148.520368.44  1153.5
20370.26  1153.520370.26    115120400.72    115120401.18 1151.0720405.27  1151.4
   20417  1155.620428.13 1159.5120436.87 1159.3720442.46 1156.5920446.98  1154.2
20519.02 1155.5520524.48 1156.7720534.92 1157.3420620.75  1170.520643.43  1172.2
20660.88 1173.6320669.08 1174.3220688.98 1174.8120700.28 1176.22 20703.7  1177.1
20715.51  1177.520718.07 1179.2720725.74 1180.3820776.61  1182.220792.04  1182.5
20843.33 1182.8320868.71 1183.6620901.02  1183.620918.46 1181.9520925.98  1180.7
20985.54 1181.4620988.38  1181.521004.93 1178.4621023.04  1178.921062.81    1179
21073.56 1178.98 21092.5 1179.12 21172.2 1180.2821191.25  1180.621257.23  1180.9
21264.74 1180.8521321.62  1181.321324.15 1181.2521396.66 1182.5721401.59  1182.7
21419.15 1182.8721430.86 1182.71

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
```

```
18809.75     .0519495.07    .03520368.44     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19495.0720368.44             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
18809.7519495.07 1156.9520368.4421430.86 1155.48

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  9

Pier Data
Pier Station     Upstream=19341.58    Downstream=19341.58
Upstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155
Downstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155

Pier Data
Pier Station     Upstream=19490.08    Downstream=19490.08
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=19628.48    Downstream=19628.48
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=19764.16    Downstream=19764.16
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=19897.65    Downstream=19897.65
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20031.61    Downstream=20031.61
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20167.28    Downstream=20167.28
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
```

```
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20301.87    Downstream=20301.87
Upstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155
Downstream     num=       2
    Width   Elev    Width   Elev
       9    1125       9    1155

Pier Data
Pier Station     Upstream=20444.72    Downstream=20444.72
Upstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155
Downstream     num=       2
    Width   Elev    Width   Elev
      14    1125      14    1155

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1153.70   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1152.27   E.G. Elev (ft)               1153.65       1153.57
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1151.96       1151.86
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1142.85       1142.84
  Q Weir (cfs)                           Max Chl Dpth (ft)              23.96         23.86
  Weir Sta Lft (ft)                      Vel Total (ft/s)               10.43         10.50
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           16200.92      16101.27
  Weir Submerg                           Froude # Chl                   0.51          0.51
  Weir Max Depth (ft)                    Specif Force (cu ft)       221502.02     220216.25
  Min Top Rd (ft)              1164.65   Hydr Depth (ft)                19.68         19.66
  Min El Prs (ft)              1171.15   W.P. Total (ft)              1083.46       1077.12
  Delta EG (ft)                   0.23   Conv. Total (cfs)          4174637.8     4148116.3
  Delta WS (ft)                   0.27   Top Width (ft)               1018.62        989.59
  BR Open Area (sq ft)        27050.61   Frctn Loss (ft)                 0.08          0.03
  BR Open Vel (ft/s)             10.50   C & E Loss (ft)                 0.00          0.07
  Coef of Q                              Shear Total (lb/sq ft)          1.53          1.55
  Br Sel Method            Energy only   Power Total (lb/ft s)          15.96         16.26


BRIDGE OUTPUT    Profile #PF#2
Opening : Bridge #1

  E.G. US. (ft)                1153.70   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1152.27   E.G. Elev (ft)               1153.65       1153.57
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1151.96       1151.86
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1142.85       1142.84
  Q Weir (cfs)                           Max Chl Dpth (ft)              23.96         23.86
  Weir Sta Lft (ft)                      Vel Total (ft/s)               10.43         10.50
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           16200.82      16101.17
  Weir Submerg                           Froude # Chl                   0.51          0.51
  Weir Max Depth (ft)                    Specif Force (cu ft)       221500.38     220214.61
  Min Top Rd (ft)              1164.65   Hydr Depth (ft)                19.68         19.66
  Min El Prs (ft)              1171.15   W.P. Total (ft)              1083.46       1077.12
  Delta EG (ft)                   0.23   Conv. Total (cfs)          4174599.3     4148077.5
  Delta WS (ft)                   0.27   Top Width (ft)               1018.61        989.58
  BR Open Area (sq ft)        27050.61   Frctn Loss (ft)                 0.08          0.03
  BR Open Vel (ft/s)             10.50   C & E Loss (ft)                 0.00          0.07
  Coef of Q                              Shear Total (lb/sq ft)          1.53          1.55
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Br Sel Method	Energy only	Power Total (lb/ft s)	15.96	16.26

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.19

INPUT
Description: Downstream face of Old Mill Ave Bridge

Station Elevation Data num= 152

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18809.75	1162.718	820.39	1162.6	418831.85	1162.5	318857.82	1163.8	118877.18	1164.27
18888.32	1163.518	900.49	1163.6	518919.16	116418	937.36	1164.3	418946.61	1164.15
18950.27	1163.318	954.81	1162.9	518960.79	1163.3	718965.21	1163.2	518972.45	1162.61
18982.18	116318	988.86	1162.9	418996.22	1162.0	519006.32	1162.0	219025.23	1162.29
19044.39	1162.619	078.37	1162.3	19098.6	1164.3	319105.58	1164.1	19115.02	1162.75
19130.31	1155	19133.8	1154.5	319144.84	1154.3	419150.64	1153.8	119167.48	1153.29
19179.2	1151.719	182.62	115119	191.01	115019	238.27	115019	254.74	1153.88
19260.54	115519	291.77	1153.8	919319.64	1152.92	19353	1150.5	819371.19	1151
19383.74	115119	410.81	1150.3	419426.92	1149.8	419444.75	1151.85	19459.7	1152.23
19474.59	1152.619	490.12	1153.1	319493.26	1151.6	719493.26	1152.6	719495.07	1152.67
19495.07	1150.671	9497.88	1146.3	319499.24	1146.3	319510.34	114019	518.41	1138.4
19520.86	1138.319	530.74	1135.8	19541.7	113519	562.09	1133.119	589.92	1132
19604.42	1131.819	611.22	1131.4	19619.1	1131.519	649.46	113119	658.43	1131
19682.63	113119	704.66	113119	713.07	1131	19754.5	113119	776.89	1131
19797.37	1131	19817.4	1130.119	836.52	113019	839.42	113019	861.27	1129.4
19867.06	1129.419	900.87	112919	922.35	112919	945.55	112919	963.49	1128.2
19984.25	112820	003.37	1128.7	20014.97	1128.8	20036.9	112920	062.37	1129.2
20084.03	1129.420	099.26	1129.8	20128.71	113020	145.21	113020	161.79	1131.1
20183.09	113220	199.13	1132.8	20227.41	1133.4	20254.78	1134.4	20274.45	1135.1
20298.28	113620	315.23	1137.3	20321.57	1138	20342.6	1143.7	20347.59	1145
20352.93	114620	364.27	1146.3	20365.63	1146.3	20368.44	1148.5	20368.44	1153.5
20370.26	1153.520	370.26	115120	400.72	115120	401.18	1151.0	720405.27	1151.4
20417	1155.620	428.13	1159.5	120436.87	1159.3	720442.46	1156.5	920446.98	1154.2
20519.02	1155.552	0524.48	1156.7	720534.92	1157.3	420620.75	1170.5	20643.43	1172.2
20660.88	1173.632	0669.08	1174.3	220688.98	1174.8	120700.28	1176.22	20703.7	1177.1
20715.51	1177.520	718.07	1179.2	720725.74	1180.3	820776.61	1182.2	20792.04	1182.5
20843.33	1182.832	0868.71	1183.6	620901.02	1183.6	20918.46	1181.952	0925.98	1180.7
20985.54	1181.462	0988.38	1181.5	21004.93	1178.4	621023.04	1178.9	21062.81	1179
21073.56	1178.98	21092.5	1179.12	21172.2	1180.2	821191.25	1180.6	21257.23	1180.9
21264.74	1180.852	1321.62	1181.3	21324.15	1181.2	521396.66	1182.5	721401.59	1182.7
21419.15	1182.872	1430.86	1182.71						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18809.75	.05	19495.07	.03	20368.44	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19495.07	20368.44	790	650.87	300	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18809.75	19495.07	1156.95	20368.44	21430.86	1155.48

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1153.47	Element			
Vel Head (ft)	1.48	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.99	Reach Len. (ft)	790.00	650.87	300.00
Crit W.S. (ft)	1142.33	Flow Area (sq ft)		17327.40	
E.G. Slope (ft/ft)	0.001000	Area (sq ft)	253.66	17327.40	34.27
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1097.93	Top Width (ft)	187.89	873.37	36.67
Vel Total (ft/s)	9.75	Avg. Vel. (ft/s)		9.75	
Max Chl Dpth (ft)	23.99	Hydr. Depth (ft)		19.84	
Conv. Total (cfs)	5344232.5	Conv. (cfs)		5344232.5	
Length Wtd. (ft)	650.87	Wetted Per. (ft)		884.90	
Min Ch El (ft)	1128.00	Shear (lb/sq ft)		1.22	
Alpha	1.00	Stream Power (lb/ft s)		11.92	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)	2435.98	13078.96	1277.06
C & E Loss (ft)	0.00	Cum SA (acres)	210.39	795.99	243.57

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1153.47	Element			
Vel Head (ft)	1.48	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.99	Reach Len. (ft)	790.00	650.87	300.00

Crit W.S. (ft)	1142.33	Flow Area (sq ft)		17327.29	
E.G. Slope (ft/ft)	0.001000	Area (sq ft)		17327.29	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	873.37	Top Width (ft)		873.37	
Vel Total (ft/s)	9.75	Avg. Vel. (ft/s)		9.75	
Max Chl Dpth (ft)	23.99	Hydr. Depth (ft)		19.84	
Conv. Total (cfs)	5344179.5	Conv. (cfs)		5344179.5	
Length Wtd. (ft)	650.87	Wetted Per. (ft)		884.90	
Min Ch El (ft)	1128.00	Shear (lb/sq ft)		1.22	
Alpha	1.00	Stream Power (lb/ft s)		11.92	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)	1.57	13079.79	0.41
C & E Loss (ft)	0.00	Cum SA (acres)	0.46	795.98	0.23

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.06

INPUT
Description: Upstream face of SPRR bridge

Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18840	1164.719	100.66	1166.531	9100.76	1162.219	100.86	1158.719	131.19	1154.4
19133.48	1154.419	162.91	1152	19165.2	1152	19194.54	1148.619	195.73	1148.6
19196.93	1148.619	226.26	1148	19228.55	1148	19257.89	1148	19260.28	1148
19289.61	1147.6	19291.9	1147.619	321.44	1146	19326.41	1146	19331.88	1145.7
19359.72	1145	19370.37	1145	19402.49	1144	19419.89	1144.519	427.85	1144.5
19432.82	1146.319	452.71	1147.819	498.46	1150	19517.35	1151	19559.3	1149.5
19559.3	1152	19561.3	1152	19561.3	1149.519	572.21	1146.331	9573.71	1146.33
19619.89	1132.119	682.54	1126	19723.61	1128	19731.57	1128	19801.88	1126.8
19874.97	1126	19882.93	1126	19953.04	1126	20026.94	1126.120	034.89	1126.1
20110.17	1130	20187.95	1133.4	20196.3	1133.420	272.28	1135	20350.05	1135.2
20358.01	1135.220	380.68	1135	20390.1	1145.852	0390.29	1153.520	391.46	1153.5
20391.47	1150.952	0402.54	1147.952	0409.29	1146.592	0413.28	1147.782	0454.45	1159.2
20464.19	1159.37	20467.8	1158.192	0486.14	1151.152	0494.68	1151.412	0606.21	1153.2
20608.52	1153.612	0628.36	1158.22	0651.85	1164.422	0656.11	1165.152	0725.19	1167.4
20752.42	1166.862	0759.76	1168.642	0773.48	1173.92	0827.04	1176.73		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18840	.05	19561.3	.035	20390.29	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19561.32	0390.29	84.74	84.74	84.74	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18840	19561.3	1155	20390.29	20827.04	1156.8

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1152.84	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.47	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.37	Reach Len. (ft)	31.00	31.00	31.00
Crit W.S. (ft)	1140.96	Flow Area (sq ft)		17359.38	
E.G. Slope (ft/ft)	0.000934	Area (sq ft)	1475.43	17359.38	89.62
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1260.04	Top Width (ft)	388.64	828.94	42.46
Vel Total (ft/s)	9.74	Avg. Vel. (ft/s)		9.74	
Max Chl Dpth (ft)	25.37	Hydr. Depth (ft)		20.94	
Conv. Total (cfs)	5531272.5	Conv. (cfs)		5531272.5	
Length Wtd. (ft)	31.00	Wetted Per. (ft)		844.28	
Min Ch El (ft)	1126.00	Shear (lb/sq ft)		1.20	
Alpha	1.00	Stream Power (lb/ft s)		11.67	
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	2420.30	12819.82	1276.64
C & E Loss (ft)	0.02	Cum SA (acres)	205.16	783.28	243.30

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1152.84	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.47	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.37	Reach Len. (ft)	31.00	31.00	31.00
Crit W.S. (ft)	1140.96	Flow Area (sq ft)		17359.38	
E.G. Slope (ft/ft)	0.000934	Area (sq ft)		17359.38	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	

Top Width (ft)	828.94	Top Width (ft)		828.94		
Vel Total (ft/s)	9.74	Avg. Vel. (ft/s)		9.74		
Max Chl Dpth (ft)	25.37	Hydr. Depth (ft)		20.94		
Conv. Total (cfs)	5531272.5	Conv. (cfs)		5531272.5		
Length Wtd. (ft)	31.00	Wetted Per. (ft)		844.28		
Min Ch El (ft)	1126.00	Shear (lb/sq ft)		1.20		
Alpha	1.00	Stream Power (lb/ft s)		11.67		
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	1.57	12820.65	0.41	
C & E Loss (ft)	0.02	Cum SA (acres)	0.46	783.26	0.23	

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 221.055

INPUT
Description: Southern Pacific Railraod
Distance from Upstream XS = 31
Deck/Roadway Width = 23
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 20

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
18840	1164.7	1164.719	100.66	1166.53	1166.531	9100.76	1166.53	1162.23
19131.19	1166.6	1162.319	162.91	1166.65	1162.351	9194.54	1166.72	1162.42
19226.26	1166.78	1162.519	257.89	1166.84	1162.541	9289.61	1167.09	1161.79
19321.44	1167.09	1161.791	9419.89	1167.45	1162.151	9571.55	1167.45	1162.15
19723.61	1167.46	1162.161	9874.97	1167.48	1162.182	0026.94	1167.51	1162.21
20187.95	1167.53	1162.232	0350.05	1167.55	1162.252	0501.31	1167.57	1162.27
20603.15	1167.5	1162.22	0631.99	1167.52	1163.07			

Upstream Bridge Cross Section Data
Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18840	1164.719	100.66	1166.531	9100.76	1162.219	100.86	1158.719	131.19	1154.4
19133.48	1154.419	162.91	1152	19165.2	1152	19194.54	1148.619	195.73	1148.6
19196.93	1148.619	226.26	1148	19228.55	1148	19257.89	1148	19260.28	1148
19289.61	1147.6	19291.9	1147.619	321.44	1146	19326.41	1146	19331.88	1145.7
19359.72	1145	19370.37	1145	19402.49	1144	19419.89	1144.519	427.85	1144.5
19432.82	1146.319	452.71	1147.819	498.46	1150	19517.35	1151	19559.3	1149.5
19559.3	1152	19561.3	1152	19561.3	1149.519	572.21	1146.331	9573.71	1146.33
19619.89	1132.119	682.54	1126	19723.61	1126	19731.57	1126	19801.88	1126.8
19874.97	1126	19882.93	1126	19953.04	1126	20026.94	1126.120	034.89	1126.1
20110.17	1130	20187.95	1133.4	20196.3	1133.420	272.28	1135	20350.05	1135.2
20358.01	1135.220	380.68	1135	20390.1	1145.852	0390.29	1153.520	391.46	1153.5
20391.47	1150.952	0402.54	1147.952	0409.29	1146.592	0413.28	1147.782	0454.45	1159.2
20464.19	1159.37	20467.8	1158.192	0486.14	1151.152	0494.68	1151.412	0606.21	1153.2
20608.52	1153.612	0628.36	1158.22	0651.85	1164.422	0656.11	1165.152	0725.19	1167.4
20752.42	1166.862	0759.76	1168.642	0773.48	1173.92	0827.04	1176.73		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18840	.05	19561.3	.03	20390.29	.05

Bank Sta: Left	Right	Coeff Contr.	Expan.
19561.3	20390.29	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18840	19561.3	1155	20390.29	20827.04	1156.8

Downstream Deck/Roadway Coordinates
num= 20

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
18840	1164.7	1164.719	100.66	1166.53	1166.531	9100.76	1166.53	1162.23
19131.19	1166.6	1162.319	162.91	1166.65	1162.351	9194.54	1166.72	1162.42
19226.26	1166.78	1162.519	257.89	1166.84	1162.541	9289.61	1167.09	1161.79
19321.44	1167.09	1161.791	9419.89	1167.45	1162.151	9571.55	1167.45	1162.15
19723.61	1167.46	1162.161	9874.97	1167.48	1162.182	0026.94	1167.51	1162.21
20187.95	1167.53	1162.232	0350.05	1167.55	1162.252	0501.31	1167.57	1162.27
20603.15	1167.5	1162.22	0631.99	1167.52	1163.07			

Downstream Bridge Cross Section Data
Station Elevation Data num= 75

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18840	1164.719	100.66	1166.531	9100.76	1162.219	100.86	1158.719	131.19	1154.4
19133.48	1154.419	162.91	1152	19165.2	1152	19194.54	1148.619	195.73	1148.6
19196.93	1148.619	226.26	1148	19228.55	1148	19257.89	1148	19260.28	1148
19289.61	1147.6	19291.9	1147.619	321.44	1146	19326.41	1146	19331.88	1145.7
19359.72	1145	19370.37	1145	19402.49	1144	19419.89	1144.519	427.85	1144.5

```
19432.82  1146.319452.71  1147.819498.46    115019517.35    115119572.76  1149.5
19572.76    115219574.76    115219574.76    114719582.84 1146.3319584.34 1146.33
19619.89  1132.119682.54    112619723.61    112819731.57    112819801.88  1126.8
19874.97    112619882.93    112619953.04    112620026.94  1126.120034.89  1126.1
20110.17    113020187.95  1133.4 20196.3  1133.420272.28    113520350.05  1135.2
20358.01  1135.220380.68    113520387.21 1146.3320388.81 1146.3320388.81  1153.5
20389.99  1153.520390.01    115120391.83 1150.4720395.86 1145.5420431.39 1154.56
20452.23 1159.2820454.87  1159.320472.71 1153.73 20483.2 1150.5120500.14 1151.09
20574.21 1152.0120608.64  1155.420657.71 1163.9320673.68 1164.5720730.98 1166.36
20750.08 1170.8720751.88  1171.120779.87 1172.1820800.22 1175.0920819.81 1173.62

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18840    .03519574.76    .03520388.81    .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19574.7620388.81             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1884019574.76    115520388.8120819.81 1158.49

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  16

Pier Data
Pier Station     Upstream=19133.34    Downstream=19133.34
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19165.06    Downstream=19165.06
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream= 19193.7    Downstream= 19193.7
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19228.41    Downstream=19228.41
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19260.04    Downstream=19260.04
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19291.76    Downstream=19291.76
Upstream     num=       2
```

```
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19323.59    Downstream=19323.59
Upstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163
Downstream     num=       2
    Width   Elev    Width   Elev
     2.3    1120     2.3    1163

Pier Data
Pier Station     Upstream=19424.89    Downstream=19424.89
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=19576.55    Downstream=19576.55
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=19728.61    Downstream=19728.61
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=19879.97    Downstream=19879.97
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20031.94    Downstream=20031.94
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20192.95    Downstream=20192.95
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20355.05    Downstream=20355.05
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
```

```
Pier Station     Upstream=20506.31    Downstream=20506.31
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Pier Data
Pier Station     Upstream=20608.15    Downstream=20608.15
Upstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163
Downstream     num=       2
    Width   Elev    Width   Elev
       8    1120       8    1163

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream water surface

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1152.84   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1151.37   E.G. Elev (ft)               1152.78       1152.74
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1151.10       1151.02
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1141.37       1141.36
  Q Weir (cfs)                           Max Chl Dpth (ft)              25.10         25.02
  Weir Sta Lft (ft)                      Vel Total (ft/s)               10.41         10.53
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           16237.83      16046.93
  Weir Submerg                           Froude # Chl                   0.40          0.41
  Weir Max Depth (ft)                    Specif Force (cu ft)       231834.45     230292.88
  Min Top Rd (ft)              1159.46   Hydr Depth (ft)                20.79         20.89
  Min El Prs (ft)              1166.53   W.P. Total (ft)              1020.67       1000.07
  Delta EG (ft)                   0.19   Conv. Total (cfs)          4360642.5     4334052.5
  Delta WS (ft)                   0.25   Top Width (ft)               1181.54       1191.69
  BR Open Area (sq ft)        32758.78   Frctn Loss (ft)                 0.03          0.04
  BR Open Vel (ft/s)             10.53   C & E Loss (ft)                 0.00          0.06
  Coef of Q                              Shear Total (lb/sq ft)          1.49          1.52
  Br Sel Method            Energy only   Power Total (lb/ft s)          15.53         16.04


BRIDGE OUTPUT    Profile #PF#2
Opening : Bridge #1

  E.G. US. (ft)                1152.84   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1151.37   E.G. Elev (ft)               1152.78       1152.74
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1151.10       1151.02
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1141.37       1141.36
  Q Weir (cfs)                           Max Chl Dpth (ft)              25.10         25.02
  Weir Sta Lft (ft)                      Vel Total (ft/s)               10.41         10.53
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           16237.83      16046.93
  Weir Submerg                           Froude # Chl                   0.40          0.41
  Weir Max Depth (ft)                    Specif Force (cu ft)       231834.45     230292.88
  Min Top Rd (ft)              1159.46   Hydr Depth (ft)                20.79         20.89
  Min El Prs (ft)              1166.53   W.P. Total (ft)              1020.67       1000.07
  Delta EG (ft)                   0.19   Conv. Total (cfs)          4360642.5     4334052.5
  Delta WS (ft)                   0.25   Top Width (ft)               1181.54       1191.69
  BR Open Area (sq ft)        32758.78   Frctn Loss (ft)                 0.03          0.04
  BR Open Vel (ft/s)             10.53   C & E Loss (ft)                 0.00          0.06
  Coef of Q                              Shear Total (lb/sq ft)          1.49          1.52
  Br Sel Method            Energy only   Power Total (lb/ft s)          15.53         16.04
```

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.05

INPUT
Description: Downstream face of SPRR bridge

Station Elevation Data num= 75

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18840	1164.719	100.66	1166.53	19100.76	1162.21	9100.86	1158.71	9131.19	1154.4
19133.48	1154.41	9162.91	1152	19165.2	115219194.54		1148.61	9195.73	1148.6
19196.93	1148.61	9226.26	114819228.55		114819257.89		114819260.28		1148
19289.61	1147.6	19291.9	1147.61	9321.44	114619326.41		114619331.88		1145.7
19359.72	114519370.37		114519402.49		114419419.89		1144.51	9427.85	1144.5
19432.82	1146.31	9452.71	1147.81	9498.46	115019517.35		115119572.76		1149.5
19572.76	115219574.76		115219574.76		114719582.84		1146.331	9584.34	1146.33
19619.89	1132.11	9682.54	112619723.61		112819731.57		112819801.88		1126.8
19874.97	112619882.93		112619953.04		112620026.94		1126.12	0034.89	1126.1
20110.17	113020187.95		1133.4	20196.3	1133.42	0272.28	113520350.05		1135.2
20358.01	1135.22	0380.68	113520387.21		1146.332	0388.81	1146.332	0388.81	1153.5
20389.99	1153.52	0390.01	115120391.83		1150.472	0395.86	1145.542	0431.39	1154.56
20452.23	1159.282	0454.87	1159.32	0472.71	1153.73	20483.2	1150.512	0500.14	1151.09
20574.21	1152.012	0608.64	1155.42	0657.71	1163.932	0673.68	1164.572	0730.98	1166.36
20750.08	1170.872	0751.88	1171.12	0779.87	1172.182	0800.22	1175.092	0819.81	1173.62

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18840	.035	19574.76	.035	20388.81	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19574.76	20388.81	210	167.68	80	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18840	19574.76	115	520388.81	20819.81	1158.49

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1152.65	Element			
Vel Head (ft)	1.53	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.12	Reach Len. (ft)	210.00	167.68	80.00
Crit W.S. (ft)	1140.98	Flow Area (sq ft)		16999.54	
E.G. Slope (ft/ft)	0.000983	Area (sq ft)	1389.25	16999.54	80.41
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1262.73	Top Width (ft)	399.93	814.05	48.76
Vel Total (ft/s)	9.94	Avg. Vel. (ft/s)		9.94	
Max Chl Dpth (ft)	25.12	Hydr. Depth (ft)		20.88	
Conv. Total (cfs)	5390408.0	Conv. (cfs)		5390408.0	
Length Wtd. (ft)	167.68	Wetted Per. (ft)		832.82	
Min Ch El (ft)	1126.00	Shear (lb/sq ft)		1.25	
Alpha	1.00	Stream Power (lb/ft s)		12.45	
Frctn Loss (ft)	0.18	Cum Volume (acre-ft)	2417.72	12787.68	1276.48
C & E Loss (ft)	0.01	Cum SA (acres)	204.42	781.74	243.22

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1152.65	Element			
Vel Head (ft)	1.53	Wt. n-Val.		0.035	
W.S. Elev (ft)	1151.12	Reach Len. (ft)	210.00	167.68	80.00
Crit W.S. (ft)	1140.98	Flow Area (sq ft)		16999.54	
E.G. Slope (ft/ft)	0.000983	Area (sq ft)		16999.54	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	814.05	Top Width (ft)		814.05	
Vel Total (ft/s)	9.94	Avg. Vel. (ft/s)		9.94	
Max Chl Dpth (ft)	25.12	Hydr. Depth (ft)		20.88	
Conv. Total (cfs)	5390408.0	Conv. (cfs)		5390408.0	
Length Wtd. (ft)	167.68	Wetted Per. (ft)		832.82	
Min Ch El (ft)	1126.00	Shear (lb/sq ft)		1.25	
Alpha	1.00	Stream Power (lb/ft s)		12.45	
Frctn Loss (ft)	0.18	Cum Volume (acre-ft)		12788.51	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		781.72	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 221.02

INPUT
Description:
Station Elevation Data num= 210

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15044.3	116	115046.74	1160.8	115054.99	1160.9	915067.31	1160.6	915118.09	1159.67
15188.86	1159.9	15261.54	1159.9	715295.45	1160.1	415332.02	1158.6	115339.82	1158.24
15380.65	1157.7	15388.69	1157.7	615513.83	1159.1	115577.72	1158.4	215622.59	1158.37
15670.19	1158.3	15740.55	1159.1	815755.81	1159.1	915780.94	1158.42	15794.9	1158.07
15840.15	1157	15862.8	1158.0	415868.58	1158.2	515878.24	1158.2	715931.25	1157.44
16026.39	1158.3	16042.1	1158.3	516063.87	1158.0	616173.44	1157.7	216198.77	1157.57
16240.13	1156.9	16263.89	1157.7	716286.32	1156.4	916315.25	1157.6	816425.38	1156.64
16472.1	1156.2	16481.97	1156.1	316484.62	1156.2	416543.72	1155.97	16656.3	1155.75
16680.03	1156.4	16701.67	1155.6	816728.06	1157.12	16750.9	1156.9	516855.76	1157.05
16901.91	1157.1	16958.94	1156.6	217074.38	1155.6	617090.35	1156.28	17098.2	1156.49
17121.74	1155.1	17157.02	1155.3	917177.67	1155.3	717290.67	1155.8	117359.48	1156.44
17401.65	1156.6	17496.83	1157.4	717533.23	1157.7	117610.32	1157.9	617651.54	1158.27
17781.11	1158.5	17812.58	1158.8	317889.77	1158.4	817945.95	1158.4	318065.89	1158.44
18105.38	1158.3	18202.28	1157.8	818260.45	1157.8	418310.83	1158.05	18378	1158.54
18419.2	1157.7	18429.86	1157.3	818444.45	1157.7	718468.43	1158.2	518483.22	1156.71
18487.84	1156.7	18552	1157.6	218598.58	1157.51	18671.6	1157.4	718724.73	1157.28
18802.71	1157.1	18855.51	1156.8	918882.85	1156.4	18939.89	1157.0	118962.01	1156.9
18980.67	1156.7	18996.52	1156.7	519046.82	1156.3	919054.65	1155.9	519125.72	1152.64
19144.8	1157.3	19147.3	1157.8	119158.87	1158.7	819187.22	1152.7	319199.35	1150.01
19201.06	1149.3	19219.83	1149.8	719235.69	1149.9	519258.88	1149.0	119304.33	1148.04
19324	1149.5	19332.28	1149.3	819355.27	1148.9	819376.72	1147.7	219403.68	1146.08
19419.08	1147.1	19423.4	1147.2	919495.54	1154.0	519509.58	1149.5	19509.58	1152
19511.58	115	19511.58	1146.33	19519	1146.3	319549.33	1135.3	619552.87	1133.4
19554.34	1133.5	19573.39	1132.4	719596.68	1135.0	219601.53	1134.8	219702.75	1131
19732.46	1130.5	19814.47	1130.3	419836.04	1130.1	819975.05	1131.8	20064.35	1130.6
20095.86	1130.06	20155.2	1130.7	520233.83	1131.55	20325.5	1131.3	820376.39	1136.86
20379.97	1146.3	20381.47	1146.3	20381.47	115	20383.47	115	20383.47	1148.6
20392.38	1148.5	20393.98	1148.2	820394.98	1150.3	720413.05	1146.2	20438.31	1154.55
20450.39	1158.3	20461.34	1158.4	220468.37	1155.9	120484.16	1152.4	820509.39	1152.81
20518.26	1153.2	20526.01	1154.6	720558.65	1161.1	20642.55	1164.38	20670.1	1166.06
20685.24	1168.8	20694.24	1171.2	520759.53	1195.5	820766.38	1193.5	620794.56	1193.49
20802.53	119	20860.02	1192.4	820891.04	1189.0	320921.83	1184.5	520973.53	1176.58
21007.78	1169.7	21020.9	1166.7	21043.59	1167.8	621058.76	1167.3	921077.96	1165.1
21084.16	1164.5	21125.91	1172.4	921137.04	1175.4	421155.09	1177.0	621179.84	1178.32
21199.1	1179.7	21217.63	1179.9	621324.45	1182.8	521329.09	1182.8	921337.12	1180.97
21339.29	1181.3	21359.14	1183.2	721368.63	1182.1	621379.89	1181.4	21410.49	1180.99
21439.46	1180.8	21455.92	1180.0	621468.95	1179.3	121470.21	1179.7	421475.48	1179.98
21499.92	1177.3	21505.23	1176.9	21509.4	1177.8	421555.88	1191.1	721570.26	1193.97
21572.09	1194.8	21600.37	1195.6	121610.52	1195.6	21618.72	1196.1	321666.21	1196.37
21680.57	1195.7	21714.58	1194.7	821730.11	1194.5	121742.46	1194.7	221795.72	1191.81
21831.3	1190.3	21844.02	1190.21	21857.8	1193.4	321868.24	1193.7	721900.08	1195.17
21920.57	119	21934.48	1195.0	921969.69	1194.5	221976.39	1193.8	721983.44	1192.33

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
15044.3	.035	19511.58	.035	20381.47	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19511.58	20381.47	530	503.55	450	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
15044.3	19511.58	1154.05	20381.47	21983.44	1158

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1152.45	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1150.78	Reach Len. (ft)	530.00	503.55	450.00
Crit W.S. (ft)	1142.42	Flow Area (sq ft)		16302.64	
E.G. Slope (ft/ft)	0.001232	Area (sq ft)	564.84	16302.64	102.13
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1182.09	Top Width (ft)	268.75	869.89	43.45
Vel Total (ft/s)	10.37	Avg. Vel. (ft/s)		10.37	
Max Chl Dpth (ft)	20.72	Hydr. Depth (ft)		18.74	
Conv. Total (cfs)	4815416.5	Conv. (cfs)		4815416.5	
Length Wtd. (ft)	503.55	Wetted Per. (ft)		888.35	
Min Ch El (ft)	1130.06	Shear (lb/sq ft)		1.41	
Alpha	1.00	Stream Power (lb/ft s)		14.63	
Frctn Loss (ft)	0.68	Cum Volume (acre-ft)	2413.01	12723.58	1276.31
C & E Loss (ft)	0.02	Cum SA (acres)	202.81	778.50	243.13

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1152.45	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1150.78	Reach Len. (ft)	530.00	503.55	450.00
Crit W.S. (ft)	1142.42	Flow Area (sq ft)		16302.64	
E.G. Slope (ft/ft)	0.001232	Area (sq ft)		16302.64	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	869.89	Top Width (ft)		869.89	
Vel Total (ft/s)	10.37	Avg. Vel. (ft/s)		10.37	
Max Chl Dpth (ft)	20.72	Hydr. Depth (ft)		18.74	
Conv. Total (cfs)	4815416.5	Conv. (cfs)		4815416.5	
Length Wtd. (ft)	503.55	Wetted Per. (ft)		888.35	
Min Ch El (ft)	1130.06	Shear (lb/sq ft)		1.41	
Alpha	1.00	Stream Power (lb/ft s)		14.63	
Frctn Loss (ft)	0.68	Cum Volume (acre-ft)		12724.41	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		778.48	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.92

INPUT
Description:
Station Elevation Data num= 249

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15056.94	1158.315	076.82	1156.241	5078.01	1156.51	5085.42	1156.98	15091.4	1157.54
15092.38	1157.715	132.68	1156.191	5136.58	1156.01	15142.69	1156.041	5285.82	1156.09
15333.21	1155.415	354.33	1154.781	5385.82	1155.3	15402	1155.471	5501.97	1156.32
15525.24	1156.115	590.72	1155.4	15610.6	1155.341	5746.64	1155.41	5775.17	1154.91
15792.22	1154.915	831.19	1154.71	5850.08	1154.581	5854.93	1154.511	5860.35	1153.76
15861.43	1153.815	883.33	1156.141	5928.57	1155.61	15962.04	1155.281	5975.13	1155.33
15996.69	1155.316	126.78	1154.931	6218.25	1154.61	6274.39	1155.21	6288.62	1155.19
16354.88	1154.616	404.13	1154.61	6519.19	1154.571	6521.31	1154.67	16544.3	1155.19
16674.08	1156.216	693.66	1155.391	6704.58	1155.211	6754.43	1154.751	6767.64	1154.51
16947.93	1153.917	054.56	1153.291	7089.35	1154.581	7115.83	1153.75	17124.3	1154.05
17152.88	1154.717	229.24	1155.171	7259.62	1155.51	7358.95	1154.931	7368.96	1155.12
17384.65	1156.217	408.17	1154.91	7428.41	1156.271	7434.19	1156.341	7506.93	1156.38
17532.5	1156.617	643.84	1156.481	7662.16	1156.611	7702.03	1156.7	17817.4	1156.92
17830.58	115	717917.79	1157.63	17979.7	1157.651	8018.43	1157.521	8084.18	1157.06
18143.35	1157.518	147.32	1157.531	8297.14	1157.231	8301.96	1157.211	8323.41	1156.76
18375.77	1155.818	380.73	1155.791	8409.33	1155.731	8422.82	1155.511	8452.23	1155.53
18468.78	1155.918	481.68	1155.861	8496.53	1156.031	8551.56	1155.671	8647.29	1154.57
18693.89	1153.918	707.39	1153.641	8754.24	1153.761	8813.55	1153.871	8864.59	1154.06
18887.41	1154.718	913.94	1155.011	8934.68	1156.231	8984.13	1150.57	18986.8	1150.32
19004.77	1153.319	026.27	1156.881	9040.29	1157.531	9050.92	1155.851	9073.98	1152.34
19092.01	1151.619	116.39	1150.051	9123.92	1149.361	9138.68	1149.361	9192.02	1149.53
19214.34	1149.919	229.37	1152.641	9252.46	1158.11	19262.2	1158.871	9297.45	1157.11
19318.87	1155.819	324.16	1154.79	19345.6	1150.211	9393.36	1149.071	9440.17	1147.87
19483.52	1147.719	505.95	1147.451	9520.91	1149.261	9533.07	1150.961	9545.32	1148.5
19545.32	115	119547.32	115	119547.32	1146.331	9548.82	1146.331	9576.51	1134.6
19587.17	1129.16	19608.3	1130.091	9676.46	1131.71	19705.2	1131.961	9733.24	1131.7
19838.63	1130.351	9914.22	1131.581	9977.78	1132.572	0015.93	1131.942	0098.73	1130.3
20220.32	1131.442	0236.84	1131.562	0266.69	1131.62	0358.46	1131.612	0387.17	1140.3
20398.68	1143.622	0407.79	1143.982	0409.09	1146.332	0410.59	1146.332	0410.59	1151
20412.59	115	120412.59	1148.52	0426.44	1150.442	0455.68	1151.152	0478.14	1156.71
20485.15	1156.72	0496.49	1154.972	0511.95	1152.412	0537.99	1153.672	0548.73	1155.88
20574.28	1158.22	0673.67	1178.6	20722.4	1187.42	0757.73	1190.332	0774.83	1191.37
20800.66	1191.2	20804.1	1190.882	0824.56	1189.422	0851.13	1190.842	0874.18	1191.08
20941.46	1192.22	0978.01	1191.07	20982.4	1190.852	1008.46	1193.532	1016.52	1192.8
21033.82	1192.72	1056.09	1192.732	1105.45	1178.512	1154.97	1162.942	1224.56	1163.92
21300.76	1165.7	21334.6	1167.812	1348.51	1166.742	1358.61	1165.472	1385.06	1167.95
21409.45	1166	21414.6	1165.77	21417.4	1168.552	1429.15	1178.662	1433.72	1178.43
21441.24	1177.72	1447.86	1177.93	21464.7	1178.42	1471.88	1177.932	1486.87	1177.45
21524.71	1176.72	1570.22	1175.122	1579.81	1175.272	1582.09	1175.22	1594.81	1172.45
21597.81	1172.42	1618.81	1176.85	21623.8	1177.72	1636.86	1177.422	1646.82	1176.73
21679.65	1174.82	1702.01	1174.222	1704.67	1174.742	1721.42	1174.942	1740.46	1176.13
21746.66	1176.32	1773.81	1176.592	1787.05	1176.12	1792.77	1175.452	1822.28	1176.86
21838.23	1177.12	1868.53	1177.942	1871.44	1178.12	1877.86	1177.852	1903.56	1176.5
21908.69	1173.62	1921.88	1172.56	21936.7	1176.722	1952.08	1177.82	1957.85	1178.36
21978.05	1179.62	1987.23	1181.322	1991.73	1181.862	2001.18	1181.92	2022.78	1184.12
22029.69	118	522051.86	1185.91	22081.2	1187.062	2087.57	1187.452	2112.52	1185.66
22122.29	1184.32	2146.68	1182.162	2172.21	1180.52	2189.25	1177.512	2196.21	1176.86
22204.41	1176.42	2207.61	1176.52	2229.25	1175.362	2252.83	1180.492	2263.35	1181.24
22272.03	1180.52	2326.75	1180.192	2330.68	1180.42	2367.48	1183.922	2408.32	1184.91
22434.33	1185.42	2440.61	1185.34	22461.3	1184.782	2481.54	1184.43		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
15056.94	.035	19547.32	.035	20410.59	.035

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Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19547.3220410.59              560  518.52     450            .1        .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
15056.9419547.32 1151.6720410.5922481.54    1155
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CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1151.76	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.88	Wt. n-Val.		0.035	
W.S. Elev (ft)	1149.88	Reach Len. (ft)	560.00	518.52	450.00
Crit W.S. (ft)	1142.46	Flow Area (sq ft)		15374.35	
E.G. Slope (ft/ft)	0.001473	Area (sq ft)	287.09	15374.35	6.79
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1140.72	Top Width (ft)	267.60	863.27	9.85
Vel Total (ft/s)	10.99	Avg. Vel. (ft/s)		10.99	
Max Chl Dpth (ft)	20.72	Hydr. Depth (ft)		17.81	
Conv. Total (cfs)	4403745.0	Conv. (cfs)		4403745.0	
Length Wtd. (ft)	518.52	Wetted Per. (ft)		877.30	
Min Ch El (ft)	1129.16	Shear (lb/sq ft)		1.61	
Alpha	1.00	Stream Power (lb/ft s)		17.71	
Frctn Loss (ft)	0.76	Cum Volume (acre-ft)	2407.82	12540.49	1275.75
C & E Loss (ft)	0.01	Cum SA (acres)	199.55	768.48	242.86

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1151.76	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.88	Wt. n-Val.		0.035	
W.S. Elev (ft)	1149.88	Reach Len. (ft)	560.00	518.52	450.00
Crit W.S. (ft)	1142.46	Flow Area (sq ft)		15374.24	
E.G. Slope (ft/ft)	0.001473	Area (sq ft)		15374.24	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	863.27	Top Width (ft)		863.27	
Vel Total (ft/s)	10.99	Avg. Vel. (ft/s)		10.99	
Max Chl Dpth (ft)	20.72	Hydr. Depth (ft)		17.81	
Conv. Total (cfs)	4403695.5	Conv. (cfs)		4403695.5	
Length Wtd. (ft)	518.52	Wetted Per. (ft)		877.30	
Min Ch El (ft)	1129.16	Shear (lb/sq ft)		1.61	
Alpha	1.00	Stream Power (lb/ft s)		17.71	
Frctn Loss (ft)	0.76	Cum Volume (acre-ft)		12541.32	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		768.46	0.18

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CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.82

INPUT
Description:
Station Elevation Data    num=     264
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14966.67  1155.7 14994.9 1155.2315013.71 1154.0115021.11 1153.2415050.66 1152.65
15099.94  1152.7 15126.2 1152.59 15191.9 1152.8615243.19 1152.4715250.24 1152.37
   15320  1152.915352.84 1153.5415386.05 1153.4815392.04  1153.2   15408 1152.23
15416.37  1152.315429.68 1152.5715444.43 1152.3415469.09 1152.2515557.75 1151.86
15628.53  1152.5 15672.2 1152.9815686.44 1151.5315728.08 1152.1615748.26 1152.35
15782.75  1153.415803.31 1152.7815849.34 1152.4115922.54 1151.5415965.71 1151.57
16105.59  1151.516112.76 1151.6116148.28 1154.0316175.63 1153.9116187.03 1153.49
16210.44  1153.416219.87 1153.1616229.03 1153.4316231.92 1153.7216303.07 1152.63
16354.15  1152.716380.98 1152.7216394.77 1152.6216430.95 1152.8916514.83 1153.13
16560.89  1153.416578.84 1152.5816629.65 1150.4216648.01 1150.4516695.46 1150.95
 16724.6  1151.116832.81 1151.8416937.42 1151.7816970.15 1152.3916981.11 1152.48
16989.67  1152.917011.25 1152.7717034.73  1153.117039.76 1153.3217062.09 1155.14
 17147.1  1153.917172.08 1154.0217193.39 1155.5217202.14 1155.8817248.97  1155.9
17265.63  1155.717297.38 1154.7617315.73 1153.8717319.73  1153.617352.48 1154.26
17361.43  1154.417372.68 1154.3117442.96 1153.6417471.11 1154.4117499.21 1155.65
17565.37  1155.417596.88 1155.26 17615.1 1155.8517640.73 1156.4517653.51 1156.31
 17664.8  1156.1   17677 1156.53 17703.8 1156.6217762.99 1156.09 17805.4 1156.21
17842.82  1156.417871.78 1156.8517885.61 1156.3717937.13 1156.8617965.61 1157.26
17997.08  1157.118162.42 1157.1318212.41 1157.0118217.42 1156.9518247.84 1155.01
18291.62  1156.818294.91 1157.0618323.51  1154.6 18349.5    115418364.36 1153.56
18380.47  1154.618411.31 1153.6718465.27 1153.4618533.94 1152.5818551.54 1152.58
18577.54  1152.418629.65 1152.66 18635.6 1152.8318686.63 1153.7818723.07 1154.13
18733.12  1154.818806.96 1153.9518815.49 1153.6318848.51 1149.7218861.19 1148.53
18876.01  1148.818879.55 1149.3218908.05 1153.79 18919.3  1153.418983.58  1152.3
 19000.8  1151.8   19010 1153.7419023.73 1156.2719034.07 1157.2919037.58 1156.53
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19073.99  1149.119089.08 1149.2819093.85 1149.0719102.34 1150.4219115.72 1150.38
19135.01  1150.619152.18 1149.5919196.97 1148.9719202.14 1148.8119216.01 1149.13
19228.26  1148.919235.07 1147.76 19299.3 1147.9219335.62 1148.2519357.09 1148.57
19390.82  1155.419394.26 1155.99 19404.6 1156.6619422.48 1152.7119456.86 1145.22
 19466.2  1146.6 19492.6 1150.1519503.84    115119503.84  1153.519505.84  1153.5
19505.84 1146.3319507.34 1146.33 19513.3 1145.1319521.34  1137.919535.91  1139.4
19554.48 1132.9419565.22 1129.5619593.76  1130.319639.73 1131.7319657.19  1131.5
19773.87 1129.9819873.48 1130.9819913.76 1131.1919944.72    113120035.35    1130
20064.49 1130.0120174.19 1130.0420216.93 1129.9920301.27 1129.7120329.01  1130.7
20343.21 1135.1620357.45 1138.5320368.79 1141.7720372.67 1146.3320374.17 1146.33
20374.17    115120376.17    115120376.17  1148.520400.56 1144.4320410.51 1142.71
20451.53  1154.120457.91 1156.3820468.85 1156.5520471.23 1156.1820513.54 1155.92
20518.83  1156.120542.27 1160.1420560.28  1164.520624.24 1179.3220645.69 1177.93
20650.23  1177.920654.43 1179.0820672.84 1182.9820691.43 1182.5320711.77 1182.31
20726.85  1180.620751.98 1176.5320790.42 1177.8320866.31  1179.420886.86 1179.88
20891.78  1179.9 20945.2 1178.3320946.24 1178.4620970.97    118320977.55  1183.6
20990.97  1182.421016.54 1183.8421027.23 1184.24 21049.3 1185.5921139.77 1162.31
21157.79  1157.721160.49  1157.421179.51 1154.7321238.31 1153.52 21243.5 1153.81
21315.86  1157.321324.45 1157.58 21363.1 1159.4821380.83 1160.4721399.61  1165.3
21437.88    116421447.56 1160.68 21454.8 1158.03 21473.7 1158.38 21494.5  1158.6
21549.92  1158.321575.58 1159.9421603.97  1164.921625.71 1169.4721631.47 1171.18
21647.04  1167.921667.64 1170.4121673.43 1170.9721685.04 1170.7221720.26 1171.33
21734.34  1171.521777.94 1171.02 21794.5 1171.1321803.73 1171.3421815.17 1171.71
21830.12  1169.921841.34 1168.2821848.75 1169.5321866.74 1173.4221873.12 1174.92
21919.28  1175.321939.52  1175.221987.72 1175.3522008.71 1176.0722022.69 1176.31
22044.47  1176.422061.01 1176.7122105.28 1176.9222127.76 1176.78 22155.6 1177.46
22185.01  1176.722253.65  1177.122327.29 1175.3722341.26 1175.3422408.59 1175.97
22420.56  1182.122430.93 1184.4122455.02 1185.5422498.64 1186.42

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14966.67    .03519505.84    .03520374.17    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19505.8420374.17              197  191.93     187              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14966.6719505.84    115620374.1722498.64    1156

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1150.99   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.85   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1149.14   Reach Len. (ft)             197.00     191.93     187.00
  Crit W.S. (ft)            1141.71   Flow Area (sq ft)                    15498.47
  E.G. Slope (ft/ft)       0.001445   Area (sq ft)                249.94   15498.47     195.32
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1177.32   Top Width (ft)              251.48     868.33      57.51
  Vel Total (ft/s)            10.90   Avg. Vel. (ft/s)                        10.90
  Max Chl Dpth (ft)           19.58   Hydr. Depth (ft)                        17.85
  Conv. Total (cfs)       4446461.5   Conv. (cfs)                         4446461.5
  Length Wtd. (ft)           191.93   Wetted Per. (ft)                       882.25
  Min Ch El (ft)            1129.56   Shear (lb/sq ft)                         1.58
  Alpha                        1.00   Stream Power (lb/ft s)                  17.28
  Frctn Loss (ft)              0.07   Cum Volume (acre-ft)       2404.37   12356.74    1274.71
  C & E Loss (ft)              0.14   Cum SA (acres)              196.21     758.17     242.51


Warning: Divided flow computed for this cross-section.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less
         than 0.7 or greater than 1.4.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1150.99   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.85   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1149.14   Reach Len. (ft)             197.00     191.93     187.00
  Crit W.S. (ft)            1141.71   Flow Area (sq ft)                    15498.37
  E.G. Slope (ft/ft)       0.001445   Area (sq ft)                         15498.37
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)             868.33   Top Width (ft)                         868.33
  Vel Total (ft/s)            10.90   Avg. Vel. (ft/s)                        10.90
  Max Chl Dpth (ft)           19.58   Hydr. Depth (ft)                        17.85
  Conv. Total (cfs)       4446413.0   Conv. (cfs)                         4446413.0
  Length Wtd. (ft)           191.93   Wetted Per. (ft)                       882.25
  Min Ch El (ft)            1129.56   Shear (lb/sq ft)                         1.58
  Alpha                        1.00   Stream Power (lb/ft s)                  17.28
  Frctn Loss (ft)              0.07   Cum Volume (acre-ft)               12357.58       0.32
  C & E Loss (ft)              0.14   Cum SA (acres)                      758.16       0.18
```

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.756

INPUT
Description: Upstream End of Apron
Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19547	1155	19547	1147	19578.5	1129	20421.5	1129	20453	1147
20453	1155								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19547	.015	19547	.015	20453	.015

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19547	20453	6	6	6	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1150.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.38	Wt. n-Val.		0.015	
W.S. Elev (ft)	1149.39	Reach Len. (ft)	6.00	6.00	6.00
Crit W.S. (ft)		Flow Area (sq ft)		17910.45	
E.G. Slope (ft/ft)	0.000173	Area (sq ft)		17910.45	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	9.44	Avg. Vel. (ft/s)		9.44	
Max Chl Dpth (ft)	20.39	Hydr. Depth (ft)		19.77	
Conv. Total (cfs)	12836483.0	Conv. (cfs)		12836483.0	
Length Wtd. (ft)	6.00	Wetted Per. (ft)		920.35	
Min Ch El (ft)	1129.00	Shear (lb/sq ft)		0.21	
Alpha	1.00	Stream Power (lb/ft s)		1.99	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	2403.81	12283.14	1274.29
C & E Loss (ft)	0.07	Cum SA (acres)	195.64	754.26	242.39

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1150.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.38	Wt. n-Val.		0.015	
W.S. Elev (ft)	1149.39	Reach Len. (ft)	6.00	6.00	6.00
Crit W.S. (ft)		Flow Area (sq ft)		17910.33	
E.G. Slope (ft/ft)	0.000173	Area (sq ft)		17910.33	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	9.44	Avg. Vel. (ft/s)		9.44	
Max Chl Dpth (ft)	20.39	Hydr. Depth (ft)		19.77	
Conv. Total (cfs)	12836353.0	Conv. (cfs)		12836353.0	
Length Wtd. (ft)	6.00	Wetted Per. (ft)		920.35	
Min Ch El (ft)	1129.00	Shear (lb/sq ft)		0.21	
Alpha	1.00	Stream Power (lb/ft s)		1.99	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)		12283.97	0.32
C & E Loss (ft)	0.07	Cum SA (acres)		754.25	0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.755

INPUT
Description: Downstream Bladder
Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19547	1155	19547	1147	19578.5	1132	20421.5	1132	20453	1147
20453	1155								

```
Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   19547    .015   19547    .015   20453    .015

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         19547   20453               54      54      54              .1       .3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1150.71   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.08   Wt. n-Val.                           0.015
  W.S. Elev (ft)            1148.62   Reach Len. (ft)             1.00      1.00       1.00
  Crit W.S. (ft)            1142.67   Flow Area (sq ft)                  14586.65
  E.G. Slope (ft/ft)       0.000341   Area (sq ft)                       14586.65
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             906.00   Top Width (ft)                       906.00
  Vel Total (ft/s)            11.59   Avg. Vel. (ft/s)                     11.59
  Max Chl Dpth (ft)           16.62   Hydr. Depth (ft)                     16.10
  Conv. Total (cfs)       9145897.0   Conv. (cfs)                      9145897.0
  Length Wtd. (ft)             1.00   Wetted Per. (ft)                    916.02
  Min Ch El (ft)            1132.00   Shear (lb/sq ft)                      0.34
  Alpha                        1.00   Stream Power (lb/ft s)                3.93
  Frctn Loss (ft)                     Cum Volume (acre-ft)      2403.81  12280.90    1274.29
  C & E Loss (ft)                     Cum SA (acres)             195.64    754.14     242.39

Warning: The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
         additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1150.71   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.08   Wt. n-Val.                           0.015
  W.S. Elev (ft)            1148.62   Reach Len. (ft)             1.00      1.00       1.00
  Crit W.S. (ft)            1142.67   Flow Area (sq ft)                  14586.43
  E.G. Slope (ft/ft)       0.000341   Area (sq ft)                       14586.43
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             906.00   Top Width (ft)                       906.00
  Vel Total (ft/s)            11.59   Avg. Vel. (ft/s)                     11.59
  Max Chl Dpth (ft)           16.62   Hydr. Depth (ft)                     16.10
  Conv. Total (cfs)       9145669.0   Conv. (cfs)                      9145669.0
  Length Wtd. (ft)             1.00   Wetted Per. (ft)                    916.02
  Min Ch El (ft)            1132.00   Shear (lb/sq ft)                      0.34
  Alpha                        1.00   Stream Power (lb/ft s)                3.93
  Frctn Loss (ft)                     Cum Volume (acre-ft)             12281.74       0.32
  C & E Loss (ft)                     Cum SA (acres)                     754.12       0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
         additional cross sections.

BRIDGE                    RIVER: Salt River
REACH: Reach 4               RS: 220.752

INPUT
Description:
Distance from Upstream XS =       1
Deck/Roadway Width        =      52
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19547    1175    1174   20453    1175    1174

Upstream Bridge Cross Section Data
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   19547    1155   19547    1147 19578.5    1132 20421.5    1132   20453    1147
   20453    1155

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   19547    .015   19547    .015   20453    .015

Bank Sta: Left   Right    Coeff Contr.   Expan.
         19547   20453              .1       .3
```

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Downstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19547    1175    1174   20453    1175    1174

Downstream Bridge Cross Section Data
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   19547    1155   19547    1147 19578.5 1131.67 20421.5 1131.67   20453    1147
   20453    1155

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   19547    .015   19547    .015   20453    .015

Bank Sta: Left   Right    Coeff Contr.   Expan.
         19547   20453             .1       .3

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  3

Pier Data
Pier Station     Upstream=   19772    Downstream=   19772
Upstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
   27.33    1132    5.66  1153.5    5.66 1161.17
Downstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
   27.33 1131.67    5.66  1153.5    5.66 1161.17

Pier Data
Pier Station     Upstream=   20000    Downstream=   20000
Upstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
   27.33    1132    5.66  1153.5    5.66    1161
Downstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
   27.33 1131.67    5.66  1153.5    5.66    1161

Pier Data
Pier Station     Upstream=   20228    Downstream=   20228
Upstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
   27.33    1132    5.66  1153.5    5.66    1161
Downstream     num=       3
    Width   Elev    Width   Elev    Width   Elev
   27.33 1131.67    5.66  1153.5    5.66    1161

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.6
       Yarnell                 KVal =      .9
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1150.71   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1148.62   E.G. Elev (ft)               1150.51       1150.17
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1147.88       1147.52
```

Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1143.31	1142.98
Q Weir (cfs)		Max Chl Dpth (ft)	15.88	15.85
Weir Sta Lft (ft)		Vel Total (ft/s)	13.00	13.04
Weir Sta Rgt (ft)		Flow Area (sq ft)	12995.29	12955.52
Weir Submerg		Froude # Chl	0.59	0.60
Weir Max Depth (ft)		Specif Force (cu ft)	169046.08	168813.69
Min Top Rd (ft)	1175.00	Hydr Depth (ft)	14.90	14.87
Min El Prs (ft)	1174.00	W.P. Total (ft)	939.27	938.34
Delta EG (ft)	0.55	Conv. Total (cfs)	7419114.0	7386226.5
Delta WS (ft)	0.63	Top Width (ft)	872.04	871.23
BR Open Area (sq ft)	36387.56	Frctn Loss (ft)		
BR Open Vel (ft/s)	13.04	C & E Loss (ft)		
Coef of Q		Shear Total (lb/sq ft)	0.45	0.45
Br Sel Method	Momentum	Power Total (lb/ft s)	5.83	5.89

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

		Element	Inside BR US	Inside BR DS
E.G. US. (ft)	1150.71	E.G. Elev (ft)	1150.51	1150.17
W.S. US. (ft)	1148.62	W.S. Elev (ft)	1147.88	1147.52
Q Total (cfs)	169000.00	Crit W.S. (ft)	1143.31	1142.98
Q Bridge (cfs)	169000.00	Max Chl Dpth (ft)	15.88	15.85
Q Weir (cfs)		Vel Total (ft/s)	13.00	13.04
Weir Sta Lft (ft)		Flow Area (sq ft)	12995.08	12955.30
Weir Sta Rgt (ft)		Froude # Chl	0.59	0.60
Weir Submerg		Specif Force (cu ft)	169044.03	168811.66
Weir Max Depth (ft)		Hydr Depth (ft)	14.90	14.87
Min Top Rd (ft)	1175.00	W.P. Total (ft)	939.27	938.34
Min El Prs (ft)	1174.00	Conv. Total (cfs)	7418919.0	7386026.5
Delta EG (ft)	0.55	Top Width (ft)	872.04	871.23
Delta WS (ft)	0.63	Frctn Loss (ft)		
BR Open Area (sq ft)	36387.56	C & E Loss (ft)		
BR Open Vel (ft/s)	13.04	Shear Total (lb/sq ft)	0.45	0.45
Coef of Q		Power Total (lb/ft s)	5.83	5.89
Br Sel Method	Momentum			

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.75

INPUT
Description: Downstream Bladder
Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19547	1155	19547	1147	19578.5	1131.67	20421.5	1131.67	20453	1147
20453	1155								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19547	.015	19547	.015	20453	.015

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19547	20453	31	31	31	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

		Element	Left OB	Channel	Right OB
E.G. Elev (ft)	1150.16				
Vel Head (ft)	2.17	Wt. n-Val.		0.015	
W.S. Elev (ft)	1147.99	Reach Len. (ft)	31.00	31.00	31.00
Crit W.S. (ft)		Flow Area (sq ft)		14304.64	
E.G. Slope (ft/ft)	0.000364	Area (sq ft)		14304.64	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	11.81	Avg. Vel. (ft/s)		11.81	
Max Chl Dpth (ft)	16.32	Hydr. Depth (ft)		15.79	
Conv. Total (cfs)	8859367.0	Conv. (cfs)		8859367.0	
Length Wtd. (ft)	31.00	Wetted Per. (ft)		915.05	
Min Ch El (ft)	1131.67	Shear (lb/sq ft)		0.36	
Alpha	1.00	Stream Power (lb/ft s)		4.20	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	2403.81	12264.78	1274.29
C & E Loss (ft)	0.19	Cum SA (acres)	195.64	753.06	242.39

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1150.16	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.17	Wt. n-Val.		0.015	
W.S. Elev (ft)	1147.99	Reach Len. (ft)	31.00	31.00	31.00
Crit W.S. (ft)		Flow Area (sq ft)		14304.42	
E.G. Slope (ft/ft)	0.000364	Area (sq ft)		14304.42	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	11.81	Avg. Vel. (ft/s)		11.81	
Max Chl Dpth (ft)	16.32	Hydr. Depth (ft)		15.79	
Conv. Total (cfs)	8859142.0	Conv. (cfs)		8859142.0	
Length Wtd. (ft)	31.00	Wetted Per. (ft)		915.05	
Min Ch El (ft)	1131.67	Shear (lb/sq ft)		0.36	
Alpha	1.00	Stream Power (lb/ft s)		4.20	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)		12265.62	0.32
C & E Loss (ft)	0.19	Cum SA (acres)		753.04	0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.74

INPUT
Description: Downstream End of Apron
Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19547	1155	19547	1147	19578.5	1129	20421.5	1129	20453	1147
20453	1155								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19547	.032	19547	.032	20453	.032

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19547	20453	30	30	30	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1149.95	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.53	Wt. n-Val.		0.032	
W.S. Elev (ft)	1148.42	Reach Len. (ft)	30.00	30.00	30.00
Crit W.S. (ft)		Flow Area (sq ft)		17028.55	
E.G. Slope (ft/ft)	0.000931	Area (sq ft)		17028.55	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	9.92	Avg. Vel. (ft/s)		9.92	
Max Chl Dpth (ft)	19.42	Hydr. Depth (ft)		18.80	
Conv. Total (cfs)	5539272.5	Conv. (cfs)		5539272.5	
Length Wtd. (ft)	30.00	Wetted Per. (ft)		918.40	
Min Ch El (ft)	1129.00	Shear (lb/sq ft)		1.08	
Alpha	1.00	Stream Power (lb/ft s)		10.69	
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)	2403.81	12253.63	1274.29
C & E Loss (ft)	0.00	Cum SA (acres)	195.64	752.41	242.39

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1149.95	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.53	Wt. n-Val.		0.032	
W.S. Elev (ft)	1148.42	Reach Len. (ft)	30.00	30.00	30.00
Crit W.S. (ft)		Flow Area (sq ft)		17028.33	
E.G. Slope (ft/ft)	0.000931	Area (sq ft)		17028.33	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	9.92	Avg. Vel. (ft/s)		9.92	
Max Chl Dpth (ft)	19.42	Hydr. Depth (ft)		18.80	
Conv. Total (cfs)	5539155.0	Conv. (cfs)		5539155.0	
Length Wtd. (ft)	30.00	Wetted Per. (ft)		918.40	
Min Ch El (ft)	1129.00	Shear (lb/sq ft)		1.08	
Alpha	1.00	Stream Power (lb/ft s)		10.69	
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)		12254.47	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		752.40	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.735

INPUT
Description: Downstrem End of Rip-Rap
Station Elevation Data num= 6

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19547	1155	19547	1147	19578.5	1129	20421.5	1129	20453	1147
20453	1155								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19547	.035	19547	.035	20453	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19547	20453	182	182	182	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1149.92	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.54	Wt. n-Val.		0.035	
W.S. Elev (ft)	1148.38	Reach Len. (ft)	182.00	182.00	182.00
Crit W.S. (ft)		Flow Area (sq ft)		16994.82	
E.G. Slope (ft/ft)	0.001121	Area (sq ft)		16994.82	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	9.94	Avg. Vel. (ft/s)		9.94	
Max Chl Dpth (ft)	19.38	Hydr. Depth (ft)		18.76	
Conv. Total (cfs)	5048042.0	Conv. (cfs)		5048042.0	
Length Wtd. (ft)	182.00	Wetted Per. (ft)		918.33	
Min Ch El (ft)	1129.00	Shear (lb/sq ft)		1.29	
Alpha	1.00	Stream Power (lb/ft s)		12.88	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)	2403.81	12241.92	1274.29
C & E Loss (ft)	0.05	Cum SA (acres)	195.64	751.79	242.39

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1149.92	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.54	Wt. n-Val.		0.035	
W.S. Elev (ft)	1148.38	Reach Len. (ft)	182.00	182.00	182.00
Crit W.S. (ft)		Flow Area (sq ft)		16994.49	
E.G. Slope (ft/ft)	0.001121	Area (sq ft)		16994.49	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.00	Top Width (ft)		906.00	
Vel Total (ft/s)	9.94	Avg. Vel. (ft/s)		9.94	
Max Chl Dpth (ft)	19.38	Hydr. Depth (ft)		18.76	
Conv. Total (cfs)	5047880.5	Conv. (cfs)		5047880.5	
Length Wtd. (ft)	182.00	Wetted Per. (ft)		918.33	
Min Ch El (ft)	1129.00	Shear (lb/sq ft)		1.29	
Alpha	1.00	Stream Power (lb/ft s)		12.88	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)		12242.75	0.32
C & E Loss (ft)	0.05	Cum SA (acres)		751.77	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.73

INPUT
Description:
Station Elevation Data num= 313

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14797.3	1154.31	4913.57	1152.42	14944.1	1152.26	14944.42	1151.47	14966.97	1151.88
14980.8	1152.31	5003.23	1152.21	5059.05	1152.19	15081.02	1152.11	15093.12	1152.34
15126.06	1152.11	5181.19	1151.61	15210.79	1150.47	15233.66	1151.47	15251.43	1150.94
15273.4	115115	362.88	1150.59	15379.06	1150.05	15423.88	1149.95	15459.88	1149.65
15539.57	1149.31	5572.44	1149.28	15584.29	1149.51	5599.68	1150.44	15612.48	1148.8
15672.24	1149.41	5700.28	1151.35	15798	1151.37	15867.6	1150.99	15916.69	1151.03
15952.86	115116	008.14	1150.91	16080.12	1151.75	16088.31	1151.84	16116.46	1153.28
16139.26	1152.91	6148.32	1152.62	16153.19	1153.23	16160.23	1153.56	16218.88	1151.88
16243.62	1151.31	6274.61	1151.3	16363.6	1151.49	16393.63	1151.52	16435.51	1151.52
16490.57	1151.81	6564.86	1151.81	16567.24	1151.77	16703.9	1151.52	16710.5	1151.66
16724.61	1151.71	6797.96	1151.77	16899.05	1151.75	16906.7	1152.02	16932.49	1152.13
16942.39	1152.2	16955.5	1152.76	16971.52	1153.25	16982.43	1153.08	16998.31	1153.1
17049.19	1153.11	7072.46	1153.08	17121.46	1152.89	17145.41	1153.03	17192.67	1153.2
17215.62	1153.21	7238.43	1153.03	17247.66	1152.63	17269.82	1153.19	17281.82	1153.38
17364.73	1153.4	17374.5	1153.64	17397.24	1153.36	17437.21	1153.78	17481	1154.3
17525.1	1153.81	7548.55	1153.43	17626.8	1154.29	17747.58	1156.28	17767.79	1154.13
17778.06	1154.21	7792.77	1154.55	17840.7	1154.96	17896.44	1155.19	17915.02	1155.09

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17924.66  1154.917968.81  1154.318001.48 1154.4318082.98 1154.3218106.55 1154.56
18117.14  1154.618144.52 1155.1318166.73 1155.06 18183.2 1155.1318210.02 1155.28
18218.19  1155.218251.96 1154.5118271.92 1154.1718289.25 1153.6918309.93 1154.27
18348.27  1153.318353.67 1153.1718492.05 1153.3118501.57 1153.2718558.69 1153.22
18604.41  1153.218618.27 1152.9118676.89 1152.15 18726.4 1149.0418748.84 1147.58
18787.16  1146.918832.85 1146.2118862.62 1152.7218869.61 1154.0118945.35 1153.81
18952.13  1152.518954.69 1152.2418985.94 1152.9619036.14 1153.2519045.15 1154.09
19057.29  1152.319087.96 1150.4519132.13 1150.4919162.52  1150.919192.54 1151.69
19218.75  1151.219232.69 1151.8419251.32 1151.4319302.95 1151.56 19341.3 1150.74
19381.97  1149.619439.95 1151.6719450.97 1151.9619479.57    115819490.11 1159.02
19492.12  1158.5 19515.2 1153.5619531.14 1150.7919555.44 1133.3619557.72 1132.21
19576.93  1131.519658.15 1128.9619701.95 1127.6919712.81 1128.35 19715.3 1128.61
19760.95  1129.319803.61 1129.3419851.53 1129.51 19950.1  1130.619973.26 1130.69
20100.83  1130.920112.26 1130.9920141.19 1130.4720222.72 1129.0620239.48 1128.75
20265.71  1129.520365.39 1132.3820374.45 1134.0720381.94 1136.3120423.81 1148.67
20441.46  1153.620453.82 1155.5520476.74 1158.0720495.14 1160.26 20503.4 1162.18
20564.01  1175.520578.57 1176.6520595.22 1178.9120620.06 1178.5420631.53 1178.69
20644.53  1178.720676.97 1173.5820739.84  1163.120756.44 1163.6120786.35 1163.92
20833.99  1164.9 20861.4 1164.2320868.64 1164.3320875.76 1164.2420907.84 1164.16
20926.94  1165.920936.61  1166.420963.09 1168.2520978.69 1174.4321014.75 1188.53
21036.74  1188.621049.33 1188.6121126.03 1167.3921141.74 1163.4621147.25 1162.17
21162.06  1159.521169.27 1159.2821221.77 1159.6121288.72 1159.11 21296.9 1160.02
21311.98  1162.221324.94 1161.8321345.92 1161.3821351.63 1158.5321364.03    1152
21386.28  1152.221402.73 1143.1621406.95 1140.7321424.81 1142.2521442.17 1149.28
21451.75  1153.321477.29 1153.2421492.55  1153.121565.24 1152.7821589.18 1151.51
21648.09    115121676.81 1150.71 21687.2 1153.0321691.96 1153.87   21694 1153.58
21705.22  1153.521747.92 1152.7421763.65 1155.1821768.74 1156.0621780.97 1157.01
21785.19  1157.721799.01 1160.8421849.66  1162.721868.62 1160.9921880.15 1161.95
21897.96  1164.421923.34 1164.5521939.34 1165.0921967.35 1166.1321991.87 1166.37
22036.99  1167.122046.99 1168.0922070.54 1166.3422091.72 1167.65   22094 1167.89
22100.85  1167.622114.57 1167.4822158.49 1166.67 22173.5    116722193.46 1166.44
22234.87  1166.222258.75 1166.4522292.82  1167.3 22320.1 1167.4322329.22 1167.07
 22352.2  1166.422366.09 1167.1422415.22 1167.4722453.69 1167.7722492.16 1168.56
22642.92  1170.222688.53 1170.4822739.89 1170.7622822.87 1170.7622871.73 1170.39
22889.98  1170.722937.42 1171.8823028.91 1173.8123031.57 1173.9123070.19 1175.98
23095.28  1176.523102.86 1176.88 23148.1  1179.423163.39 1179.8523165.07    1180
23188.47  1180.423213.41  1179.723249.54 1179.9323278.98 1180.03 23290.4 1180.18
23363.69  1180.823383.38 1180.4223401.79 1180.0723419.41 1180.2123433.68 1178.29
23452.43  1175.523471.84 1176.6323487.22 1174.6823499.32 1176.0923523.76 1176.96
23530.78    117723580.84 1178.8723599.92 1179.7323610.68 1180.2423668.01  1183.3
23684.49  1183.123737.23 1183.1823753.82 1183.9923771.45 1184.5123788.82 1185.45
23802.17  1184.923805.38 1184.6723809.24 1184.8723813.53 1184.6423851.27 1183.72
23864.52  1183.823891.02 1183.2623892.96 1183.3223897.08  1182.723973.88 1172.66
24039.67  1173.424085.52  1187.324090.47 1189.0824151.58 1190.7824165.54 1191.26
24172.71  1191.424192.87 1191.5924242.54 1192.2624276.93 1192.6124289.34 1195.49
24302.68  1197.9   24332 1197.6224347.55 1198.15

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14797.3    .03519490.11    .03520495.14    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19490.1120495.14              510  501.55     490             .1        .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14797.319490.11 1159.0220495.1424347.55 1160.26

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1149.62   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1147.59   Reach Len. (ft)             510.00     501.55     490.00
  Crit W.S. (ft)            1141.05   Flow Area (sq ft)                    14782.77
  E.G. Slope (ft/ft)       0.001715   Area (sq ft)                 65.13   14782.77     185.87
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1018.38   Top Width (ft)               90.49     884.55      43.33
  Vel Total (ft/s)            11.43   Avg. Vel. (ft/s)                        11.43
  Max Chl Dpth (ft)           19.90   Hydr. Depth (ft)                        16.71
  Conv. Total (cfs)       4080422.3   Conv. (cfs)                         4080422.3
  Length Wtd. (ft)           501.55   Wetted Per. (ft)                       891.71
  Min Ch El (ft)            1127.69   Shear (lb/sq ft)                         1.78
  Alpha                        1.00   Stream Power (lb/ft s)                  20.30
  Frctn Loss (ft)              0.87   Cum Volume (acre-ft)       2403.67   12175.53    1273.90
  C & E Loss (ft)              0.01   Cum SA (acres)              195.45     748.05     242.30


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2
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E.G. Elev (ft)	1149.62	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1147.59	Reach Len. (ft)	510.00	501.55	490.00
Crit W.S. (ft)	1141.05	Flow Area (sq ft)		14782.43	
E.G. Slope (ft/ft)	0.001716	Area (sq ft)		14782.43	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	884.55	Top Width (ft)		884.55	
Vel Total (ft/s)	11.43	Avg. Vel. (ft/s)		11.43	
Max Chl Dpth (ft)	19.90	Hydr. Depth (ft)		16.71	
Conv. Total (cfs)	4080280.5	Conv. (cfs)		4080280.5	
Length Wtd. (ft)	501.55	Wetted Per. (ft)		891.70	
Min Ch El (ft)	1127.69	Shear (lb/sq ft)		1.78	
Alpha	1.00	Stream Power (lb/ft s)		20.30	
Frctn Loss (ft)	0.87	Cum Volume (acre-ft)		12176.37	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		748.03	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.63

INPUT
Description:
Station Elevation Data num= 293

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14824	1150.31	4870.19	1149.97	14906.61	1150.46	14934.6	1150.27	14996.54	1149.63
15005.4	1149.3	15035.6	1149.72	15073.05	1149.71	15119.49	1149.51	15140.51	1148.65
15164.17	1149.51	5176.48	1149.81	5188.71	1149.76	15222.37	1149.92	15284.22	1149.41
15311.03	1149.71	5339.76	1150.26	15407.72	1149.71	15469.64	1149.48	15540.95	1149.31
15601.47	1148.5	15631.9	1149.31	15681.89	1149.86	15766.94	1149.98	15791.74	1149.81
15882.72	1150.61	5969.23	1150.48	16026.97	1151.37	16037.23	1150.87	16047.44	1150.22
16051.03	1150.21	6077.31	1149.22	16098.49	1151.22	16164.63	1150.5	16172.4	1150.53
16267.84	1150.41	6308.54	1150.71	6383.35	1151.49	16440.92	1151.52	16503.85	1151.17
16547.1	1151.11	6625.17	1151.01	16666.85	1151.61	6686.26	1152.15	16703.27	1151.91
16750.45	1151.51	6831.13	1151.71	6846.42	1151.65	16860.48	1151.37	16872.44	1151.59
16891.43	1151.51	6919.41	1152.14	16929.14	1152.23	17034.57	1152.16	17112.73	1152.31
17151.56	115317	174.16	1152.47	17213.39	1152.61	7256.25	1152.15	17300.25	1151.98
17312.74	1152.61	7370.38	1154.25	17456.04	1154.23	17496.26	1154.11	17547.83	1153.9
17604.31	1153.81	7688.93	1153.57	17722.82	1153.27	17729.13	1153.5	17744.1	1153.57
17804.7	1154.11	7925.11	1154.32	17981.54	1154.57	18023.62	1154.59	18059.13	1154.52
18113.05	1154.11	8137.88	1154.13	18140.35	1154.19	18159.61	1154.66	18172.45	1154.58
18185.1	1154.31	8215.34	1153.57	18233.36	1153.99	18307.25	1153.15	18360.97	1153.08
18408.08	1153.51	8500.25	1153.05	18520.71	1152.71	8535.53	1152.69	18539.52	1152.17
18551.01	1151.71	8558.74	1151.53	18573.36	1151.01	18611.78	1150.64	18625.8	1150.46
18647.75	1153	18657.7	1153.83	18674.43	1152.77	18723.13	1152.74	18734.97	1152.54
18743.63	1152.31	8780.43	1150.66	18816	1152.11	18843.95	1154.42	18864.43	1154.66
18922.43	1156.41	8936.63	1156.43	18972.93	1153.51	19047.63	1154.08	19180.2	1154.87
19184.81	1154.81	9228.77	1154.53	19245.97	1154.48	19262.55	1154.51	19312.33	1154.65
19339.84	1154.71	9364.44	1154.11	19384.69	1152.64	19429.36	1143.55	19434.17	1143.26
19437.42	114419	487.14	1156.18	19502.33	1159.18	19508.86	1156.13	19533.27	1145.86
19545.56	114719	552.18	1142.25	19562.89	1133.64	19591.04	1132.37	19650.01	1129.14
19773.79	1129.51	9790.22	1129.49	19802.35	1129.25	19912.09	1127.17	19968.5	1127.1
19998.74	1127.32	0051.26	1129.37	20068.85	1129.42	0178.63	1128.86	20268.5	1129.8
20304.69	1130.52	0328.46	1130.71	20359.22	1130.61	20416.92	1138.24	20430.96	1145.24
20440.58	1147.42	0475.73	1155.96	20483.75	1156.09	20494.25	1156.75	20495.83	1156.24
20517.61	1161.22	0571.44	1174.47	20606.77	1174.27	20610.81	1174.13	20641.95	1166.52
20689.44	115520	692.07	1155.08	20726.24	1156.44	20766.82	1157.25	20783.96	1157.5
20815.62	1157.22	0830.99	1157.13	20842.11	1156.87	20875.53	1156.85	20911.76	1160.68
20935.56	1160.52	0937.82	1160.61	20985.04	1183.84	20990.99	1183.96	21011.6	1182.74
21099.54	1158.42	1115.04	1154.18	21117.51	1154.26	21170.33	1155.59	21193.48	1158.99
21199.07	1159.92	1207.28	1159.75	21228.86	1158.61	21250.98	1150.88	21272.44	1151.36
21291.3	1141.22	1314.36	1141.12	21321.72	1145.03	21333.2	1151.53	21348.91	1151.86
21376.92	1151.52	1411.05	1151.42	21474.01	1151.09	21553.59	1151.11	21637.39	1150.79
21722.63	1150.72	1785.67	1150.73	21874.62	1151.99	21878.38	1152.03	21921.19	1159.69
21948.69	1160.72	1992.61	1162.19	22000.71	1160.52	2008.81	1158.61	22018.63	1159.95
22032.5	1161.72	2048.31	1161.64	22055.74	1161.93	22094	1163.08	22134.12	1164.39
22143.98	1165.12	2154.38	1163.87	22176.46	1161.48	22190.1	1164.89	22195.05	1164.95
22228.55	1165.12	2302.09	1165.79	22385.05	1167.15	22394.52	1167.22	22452.52	1166.41
22520.66	1165.62	2561.39	1165.19	22580.78	1165.35	22602.39	1165.62	22636.28	1164.69
22655.55	1164.42	2690.77	1163.51	22697.75	1163.38	22702.64	1162.32	2753.06	1152.71
22801.2	115422	825.88	1154.61	22880.79	1160.43	22884.4	1160.73	22888.09	1161.52
22924	1165.52	2955.81	1163.92	22967.88	1163.38	22985.75	1163.45	23003.91	1166.93
23020.6	1168.42	3039.26	1170.15	23047.39	1171.7	23059	1174.32	23113.46	1183.75
23129.96	1186.62	3137.87	1187.16	23234.39	1195.15	23268.4	1196.11	23278.9	1196.22
23289.67	1196.62	3300.62	1197.46	23329	119523	354.08	1190.07	23359.12	1190.93
23364.81	1192.82	3377.13	1196.31	23381.26	1196.95	23402.82	1194.99	23412.98	1193.6
23418.94	1192.52	3442.23	1187.85	23455.44	1185.93	23473.3	1182.77	23480.12	1183.18
23500.09	1183.52	3511.29	1183.92	23528.38	1179.13	23531.54	1177.87	23542.35	1178.74
23558.13	1179.72	3564.97	1179.97	23576.86	1179.4	23611.1	1177.42	23628.94	1181.9

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 23666.9  1192.123690.06 1192.8823754.42  1196.123759.24 1196.8323774.42  1193.2
23805.81  1186.423842.08 1186.1223884.13 1185.9323889.09 1185.6423923.01 1182.75
23994.76  1183.224012.39 1183.04 24030.1 1180.4624046.96 1185.0124084.61 1190.55
 24101.8    119124136.25 1191.4224170.43 1192.0824211.66 1193.0424220.01 1193.29
24252.23  1192.824282.41 1193.1324299.04 1193.29

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   14824    .03519502.33    .03520494.25    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19502.3320494.25              490  501.08     510             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1482419502.33 1159.1820494.2524299.04 1156.75

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1148.75   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.01   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1146.74   Reach Len. (ft)           490.00     501.08     510.00
  Crit W.S. (ft)            1140.24   Flow Area (sq ft)                  14857.16
  E.G. Slope (ft/ft)       0.001734   Area (sq ft)               66.47   14857.16     187.02
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             981.94   Top Width (ft)             34.92     903.29      43.72
  Vel Total (ft/s)            11.37   Avg. Vel. (ft/s)                      11.37
  Max Chl Dpth (ft)           19.64   Hydr. Depth (ft)                      16.45
  Conv. Total (cfs)       4057886.5   Conv. (cfs)                       4057886.5
  Length Wtd. (ft)           501.08   Wetted Per. (ft)                     910.50
  Min Ch El (ft)            1127.10   Shear (lb/sq ft)                      1.77
  Alpha                        1.00   Stream Power (lb/ft s)               20.10
  Frctn Loss (ft)              0.88   Cum Volume (acre-ft)      2402.90   12004.89    1271.80
  C & E Loss (ft)              0.00   Cum SA (acres)             194.72     737.75     241.81


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1148.75   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.01   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1146.74   Reach Len. (ft)           490.00     501.08     510.00
  Crit W.S. (ft)            1140.24   Flow Area (sq ft)                  14856.83
  E.G. Slope (ft/ft)       0.001735   Area (sq ft)                       14856.83
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             903.29   Top Width (ft)                       903.29
  Vel Total (ft/s)            11.38   Avg. Vel. (ft/s)                      11.38
  Max Chl Dpth (ft)           19.64   Hydr. Depth (ft)                      16.45
  Conv. Total (cfs)       4057759.3   Conv. (cfs)                       4057759.3
  Length Wtd. (ft)           501.08   Wetted Per. (ft)                     910.49
  Min Ch El (ft)            1127.10   Shear (lb/sq ft)                      1.77
  Alpha                        1.00   Stream Power (lb/ft s)               20.10
  Frctn Loss (ft)              0.88   Cum Volume (acre-ft)              12005.73       0.32
  C & E Loss (ft)              0.00   Cum SA (acres)                       737.74       0.18


Warning: Divided flow computed for this cross-section.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.54

INPUT
Description:
Station Elevation Data    num=     318
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14801.12  1148.114812.54 1148.0714917.34 1147.3814942.26 1146.5114971.01 1147.44
14987.16  1147.615014.67  1147.515087.52 1147.2715174.13 1146.9115179.25 1146.71
15198.73    114515227.13 1146.9415255.43 1148.1715326.06 1148.5315350.94 1148.42
15371.84  1147.715395.39 1147.66 15403.6 1147.5815438.23 1147.87 15442.3 1149.14
15474.44    114815485.49 1148.2415528.24 1149.0615544.24 1148.7615568.11 1147.38
 15645.6  1147.2 15695.2 1147.4415712.03 1150.0915760.49 1149.2715778.54 1148.93
15796.55  1148.915878.15 1149.4315936.34 1149.4616036.67 1148.9516081.24 1148.97
16132.26  1149.4 16138.4  1149.416193.74 1149.9316245.08 1150.1616287.42 1149.78
16328.17  1149.916408.16 1150.1916436.34 1149.1816469.09 1150.5516478.31 1150.91
16494.71  1150.116516.71 1150.0116578.93 1150.0616592.92 1150.0416698.21 1150.06
16766.45  1150.816795.37 1151.5816822.36 1151.3416839.56 1150.8616850.28 1150.99
16914.07  1151.516976.42 1151.4917033.22 1151.6917080.06 1151.6217109.07 1151.67
17180.95  1151.717204.63 1151.8517265.71 1151.9317282.42 1151.89 17301.8 1151.62
17351.35  1151.817381.17 1151.7117423.14 1151.8517451.37 1151.5517471.72 1151.43
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17490.39  1151.217550.02 1151.4317577.93 1151.8517591.81  1152.317603.93 1153.05
17616.04  1153.617638.31    115417648.83 1154.0917661.78 1153.8517698.43 1153.35
17750.33  1152.917802.96 1152.5817845.63 1152.3317856.54 1152.7617871.73 1153.13
17899.64  1153.417932.91 1153.4218011.33 1152.7118028.57 1152.71 18060.3  1152.8
 18070.9  1152.218125.61  1152.418139.99 1152.3718143.34 1152.6218154.39 1153.04
 18165.9  1151.818176.18 1150.8618193.98  1152.218210.24 1153.2818363.83 1153.68
18515.17  1151.318533.63 1151.1518547.59 1150.9318583.44 1149.8718589.14 1149.66
18591.13  1149.818623.29 1151.3918643.25 1151.8818663.74 1152.2118689.11  1152.2
 18762.5  1153.218764.59 1154.0118797.54 1153.8518841.07 1153.6818888.92 1153.68
18894.16  1154.518906.46 1156.0118923.78 1154.1618930.74 1153.33 18931.5 1153.54
18944.76  1153.718973.23 1154.4819043.11 1154.46 19057.5 1154.41 19086.5 1154.14
19126.25  1154.119221.41 1155.1819262.48  1155.419316.88 1155.9219322.58 1155.97
19351.74    115619373.63 1146.84 19398.6 1135.7119415.07 1133.4519418.42 1133.67
19443.87  1140.8 19492.1 1154.0819508.34  1157.819536.59 1143.1319546.11 1145.24
19563.04  1133.219565.48 1131.5419567.11 1131.5719586.71 1130.7919664.41 1129.89
19726.79  1129.619754.39 1129.2519798.54 1128.6919848.54 1128.0119888.08 1128.08
19987.58  1127.820102.16 1127.3920114.83 1127.3220125.16 1127.3820240.77 1127.91
20326.68  1128.420349.68 1128.48 20357.7 1128.5720425.53 1139.1520428.07 1139.71
20437.09  1143.820447.18 1145.9620460.57 1149.8520481.21 1155.3120491.27  1156.3
 20505.8  1155.520544.78 1163.9720582.75 1163.9320596.25 1163.6320608.52 1160.71
20642.57  1152.3 20672.4 1152.4620684.76 1152.5220753.51 1154.3220766.23  1154.3
20791.41  1154.120805.86  1153.820841.26 1153.7220868.87 1156.8320900.95 1156.86
 20917.6  1158.720924.05 1159.2720934.41  1159.920951.83 1161.3620968.01 1154.61
20989.78  1146.5 21025.2 1145.4321038.38 1147.04   21076 1157.7221110.76 1156.47
21129.93  1151.621132.61 1150.8521158.94 1153.3721176.73 1153.6221197.09  1154.4
21203.78  1150.121217.27 1140.3621245.34 1139.7921262.49 1139.6821275.44 1145.24
 21284.3  1150.721302.26 1150.4721311.98 1150.8221327.71 1151.0821377.48 1150.22
21401.21  1149.8   21454 1149.8521556.04 1149.7321633.17 1149.7321650.47 1149.83
21796.34  1150.221872.57 1150.2121917.66 1149.9321954.45 1149.8721974.64 1154.51
 21994.3  1158.722036.34  1159.522058.49 1155.5322082.22 1159.6522098.66 1158.78
22143.89  1160.722168.86 1159.9122182.01 1159.4222189.91 1159.8422193.83 1159.44
22212.89  1157.9 22227.2 1159.9722231.65 1160.35   22233 1161.4522274.63 1161.04
22292.93  1157.122314.39 1152.5522336.43  1152.722394.74 1152.7222536.32 1152.44
22549.68  1154.122578.44 1156.5522587.09 1157.5922601.62 1158.3222634.03 1160.85
22649.16  1163.222652.36 1164.7622698.86 1170.8822732.02  1178.522750.13 1180.51
22764.69  1183.822786.36 1185.0922801.42 1186.7722807.62 1186.9522821.79  1185.8
22837.43  1182.4 22869.3 1183.02 22895.2 1182.5222904.25 1179.5822933.69 1169.33
 22950.9  1170.822965.88  1173.222982.72 1171.5723029.35 1168.28 23037.9 1169.19
23050.74  1171.323094.46 1178.9623104.35 1180.55 23113.1 1181.4323129.31 1184.41
23158.01  1185.823167.19 1186.1223175.38 1186.0823251.08 1186.5223315.44 1186.17
23330.46  1186.923340.75 1188.0823347.56 1187.9923361.34  1188.323374.98 1185.09
23384.93  1182.523392.12 1183.48 23403.1  1183.123417.07 1183.02 23439.8 1181.66
23467.05  1173.623510.61 1166.0723546.75  1173.923560.99 1175.2423605.58  1179.9
23610.35  1180.223648.59 1176.5123658.04 1177.0623679.04 1179.3723737.48 1184.35
23746.68  1185.423757.51 1186.2123782.27 1187.8323806.71 1188.2923814.08 1187.68
23822.57  1185.6 23836.1 1184.4523839.74 1183.76 23876.7 1183.32 23932.7 1183.22
23939.22  1185.2 23942.1 1185.6123948.18 1186.9323956.29  1188.123973.47 1189.62
23995.43  1189.424030.29 1190.38 24061.1  1191.724079.65 1192.3124092.29 1193.11
24108.39  1192.1 24116.9 1191.9224122.12 1191.1124132.53 1189.8524183.32 1184.77
24208.61  1178.324227.19 1182.9124228.22  1183.1

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14801.12    .03519508.34    .03520491.27    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19508.3420491.27              470  492.46     510              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14801.1219508.34  1157.820491.2724228.22  1156.3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1147.86   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1145.84   Reach Len. (ft)             470.00    492.46     510.00
  Crit W.S. (ft)            1139.51   Flow Area (sq ft)                   14796.15
  E.G. Slope (ft/ft)       0.001789   Area (sq ft)                615.92  14796.15     334.79
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1107.01   Top Width (ft)              108.14    915.24      83.63
  Vel Total (ft/s)            11.42   Avg. Vel. (ft/s)                      11.42
  Max Chl Dpth (ft)           18.52   Hydr. Depth (ft)                      16.17
  Conv. Total (cfs)        3995105.3  Conv. (cfs)                        3995105.3
  Length Wtd. (ft)           492.46   Wetted Per. (ft)                     922.51
  Min Ch El (ft)            1127.32   Shear (lb/sq ft)                      1.79
  Alpha                        1.00   Stream Power (lb/ft s)               20.47
  Frctn Loss (ft)              0.87   Cum Volume (acre-ft)       2399.06  11834.34    1268.75
  C & E Loss (ft)              0.00   Cum SA (acres)              193.91    727.29     241.06
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Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1147.86	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1145.84	Reach Len. (ft)	470.00	492.46	510.00
Crit W.S. (ft)	1139.51	Flow Area (sq ft)		14795.70	
E.G. Slope (ft/ft)	0.001790	Area (sq ft)		14795.70	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	915.24	Top Width (ft)		915.24	
Vel Total (ft/s)	11.42	Avg. Vel. (ft/s)		11.42	
Max Chl Dpth (ft)	18.52	Hydr. Depth (ft)		16.17	
Conv. Total (cfs)	3994910.0	Conv. (cfs)		3994910.0	
Length Wtd. (ft)	492.46	Wetted Per. (ft)		922.51	
Min Ch El (ft)	1127.32	Shear (lb/sq ft)		1.79	
Alpha	1.00	Stream Power (lb/ft s)		20.47	
Frctn Loss (ft)	0.87	Cum Volume (acre-ft)		11835.18	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		727.28	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.45

INPUT
Description:
Station Elevation Data num= 300

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14746.98	1146.214	752.11	1146.161	4851.06	1146.061	4881.09	1144.141	4910.13	1145.7
14925.3	1146.214	999.81	1146.241	5023.75	1146.271	5115.38	1145.811	5137.82	1145.45
15144.01	1145.315	160.69	1145.381	5176.34	1145.681	5184.15	1146.331	5241.95	1146.63
15281.17	1146.915	309.12	1146.71	5343.83	11471	5371.59	1147.271	5386.45	1147.23
15467.17	1146.815	478.24	1147.041	5519.72	1147.261	5566.17	1147.44	15703.9	1148.08
15879.53	1149.315	903.48	1149.441	6002.54	1148.821	6043.15	1148.71	6096.54	1148.58
16155.73	1148.316	205.69	1148.41	6292.19	1148.491	6344.01	1148.061	6355.56	1149.08
16366.8	1149.516	377.57	1150.251	6384.06	1149.311	6467.03	1150.641	6629.45	1154.53
16647.95	1154.4	16654.8	1154.481	6671.82	1152.76	16685.8	1149.821	6704.38	1150.2
16731.97	1150.516	753.89	1149.661	6759.47	1149.541	6774.45	1150.011	6781.12	1150.37
16822.5	1150.216	914.48	1150.391	6964.07	1150.251	7015.87	1150.181	7115.48	1150.27
17187.88	1150.717	261.47	1150.67	17330.5	1150.531	7389.14	1150.541	7454.55	1150.76
17484.6	1150.717	564.97	1150.281	7593.47	1150.321	7606.17	1150.271	7616.31	1150
17625.19	1150.517	645.56	1151.231	7649.08	1151.231	7705.84	1152.031	7761.81	1152.59
17778.02	1151.717	799.36	1151.141	7813.13	1151.091	7884.85	1151.54	17965.3	1150.68
18001.45	1150.418	020.96	1150.131	8030.58	1149.761	8070.55	1149.551	8080.22	1149.88
18090.73	1150.118	108.23	1149.291	8115.98	1148.841	8187.96	1148.571	8459.38	1149.73
18486.51	1149.818	492.09	1149.661	8519.46	1148.991	8529.99	1150.051	8545.81	1150.22
18609.17	1148.218	628.58	1148.611	8662.47	1151.71	8721.65	1156.191	8808.58	1156.99
18824.67	1156.718	860.42	1155.861	8934.66	1154.041	8956.18	1153.371	8972.54	1154.24
18977.64	1154.918	986.44	1154.391	9001.14	1153.621	9022.53	1154.21	9085.01	1153.2
19149.05	1152.419	204.31	1151.881	9229.04	1153.671	9242.84	1154.81	9261.71	1156.74
19263.03	1156.919	275.24	1157.38	19303.4	11581	9310.63	1156.951	9326.37	1154.84
19333.35	1154.419	355.52	1153.591	9361.74	1154.761	9392.06	1140.481	9416.73	1129.63
19490.61	1151.619	495.17	1152.941	9510.69	1154.921	9520.68	1151.331	9544.52	1143.35
19553.74	1145.619	572.14	1129.781	9665.24	1130.6	19786.7	1126.551	9856.98	1127.38
19925.41	1128.220	052.36	1125.95	20178	1126.88	20308.6	1125.432	0337.05	1126.91
20359.69	1128.1	20418.9	1136.772	0433.54	1138.95	20442.6	1142.972	0452.11	1145.04
20459.98	11472	0486.73	1153.982	0501.85	1152.22	0505.69	1151.842	0508.94	1152.23
20520.58	1154.920	536.79	1154.882	0579.49	1153.982	0596.08	1152.732	0626.31	1153.04
20638.92	11532	0676.95	1152.042	0712.89	1150.942	0732.98	1151.742	0744.81	1151.6
20771.95	1151.720	800.57	1150.822	0804.59	1150.662	0830.42	1153.22	20875	1152.73
20887.8	1152.8	20896.5	1150.862	0922.93	1145.522	0938.03	1144.772	0957.31	1143.67
20981.34	1145.2	21015.1	1155.52	1034.51	1153.282	1041.76	1152.662	1066.29	1144.28
21135.83	11442	1154.19	1144.24	21225.1	1144.772	1232.85	1146.092	1249.91	1149.32
21275.87	1149.621	280.71	1149.542	1284.16	1148.152	1300.98	1140.582	1329.25	1140.09
21345.2	1140.121	351.19	1143.012	1365.21	1149.012	1385.23	1148.622	1389.35	1148.63
21391.53	1148.321	406.85	1147.222	1414.28	1147.462	1430.38	1147.512	1459.89	1147.66
21501.59	1148.421	669.43	1148.692	1698.08	1148.712	1706.27	1148.762	1828.84	1149.75
21966.13	1148.821	975.32	1148.842	1988.33	1149.16	22026.1	1156.012	2047.67	1158.88
22052.31	1158.922	066.78	1157.462	2089.29	1162.012	2094.55	1163.022	2102.22	1160.22
22108.11	1160.522	126.83	1162.352	2134.31	1162.312	2140.23	1162.142	2171.87	1161.82
22185.25	1161.822	223.04	1161.062	2229.65	1160.892	2241.59	1158.932	2247.22	1158.16
22263.02	1155.722	277.72	1160.44	22295	1158.712	2312.49	1164.622	2323.46	1167.71
22326.51	1168.422	334.35	1169.15	22354.2	1171.282	2358.34	1170.912	2366.27	1170.67
22389.93	1162.722	426.46	1165.352	2447.68	1166.612	2460.42	1164.92	2478.36	1161.88
22493.23	1158.822	548.65	1168.96	22557.7	1170.772	2571.15	1171.672	2589.76	1171.8
22608.2	1171.822	632.49	1165.542	2655.97	1165.212	2666.17	1165.212	2706.69	1158.21
22733.65	1159.722	770.59	1156.432	2796.01	1159.772	2799.92	1160.152	2833.84	1160.25
22864.9	1161.2	22880.6	1162.672	2890.85	1164.42	2917.15	1165.052	2930.23	1166.18

22940.6	1166.122971.53	1172.2822986.71	1172.4923002.29	1172.9423015.56	1171.39
23034.78	1168.723058.87	1169.2223069.85	1169.3623104.84	1169.6223151.57	1170.04
23174.83	1169.823201.95	1169.7423205.45	1168.8823214.31	1167.4123241.36	1161.69
23247.9	1164.623269.96	1170.2123283.36	1169.65 23293	1169.8223295.79	1169.72
23312.61	1169.923326.72	1172.2923338.48	1174.1123365.04	1174.7823374.67	1175.28
23401.49	1178.323428.88	1181.8923450.92	1183.1123467.59	1185.44 23529.2	1187.78
23533.18	1187.7 23583.4	1181.3623609.86	1183.1123613.57	1183.2923632.88	1182.66
23672.89	1182.4 23712.1	1182.3223727.43	1181.9423751.66	1181.0823776.53	1180.43
23781.57	1180.223801.96	1180.4923855.26	1180.9723873.06	1182.9523882.04	1182.85
23890.47	1182.2 23941.5	1180.4824011.76	1178.4824062.88	1178.924078.81	1178.99

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14746.98	.035	19510.69	.035	20486.73	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19510.6	920486.73	500	506.77	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14746.98	19510.69	1154.92	20486.73	24078.81	1153.98

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1146.99	Element			
Vel Head (ft)	2.01	Wt. n-Val.		0.035	
W.S. Elev (ft)	1144.97	Reach Len. (ft)	500.00	506.77	520.00
Crit W.S. (ft)	1138.52	Flow Area (sq ft)		14836.82	
E.G. Slope (ft/ft)	0.001759	Area (sq ft)	673.78	14836.82	391.17
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1293.58	Top Width (ft)	114.33	908.83	270.42
Vel Total (ft/s)	11.39	Avg. Vel. (ft/s)		11.39	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		16.33	
Conv. Total (cfs)	4029584.3	Conv. (cfs)		4029584.3	
Length Wtd. (ft)	506.77	Wetted Per. (ft)		916.96	
Min Ch El (ft)	1125.43	Shear (lb/sq ft)		1.78	
Alpha	1.00	Stream Power (lb/ft s)		20.24	
Frctn Loss (ft)	0.84	Cum Volume (acre-ft)	2392.10	11666.83	1264.50
C & E Loss (ft)	0.05	Cum SA (acres)	192.71	716.98	238.99

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1146.99	Element			
Vel Head (ft)	2.01	Wt. n-Val.		0.035	
W.S. Elev (ft)	1144.97	Reach Len. (ft)	500.00	506.77	520.00
Crit W.S. (ft)	1138.52	Flow Area (sq ft)		14836.49	
E.G. Slope (ft/ft)	0.001759	Area (sq ft)		14836.49	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	908.82	Top Width (ft)		908.82	
Vel Total (ft/s)	11.39	Avg. Vel. (ft/s)		11.39	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		16.32	
Conv. Total (cfs)	4029449.0	Conv. (cfs)		4029449.0	
Length Wtd. (ft)	506.77	Wetted Per. (ft)		916.96	
Min Ch El (ft)	1125.43	Shear (lb/sq ft)		1.78	
Alpha	1.00	Stream Power (lb/ft s)		20.24	
Frctn Loss (ft)	0.84	Cum Volume (acre-ft)		11667.68	0.32
C & E Loss (ft)	0.05	Cum SA (acres)		716.97	0.18

Warning: Divided flow computed for this cross-section.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.35

INPUT
Description:
Station Elevation Data num= 282

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14725.39	1145.514	734.14	1145.47	14749.59	1144.96	14753.94	1145.18	14770.5	1144.77
14783.72	1144.614	795.36	1144.65	14804.37	1144.86	14823.99	1144.88	14829.06	1145.62
14835.67	1145.614	923.33	1146.68	14966.39	1146.48	15039.52	1144.92	15045.24	1145.66
15049.3	1145.415	062.11	1143.81	15082.92	1144.63	15099.12	1144.93	15101.95	1145.22
15117.01	1145.315	160.07	1146.38	15194.51	1145.68	15220.11	1146.58	15232.48	1147.61
15296.52	1147.915	307.85	1148.16	15314.28	1147.78	15336.75	1146.06	15367.99	1146.25
15380.22	1146.615	393.86	1146.71	15413.12	1147.56	15440.83	1147	15456.8	1146.91
15523.42	1146.915	540.82	1146.81	15642.16	1148.26	15661.09	1148.15	15833.01	1148.5
15861.97	1148.515	964.59	1148.29	16035.38	1148.94	16050.56	1148.78	16104.11	1147.66

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16136.13  1146.716148.11 1146.7816172.71  1148.116238.71  1147.116270.89 1146.98
16286.77  1146.816359.94 1147.9216384.15 1146.6516386.33  1146.616400.88 1146.88
16413.24  1147.316428.09 1148.8916462.01 1149.0116531.58 1147.9216596.51 1149.25
16636.45  1149.316648.83 1148.0116654.62 1147.9216676.35 1148.0716697.82  1148.6
16721.43  1149.416751.94 1149.3516845.03  1149.616937.24 1149.04   16966 1148.95
16985.73  1148.717000.91 1148.6417010.69 1148.7617021.47 1148.78 17049.3 1150.14
17054.03  1150.317064.58 1150.3617143.42 1150.3717240.43 1150.2117273.08 1150.21
17281.85    115017305.82 1149.4917311.15 1149.6117331.18 1149.7117358.67 1150.37
17459.87    115017469.16 1149.9817595.87 1150.0917634.61 1150.0117716.87 1150.04
17758.47    115017893.22 1148.82 17925.8 1148.53 17948.2 1148.8517992.64 1147.73
18001.09  1148.418006.03 1148.57 18044.3 1147.6518078.29  1147.218112.96 1147.66
18176.17  1147.818180.45  1147.918266.54  1148.718279.26 1148.7318359.82 1148.08
18394.67  1147.718462.46 1146.6618497.19 1146.2418505.15 1145.9518558.58 1146.42
18561.93  1146.518574.15 1145.8918595.21 1146.5218611.09 1146.7118633.45  1146.7
18642.24  1147.418655.46 1146.77 18672.4 1144.1318674.03 1143.1418695.73 1143.25
18701.34  1143.418727.85 1146.6818745.64 1149.8518777.23 1154.1818821.24 1153.45
18871.15  1153.118908.75  1152.918933.78  1152.318959.08 1151.7818968.95 1152.17
18989.29  1152.319036.39 1152.8219038.88 1152.9619060.44 1153.5219080.83 1154.35
19090.67  1152.719128.69 1153.0119148.78 1152.9819202.42 1153.73 19280.2 1153.64
19308.46  1156.219353.13  1154.119365.17 1153.4319392.88  1154.119395.59 1153.96
19400.85  1151.119432.33    113319500.71 1151.3719502.69 1151.8219519.66 1156.41
   19539  1146.619549.07 1141.9719557.01 1144.4219564.03 1141.7219603.77 1127.37
19631.86  1127.419687.85 1127.18 19723.5  1126.719825.47 1126.6819862.39 1126.52
19883.63  1126.319989.51 1124.35 20081.1  1126.420115.32 1127.1320127.17 1126.67
20175.73  1125.820246.04 1123.9920276.03 1124.8520290.12  1125.320372.13  1127.3
20426.97    113020449.72 1141.49 20458.5 1143.7720477.29 1147.7320496.54  1151.9
 20511.6    115020518.58 1149.2220530.19 1149.95 20547.5 1151.1520575.07 1150.27
20578.53  1150.420588.29 1151.2920610.78 1150.9220640.86 1150.5520660.11 1150.35
20675.24  1149.720706.15 1147.9420728.63 1148.9820731.37 1149.6420735.97 1149.28
20740.15  1149.220789.02 1148.11 20809.2 1148.1820846.38 1150.5920864.44 1151.29
20872.47  1151.620873.77 1151.3420912.02 1145.6220928.49 1145.1420966.28 1143.83
20978.93  1143.820990.28 1143.4721008.25 1148.1521024.38 1152.2921058.78 1151.06
21066.86  1148.221075.46 1144.2421155.96 1144.04 21229.4 1143.8821316.03 1143.34
21317.74  1144.121331.92 1148.7521359.64 1149.1121360.18 1148.6321373.89 1139.71
21393.03  1139.1 21415.4 1138.9221429.42 1143.5721439.44 1147.28 21455.6 1147.16
21462.13    114721473.03 1146.3821482.38 1145.7521499.16 1145.1621579.66 1145.51
21791.94  1147.221856.09  1147.321869.98 1147.3921943.36 1147.4921995.53 1147.19
22028.65  1147.122031.46  1149.1 22070.6 1152.4822088.35  1151.622103.06 1146.47
22110.94  1143.922119.14 1148.6122129.17 1155.6622158.73 1155.2822205.83 1154.86
22246.47  1161.822259.44 1164.1622279.81 1167.2422295.82 1166.5922298.17  1166.8
22321.53  1168.122331.99 1168.5522364.86 1167.8622419.41 1167.48 22478.6 1167.24
 22491.1  1167.122538.98 1166.3322594.96 1166.6122606.99 1166.5222640.11 1166.05
22667.95  1165.422685.57  1166.122706.79  1167.222735.69 1165.75 22764.9 1163.86
22804.35  1162.422865.92 1157.0422891.83 1157.29 22902.1 1157.0622941.33 1156.81
22981.98  1166.723006.53 1173.7623009.37 1172.4123011.72 1171.7923017.67 1172.14
23044.31  1173.1 23056.5 1172.5523110.78 1172.9823119.28 1173.12 23122.8 1173.01
23172.06  1172.223191.68 1172.5223195.02 1172.36 23209.6 1170.9423219.89 1172.82
23223.55  1173.223263.08 1166.54

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14725.39    .03519519.66    .03520496.54    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19519.6620496.54              490  500.81     520              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14725.3919519.66 1156.4120496.5423263.08  1151.9

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1146.10   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                1.86   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1144.24   Reach Len. (ft)             490.00     500.81     520.00
  Crit W.S. (ft)            1137.09   Flow Area (sq ft)                    15436.37
  E.G. Slope (ft/ft)       0.001554   Area (sq ft)                380.15   15436.37     369.24
  Q Total (cfs)           169000.00   Flow (cfs)                           169000.00
  Top Width (ft)            1375.54   Top Width (ft)              112.37     915.59     347.58
  Vel Total (ft/s)            10.95   Avg. Vel. (ft/s)                        10.95
  Max Chl Dpth (ft)           20.25   Hydr. Depth (ft)                        16.86
  Conv. Total (cfs)       4286780.5   Conv. (cfs)                          4286780.5
  Length Wtd. (ft)           500.81   Wetted Per. (ft)                       922.69
  Min Ch El (ft)            1123.99   Shear (lb/sq ft)                         1.62
  Alpha                        1.00   Stream Power (lb/ft s)                  17.77
  Frctn Loss (ft)              0.86   Cum Volume (acre-ft)       2386.05   11490.74    1259.96
  C & E Loss (ft)              0.02   Cum SA (acres)              191.41     706.37     235.30

Warning: Divided flow computed for this cross-section.
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CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1146.10	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.86	Wt. n-Val.		0.035	
W.S. Elev (ft)	1144.24	Reach Len. (ft)	490.00	500.81	520.00
Crit W.S. (ft)	1137.09	Flow Area (sq ft)		15435.92	
E.G. Slope (ft/ft)	0.001554	Area (sq ft)		15435.92	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	915.58	Top Width (ft)		915.58	
Vel Total (ft/s)	10.95	Avg. Vel. (ft/s)		10.95	
Max Chl Dpth (ft)	20.25	Hydr. Depth (ft)		16.86	
Conv. Total (cfs)	4286604.0	Conv. (cfs)		4286604.0	
Length Wtd. (ft)	500.81	Wetted Per. (ft)		922.68	
Min Ch El (ft)	1123.99	Shear (lb/sq ft)		1.62	
Alpha	1.00	Stream Power (lb/ft s)		17.77	
Frctn Loss (ft)	0.86	Cum Volume (acre-ft)		11491.59	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		706.36	0.18

Warning: Divided flow computed for this cross-section.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.25

INPUT
Description:
Station Elevation Data num= 349

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14669.3	1141.2	14696	1141.4	114716.46	1141.8	14734.89	1140.2	14738.34	1140
14768.15	1141.6	14812.37	1141.57	14838.8	1141.9	14890.22	1142.5	14893.45	1142.47
14952.96	1141.9	14990.54	1141.8	15014.65	1141.27	15045.5	1141.8	15053.65	1141.8
15146.97	1141.5	15157.23	1141.7	15244.56	1144.0	15266.24		114415326.43	1145.26
15385.32	1145.5	15516.41	1144.4	15540.47	1144.3	15579.56	1145.6	15680.58	1144.02
15706.7	1143.6	15726.55	1143.5	15754.97	1145.0	15769.83	1145.7	15806.78	1145.19
15847.95	1144.8	15908.04	1146.0	15939.34	1146.5	15962.83	1146.1	15972.94	1145.65
15986.85	1145.3	16000.95	1145.1	16024.19	1145.6	16105.28	1146.1	16115.42	1146.22
16230.86		114816244.42	1147.2	16258.68	1146.6	16266.61	1146.3	16293.47	1146.09
16301.66	1146.1	16383.22	1146.72	16414.9	1146.7	16482.81	1147.2	16504.83	1147.38
16572.16	1147.3	16578.56	1146.9	16609.46	1146.1	16633.03	1146.9	16649.47	1147.34
16683.41	1147.6	16741.32	1147.9	16756.58	1147.7	16770.63	1147.5	16808.89	1147.46
16851.53	1147.9	16901.19	1148.2	16920.3	1147.6	16939.23	1147.3	16953.12	1147.51
16967.88	1147.9	16989.95	1147.7	17061.99	1148.6	17131.84	1148.8	17184.33	1148.44
17227.94	1148.5	17239.04	1148.3	17265.97	1149.68	17292	1147.8	17303.04	1148.05
17309.99	1148.7	17320.73	1148.4	17366.68	1149.6	17373.41	1149.8	17389.09	1149.83
17504.52	1149.7	17533.74	1148.0	17546.98	1147.4	17587.64	1147.7	17659.68	1148.62
17759.26	1148.1	17829.13	1147.4	17834.45	1147.4	17847.61	1146.5	17850.37	1146.8
17860.97	1146.2	17879.42	1146.0	17912.16	1145.8	17921.91	1145.9	17941.62	1146.82
17978.97	1146.7	18099.37	1145.6	18178.51	1145.8	18227.54	1145.4	18292.64	1145.2
18360.29	1144.4	18416.44	1142.6	18447.34	1143.2	18474.49	1144.5	18542.66	1145.67
18546.53	1145.8	18577.13	1147.42	18602.8	1148.6	18619.79	1147.8	18649.25	1147.01
18663.27	1146.8	18687.94	1145.9	18750.86	1146.48	18782.2	1147.0	18849.61	1148.48
18902.85	1149.5	18980.06	1149.7	18987.95	1150.0	19004.24	1149.5	19011.28	1149.54
19087.34	1151.9	19090.48	1151.93	19116.5	1151.9	19124.55	1151.0	19130.34	1150.2
19136.83	1150.8	19146.03	1152.0	19162.08	1151.7	19184.38	1151.3	19206.42	1149.61
19218	1148.3	19242.91	1147.7	19260.28	1147.3	19277.78	1146.6	19296.05	1145.93
19315.11	1148.3	19336.56	1151.3	19384.06	1151.8	19403.77	1151.9	19432.88	1151.94
19442.06	1151.6	19447	1147.9	19457.65	1140.9	19488.89	1147.4	19507.63	1151.32
19522.87	1153.5	19554.33	1141.0	19559.11	1142.3	19561.79	1142.7	19577.69	1136.68
19600.27	1127.1	19613.8	1127.0	19660.05	1126.5	19717.39	1125.9	19739.56	1126.02
19798.63	1126.8	19898.04	1124.5	19925.47	1124.0	19948.27	1124.3	20038.98	1126.03
20051.01	1126.2	20181.25	1124.1	20280.79	1127.5	20309.66	1128.5	20371.33	1129.09
20431.79	1129.7	20446.94	1136.33	20454.8	1139.6	20497.24	1150.3	20498.94	1150.8
20540.34	1145.8	20550	1146.6	20568.14	1147.9	20569.31	1148.1	20569.71	1149.34
20592.92	1148.8	20615.52	1148.5	20619.54	1149.0	20637.93	1149.7	20641.95	1149.18
20651.88	1149.3	20653.82	1148.88	20662.5	1149.8	20690.24	1147.9	20704.98	1147.45
20728.18	1147.4	20749.28	1147.1	20765.93	1149.2	20797.28	1149.1	20812	1148.78
20834.04	1147.3	20847.92	1146.9	20861.76	1147.1	20865.13	1146.4	20867.65	1146.92
20905.04	1152.1	20905.07	1153.1	20907.01	1154.1	20925.14	1154.0	20942.62	1153.22
20957.29	1149.5	20973.44	1145.2	20977.87	1146.6	20993.54	1145.9	21027.21	1144.25
21036.39	1143.9	21082.58	1143.7	21083.18	1145.3	21084.35	1145.0	21107.03	1150.4
21112.26	1151.5	21115.86	1151.5	21117.26	1152.5	21125.17	1149.5	21134.03	1149.45
21148.61	1149.9	21148.7	1150.6	21156.06	1144.26	21157.4	1143.3	21171.27	1144.61
21173.46	1144.1	21197.06	1143.4	21201.63	1142.89	21219.1	1142.8	21272.36	1142.43
21272.7		114321303.18	1142.4	21324.66	1142.4	21372.84	1143.3	21390.94	1143.96
21395.65	1143.8	21402.53	1145.5	21413.78	1148.6	21416.07	1150.17	21438.9	1150.43
21442.05		114921444.91	1144.69	21449.4	1138.83	21459.3	1140.6	21484.71	1140.34
21496.57	1140.1	21500.37	1138.96	21509.3	1143.17	21515	1145.9	21516.27	1146.41
21546.73	1147.8	21548.94	1145.9	21550.77	1145.8	21558.28	1146.9	21558.63	1146.08

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21583.57  1147.621585.59 1147.6321600.87 1147.8621609.33 1146.6521625.89 1145.94
21667.88  1145.621692.76  1145.521702.11 1146.1721712.99 1147.5821755.73 1146.47
21773.13  1145.821804.28 1146.5721809.78 1146.8221824.28 1146.55 21830.5 1146.34
21838.18  1146.421853.31 1147.6221862.39  1148.221878.77 1148.5721886.99 1147.25
21892.55  1146.921912.24 1146.8321949.06 1146.8821955.72  1147.121992.39 1148.08
21993.27  1147.622003.04 1147.1322013.87 1147.6422020.58 1148.74 22023.8  1151.5
22024.87  1151.922029.37 1150.5622030.61 1149.95 22030.9 1147.6822032.04  1148.3
22032.09  1151.922033.36 1151.0522035.83 1147.6122045.88 1147.6522054.82 1147.85
22058.73  1148.1 22068.2 1147.8722076.26 1147.4422083.29 1151.88 22088.5 1152.85
   22095  1153.722102.18 1152.4722111.71 1147.84 22113.2 1147.2722117.92 1149.93
22123.62  1153.522130.31 1157.38 22135.7 1154.4822157.41 1155.91 22163.5 1154.36
22180.59  1149.122181.12 1148.0622186.75 1150.0122199.13 1153.6922201.91 1154.62
22205.97  1155.622211.34 1155.3222231.42 1153.9522233.49 1154.2422248.76 1154.93
22294.99  1152.7 22358.5 1153.4722364.22 1153.5322412.11 1154.8322415.49 1155.76
22415.89  1156.822419.27 1155.9522429.54 1155.0922450.54 1157.8922483.44 1163.47
22508.73  1163.122514.12 1162.8622521.49 1163.24 22541.1 1163.8922546.09 1164.17
22553.57  1165.122559.79    116622607.78 1166.6422685.95 1168.0322694.88  1168.1
22712.45  1167.922738.54 1167.6422764.84 1166.4922775.76 1163.4422783.83  1165.1
 22785.1  1165.522819.35 1165.8922846.71 1163.9122860.22 1164.0522888.52  1161.7
22898.03  1162.322908.01 1162.0322927.09 1162.6822936.67 1162.76

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14669.3    .03519522.87    .03520498.94    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19522.8720498.94              500  500.83     490              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14669.319522.87  1153.520498.9422936.67  1150.8

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1145.23   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.09   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1143.14   Reach Len. (ft)            500.00     500.83     490.00
  Crit W.S. (ft)            1137.06   Flow Area (sq ft)                   14576.74
  E.G. Slope (ft/ft)       0.001890   Area (sq ft)               770.84   14576.74     249.90
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1743.60   Top Width (ft)             596.42     919.66     227.52
  Vel Total (ft/s)            11.59   Avg. Vel. (ft/s)                      11.59
  Max Chl Dpth (ft)           19.13   Hydr. Depth (ft)                      15.85
  Conv. Total (cfs)       3887181.3   Conv. (cfs)                        3887181.3
  Length Wtd. (ft)           500.83   Wetted Per. (ft)                     925.95
  Min Ch El (ft)            1124.01   Shear (lb/sq ft)                       1.86
  Alpha                        1.00   Stream Power (lb/ft s)                21.54
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)      2379.58   11318.21    1256.26
  C & E Loss (ft)              0.03   Cum SA (acres)             187.43     695.82     231.87


Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1145.23   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.09   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1143.14   Reach Len. (ft)            500.00     500.83     490.00
  Crit W.S. (ft)            1137.06   Flow Area (sq ft)                   14576.18
  E.G. Slope (ft/ft)       0.001890   Area (sq ft)                        14576.18
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             919.65   Top Width (ft)                       919.65
  Vel Total (ft/s)            11.59   Avg. Vel. (ft/s)                      11.59
  Max Chl Dpth (ft)           19.13   Hydr. Depth (ft)                      15.85
  Conv. Total (cfs)       3886946.3   Conv. (cfs)                        3886946.3
  Length Wtd. (ft)           500.83   Wetted Per. (ft)                     925.95
  Min Ch El (ft)            1124.01   Shear (lb/sq ft)                       1.86
  Alpha                        1.00   Stream Power (lb/ft s)                21.54
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)              11319.07       0.32
  C & E Loss (ft)              0.03   Cum SA (acres)                       695.81       0.18


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 220.16
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INPUT
Description:
Station Elevation Data num= 259

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14558.26	1140.114	601.34	1139.881	4620.29	1139.891	4648.79	1141.511	4664.25	1140.61
14699.34	1141.614	718.01	1141.591	4790.33	1141.591	4818.53	1141.861	4895.67	1142.18
15034.84	1143.91	5053.17	1143.671	5096.39	1143.07	15111.3	1142.951	5132.96	1142.95
15169.64	1143.41	5197.82	1143.91	5251.91	1143.9	15289.9	1145.841	5300.92	1146.51
15495.98	1143.61	5524.65	1143.331	5535.19	1143.511	5572.76	1144.261	5589.11	1144.43
15614.98	1144.51	5687.06	1145.09	15734.3	1145.41	5803.62	1144.761	5859.66	1144.21
15868.89	1144	15893.57	1144.051	5934.43	1145.12	15967.5	1145.131	5993.08	1145.16
16008.42	1145	16039.76	1144.541	6055.43	1144.951	6152.98	1145.981	6156.28	1146.02
16187.56	1145	16196.71	1144.991	6210.32	1145.41	6216.18	1145.431	6233.87	1145
16271.52	1145.11	6327.67	1145.421	6366.09	1145.961	6374.17	1146.13	16417.1	1146.31
16484.92	1146.41	6497.32	1146.591	6513.78	1146.681	6539.16	1145.371	6560.28	1145.35
16577.35	1145.41	6668.97	1146.28	16689.1	1145.34	16700.4	1144.951	6728.75	1145.08
16832.02	1147.6	16837	1147.631	6858.13	1146.391	6867.63	1146.61	6879.67	1146.67
16908.91	1146.31	7022.46	1147.49	17149.3	1147.821	7167.69	1146.39	17175.6	1146.74
17193.26	1148.3	17217.1	1148.311	7227.91	1148.151	7242.49	1147.81	7354.23	1148.45
17382.23	1148.51	7409.55	1147.811	7425.59	1147.5	17568.1	1145.11	7649.12	1144.43
17682.1	1144	17710.46	1144.261	7771.01	1145.21	7778.25	1145.311	7792.86	1145.15
17804.62	1145.21	7817.29	1145.1	17852.1	1144.981	7869.04	1144.881	7987.97	1145.36
18006.3	1145.71	8056.03	1146.181	8068.08	1145.931	8098.69	1146.561	8107.36	1146.63
18142.42	1145.71	8202.88	1144.161	8218.04	1144.521	8233.08	1145.351	8252.18	1145.25
18278.9	1145.31	8290.75	1145.451	8340.71	1145.961	8372.38	1145.71	8379.92	1145.53
18409.63	1146.31	8413.87	1146.291	8430.47	1145.181	8457.38	1145.051	8514.13	1144.57
18547.44	1145	18575.72	1145.161	8655.55	1145.41	8750.49	1145.441	8839.08	1144.51
18847.3	1144.31	8925.78	1141.841	9006.31	1143.681	9012.55	1143.791	9121.56	1145.48
19156.79	1145	19203.49	1146.021	9209.43	1146.341	9219.89	1146.381	9234.21	1146.33
19241.65	1147.11	9268.87	1147.991	9272.29	1147.971	9289.79	1150.251	9300.47	1154.06
19315.85	1159.11	9322.74	1156.461	9341.28	1149.861	9361.08	1149.431	9367.81	1149.26
19378.01	1149.51	9399.76	1149.531	9414.12	1149.771	9415.39	1149.71	9451.58	1138.81
19454.2	1137.91	9501.23	1151.151	9510.31	1154.081	9515.25	1152.71	9522.24	1151.84
19532	1151.21	9539.77	1147.881	9547.51	1145.91	9556.05	1144.17	19561.2	1141.76
19575.95	1134.21	9608.44	1130.73	19637	1126.531	9664.14	1126	19716.23	1126.18
19735.51	1126.21	9805.41	1126.341	9854.78	1126.231	9862.41	1126.241	9977.89	1125.59
19988	1125.62	0055.71	1125.572	0098.15	1125.892	0118.29	1125.462	0225.13	1126.19
20246.76	1126.32	0256.27	1126.112	0377.74	1124.582	0386.58	1125.432	0451.67	1132
20465.75	1138.52	0490.53	1148.342	0493.76	1149.942	0502.77	1150.212	0505.34	1151.16
20515.14	1151.32	0526.39	1151.22	0530.89	1151.252	0537.96	1151	20557.56	1150.15
20577.7	1150.1	20612.4	1148.992	0650.93	1150.922	0676.41	1152.422	0699.12	1147.44
20720.21	1143.7	20762.3	1144.722	0828.37	1145.522	0830.49	1145.642	0878.51	1145.14
20899.15	1145	20915.75	1144.32	0933.85	1142.512	0938.75	1142.352	0943.08	1141.87
20946.54	1143	20949.2	1143.052	0955.72	1146.922	0979.74	1153.822	1012.55	1164.51
21027.23	1164.52	1059.64	1164.582	1097.75	1151.75	21122.9	1143.62	1126.93	1143.42
21131.64	1141.12	1138.96	1141.482	1158.51	1134.142	1211.22	1134.05	21230.9	1140.88
21249.19	1141.7	21275.9	1150.232	1278.43	1150.992	1287.42	1151	21297.37	1149.81
21321.46	1148.5	21328.5	1143.862	1330.79	1142.52	1351.03	1141.66	21363.9	1141.47
21393.58	1141.92	1405.26	1141.312	1438.19	1141.29	21452.4	1141.352	1473.13	1141.81
21484.79	1145.4	21494.9	1148.192	1509.25	1148.852	1523.37	1149.972	1530.92	1145.09
21541.36	1138.52	1588.15	1139.072	1600.99	1144.842	1630.49	1145.362	1652.18	1145.66
21693.37	1145.92	1699.87	1145.942	1757.41	1147.22	1786.74	1147.82	1819.64	1148.51
21823.23	1148.42	1876.31	1147.982	1940.69	1150.472	1968.32	1151.662	1985.13	1153.34
21989.98	1154.12	2011.31	1154.562	2029.38	1154.782	2035.21	1152.32	2042.51	1148.88
22067.57	1152.92	2071.58	1152.882	2102.57	1153.092	2111.37	1153.552	2128.28	1154.08
22141.3	1159.12	2153.18	1163.872	2186.69	1177.072	2190.01	1177.08		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14558.26	.035	19510.31	.035	20515.14	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19510.31	20515.14	480	495.84	550	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14558.26	19510.31	1154.08	20515.14	22190.01	1151.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1144.14	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.40	Wt. n-Val.		0.035	
W.S. Elev (ft)	1141.74	Reach Len. (ft)	480.00	495.84	550.00
Crit W.S. (ft)	1136.90	Flow Area (sq ft)		13591.57	
E.G. Slope (ft/ft)	0.002357	Area (sq ft)	237.01	13591.57	760.95
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1469.89	Top Width (ft)	273.72	912.67	283.50
Vel Total (ft/s)	12.43	Avg. Vel. (ft/s)		12.43	
Max Chl Dpth (ft)	17.16	Hydr. Depth (ft)		14.89	

Conv. Total (cfs)	3480660.3	Conv. (cfs)		3480660.3	
Length Wtd. (ft)	495.84	Wetted Per. (ft)		917.43	
Min Ch El (ft)	1124.58	Shear (lb/sq ft)		2.18	
Alpha	1.00	Stream Power (lb/ft s)		27.11	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)	2373.80	11156.28	1250.58
C & E Loss (ft)	0.04	Cum SA (acres)	182.43	685.29	228.99

Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1144.14	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.40	Wt. n-Val.		0.035	
W.S. Elev (ft)	1141.74	Reach Len. (ft)	480.00	495.84	550.00
Crit W.S. (ft)	1136.90	Flow Area (sq ft)		13590.57	
E.G. Slope (ft/ft)	0.002358	Area (sq ft)		13590.57	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	912.67	Top Width (ft)		912.67	
Vel Total (ft/s)	12.44	Avg. Vel. (ft/s)		12.44	
Max Chl Dpth (ft)	17.16	Hydr. Depth (ft)		14.89	
Conv. Total (cfs)	3480244.0	Conv. (cfs)		3480244.0	
Length Wtd. (ft)	495.84	Wetted Per. (ft)		917.42	
Min Ch El (ft)	1124.58	Shear (lb/sq ft)		2.18	
Alpha	1.00	Stream Power (lb/ft s)		27.12	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)		11157.14	0.32
C & E Loss (ft)	0.04	Cum SA (acres)		685.27	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.06

INPUT
Description: Upstream face of Preist Rd Bridge
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18820	1144	19040	1148	19210	1152	19541.7	1156.02	19541.8	1149.07
19541.9	1148.5	19555.9	1148.27	19568.6	1138.69	19576.6	1137.91	19594.4	1126.86
19652.1	1126.1	19661.1	1124.14	19665.1	1124.14	19728.4	1122.9	19781.5	1123.99
19785.5	1123.99	19844.6	1123.1	19903	1123.46	19963	1123	20023.2	1123.05
20101.5	1123.6	20105.9	1125.63	20146.2	1126.4	20204.1	1126.31	20267.2	1126.5
20327.5	1126.27	20388.2	1126.3	20452.8	1126.86	20488.2	1148.53	20494.5	1148.52
20504.7	1148.55	20504.8	1158.3	20504.9	1165.2	21100	1180		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18820	.035	19541.8	.035	20504.8	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19541.8	20504.8	176.4	176.4	176.4	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18820	19541.8	1149.07	20504.8	21100	1158.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1142.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.27	Wt. n-Val.		0.035	
W.S. Elev (ft)	1140.72	Reach Len. (ft)	0.00	0.00	0.00
Crit W.S. (ft)	1135.39	Flow Area (sq ft)		13992.87	
E.G. Slope (ft/ft)	0.002141	Area (sq ft)		13992.87	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	909.54	Top Width (ft)		909.54	
Vel Total (ft/s)	12.08	Avg. Vel. (ft/s)		12.08	
Max Chl Dpth (ft)	17.82	Hydr. Depth (ft)		15.38	
Conv. Total (cfs)	3652052.8	Conv. (cfs)		3652052.8	
Length Wtd. (ft)	0.00	Wetted Per. (ft)		918.02	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.04	
Alpha	1.00	Stream Power (lb/ft s)		24.61	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	2372.49	10999.28	1245.77
C & E Loss (ft)	0.02	Cum SA (acres)	180.92	674.92	227.20

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1142.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.27	Wt. n-Val.		0.035	
W.S. Elev (ft)	1140.72	Reach Len. (ft)	0.00	0.00	0.00
Crit W.S. (ft)	1135.39	Flow Area (sq ft)		13991.64	
E.G. Slope (ft/ft)	0.002142	Area (sq ft)		13991.64	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	909.53	Top Width (ft)		909.53	
Vel Total (ft/s)	12.08	Avg. Vel. (ft/s)		12.08	
Max Chl Dpth (ft)	17.82	Hydr. Depth (ft)		15.38	
Conv. Total (cfs)	3651537.8	Conv. (cfs)		3651537.8	
Length Wtd. (ft)	0.00	Wetted Per. (ft)		918.01	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.04	
Alpha	1.00	Stream Power (lb/ft s)		24.62	
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)		11000.16	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		674.90	0.18

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 220.05

INPUT
Description: Priest Road
Distance from Upstream XS = 0
Deck/Roadway Width = 105
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 13

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
18820	1144	1144	19040	1148	1148	19210	1152	1152
19541.7	1156.02	1156.02	19541.7	1156.02	1149.07	19661.1	1157.26	1150.31
19781.5	1158.44	1151.49	19903	1159.65	1152.7	20023.2	1160.89	1153.94
20142.2	1162.1	1155.11	20263.2	1163.32	1156.37	20384.2	1164.33	1157.4
20504.7	1165.2	1158.25						

Upstream Bridge Cross Section Data
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18820	1144	19040	1148	19210	1152	19541.7	1156.02	19541.8	1149.07
19541.9	1148.5	19555.9	1148.27	19568.6	1138.69	19576.6	1137.91	19594.4	1126.86
19652.1	1126.1	19661.1	1124.14	19665.1	1124.14	19728.4	1122.9	19781.5	1123.99
19785.5	1123.99	19844.6	1123.1	19903	1123.46	19963	1123	20023.2	1123.05
20101.5	1123.6	20105.9	1125.63	20146.2	1126.4	20204.1	1126.31	20267.2	1126.5
20327.5	1126.27	20388.2	1126.3	20452.8	1126.86	20488.2	1148.53	20494.5	1148.52
20504.7	1148.55	20504.8	1158.3	20504.9	1165.2	21100	1180		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18820	.035	19541.8	.035	20504.8	.035

Bank Sta: Left	Right	Coeff Contr.	Expan.
19541.8	20504.8	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18820	19541.8	1149.07	20504.8	21100	1158.3

Downstream Deck/Roadway Coordinates
num= 13

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
18820	1144	1144	19040	1148	1148	19210	1152	1152
19541.7	1156.02	1156.02	19541.7	1156.02	1149.07	19661.1	1157.26	1150.31
19781.5	1158.44	1151.49	19903	1159.65	1152.7	20023.2	1160.89	1153.94
20142.2	1162.1	1155.11	20263.2	1163.32	1156.37	20384.2	1164.33	1157.4
20504.7	1165.2	1158.25						

Downstream Bridge Cross Section Data
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18820	1144	19040	1148	19210	1152	19541.7	1156.02	19541.8	1149.07
19541.9	1148.5	19555.9	1148.27	19568.6	1138.69	19576.6	1137.91	19594.4	1126.86
19652.1	1126.1	19661.1	1124.14	19665.1	1124.14	19728.4	1122.9	19781.5	1123.99
19785.5	1123.99	19844.6	1123.1	19903	1123.46	19963	1123	20023.2	1123.05
20101.5	1123.6	20105.9	1125.63	20146.2	1126.4	20204.1	1126.31	20267.2	1126.5
20327.5	1126.27	20388.2	1126.3	20452.8	1126.86	20488.2	1148.53	20494.5	1148.52
20504.7	1148.55	20504.8	1158.3	20504.9	1165.2	21100	1180		

Manning's n Values num= 3

```
     Sta    n Val     Sta    n Val     Sta    n Val
   18820     .035 19541.8     .035 20504.8     .035

Bank Sta: Left   Right    Coeff Contr.   Expan.
       19541.8 20504.8             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18820 19541.8 1149.07 20504.8   21100  1158.3

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  7

Pier Data
Pier Station     Upstream= 19663.1    Downstream= 19663.1
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1151
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1151

Pier Data
Pier Station     Upstream= 19783.5    Downstream= 19783.5
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1152
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1152

Pier Data
Pier Station     Upstream=   19905    Downstream=   19905
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1153
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1153

Pier Data
Pier Station     Upstream= 20025.2    Downstream= 20025.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1154
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1123       4    1154

Pier Data
Pier Station     Upstream= 20144.2    Downstream= 20144.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1156
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1156

Pier Data
Pier Station     Upstream= 20265.2    Downstream= 20265.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1157
Downstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1157

Pier Data
Pier Station     Upstream= 20386.2    Downstream= 20386.2
Upstream     num=       2
    Width   Elev    Width   Elev
       4    1126       4    1158
Downstream     num=       2
```

Width	Elev	Width	Elev
4	1126	4	1158

Number of Bridge Coefficient Sets = 1

Low Flow Methods and Data
Energy
Momentum Cd = 1.2
Yarnell KVal = 1.05
Selected Low Flow Methods = Energy

High Flow Method
Energy Only

Additional Bridge Parameters
Add Friction component to Momentum
Do not add Weight component to Momentum
Class B flow critical depth computations use critical depth
inside the bridge at the upstream end
Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT Profile #PF#1
Opening : Bridge #1

E.G. US. (ft)	1142.99	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1140.72	E.G. Elev (ft)	1142.96	1142.58
Q Total (cfs)	169000.00	W.S. Elev (ft)	1140.46	1139.87
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1135.63	1135.62
Q Weir (cfs)		Max Chl Dpth (ft)	17.56	16.97
Weir Sta Lft (ft)		Vel Total (ft/s)	12.69	13.20
Weir Sta Rgt (ft)		Flow Area (sq ft)	13320.24	12799.20
Weir Submerg		Froude # Chl	0.57	0.61
Weir Max Depth (ft)		Specif Force (cu ft)	170784.95	165762.31
Min Top Rd (ft)	1148.55	Hydr Depth (ft)	15.12	14.56
Min El Prs (ft)	1158.25	W.P. Total (ft)	1107.99	1097.59
Delta EG (ft)	0.67	Conv. Total (cfs)	2967717.3	2794297.5
Delta WS (ft)	0.99	Top Width (ft)	880.77	879.02
BR Open Area (sq ft)	25521.96	Frctn Loss (ft)	0.36	0.22
BR Open Vel (ft/s)	13.20	C & E Loss (ft)	0.02	0.04
Coef of Q		Shear Total (lb/sq ft)	2.43	2.66
Br Sel Method	Energy only	Power Total (lb/ft s)	30.88	35.16

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1142.99	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1140.72	E.G. Elev (ft)	1142.96	1142.58
Q Total (cfs)	169000.00	W.S. Elev (ft)	1140.46	1139.87
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1135.63	1135.62
Q Weir (cfs)		Max Chl Dpth (ft)	17.56	16.97
Weir Sta Lft (ft)		Vel Total (ft/s)	12.69	13.20
Weir Sta Rgt (ft)		Flow Area (sq ft)	13317.63	12798.85
Weir Submerg		Froude # Chl	0.57	0.61
Weir Max Depth (ft)		Specif Force (cu ft)	170770.17	165759.52
Min Top Rd (ft)	1156.28	Hydr Depth (ft)	15.16	14.57
Min El Prs (ft)	1158.25	W.P. Total (ft)	1105.36	1097.10
Delta EG (ft)	0.67	Conv. Total (cfs)	2971454.8	2795003.3
Delta WS (ft)	0.99	Top Width (ft)	878.62	878.62
BR Open Area (sq ft)	25091.80	Frctn Loss (ft)	0.36	0.22
BR Open Vel (ft/s)	13.20	C & E Loss (ft)	0.02	0.04
Coef of Q		Shear Total (lb/sq ft)	2.43	2.66
Br Sel Method	Energy only	Power Total (lb/ft s)	30.88	35.16

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 220.03

INPUT
Description: Downstream face of Preist Rd Bridge
Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18820	1144	19040	1148	19210	1152	19541.7	1156.02	19541.8	1149.07
19541.9	1148.5	19555.9	1148.27	19568.6	1138.69	19576.6	1137.91	19594.4	1126.86
19652.1	1126.1	19661.1	1124.14	19665.1	1124.14	19728.4	1122.9	19781.5	1123.99
19785.5	1123.99	19844.6	1123.1	19903	1123.46	19963	1123	20023.2	1123.05
20101.5	1123.6	20105.9	1125.63	20146.2	1126.4	20204.1	1126.31	20267.2	1126.5
20327.5	1126.27	20388.2	1126.3	20452.8	1126.86	20488.2	1148.53	20494.5	1148.52
20504.7	1148.55	20504.8	1158.3	20504.9	1165.2	21100	1180		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18820	.035	19541.8	.035	20504.8	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19541.8	20504.8	840	799.9	720	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18820	19541.8	1149.07	20504.8	21100	1158.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1142.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.59	Wt. n-Val.		0.035	
W.S. Elev (ft)	1139.74	Reach Len. (ft)	840.00	799.90	720.00
Crit W.S. (ft)	1135.40	Flow Area (sq ft)		13097.09	
E.G. Slope (ft/ft)	0.002656	Area (sq ft)		13097.09	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.62	Top Width (ft)		906.62	
Vel Total (ft/s)	12.90	Avg. Vel. (ft/s)		12.90	
Max Chl Dpth (ft)	16.84	Hydr. Depth (ft)		14.45	
Conv. Total (cfs)	3279183.3	Conv. (cfs)		3279183.3	
Length Wtd. (ft)	799.90	Wetted Per. (ft)		914.49	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.37	
Alpha	1.00	Stream Power (lb/ft s)		30.64	
Frctn Loss (ft)	2.20	Cum Volume (acre-ft)	2372.49	10946.58	1245.77
C & E Loss (ft)	0.01	Cum SA (acres)	180.92	671.33	227.20

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1142.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.59	Wt. n-Val.		0.035	
W.S. Elev (ft)	1139.73	Reach Len. (ft)	840.00	799.90	720.00
Crit W.S. (ft)	1135.40	Flow Area (sq ft)		13096.98	
E.G. Slope (ft/ft)	0.002656	Area (sq ft)		13096.98	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.62	Top Width (ft)		906.62	
Vel Total (ft/s)	12.90	Avg. Vel. (ft/s)		12.90	
Max Chl Dpth (ft)	16.83	Hydr. Depth (ft)		14.45	
Conv. Total (cfs)	3279137.8	Conv. (cfs)		3279137.8	
Length Wtd. (ft)	799.90	Wetted Per. (ft)		914.49	
Min Ch El (ft)	1122.90	Shear (lb/sq ft)		2.37	
Alpha	1.00	Stream Power (lb/ft s)		30.64	
Frctn Loss (ft)	2.20	Cum Volume (acre-ft)		10947.46	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		671.32	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.88

INPUT
Description:
Station Elevation Data num= 261

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14514.07	1139	14534.1	1138.85	14545.54	1138.98	14568.07	1140.1	14616.5	1140.32
14716.7	1141	14745.12	1140.86	14840.33	1140.22	14862.85	1139.85	14909.77	1139.33
14931.77	1140.71	4961.51	1141.91	4973.84	1141.54	14992.46	1141.19	15030.45	1141.06
15047.06	1140.91	5059.77	1141.35	15078.45	1141.79	15107.01	1139.96	15123.4	1140.12
15199.13	1140.21	5217.64	1140.41	5301.85	1142.54	15323.64	1141.01	15345.17	1140.24
15380.24	1140.31	5441.95	1139.88	15464.09	1139.76	15548.89	1141.78	15563.61	1142.06
15578.38	1140.71	5601.21	1140.06	15608.94	1140.05	15634.45	1140.81	5649.04	1140.83
15719.22	1141.11	5815.93	1141.63	15837.84	1140.63	15860.05	1140.15	15893.02	1140.86
15939.51	1140.71	5978.38	1140.66	16064.4	1143.15	16070.41	1143.22	16095.29	1141.64
16115.96	1141.31	6119.03	1141.41	6134.54	1141.57	16146.86	1141.89	16169.82	1142.09
16236.82	1143.51	6306.63	1144.91	6330.96	1145.55	16356.32	1145.04	16390.25	1144.9
16418.37	1146.11	6499.77	1146.41	16543.51	1146.58	16545.29	1146.44	16607.82	1144.66
16624.62	1144.81	6876.38	1145.05	16916.17	1145.31	16938.38	1145.38	16953.95	1145.54
16977.85	1144.51	6984.79	1144.21	7015.75	1144.05	17019.85	1144.41	17024.96	1143.93
17076.6	1143.61	7080.54	1143.81	7109.82	1143.58	17203.42	1142.58	17223.3	1142.22
17320.75	1142.51	7338.45	1142.89	17457.6	1141.91	17572.79	1141.51	17582.93	1141.38
17588.97	1141.51	7626.53	1141.14	17630.9	1142.01	17642.89	1143.31	17665.29	1142.28

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17673.37    114217690.74 1141.9117757.85 1141.6317933.69 1140.81 18090.1 1139.93
18246.31  1140.218269.96 1140.2318307.92 1140.4718469.32 1140.3818475.89 1140.37
18530.05  1136.118574.27 1136.1918616.16 1136.3218617.38 1136.0718669.45  1135.5
18722.74  1135.618758.73 1136.0818801.35  1134.818813.29 1134.5418825.95 1134.44
18948.97  1133.119124.49 1134.1719150.71  1134.319175.81 1134.2619242.66 1133.74
19280.61  1132.319300.45 1131.8419312.63 1131.1619339.53 1130.9919367.29 1130.67
19377.92  1131.719385.17 1132.6819400.47 1133.2319437.39 1135.05 19458.1 1136.05
19516.39    1148 19523.8  1146.619527.76 1145.4119551.27 1140.2319567.62 1136.33
19583.83  1126.819590.67 1122.2919682.49  1119.519806.82 1121.44 19858.6 1121.91
19875.84  1122.219937.15 1123.8620067.48 1122.2620073.13 1122.35 20196.5  1124.7
 20230.3  1124.9 20327.1 1125.5120344.25 1125.1420441.63 1124.5120459.19  1124.5
20462.04  1124.8 20473.1 1132.2220494.93 1145.8320511.31 1147.1320520.67 1147.25
20532.47    114320552.33 1139.5420569.55 1144.1120630.63 1158.5220644.87 1158.83
20659.44  1158.920689.08 1158.5720709.23 1158.6120742.28 1150.78   20786 1140.17
20820.66  1139.5 20838.8 1133.3520851.83 1135.7120873.02 1138.6220904.34 1139.63
20914.53  1139.9 20930.3 1137.2420954.89 1142.7820967.13 1145.6921028.23 1143.73
21038.71  1143.321109.85  1143.721125.63 1139.4921156.43 1131.7721173.08 1134.84
21202.67  1140.221223.83 1140.4121235.54 1140.6821249.54 1140.6721256.44 1139.08
21276.33  1134.721309.24 1141.7421343.49 1149.2821373.03 1150.3921382.21 1150.93
21405.52  1145.321425.87 1140.3621435.22 1142.9821447.44 1146.1221457.15 1145.21
21464.44    114521476.64  1148.621498.65 1140.9221504.19 1139.1421507.27 1139.27
 21525.4  1140.621536.85 1145.3321548.26 1150.5621562.18 1151.0821573.25 1151.75
 21581.8    114421586.19 1140.4221590.74 1137.0321614.98 1137.7421621.41  1144.2
21627.18  1149.221647.99  1149.8 21676.5 1150.3921698.78 1150.07 21704.8 1149.87
 21714.9  1149.921718.82 1149.7721741.72 1150.2721756.99 1151.8521761.84 1152.29
21770.32  1152.321786.83 1151.7721798.92 1151.1621812.42 1151.1921825.82 1150.99
21841.46  1151.2 21860.1  1150.721867.61 1153.49 21875.5 1156.1121881.43 1153.28
21885.28  1151.321896.51 1150.9421900.43 1152.4121904.66  1153.521912.81 1153.49
21913.99  1153.121919.15  1152.321957.76 1150.7221960.81 1150.53 22016.2 1147.91
22029.46  1147.522127.03 1149.3122174.32 1150.1222250.23 1150.3622289.13  1150.5
22314.04  1150.822475.21 1153.3722608.07 1155.77 22672.8 1156.7422834.76    1159
22874.27  1159.322935.54  1159.822958.25 1160.0923019.14 1167.4423077.95 1168.76
23103.21  1168.623119.43 1169.0623164.87 1169.3323224.52 1170.5523231.74 1170.44
23235.16  1170.923266.86 1171.7123290.08 1172.1123294.62 1172.4523314.61 1171.39
23332.24  1171.523335.15 1171.4723373.54 1177.4523376.52 1178.07 23468.6  1178.9
23524.62  1178.2

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14514.07    .03519516.39    .03520520.67    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19516.3920520.67              460   484.7     520              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14514.0719516.39    114820520.6723524.62 1147.25

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1140.11   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.67   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1137.44   Reach Len. (ft)             460.00     484.70     520.00
  Crit W.S. (ft)            1133.46   Flow Area (sq ft)                   12889.63
  E.G. Slope (ft/ft)       0.002850   Area (sq ft)               3074.04   12889.63     263.08
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            2003.65   Top Width (ft)              951.85     918.51     133.29
  Vel Total (ft/s)            13.11   Avg. Vel. (ft/s)                      13.11
  Max Chl Dpth (ft)           17.94   Hydr. Depth (ft)                      14.03
  Conv. Total (cfs)       3165450.5   Conv. (cfs)                        3165450.5
  Length Wtd. (ft)           484.70   Wetted Per. (ft)                     926.49
  Min Ch El (ft)            1119.50   Shear (lb/sq ft)                       2.48
  Alpha                        1.00   Stream Power (lb/ft s)                32.46
  Frctn Loss (ft)              1.42   Cum Volume (acre-ft)       2342.85   10707.98    1243.60
  C & E Loss (ft)              0.01   Cum SA (acres)              171.75     654.58     226.10


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1140.11   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.67   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1137.44   Reach Len. (ft)             460.00     484.70     520.00
  Crit W.S. (ft)            1133.46   Flow Area (sq ft)                   12889.52
  E.G. Slope (ft/ft)       0.002850   Area (sq ft)                        12889.52
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             918.51   Top Width (ft)                        918.51
```

Vel Total (ft/s)	13.11	Avg. Vel. (ft/s)	13.11	
Max Chl Dpth (ft)	17.94	Hydr. Depth (ft)	14.03	
Conv. Total (cfs)	3165410.3	Conv. (cfs)	3165410.3	
Length Wtd. (ft)	484.70	Wetted Per. (ft)	926.48	
Min Ch El (ft)	1119.50	Shear (lb/sq ft)	2.48	
Alpha	1.00	Stream Power (lb/ft s)	32.46	
Frctn Loss (ft)	1.42	Cum Volume (acre-ft)	10708.86	0.32
C & E Loss (ft)	0.01	Cum SA (acres)	654.56	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.79

INPUT
Description:
Station Elevation Data num= 223

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14407.68	1139.214	468.83	1139.8214	485.33	1139.93	14518	1139.8914	548.99	1139.18
14620.03	1139.314	668.12	1139.7514	706.45	1139.75	14832.3	1138.32	14892.5	1138.09
14904.61	1138.414	928.04	1139.2714	997.05	1138.815	025.99	1136.9215	055.19	1137.74
15090.5	1138.515	126.36	1138.715	276.76	1139.2915	340.82	1138.8715	451.12	1139.3
15529.41	1139.415	612.27	1139.3515	725.83	1139.7115	741.08	1140.0815	775.12	1140.19
15873.79	1141.115	910.11	1141.2616	021.21	1142.5916	027.75	1142.6516	074.81	1142.62
16203.28	1142.416	247.36	1143.1616	274.57	1144.116	342.63	1144.716	451.28	1144.81
16487.53	1144.7	16516.2	1144.8916	536.79	1144.2516	570.44	1145.2216	584.21	1144.78
16632.47	1144.416	744.74	1143.9216	831.02	1144.4116	889.17	1144.8416	901.11	1144.25
16918.3	1143.216	943.53	1142.6816	949.05	1142.4916	952.26	1142.8116	973.17	1144.37
17009.58	1142.617	012.25	1142.5817	042.77	1142.6217	159.75	1142.8817	191.74	1142.05
17223.52	1140	17234.95	1139.8317	330.48	1139.5117	360.77	1139.3717	365.29	1139.49
17445.7	1142.117	479.75	1141.5517	492.77	1141.4917	510.85	1141.817	541.66	1142.67
17553.26	1141.217	563.12	1140.3817	572.19	1140.3817	574.51	1140.2717	590.06	1142.39
17593.85	1142.2	17613.7	1140.4117	649.97	1140.0617	656.94	1140.1817	712.79	1140.21
17932.29	1139.9	17938.1	1139.86	18254.9	1138.88	18262.6	1138.8218	381.92	1137.77
18518.03	1136.2	18535.5	1135.61	18599	1133.35	18634.5	1133.9718	668.91	1134.64
18727.87	1134.518	773.84	1134.0518	956.07	1133.5618	965.29	1133.44	19059.1	1132.9
19149.42	1133.919	199.61	1132.9119	285.53	1130.6719	300.58	1130.7119	327.48	1130.9
19342.87	1132.319	349.94	1132.8119	375.09	1133.5419	402.26	1134.4219	422.93	1134.51
19423.57	1134.719	466.98	1147.5119	474.09	1146.3619	481.23	1144.9219	507.83	1138.04
19514.17	1136	19520.98	1131.6219	534.67	1122.9819	592.24	1120.5519	613.26	1119.63
19623.23	1119.319	688.14	1120.2319	747.16	1121.3319	877.07	1122.519	969.89	1120.9
20006.98	1120.320	045.82	1121.0820	135.59	1122.5320	261.98	1121.5920	265.76	1121.6
20295.54	1122.620	397.76	1126.4220	419.57	1124.74	20440.4	1133.4120	472.23	1147.56
20487.01	1145.720	493.02	1145.2820	504.32	1143.7720	510.94	1142.2720	531.87	1138.63
20596.65	1152.720	619.85	1157.4520	637.69	1159.2620	644.03	1159.7920	670.81	1161.71
20683.95	1159.720	702.44	1157.3620	720.83	1150.4920	759.31	1140.3120	765.94	1139.93
20789.25	1140.220	811.57	1140.6220	865.32	1141.1120	911.37	1158.9320	922.09	1158.31
20932.71	1159	20934.31	1158.7820	968.75	1152.6221	013.76	1144.3221	015.69	1144.31
21022.9	1143.121	061.13	1154.7121	124.06	1152.7221	135.53	1154.6221	141.27	1155.41
21152.79	1155	21206.9	1153.2421	239.23	1145.1821	269.78	1140.3821	302.85	1132.7
21322.67	1134.821	350.48	1138.3921	372.98	1139.9421	392.52	1142.1321	424.09	1142.33
21440.91	1142.721	452.58	1144.8121	463.84	1145.121	485.26	1145.44	21502.6	1143.2
21531.89	1138.721	567.05	1130.0121	573.87	1128.1321	581.65	1128.2	21617.3	1128.89
21677.8	1129	21696.74	1134.5721	704.97	1135.9521	714.07	1137.8421	721.93	1138.03
21766.84	1148.121	770.48	1148.9121	794.34	1149.1921	802.49	1149.1321	828.42	1149.17
21837.25	1144	21853.31	1137.0321	870.03	1137.7821	879.62	1143.2621	892.74	1147.42
21907.6	1147.621	916.48	1148.1521	934.61	1150.2321	941.35	1153.1721	953.82	1152.82
21966.37	1149.821	979.15	1150.1321	998.44	1152.2	22030.3	1150.0522	129.14	1150.78
22161.16	1151.122	177.76	1151.422	249.65	1151.8622	358.89	1153.65	22474.2	1154.86
22489.84	1155	22654.62	1155.9222	702.02	1155.8522	777.01	1156.42	22806.8	1156.72
22838.75	1158.322	897.88	1162.222	928.01	1163.1622	940.21	1163.2122	970.64	1163.66
22986.06	1163.823	007.96	1163.52	23070	1163.8923	246.96	1167.5623	338.09	1168.22
23382.44	1168.723	389.54	1168.2823	399.66	1167.31				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14407.68	.035	19466.98	.035	20472.23	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19466.98	20472.23	420	490.52	550	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14407.68	19466.98	1147.51	20472.23	23399.66	1147.56

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1138.69	Element	Left OB	Channel	Right OB

Vel Head (ft)	2.73	Wt. n-Val.		0.035	
W.S. Elev (ft)	1135.96	Reach Len. (ft)	420.00	490.52	550.00
Crit W.S. (ft)	1132.24	Flow Area (sq ft)		12747.50	
E.G. Slope (ft/ft)	0.003008	Area (sq ft)	2254.97	12747.50	1024.48
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2039.42	Top Width (ft)	902.66	931.90	204.86
Vel Total (ft/s)	13.26	Avg. Vel. (ft/s)		13.26	
Max Chl Dpth (ft)	16.66	Hydr. Depth (ft)		13.68	
Conv. Total (cfs)	3081485.3	Conv. (cfs)		3081485.3	
Length Wtd. (ft)	490.52	Wetted Per. (ft)		938.24	
Min Ch El (ft)	1119.30	Shear (lb/sq ft)		2.55	
Alpha	1.00	Stream Power (lb/ft s)		33.82	
Frctn Loss (ft)	1.43	Cum Volume (acre-ft)	2314.71	10565.34	1235.92
C & E Loss (ft)	0.04	Cum SA (acres)	161.95	644.28	224.08

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1138.69	Element			
Vel Head (ft)	2.73	Wt. n-Val.		0.035	
W.S. Elev (ft)	1135.96	Reach Len. (ft)	420.00	490.52	550.00
Crit W.S. (ft)	1132.24	Flow Area (sq ft)		12747.28	
E.G. Slope (ft/ft)	0.003008	Area (sq ft)		12747.28	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	931.90	Top Width (ft)		931.90	
Vel Total (ft/s)	13.26	Avg. Vel. (ft/s)		13.26	
Max Chl Dpth (ft)	16.66	Hydr. Depth (ft)		13.68	
Conv. Total (cfs)	3081397.0	Conv. (cfs)		3081397.0	
Length Wtd. (ft)	490.52	Wetted Per. (ft)		938.24	
Min Ch El (ft)	1119.30	Shear (lb/sq ft)		2.55	
Alpha	1.00	Stream Power (lb/ft s)		33.83	
Frctn Loss (ft)	1.43	Cum Volume (acre-ft)		10566.23	0.32
C & E Loss (ft)	0.04	Cum SA (acres)		644.27	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.70

INPUT
Description:
Station Elevation Data num= 215

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14633.62	1140.414	764.84	1139.661	4844.88	1138.831	4895.18	1138.21	4947.92	1139.47
14963.26	1139.814	966.51	1139.611	4991.08	1137.831	5049.71	1138.821	5058.26	1138.83
15086.6	1137.815	264.28	1140.211	5343.48	1140.931	5407.52	1140.71	5507.95	1139.72
15562.35	1140.1	15691.2	1140.281	5750.02	1140.561	5864.61	1140.691	5930.64	1140.63
16007.91	1141	16038.86	1140.91	6078.48	1141.21	16114.7	1143.471	6117.13	1143.72
16132.24	1143.816	319.58	1144.111	6329.22	1144.781	6335.73	1144.821	6362.18	1144.66
16407.68	1144.816	486.45	1144.541	6566.52	1145.161	6580.76	1145.051	6604.06	1143.08
16634.35	1144.616	658.71	1144.971	6665.82	1145.21	6684.38	1144.711	6816.17	1142.9
16816.85	1143	16945.54	1143.75	16958	1143.85	16965.7	1143.531	6989.86	1142.72
17017.43	1142.21	7023.42	1143.57	17028	1144.371	7070.17	1142.551	7071.47	1142.53
17250.94	1143.21	7259.15	1142.551	7296.62	1139.971	7355.46	1140.541	7369.68	1140.64
17502.59	1141.11	7532.54	1140.941	7570.73	1140.91	7608.36	1139.831	7626.76	1138.78
17637.22	1138.51	7654.23	1140.851	7673.44	1139.21	7682.64	1139.17	17842.4	1139.03
18023.52	1139.5	18102	1139.621	8204.04	1139.331	8279.06	1139.141	8308.99	1138.59
18495.46	1136.31	8551.03	1135.691	8588.44	1133.951	8714.96	1128.221	8826.61	1128.03
18839.02	1128.11	8938.73	1128.52	19017.9	1128.631	9037.93	1128.991	9100.52	1128.87
19215.21	1128.71	9248.29	1128.821	9280.17	1128.381	9285.54	1128.391	9377.57	1128.99
19395.02	1129.11	9399.73	1129.421	9421.42	1131.071	9429.68	1131.541	9452.68	1133.19
19491.29	1141.61	9513.76	1146.611	9524.58	1142.821	9527.35	1142.211	9559.25	1136.62
19567.04	1134.6	19575.1	1128.551	9581.75	1122.991	9637.42	1122.671	9690.95	1122.4
19797.6	1121.41	9814.69	1121.251	9944.41	1122.671	9984.25	1121.372	0074.13	1118.48
20130.98	111	920202.55	1119.792	0273.94	1117.572	0313.19	1116.132	0332.53	1115.81
20402.51	1119.22	0464.33	1122.132	0480.18	1122.242	0528.41	1140.992	0544.81	1147.24
20549.49	1144.32	0565.63	1141.612	0590.33	1140.722	0662.36	1137.132	0667.43	1136.89
20671.64	1135.72	0680.37	1133.552	0690.16	1132.8	20707.5	1138.332	0711.62	1139.31
20731.52	1141.72	0768.16	1143.382	0787.42	1141.692	0798.95	1140.122	0809.29	1138.44
20869.2	1140.22	0902.92	1135.452	0947.18	1134.492	0962.23	1131.89	20977.7	1128.91
20991.82	1132.42	1009.72	1135.772	1050.94	1133.852	1052.85	1133.812	1105.52	1135.74
21109.2	1135.82	1221.24	113	521227.41	1134.852	1230.59	113	521252.61	1135.61
21276.6	1135.42	1303.51	1135.362	1333.85	1136.77	21360.7	1137.012	1389.07	1138.72

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21409.47  1137.321419.54 1137.7921465.27 1139.8721480.19 1138.1721506.69 1150.76
21546.35  1168.721550.48 1169.9721604.24  1167.321613.96 1166.8721616.47 1166.63
 21645.1  1163.321671.54 1163.5121686.93 1163.0721711.68 1162.5421739.31 1154.45
21794.52  1140.921869.82 1128.8221877.11 1128.89 21907.6  1129.621954.37 1143.66
21956.14  1144.421959.45 1144.43 21987.8 1141.7922006.39 1147.7522022.35 1151.08
22052.98  1150.322078.71 1149.3422092.62 1142.1922103.59 1136.1922124.51 1136.06
22138.52  1144.322141.96 1147.6922156.81 1149.3122167.82 1149.4322200.31 1153.08
22222.88  1151.422229.35 1150.6322241.45 1150.9822343.53 1154.4922382.64 1154.34
22464.86  1152.822498.09 1153.02 22580.2 1152.4122599.65 1152.7522733.11    1156
22805.72  1157.522816.51 1157.7922822.49 1157.6822872.27 1158.8722908.77 1159.42
22937.69  1160.222950.05 1160.2522960.03 1161.3922979.67 1162.5323004.16 1164.17
23009.95  1164.823114.11 1165.3223142.08 1165.5823151.18 1165.5523172.79  1165.8
23290.13  1165.923336.65 1165.86 23397.6  1166.723466.81 1167.6723469.22 1167.72

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14633.62    .03519513.76    .03520544.81    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19513.7620544.81              460  477.05     540             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14633.6219513.76 1146.6120544.8123469.22 1147.24

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1137.22   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.59   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1134.63   Reach Len. (ft)            460.00    477.05     540.00
  Crit W.S. (ft)            1130.64   Flow Area (sq ft)                  13091.68
  E.G. Slope (ft/ft)       0.002805   Area (sq ft)              4786.64  13091.68     550.38
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            2045.78   Top Width (ft)             885.57    945.15     215.06
  Vel Total (ft/s)            12.91   Avg. Vel. (ft/s)                      12.91
  Max Chl Dpth (ft)           18.82   Hydr. Depth (ft)                      13.85
  Conv. Total (cfs)       3190673.8   Conv. (cfs)                       3190673.8
  Length Wtd. (ft)           477.05   Wetted Per. (ft)                     951.82
  Min Ch El (ft)            1115.81   Shear (lb/sq ft)                      2.41
  Alpha                        1.00   Stream Power (lb/ft s)               31.10
  Frctn Loss (ft)              1.14   Cum Volume (acre-ft)      2280.77  10419.86    1225.97
  C & E Loss (ft)              0.16   Cum SA (acres)             153.33    633.71     221.43


Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
         additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1137.22   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.59   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1134.63   Reach Len. (ft)            460.00    477.05     540.00
  Crit W.S. (ft)            1130.64   Flow Area (sq ft)                  13091.33
  E.G. Slope (ft/ft)       0.002806   Area (sq ft)                       13091.33
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             945.15   Top Width (ft)                       945.15
  Vel Total (ft/s)            12.91   Avg. Vel. (ft/s)                      12.91
  Max Chl Dpth (ft)           18.82   Hydr. Depth (ft)                      13.85
  Conv. Total (cfs)       3190541.8   Conv. (cfs)                       3190541.8
  Length Wtd. (ft)           477.05   Wetted Per. (ft)                     951.82
  Min Ch El (ft)            1115.81   Shear (lb/sq ft)                      2.41
  Alpha                        1.00   Stream Power (lb/ft s)               31.10
  Frctn Loss (ft)              1.14   Cum Volume (acre-ft)              10420.75       0.32
  C & E Loss (ft)              0.16   Cum SA (acres)                       633.70       0.18


Warning: The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
         additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.61

INPUT
Description:
Station Elevation Data    num=     247
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Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14651.85	113914697.71	1139.0414706.79	1139.2614797.41	1139.2514832.95	1139.2				
14844.59	1139.614933.07	1139.2814966.85	1138.8	14984	1138.8215010.87	1138.63			
15043.23	1138.615099.91	1138.9115111.66	1138.8915134.51	1137.9215148.37	1137.92				
15170.52	1139.215175.81	1139.4815229.08	1140.1515270.91	1139.9215321.35	1138.54				
15375.73	1138.715408.15	1139.8315518.03	1140.66 15549.8	1140.815558.72	1140.49				
15632	1141.515661.19	1142.4115682.16	1142.2915689.74	1142.5915770.19	1141.99				
15835.24	1141.415897.66	1140.4 15980.3	1141.5216082.87	1141.2816109.07	1142.53				
16147.7	1142.216164.41	1142.0816230.45	1141.9416252.58	1141.7816272.83	1141.24				
16331.44	1142.716387.34	1141.6716436.59	1141.59 16504.6	1141.9116621.43	1142.3				
16634.06	1142.416667.37	1142.9816680.81	1143.2616687.07	1143.5316701.14	1143.11				
16713.57	1143.116747.97	1144.2616848.16	1142.4416890.73	1141.8916912.08	1142.01				
17022.75	1142.317052.97	1141.5717071.64	1141.2217081.48	1141.2817101.73	1141.8				
17111.26	1143.217137.12	1142.3617146.81	1142.3717267.43	1141.9417308.32	1143.04				
17345.72	1140.617355.11	1139.917473.15	1139.0917558.32	1139.8817564.58	1139.88				
17633.8	1139.617650.52	1138.62 17664.3	1137.9517680.79	1137.3217692.86	1137.23				
17708.67	1139.817728.45	1138.1117754.54	1137.9917807.05	1138.0617893.02	1137.96				
17960.54	1138.918084.72	1139.0518124.45	1139.3118170.64	1139.3618306.01	1139.48				
18513.36	113618525.09	1135.4918583.09	1132.5918644.56	1131.7118654.84	1131.2				
18688.32	1130.218706.18	1130.118794.11	1129.9918840.37	1129.3418887.46	1129.98				
18906.22	113018996.02	1129.8419017.85	1130.2819115.34	1130.2519143.84	1129.67				
19176.75	1130.419191.32	1130.7419203.48	1131.6619219.44	1132.6819254.19	1133.06				
19278.79	1133.119306.96	1132.4419356.04	1132.4719384.96	1131.2519394.54	1130.47				
19402.54	1130.1	19406	1129.5319422.11	1130.32 19422.9	1131.1519452.59	1130.78			
19474.18	1130.519479.79	1131.7119521.95	1141.9819538.73	114319567.21	1132.83				
19578.53	1133.719586.01	1126.9319591.37	1123.0319602.42	1122.5619639.62	1122.19				
19707.4	1122 19754.2	1121.5219835.67	1120.8619908.35	1120.4419950.69	1119.77				
20036.32	1118.920140.17	1116.92 20150.7	1116.66 20252.9	1115.7320301.64	1115.21				
20353.37	1113.520368.53	1112.3920394.53	1112.4220422.02	1114.24	20533	1122.59			
20538.69	1123.720567.99	1144.3920580.96	1144.9320583.69	1144.820590.96	1144.01				
20610.7	1141.320627.36	1137.2520651.52	1136.4920666.08	1136.3720680.19	1136.77				
20701.25	113620726.85	1130.6620736.71	1131.1620750.66	1137.8920758.46	1137.99				
20777.34	1138.620826.99	1139.6820833.14	1139.7820839.92	1138.7620884.09	1131.99				
20911.21	1132.320923.05	1132.4620996.31	1131.9121019.84	1131.3821081.49	1131.24				
21118.96	1136.121149.81	1140.1621211.27	1140.2421225.22	1139.7821242.25	1137.36				
21291.23	112921297.81	1128.821317.56	1127.8921350.78	1125.1521363.69	1125.19				
21393.12	1125.521440.76	1125.6 21481.2	1129.1721521.37	1131.2921550.21	1132.19				
21583.63	1131.121639.47	1128.3121672.65	1126.5121687.56	1126.7321734.61	1126.85				
21739.13	1127.121789.72	1128.7121824.55	1128.3421840.03	1128.8721848.07	1128.71				
21859.98	1128.721864.54	1128.5421904.22	1128.7121949.34	1128.6521963.01	1130.96				
22011.99	1135.422017.42	1136.9822038.21	1141.8522075.75	1150.3722107.68	1155.01				
22114.05	1154.422129.53	1153.5422138.87	1150.2222145.72	1149.0722175.39	1149.55				
22194.88	1149.922212.13	1139.722217.47	1136.4722241.39	1136.4722243.16	1137.31				
22256.99	1145.122272.64	1146.1322275.06	1147.2422276.96	1147.1622290.77	1144.06				
22302.5	1144.522334.77	1145.6922344.24	1146.622351.31	1148.6622385.92	1154.54				
22400.67	1153.222413.67	1151.8922423.88	1154.03	22433	1157.7622450.45	1154.1			
22462.91	1151.622469.36	1154.7622484.16	1164.5322493.46	1168.4522501.87	1170.86				
22504.27	1171.9 22524.4	1178.5822529.11	1177.8522539.59	1176.7622577.15	1166.66				
22590.78	1163.6 22595.1	1162.9422601.97	1159.9422605.98	1159.8822666.91	1156.76				
22700.56	1156.522804.52	1154.99 22876.8	1155.0722934.19	1156.52 22999.2	1156.68				
23150.41	1183.423163.78	1183.43							

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14651.85	.035	19538.73	.035	20567.99	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19538.7	20567.99	470	499.49	550	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14651.85	19538.73	114320567.99	23163.78	1144.39	

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1135.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.07	Wt. n-Val.		0.035	
W.S. Elev (ft)	1133.86	Reach Len. (ft)	470.00	499.49	550.00
Crit W.S. (ft)	1128.49	Flow Area (sq ft)		14649.74	
E.G. Slope (ft/ft)	0.002051	Area (sq ft)	2779.51	14649.74	4408.14
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2912.62	Top Width (ft)	930.96	988.76	992.90
Vel Total (ft/s)	11.54	Avg. Vel. (ft/s)		11.54	
Max Chl Dpth (ft)	21.47	Hydr. Depth (ft)		14.82	
Conv. Total (cfs)	3731983.0	Conv. (cfs)		3731983.0	
Length Wtd. (ft)	499.49	Wetted Per. (ft)		996.68	
Min Ch El (ft)	1112.39	Shear (lb/sq ft)		1.88	
Alpha	1.00	Stream Power (lb/ft s)		21.71	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)	2240.82	10267.95	1195.24
C & E Loss (ft)	0.03	Cum SA (acres)	143.74	623.12	213.94

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1135.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.07	Wt. n-Val.		0.035	
W.S. Elev (ft)	1133.86	Reach Len. (ft)	470.00	499.49	550.00
Crit W.S. (ft)	1128.49	Flow Area (sq ft)		14649.25	
E.G. Slope (ft/ft)	0.002051	Area (sq ft)		14649.25	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	988.76	Top Width (ft)		988.76	
Vel Total (ft/s)	11.54	Avg. Vel. (ft/s)		11.54	
Max Chl Dpth (ft)	21.47	Hydr. Depth (ft)		14.82	
Conv. Total (cfs)	3731781.8	Conv. (cfs)		3731781.8	
Length Wtd. (ft)	499.49	Wetted Per. (ft)		996.68	
Min Ch El (ft)	1112.39	Shear (lb/sq ft)		1.88	
Alpha	1.00	Stream Power (lb/ft s)		21.71	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)		10268.85	0.32
C & E Loss (ft)	0.03	Cum SA (acres)		623.11	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.51

INPUT
Description:
Station Elevation Data num= 242

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14907.1	1137.714	918.73	1137.5	614943.68	1136.9	14991.19	1137.3	315029.11	1136.79
15038.26	1137.415	056.17	1137.4	915077.68	1136.7	415084.36	1136.3	615145.62	1137.65
15159.83	1138.115	191.79	1138.62	15219.5	1138.3	115314.53	1137.8	715372.32	1137.67
15419.74	1137.9	15530.8	1137.8	915575.07	1138.6	315616.57	1139.5	415715.85	1139.83
15727.73	1139.9	15781.62	1140.1	515840.29	1140.3	315854.62	1140.2	415893.97	1140.25
15961.21	1140.4	16003.39	1140.32	16029.7	1142.2	516075.73	1142.3	116283.73	1142.46
16362.84	1142.8	16386.02	1142.7	316472.11	1142.65	16477.3	1142.4	616543.73	1142.86
16653.27	1142.8	16670.33	1142.6	816703.08	1141.8	916716.48	1141.9	816736.38	1140.55
16769.06	1140.4	16801.48	1141.57	16866.3	1141.5	716886.73	1141.5	16948.97	1141.02
17014.66	1140.9	17033.21	1140.6	217052.23	1140.4	417116.76	1139.5	417168.51	1138.92
17181.51	1138.8	17196.8	1138.89	17299.4	1138.9	917325.94	1138.8	617385.87	1138.88
17413.69	1138.8	17461.57	1138.1	417509.77	1137.9	517545.89	1137.6	817558.05	1137.47
17599.64	1136.9	17623.36	1137.1	17657.94	1136.8	917675.27	1136.6	417692.51	1136.22
17714.36	1136.2	17724.37	1135.8	317742.56	1137.4	317752.02	1136.6	417767.46	1136.54
17774.03	1136.8	17783.01	1134.9	817787.08	1133.8	517793.02	1134.85	17805.5	1136.75
17828.82	1136.6	17884.99	1135.8	217895.95	1135.8	17940.12	1136.2	517951.48	1136.31
17977.27	1135.7	17988	1135.2	118036.31	1135.1	218041.95	1135.2	618062.82	1135.39
18123.49	1135.8	18159.15	1135.6	118203.12	1135.6	218239.59	1135.77	18296.3	1135.65
18329.98	1135.6	18390.66	1135.5	818422.21	1135.3	918476.58	1135.1	918517.78	1135.18
18538.38	1135.2	18544.05	1135.0	818639.41	1133.5	118667.57	1132.9	218700.21	1133.48
18714.34	1133.4	18716.44	1133.1	618733.91	1130.6	318744.18	1131.4	818768.41	1133.61
18843.86	1150.3	18891.18	1160.5	818941.06	1161.9	818957.81	1162.1	219011.57	1181.38
19169.29	1180.2	19211.07		118019230.82	1180.2	419273.33		118119315.33	1181.79
19356.71	1169.7	19383.56	1161.6	819385.62	1161.5	19429.2	1158.9	219434.44	1158.89
19478.03	1145.4	19488.25	1142.3	119493.28	1140.5	919501.81	1142.0	819510.14	1141.72
19517.38	1141.6	19542.2	1132.64	19548.7	1130.5	19559.57	1131.4	119570.41	1123.16
19581.96	1121.9	19595.79	1121.31	19725.6	1121.4	719755.91	1121.6	919812.57	1121.45
19889.13	1120.7	19969.48	1119.3	320064.29	1117.4	520129.14	1116.0	520175.09	1115.73
20184.45	1115.5	20262.78	1112.9	720304.95	1112.1	20375.67	1111.6	420433.28	1112.87
20459.44	1113.6	20487.19	1115.0	320510.33	1116.6	320522.25	1117.2	620554.82	1137.43
20564.57	1144.1	20581.79	1143.4	720589.29	1141.9	320590.28	1141.4	320616.53	1139.57
20622.56	1139.2	20683.6	1138.1	920692.96	1137.8	520705.62	1136.8	20732.71	1132.48
20735	1132.4	20740.07	1132.8	720748.73	1135.9	220753.07	1137.6	120755.82	1138.25
20763.22		113820775.75	1137.6	320812.37	1139.3	120825.87	1139.8	720839.04	1137.72
20866.18	1133.5	20882.4	1133.2	620889.04	1133.37	20922.3	1137.6	620933.37	1138.59
20961.26	1138.8	20989.1	1138.3	320997.01	1137.6	621014.79	1133.9	621019.19	1134.13
21021.53	1135.3	21064.97	1129.99	21128.4	1128.5	121138.81	1128.3	221180.03	1126.32
21212.36	1126.7	21232.49	1126.48	21238.9	1126.2	721265.92	1125.9	321350.77	1126.01
21412.28	1126.1	21431.15	1126.2	21465.26	1126.0	321542.92	1127.5	621549.51	1127.62
21567.64	1127.1	21620.01	1125.9	221642.33	1125.4	921694.68	1125.7	821703.12	1126.65
21734.34	1127.7	21742.84	1128.18	21778.7		112821854.71	1126.0	921911.52	1136.78
21941	1142.7	21967.33	1142.9	122014.55	1143.4	22037.84	1143.2	822067.55	1143.66
22085.53	1144.5	22100.03	1145.4	422104.75	1143.3	922121.49	1135.5	322139.24	1135.99
22150.56	1140.9	22158.78	1144.3	622180.45	1145.44	22223	1147.23	22227.4	1147.33

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22270.04  1149.522316.45 1151.4122326.33  1151.722388.88 1151.6822435.89 1152.28
 22483.7  1153.122562.58 1154.9322591.21 1155.5622600.01 1156.2122604.66 1156.84
22623.42  1159.622642.13 1156.9122666.24 1158.4322703.02 1161.0722911.95 1162.55
23047.74  1163.6 23098.1 1170.3523103.39 1170.6523146.48 1170.0823170.95 1170.08
23186.03  1170.223222.21 1170.81

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 14907.1    .03519517.38    .03520564.57    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19517.3820564.57              450  497.52     570             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 14907.119517.38  1141.620564.5723222.21  1144.1

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1134.90   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1132.93   Reach Len. (ft)           450.00     497.52     570.00
  Crit W.S. (ft)            1127.37   Flow Area (sq ft)                  14993.73
  E.G. Slope (ft/ft)       0.001942   Area (sq ft)               49.50   14993.73    5002.07
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1910.40   Top Width (ft)             43.74    1006.16     860.50
  Vel Total (ft/s)            11.27   Avg. Vel. (ft/s)                     11.27
  Max Chl Dpth (ft)           21.29   Hydr. Depth (ft)                     14.90
  Conv. Total (cfs)       3834489.0   Conv. (cfs)                        3834489.0
  Length Wtd. (ft)           497.52   Wetted Per. (ft)                   1014.15
  Min Ch El (ft)            1111.64   Shear (lb/sq ft)                      1.79
  Alpha                        1.00   Stream Power (lb/ft s)               20.21
  Frctn Loss (ft)              0.95   Cum Volume (acre-ft)      2225.56  10097.99    1135.83
  C & E Loss (ft)              0.01   Cum SA (acres)             138.48     611.68     202.24


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1134.90   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1132.93   Reach Len. (ft)           450.00     497.52     570.00
  Crit W.S. (ft)            1127.37   Flow Area (sq ft)                  14993.11
  E.G. Slope (ft/ft)       0.001943   Area (sq ft)                       14993.11
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1006.15   Top Width (ft)                     1006.15
  Vel Total (ft/s)            11.27   Avg. Vel. (ft/s)                     11.27
  Max Chl Dpth (ft)           21.29   Hydr. Depth (ft)                     14.90
  Conv. Total (cfs)       3834241.0   Conv. (cfs)                        3834241.0
  Length Wtd. (ft)           497.52   Wetted Per. (ft)                   1014.15
  Min Ch El (ft)            1111.64   Shear (lb/sq ft)                      1.79
  Alpha                        1.00   Stream Power (lb/ft s)               20.21
  Frctn Loss (ft)              0.95   Cum Volume (acre-ft)               10098.90       0.32
  C & E Loss (ft)              0.01   Cum SA (acres)                      611.67       0.18


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 219.42

INPUT
Description:
Station Elevation Data    num=     283
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14620.63  1134.2 14673.5 1134.5814680.49 1134.5914707.56 1134.8114736.04 1134.79
14744.71  1134.714800.61 1134.9614852.42 1135.3614872.53 1135.3414996.62 1136.02
15024.81    113515040.07 1134.9515072.78 1135.3415104.52 1135.2815154.61 1136.63
15165.85  1136.915189.91 1138.6215193.62 1137.7815202.22 1134.6315208.04  1134.7
15230.27  1135.6 15279.9 1136.4115359.95  1138.115389.72  1138.115395.67 1137.87
15416.25  1137.315441.94 1137.3615550.39 1137.8415645.01  1138.215651.61 1138.28
15660.76  1138.915673.51 1139.0115715.64 1139.3215799.73 1139.6615841.82 1139.75
15849.26  1139.316021.57 1139.0416032.03 1139.0916042.84    113916062.45 1138.95
16064.41  1139.116223.75 1141.6116265.53 1141.8616287.67 1141.7116449.11 1141.24
 16462.9  1141.216484.58  1141.5 16497.9 1141.99   16504 1141.1916513.84 1141.32
16535.01  1142.116564.67 1143.5116604.72 1143.4916672.76 1142.6716718.88 1142.56
16728.56  1142.316754.76 1139.6616760.38 1139.1816766.02 1139.2116791.74 1139.76
16802.67  1140.316809.73  1140.716853.31 1141.09 16866.4 1141.5816896.15 1140.65
 16991.5  1140.617013.35  1140.6 17024.6 1141.7617043.95 1141.6517087.99 1141.09
 17208.6  1141.517267.12 1141.4917365.55 1140.0817436.94 1139.4317452.76  1138.9
17466.98  1138.517497.46  1138.117509.21 1139.7517513.99 1138.9717519.24  1138.8
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17531.44  1137.817538.37 1137.4817552.39 1137.1617562.24 1136.6417576.82 1135.79
17610.19    113617630.25 1136.3317662.06  1137.817672.48  1138.217695.69 1138.05
17714.32  1139.717717.99 1140.2317745.18 1138.9817754.43 1138.6117769.56 1141.21
17783.85    114417790.83 1142.19 17810.4 1136.6217845.26 1136.4817930.63 1135.13
17975.54  1135.117978.83 1135.2418025.92 1134.7118058.25  1134.618076.99 1134.66
18217.18  1135.718226.55 1133.3118241.01 1135.6218256.47 1135.6418279.52 1135.46
18286.14  1135.618295.02 1135.5518333.81 1132.1218340.04 1131.7118387.94 1135.18
18393.95  1135.718463.66 1136.2918499.34 1133.1618545.13 1133.6618628.93 1133.24
18656.03  1133.318678.14 1132.9818714.94 1133.0118758.06 1133.4218795.14  1133.9
18830.65  1134.5   18880 1128.2918906.58  1125.318940.59 1122.7118983.81 1122.31
19027.77    112219068.19 1122.0119132.24 1122.1819198.69 1121.9619255.29 1121.89
19282.93    112219295.93 1122.1919333.76 1122.2919352.48 1122.2519363.04 1122.92
19404.32  1129.519408.06 1130.1119449.44 1140.8919462.92 1140.8119472.78 1137.63
19494.42  1130.119504.35 1130.3219516.83 1121.3219539.04 1120.0519623.47 1120.98
19657.78  1121.119662.93 1121.2719766.98 1119.81 19812.7 1119.45   19910 1117.34
19929.43    111720002.58 1116.5320063.35 1115.0420103.33 1113.8320178.65 1112.08
20203.64  1111.920267.44 1112.0220326.95 1111.8320341.15 1112.1320358.47 1112.72
20387.52  1113.920468.61 1117.0920476.84 1117.2120495.66 1129.7220514.18 1141.84
20532.19  1142.120544.18 1142.07 20576.7 1134.0220592.21 1134.4820598.18 1133.02
20609.17  1133.720613.05 1134.1420628.23 1134.44 20637.8 1135.1820652.72 1136.85
20684.01  1135.620695.37 1136.7720707.99 1136.04 20716.2 1135.0920749.84 1137.24
20759.31  1137.420786.29 1138.8220810.01 1139.9920832.42  1139.220870.53 1137.79
20878.86  1136.520928.26 1128.47 20940.8 1128.7220962.91 1129.5420981.03  1130.3
21015.89  1131.721089.81 1134.4821093.81 1134.4621134.01    113421148.67  1133.8
21157.69  1133.321183.89 1133.3321227.68 1132.8521268.38 1132.1221273.64 1131.97
21336.46  1126.721392.95 1125.0521397.81 1124.7621407.96 1124.5821460.82  1124.5
21471.44  1124.421512.83 1124.1821533.57 1124.1421553.12 1123.4121623.27 1124.22
21637.25  1124.621691.89 1124.6221698.28  1124.721741.53 1125.0721808.74  1125.6
21829.98  1126.821869.21 1129.3521894.88 1128.1621924.41 1126.4421938.23 1126.38
21949.98  1126.222000.57 1138.9322008.84 1141.2522012.87  1141.222064.49 1140.14
22080.36  1141.422100.73 1143.4722110.57 1143.8722133.37 1145.1222145.89 1139.12
22155.02  1135.122171.69  1134.722193.79 1144.2922211.23 1146.1122231.01 1146.26
22232.93  1146.422244.68 1146.54 22338.9 1148.3422367.96 1148.6922424.19  1149.5
22497.87  1151.422554.89 1152.6622637.92 1153.26 22674.7 1153.6622750.04 1154.03
22794.83  1157.122799.99  1157.422831.07 1159.4122855.05 1158.9722870.31 1158.88
22901.38    115922946.92 1159.6522974.31  1160.223008.94 1161.16 23025.1 1161.51
23092.92  1161.823115.83 1162.42 23147.8 1163.8823158.86 1165.5923168.54 1165.75
23183.72  1165.123195.54 1165.3723227.06 1164.5423241.21 1164.7623252.68 1164.69
23266.75  1165.623333.43 1166.79 23388.4 1168.0423423.21 1168.1423441.97 1167.96
23471.66  1167.123478.89 1168.5723509.38 1171.02 23539.8 1170.6323560.68 1171.68
23569.43  1171.423601.93 1170.3723628.07    1170

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14620.63    .03519462.92    .03520514.18    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19462.9220514.18              410  470.96     560             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14620.6319462.92 1140.8120514.1823628.07 1141.84

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1133.94   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.94   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1132.00   Reach Len. (ft)            410.00     470.96     560.00
  Crit W.S. (ft)            1126.37   Flow Area (sq ft)                   15121.63
  E.G. Slope (ft/ft)       0.001898   Area (sq ft)              4887.83   15121.63    4552.80
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            2400.89   Top Width (ft)             573.11    1010.17     817.60
  Vel Total (ft/s)            11.18   Avg. Vel. (ft/s)                      11.18
  Max Chl Dpth (ft)           20.17   Hydr. Depth (ft)                      14.97
  Conv. Total (cfs)       3879095.3   Conv. (cfs)                         3879095.3
  Length Wtd. (ft)           470.96   Wetted Per. (ft)                    1018.10
  Min Ch El (ft)            1111.83   Shear (lb/sq ft)                       1.76
  Alpha                        1.00   Stream Power (lb/ft s)                19.67
  Frctn Loss (ft)              0.90   Cum Volume (acre-ft)      2200.05    9926.01    1073.32
  C & E Loss (ft)              0.00   Cum SA (acres)             135.30     600.17     191.26


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1133.94   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.94   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1132.00   Reach Len. (ft)            410.00     470.96     560.00
  Crit W.S. (ft)            1126.37   Flow Area (sq ft)                   15120.89
```

E.G. Slope (ft/ft)	0.001898	Area (sq ft)	15120.89	
Q Total (cfs)	169000.00	Flow (cfs)	169000.00	
Top Width (ft)	1010.17	Top Width (ft)	1010.17	
Vel Total (ft/s)	11.18	Avg. Vel. (ft/s)	11.18	
Max Chl Dpth (ft)	20.17	Hydr. Depth (ft)	14.97	
Conv. Total (cfs)	3878791.5	Conv. (cfs)	3878791.5	
Length Wtd. (ft)	470.96	Wetted Per. (ft)	1018.10	
Min Ch El (ft)	1111.83	Shear (lb/sq ft)	1.76	
Alpha	1.00	Stream Power (lb/ft s)	19.67	
Frctn Loss (ft)	0.90	Cum Volume (acre-ft)	9926.92	0.32
C & E Loss (ft)	0.00	Cum SA (acres)	600.16	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.33

INPUT
Description:
Station Elevation Data num= 258

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14841.36	1134.914	851.62	1134.921	4986.39	1135.691	5015.71	1134.231	5048.43	1132.55
15064.99	1135.615	077.24	1137.371	5090.55	1136.921	5107.89	1135.84	15137.1	1136.5
15169.63	1137.115	190.15	1138.281	5199.59	1138.641	5219.78	1136.061	5223.87	1135.36
15243.59	1135.7	15361	1137.531	5386.12	1137.481	5405.99	1137.391	5495.79	1137.51
15535.52	1137.615	568.85	1137.361	5587.44	1137.511	5612.13	1137.351	5647.48	1137.44
15656.66	1137.415	694.61	1137.921	5725.84	1137.721	5731.28	1137.311	5778.13	1136.69
15789.04	1136.415	803.97	1137.111	5947.32	1137.421	5958.36	1137.491	5987.54	1137.58
16219.35	113916	282.77	1139.371	6338.88	1139.041	6423.21	1139.11	6549.15	1140.03
16592.29	1140.116	707.93	1140.281	6713.27	1139.921	6735.83	1138.91	6737.63	1138.91
16763.34	1138.316	797.85	1139.291	6807.74	1139.211	6836.98	1139.631	6863.67	1140.18
16869.35	1140.116	878.64	1140.141	6942.64	1139.781	7051.78	1139.761	7102.12	1139.21
17127.15	1137.317	133.29	1137.341	7184.62	1136.951	7193.09	1137.13	17194.3	1137.62
17205.76	1138.317	211.37	1139.671	7229.73	1139.66	17245.6	1139.771	7263.96	1139.51
17304.03	113917	333.74	1138.611	7347.51	1138.611	7381.09	1138.751	7419.19	1138.53
17430.86	1138.417	481.44	1137.25	17507.6	1136.841	7512.96	1135.861	7526.61	1134.7
17560.02	113617	577.76	1136.211	7583.19	1136.451	7642.53	1137.15	17674.8	1136.95
17726.24	1136.417	754.01	1138.81	7771.95	1138.641	7779.81	1137.991	7783.59	1137.84
17805.2	1137.617	819.74	1135.941	7851.93	1135.31	7952.13	1134.631	7978.25	1135.43
17987.86	1135.918	048.27	1135.611	8082.89	1135.761	8091.62	1135.241	8115.85	1132.38
18121.19	1130.418	173.85	1132.841	8204.13	1134.871	8215.33	1134.731	8235.15	1134.23
18245.91	1133.6	18272.8	1133.671	8524.41	1132.891	8554.65	1132.981	8633.36	1134.09
18649.38	1133.718	657.54	1134.171	8734.52	1134.71	8736.34	1134.811	8743.56	1133.61
18823.84	1122.518	836.47	1121.391	8886.49	1121.321	9032.83	1121.331	9164.54	1121.16
19273.71	1120.819	316.38	1120.731	9353.68	1129.46	19356.3	1130.111	9387.11	1140.42
19401.15	1140.719	430.58	1131.031	9433.25	1130.441	9440.95	1130.281	9456.11	1120.51
19466.61	1119.119	470.89	1118.66	19509.1	1118.071	9568.12	1117.48	19622.9	1116.83
19650.25	1116.819	723.26	1116.481	9829.07	1115.461	9902.92	1114.712	0012.93	1113.82
20033.87	1113.420	068.17	1113.682	0220.97	1114.562	0303.43	1115.97	20407.5	1117.25
20417.61	1116.820	425.97	1121.552	0432.73	1126.22	20441.7	1127.142	0446.02	1127
20448.12	1126.420	468.98	1140.192	0472.46	1142.72	0489.35	1141.512	0513.06	1134.97
20534.13	1128.820	589.19	1128.852	0625.02	1128.482	0653.51	1130.922	0708.31	1135.72
20718.59	1136.720	761.09	1141.52	20808.6	1143.362	0830.76	1144.032	0884.38	1143.63
20943.28	1131.620	945.41	1131.362	0993.85	1128.942	1054.83	1125.322	1097.16	1124.39
21129	1123.421	157.24	1123.072	1195.02	1121.712	1198.85	1121.422	1223.93	1120.31
21232.62	1120.321	244.16	1119.732	1265.72	1118.532	1292.93	1119.832	1308.98	1120.4
21324.3	1119.6	21342.6	1119.272	1353.11	1119.162	1376.01	1119.892	1408.57	1119.63
21420.04	1119.4	21551.9	1119.032	1578.61	1118.912	1611.11	1118.982	1630.95	1118.96
21654.33	1118.921	754.59	1117.242	1853.36	1118.952	1863.14	1118.922	1865.77	1119.91
21871.39	1121.521	913.22	1132.432	1950.91	1133.382	1985.87	1133.912	2014.52	1134.22
22035.73	1134.322	065.09	1139.782	2077.42	1142.282	2107.86	1143.592	2122.28	1143.72
22126.11	1141.822	139.29	1136.342	2162.26	1135.112	2173.92	1141.742	2176.48	1142.95
22185.97	1143.722	202.29	1144.872	2217.97	1146.342	2251.08	1145.932	2299.83	1147
22323.78	1146.222	335.91	114722	349.03	1146.972	2415.35	1147.952	2509.12	1148.69
22562.42	1148.622	614.12	1149.012	2625.45	1148.92	2636.25	1151.032	2650.36	1153.26
22663.97	1152.222	680.81	1150.172	2694.38	1148.962	2708.16	1148.652	2727.33	1148.54
22807.97	1149.422	847.56	1150.342	2868.91	1151.052	2935.83	1151.852	2981.91	1153.39
23005.61	1153.723	057.16	1155.262	3071.69	1156.242	3083.89	1156.692	3100.19	1154.27
23104.54	1153.823	117.44	1154.142	3135.42	1154.822	3144.94	1155.62	3159.22	1156.91
23196.77	1157.623	229.58	1158.082	3258.36	1158.67	23280.1	1158.612	3480.04	1157.24
23577.25	1156.923	595.16	1157.212	3646.88	1159.32	3719.99	1162.42	3735.38	1163.17
23741.97	1163.423	751.71	1163.122	3801.94	1162.732	3824.49	1163.932	3832.95	1164.01
23842.9	1163.5	23866.3	1162.332	3879.96	1162.97				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14841.36	.035	19401.15	.035	20468.98	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19401.15	20468.98	380	467.92	590	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14841.36	19401.15	1140.72	0468.98	23879.96	1140.19

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1133.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.94	Wt. n-Val.		0.035	
W.S. Elev (ft)	1131.10	Reach Len. (ft)	380.00	467.92	590.00
Crit W.S. (ft)	1125.53	Flow Area (sq ft)		15131.52	
E.G. Slope (ft/ft)	0.001929	Area (sq ft)	5378.12	15131.52	9929.08
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2726.06	Top Width (ft)	614.48	1024.85	1086.72
Vel Total (ft/s)	11.17	Avg. Vel. (ft/s)		11.17	
Max Chl Dpth (ft)	17.70	Hydr. Depth (ft)		14.76	
Conv. Total (cfs)	3847780.5	Conv. (cfs)		3847780.5	
Length Wtd. (ft)	467.92	Wetted Per. (ft)		1032.24	
Min Ch El (ft)	1113.40	Shear (lb/sq ft)		1.77	
Alpha	1.00	Stream Power (lb/ft s)		19.72	
Frctn Loss (ft)	0.92	Cum Volume (acre-ft)	2151.74	9762.47	980.23
C & E Loss (ft)	0.00	Cum SA (acres)	129.71	589.17	179.02

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1133.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.94	Wt. n-Val.		0.035	
W.S. Elev (ft)	1131.10	Reach Len. (ft)	380.00	467.92	590.00
Crit W.S. (ft)	1125.53	Flow Area (sq ft)		15130.65	
E.G. Slope (ft/ft)	0.001929	Area (sq ft)		15130.65	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1024.85	Top Width (ft)		1024.85	
Vel Total (ft/s)	11.17	Avg. Vel. (ft/s)		11.17	
Max Chl Dpth (ft)	17.70	Hydr. Depth (ft)		14.76	
Conv. Total (cfs)	3847426.8	Conv. (cfs)		3847426.8	
Length Wtd. (ft)	467.92	Wetted Per. (ft)		1032.24	
Min Ch El (ft)	1113.40	Shear (lb/sq ft)		1.77	
Alpha	1.00	Stream Power (lb/ft s)		19.72	
Frctn Loss (ft)	0.92	Cum Volume (acre-ft)		9763.39	0.32
C & E Loss (ft)	0.00	Cum SA (acres)		589.16	0.18

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.24

INPUT
Description:
Station Elevation Data num= 257

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14646.32	1134.4	14764.4	1134.86	14831.71	1135.23	14844.69	1135.32	14892.21	1135.13
14921.24	1136.1	14974.7	1136.85	15052.31	1137.39	15099.21	1135.72	15106.88	1135.32
15191.55	1136.5	15221.5	1135.03	15226.48	1134.82	15290.32	1135.39	15323.23	1136.13
15326.62	1135.5	15337.03	1133.2	15387.5	1136.9	15433.06	1136.82	15539.19	1136.44
15563.61	1136.5	15584.96	1136.26	15688.79	1136.38	15695.05	1135.99	15719.52	1135.69
15887.11	1136.8	15940.24	1136.78	16059.1	1137.29	16082.72	1136.79	16111.12	1137
16127.59	1137.3	16170.82	1136.96	16226.37	1137.07	16275.63	1137.54	16304.44	1137.29
16307.79	1137.3	16370.75	1137.24	16425.82	1138.28	16473.32	1137.34	16495.94	1137.47
16507.5	1137.5	16558.97	1137.71	16592.8	1137.79	16628.27	1137.79	16662.48	1138.27
16689.32	1138.4	16702.03	1138.52	16719.82	1138.5	16738.98	1138.62	16748.91	1139.41
16767.6	1138.5	16784.38	1138.42	16821.91	1138.93	16850.35	1139.42	16859.33	1140.14
16912.28	1140.5	16970.34	1140.07	17198.01	1139.39	17221.24	1137.33	17234.49	1136.34
17272.18	113	17407.34	1136.8	17431.72	1137.07	17446.85	1138.09	17480.31	1136.81
17503.82	1136.6	17552.53	1136.83	17569.7	1136.94	17610.6	1137.29	17626.55	1136.28
17635.29	113	17643.59	1134.98	17663.91	1133.89	17678.4	1134.45	17692.56	1134.59
17721.15	113	17738.84	1136.69	17764.86	1136.66	17777.72	1136.85	17849.78	1136.8
17857.28	1136.8	17920.2	1136.68	17947.94	1136.02	17966.4	1133.75	18068.06	1132.7
18108.56	1132.6	18142.81	1132.79	18249.02	1134.28	18324.26	1134.3	18363.86	1134.1
18388.07	113	18408.92	1134.11	18487.59	1133.9	18590	1133.74	18649.24	1133.42
18688.62	1133.4	18708	1134.81	18788.17	1134.32	18850.1	1125.45	18883.57	1120.97
18904.83	1120.9	18973.61	1120.99	19117.02	1121.69	19122.76	1121.76	19163.61	1121.65
19204.77	1120.9	19305.4	1121.68	19367.5	1122.13	19377.18	1124.5	19399.49	1130.11
19405.74	1131.9	19428.05	1138.88	19436.24	1138.93	19441.07	1138.76	19464.52	1131.35
19472.76	1128.6	19475.72	1128.92	19481.84	1129.2	19490.28	1123.75	19495.88	1119.82
19503.56	1119.1	19575.02	1115.25	19583.91	111	19682.24	1114.38	19737.43	1113.53
19806.63	1112.1	19846.97	1112.45	19977.39	1113.85	20018.91	1114.36	20027.94	1114.39
20058.13	1114.6	20207.74	1115.46	20265.72	1116.11	20322.01	1116.59	20376.48	1116.2
20413.78	1116.1	20439.92	1115.75	20457.36	1115.03	20474.25	1128.74	20483.45	1128.29

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 20490.4  1125.720496.83 1127.9520517.22 1140.0920530.41 1139.8920544.69  1136.8
20554.93    113520563.19 1131.38 20602.3 1126.1320608.87 1125.9320653.81  1124.9
20698.56  1125.320771.04 1126.2520771.61 1126.2520807.58 1129.5620831.36 1132.98
20878.82  1134.420898.67 1136.1420912.37  1137.120969.84 1138.0320996.46 1138.65
 21043.1  1138.521053.53 1138.3921079.47 1137.9921082.55    113821086.12 1137.57
21103.33  1135.9 21110.2 1136.1121117.68 1136.1221123.72 1136.7321137.71 1137.27
 21143.9  1136.421154.24 1135.8721198.86 1135.4221233.74 1134.8521241.56 1134.96
21272.19  1135.821279.85 1135.0821422.76 1121.1221458.02 1117.8821468.74 1117.79
21523.76  1116.221590.37 1116.0721601.66 1117.2921641.76 1117.1321703.21 1117.25
21782.66  1117.921808.93 1117.7821876.88 1123.4821880.78 1123.5621951.95 1122.71
21979.11  1130.621989.42 1133.9922008.61 1134.67 22014.2 1134.9222020.74 1132.65
22039.31  1125.622058.15 1119.4722076.68 1119.4622090.39 1119.6622107.16 1118.76
22119.61  1119.822181.31 1120.1222186.64 1122.02 22214.9 1132.6122243.91 1132.68
22264.09  1132.8 22473.5 1134.7822506.19 1134.9922560.06 1135.8122567.51 1135.83
22587.56  1137.4 22634.1  1143.622671.68 1141.5522679.57  1139.322697.08 1134.87
22713.99    113522737.51  1135.3 22749.5 1140.24 22757.1 1142.88 22793.1 1142.58
22801.02  1142.722827.93 1143.2122856.02 1143.2222872.09 1143.1322876.42 1143.53
22909.59  1145.122925.78 1146.0222929.43 1146.1523082.04 1146.0923143.84 1147.23
23171.14  1147.123190.17 1146.9923218.04 1147.7423270.26 1148.0123343.11  1149.1
23374.31  1149.523407.84 1150.1823457.49 1151.5823483.69 1152.1223507.96 1153.18
23515.86  1152.523528.25 1151.8523547.44 1152.9523572.23 1153.9423612.48 1153.79
23645.45  1153.923690.07 1154.0823716.54  1154.323755.06 1154.7423786.78 1154.49
23851.78  1155.123862.13 1155.0723875.66 1155.2623957.31 1155.8423980.42 1155.71
24063.68  1154.624074.39 1154.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14646.32    .03519436.24    .03520517.22    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19436.2420517.22              510  511.34     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14646.3219436.24 1138.9320517.2224074.39 1140.09
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CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1132.12	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.96	Wt. n-Val.		0.035	
W.S. Elev (ft)	1130.16	Reach Len. (ft)	510.00	511.34	500.00
Crit W.S. (ft)	1124.65	Flow Area (sq ft)		15051.38	
E.G. Slope (ft/ft)	0.001989	Area (sq ft)	4698.66	15051.38	9173.69
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2682.75	Top Width (ft)	582.44	1032.45	1067.86
Vel Total (ft/s)	11.23	Avg. Vel. (ft/s)		11.23	
Max Chl Dpth (ft)	18.06	Hydr. Depth (ft)		14.58	
Conv. Total (cfs)	3789764.8	Conv. (cfs)		3789764.8	
Length Wtd. (ft)	511.34	Wetted Per. (ft)		1042.11	
Min Ch El (ft)	1112.10	Shear (lb/sq ft)		1.79	
Alpha	1.00	Stream Power (lb/ft s)		20.13	
Frctn Loss (ft)	0.99	Cum Volume (acre-ft)	2107.79	9600.35	850.86
C & E Loss (ft)	0.01	Cum SA (acres)	124.49	578.12	164.43

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1132.12	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.96	Wt. n-Val.		0.035	
W.S. Elev (ft)	1130.16	Reach Len. (ft)	510.00	511.34	500.00
Crit W.S. (ft)	1124.65	Flow Area (sq ft)		15050.38	
E.G. Slope (ft/ft)	0.001989	Area (sq ft)		15050.38	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1032.44	Top Width (ft)		1032.44	
Vel Total (ft/s)	11.23	Avg. Vel. (ft/s)		11.23	
Max Chl Dpth (ft)	18.06	Hydr. Depth (ft)		14.58	
Conv. Total (cfs)	3789355.3	Conv. (cfs)		3789355.3	
Length Wtd. (ft)	511.34	Wetted Per. (ft)		1042.10	
Min Ch El (ft)	1112.10	Shear (lb/sq ft)		1.79	
Alpha	1.00	Stream Power (lb/ft s)		20.14	
Frctn Loss (ft)	0.99	Cum Volume (acre-ft)		9601.29	0.32
C & E Loss (ft)	0.01	Cum SA (acres)		578.11	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.14

INPUT
Description:
Station Elevation Data num= 234

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15164.78	1136.4	15208.2	1137.09	15256.23	1136.88	15380.96	1136.55	15422.24	1136.39
15435.33	1136.41	15446.04	1136.21	15465.53	1135.94	15519.25	1134.24	15542.67	1133.6
15565.73	1134.21	15589.49	1134.66	15597.77	1134.62	15670.72	1135.49	15802.44	1135.74
15827.2	1135.61	16196.09	1135.61	16201.64	1135.61	16664.74	1136.68	16758.6	1135.75
16870.13	1135.91	16954.81	1136.28	17040.55	1135.21	7082.77	1134.73	17168.23	1133.92
17192.15	1135.11	7206.81	1134.71	7223.42	1134.49	17230.65	1134.28	17259.46	1132.73
17365	1132.61	7440.14	1133.08	17514.47	1132.95	17584.53	1132.65	17773.68	1137.58
17780.81	1138.21	7796.97	1138.18	17831.92	1137.07	17866.27	1136.67	17871.77	1136.17
17888.74	1135.21	7911.91	1133.48	17919.2	1133	17927.9	1133	17951.44	1132.88
17984.39	1135.21	7989.89	1135.61	8002.57	1135.72	18097.83	1135.86	18160.79	1136.77
18183.72	1136.91	8208.57	1134.27	18242.11	1129.94	18247.45	1129.99	18284.14	1130.13
18376.13	1130.81	8429.04	1131.11	8436.08	1131.21	8491.49	1131.73	18511.74	1132.63
18546.94	1134.41	8670.73	1133.53	18717.03	1133.31	8776.64	1132.84	18789.6	1133.66
18817.97	1134.81	8852.69	1134.41	8893.54	1134.25	18904.92	1133.31	8910.67	1132.7
19016.8	1119.61	9037.75	1117.31	9042.38	1117.54	19090.57	1117.81	19140.69	1117.58
19217.98	1116.81	9251.56	1116.43	19288.52	1117.02	19303.43	1118.65	19325.43	1118.5
19342.44	1119.31	9372.01	1123.37	19386.41	1125.47	19406.2	1130.49	19430.09	1138.01
19445.31	1137.9	19448.4	1137.32	19468.34	1137.05	19470.09	1136.95	19495.93	1119.9
19497.57	1119.41	9524.89	1116.26	19534.77	1115.24	19568.82	1113.75	19629.2	1110.42
19649.81	1110.41	9773.39	1111.38	19866.54	1111.87	19893.37	1112.11	9927.72	1112.67
20063.1	111	20149.03	1116.87	20181.57	1116.61	20245.29	1115.66	20275.45	1115.54
20310.17	1115.12	0452.52	1113.92	0463.91	1114.32	0480.07	1124.6	20483.3	1126.74
20492.82	1126.32	0496.53	1124.32	0511.26	1132.71	20520.48	1138.24	20530.15	1138.08
20534.29	1138.62	0543.75	1136.11	20548.42	1135.04	20558.57	1131.51	20568.89	1128.37
20596.43	1129.2	20621.7	1130.19	20681.66	1129.79	20717.17	1129.36	20767.68	1128.58
20836.05	1134.32	0871.71	1137.19	20937.38	1130.12	0964.21	1130.25	20977.27	1129.96
20988.72	113	20999.08	1131.67	21036.18	1132.48	21072.43	1126.93	21081.9	1127.27
21087.68	1128.72	1133.93	1128.98	21141.15	1129.12	21151.53	1126.39	21185.85	1126.17
21209.44	1126.3	21212.2	1126.37	21217.6	1127.61	21219.95	1127.93	21263.22	1138.51
21266.96	1137.22	1284.09	1133.42	21291.61	1133.18	21300.74	1133.32	21322.62	1133.52
21361.86	1132.9	21390.2	1132.22	21394.13	1132.23	21454.34	1132.01	21464.97	1132.11
21476.33	113	21540.74	1130.12	1568.29	1129.44	21620.64	1129.17	21647.09	1129.18
21664.31	1127.6	21721.5	1124.24	21749.96	1123.15	21761.9	1122.55	21827.64	1121.5
21865.73	1121.62	1878.81	1121.44	21934.36	1121.98	21941.03	1122.68	21973.53	1124.83
22017.41	1131.82	2035.36	1133.11	22053.41	1133.29	22108.52	1123.12	2141.46	1123.59
22167.67	1120.62	2180.34	1119.63	22268.31	1119.63	22278.16	1119.76	22302.79	1119.7
22329.17	1119.8	22368	1119.36	22378.55	1119.39	22389.88	1120.52	22476.5	1126.06
22551.91	1133.12	2556.71	1133.47	22560.92	1134.05	22592.74	1134.85	22613.6	1135.73
22620.2	1135.72	2655.58	1135.15	22684.66	1135.14	22717.56	1134.83	22753.82	1134.64
22781.4	1134.82	2794.68	1134.92	22875.32	1135.38	22948.92	1135.38	22981.01	1138.44
23018.92	1140.62	3038.12	1141.63	23095.2	1141.91	23112.63	1142.09	23153.66	1142.77
23186.62	114	23201.76	1139.76	23217.3	1135.32	3240.34	1135.36	23254.3	1135.04
23274.71	1140.72	3282.92	1142.72	23291.34	1142.62	23321.33	1142.66	23331.53	1143.07
23349.27	1144.82	3367.87	1144.86	23401.72	1143.91	23459.98	1143.28	23542.75	1142.68
23622.63	1143.62	3653.75	1143.68	23696.07	1143.77	23727.01	1145.17	23773.37	1151.8
23779.91	1151.32	3805.74	1149.97	23818.61	1151.19	23823.91	1151.56	23874.31	1151.28
23926.63	1151.22	3980.52	1151.08	24041.38	1151.27	24067.8	1151.47		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
15164.78	.05	19470.09	.03	20520.48	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19470.09	20520.48	760	550.34	260	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
15164.78	19470.09	1136.95	20520.48	24067.8	1138.24

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1131.11	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.91	Wt. n-Val.		0.035	
W.S. Elev (ft)	1129.20	Reach Len. (ft)	760.00	550.34	260.00
Crit W.S. (ft)	1123.56	Flow Area (sq ft)		15229.76	
E.G. Slope (ft/ft)	0.001887	Area (sq ft)	4504.16	15229.76	5457.03
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2551.49	Top Width (ft)	462.09	1023.28	1066.13
Vel Total (ft/s)	11.10	Avg. Vel. (ft/s)		11.10	
Max Chl Dpth (ft)	18.80	Hydr. Depth (ft)		14.88	
Conv. Total (cfs)	3890025.0	Conv. (cfs)		3890025.0	
Length Wtd. (ft)	550.34	Wetted Per. (ft)		1032.04	

Min Ch El (ft)	1110.40	Shear (lb/sq ft)		1.74	
Alpha	1.00	Stream Power (lb/ft s)		19.30	
Frctn Loss (ft)	1.14	Cum Volume (acre-ft)	2053.91	9422.62	766.89
C & E Loss (ft)	0.02	Cum SA (acres)	118.37	566.05	152.18

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1131.11	Element			
Vel Head (ft)	1.91	Wt. n-Val.		0.035	
W.S. Elev (ft)	1129.20	Reach Len. (ft)	760.00	550.34	260.00
Crit W.S. (ft)	1123.56	Flow Area (sq ft)		15228.51	
E.G. Slope (ft/ft)	0.001888	Area (sq ft)		15228.51	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1023.27	Top Width (ft)		1023.27	
Vel Total (ft/s)	11.10	Avg. Vel. (ft/s)		11.10	
Max Chl Dpth (ft)	18.80	Hydr. Depth (ft)		14.88	
Conv. Total (cfs)	3889507.0	Conv. (cfs)		3889507.0	
Length Wtd. (ft)	550.34	Wetted Per. (ft)		1032.03	
Min Ch El (ft)	1110.40	Shear (lb/sq ft)		1.74	
Alpha	1.00	Stream Power (lb/ft s)		19.30	
Frctn Loss (ft)	1.14	Cum Volume (acre-ft)		9423.57	0.32
C & E Loss (ft)	0.02	Cum SA (acres)		566.04	0.18

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.03

INPUT
Description: Upstream face of Hohokam Bridge

Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17290	113	617865.96	1134.3	18102.01	113	618281.41	114	018715.74	1144
19304.64	1144.3	19304.73	1137.6	19326.92	1137.68	19359.5	1113.8	819387.82	1113.1
19395.38	1112.9	19424.18	1112.9	19429.84	1112.9	19484.41	1112.9	19548.81	1112.9
19554.47	1112.9	19606.22	1112.9	19673.45	1112.9	19679.11	1112.9	19728.96	1112.9
19771.17	1112.9	19781.55	1113.6	19798.08	1113.5	19803.74	1113.5	19853.13	1113.3
19922.71	1113.8	519928.38	1113.8	519976.81	1113.5	20047.35	1113.5	20053.01	1113.5
20104.28	1113.7	20171.98	1114.3	20177.65	1114.3	20228.45	1114.3	520296.62	1114.65
20299.45	1114.6	520343.83	1114.7	20383.48	113	720420.31	1137	20420.4	1138.5
20420.49	1145.2	421293.41	114	421737.18	114	021793.83	114	022171.51	1144

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17290	.05	19304.73	.035	20420.4	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19304.73	20420.4	190.12	190.12	190.12	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17290	19304.73	1137.6	20420.4	22171.51	1138.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1129.94	Element			
Vel Head (ft)	2.15	Wt. n-Val.		0.035	
W.S. Elev (ft)	1127.80	Reach Len. (ft)	31.50	31.50	31.50
Crit W.S. (ft)	1123.15	Flow Area (sq ft)		14369.09	
E.G. Slope (ft/ft)	0.002299	Area (sq ft)		14369.09	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1026.67	Top Width (ft)		1026.67	
Vel Total (ft/s)	11.76	Avg. Vel. (ft/s)		11.76	
Max Chl Dpth (ft)	14.90	Hydr. Depth (ft)		14.00	
Conv. Total (cfs)	3524551.5	Conv. (cfs)		3524551.5	
Length Wtd. (ft)	31.50	Wetted Per. (ft)		1034.68	
Min Ch El (ft)	1112.90	Shear (lb/sq ft)		1.99	
Alpha	1.00	Stream Power (lb/ft s)		23.44	
Frctn Loss (ft)	0.09	Cum Volume (acre-ft)	2014.62	9235.65	750.60
C & E Loss (ft)	0.04	Cum SA (acres)	114.34	553.10	149.00

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1129.94	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.15	Wt. n-Val.		0.035	
W.S. Elev (ft)	1127.79	Reach Len. (ft)	31.50	31.50	31.50
Crit W.S. (ft)	1123.15	Flow Area (sq ft)		14367.08	
E.G. Slope (ft/ft)	0.002300	Area (sq ft)		14367.08	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1026.66	Top Width (ft)		1026.66	
Vel Total (ft/s)	11.76	Avg. Vel. (ft/s)		11.76	
Max Chl Dpth (ft)	14.89	Hydr. Depth (ft)		13.99	
Conv. Total (cfs)	3523750.3	Conv. (cfs)		3523750.3	
Length Wtd. (ft)	31.50	Wetted Per. (ft)		1034.68	
Min Ch El (ft)	1112.90	Shear (lb/sq ft)		1.99	
Alpha	1.00	Stream Power (lb/ft s)		23.46	
Frctn Loss (ft)	0.09	Cum Volume (acre-ft)		9236.61	0.32
C & E Loss (ft)	0.04	Cum SA (acres)		553.09	0.18

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 219.02

INPUT
Description: Hohokam Expressway (SR 143)
Distance from Upstream XS = 31.5
Deck/Roadway Width = 127
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =
Upstream Deck/Roadway Coordinates
num= 16

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
17290	1136	113617865.96	1134.3	1134.318102.01		1136	1136	
18281.41	1140	114018715.74	1144	114419304.73		1144.3	1144.3	
19304.73	1144.3	1137.6819424.18	1144.43	1137.7219548.81		1145.27	1138.56	
19673.45	1145.64	1138.9319798.08	1146.04	1139.3319922.71		1146.44	1139.73	
20047.35	1146.71	114020171.98	1146.99	1140.2820299.45		1146.24	1139.53	
20420.31	1145.24	1138.53						

Upstream Bridge Cross Section Data
Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17290	113617865.96	1134.318102.01	113618281.41	114018715.74	1144				
19304.64	1144.319304.73	1137.619326.92	1137.68	19359.5	1113.8819387.82	1113.1			
19395.38	1112.919424.18	1112.919429.84	1112.919484.41	1112.919548.81	1112.9				
19554.47	1112.919606.22	1112.919673.45	1112.919679.11	1112.919728.96	1112.9				
19771.17	1112.919781.55	1113.619798.08	1113.519803.74	1113.519853.13	1113.3				
19922.71	1113.8519928.38	1113.8519976.81	1113.520047.35	1113.520053.01	1113.5				
20104.28	1113.720171.98	1114.320177.65	1114.320228.45	1114.3520296.62	1114.65				
20299.45	1114.6520343.83	1114.720383.48	113720420.31	1137 20420.4	1138.5				
20420.49	1145.2421293.41	114421737.18	114021793.83	114022171.51	1144				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17290	.05	19304.73	.035	20420.4	.05

Bank Sta: Left	Right	Coeff Contr.	Expan.
19304.73	20420.4	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17	29019304.73	1137.6	20420.4	22171.51	1138.5

Downstream Deck/Roadway Coordinates
num= 16

Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord	Sta	Hi Cord	Lo Cord
17290	1136	113617865.96	1134.3	1134.318102.01		1136	1136	
18281.41	1140	114018715.74	1144	114419304.73		1144.3	1144.3	
19304.73	1144.3	1137.6819424.18	1144.43	1137.7219548.81		1145.27	1138.56	
19673.45	1145.64	1138.9319798.08	1146.04	1139.3319922.71		1146.44	1139.73	
20047.35	1146.71	114020171.98	1146.99	1140.2820299.45		1146.24	1139.53	
20420.31	1145.24	1138.53						

Downstream Bridge Cross Section Data
Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17290	113617865.96	1134.318102.01	113618281.41	114018715.74	1144				
19304.64	1144.319304.73	1137.619326.92	1137.68	19359.5	1113.8819387.82	1113.1			
19395.38	1112.919424.18	1112.919429.84	1112.919484.41	1112.919548.81	1112.9				

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19554.47  1112.919606.22  1112.919673.45  1112.919679.11  1112.919728.96  1112.9
19771.17  1112.919781.55  1113.619798.08  1113.519803.74  1113.519853.13  1113.3
19922.71 1113.8519928.38 1113.8519976.81  1113.520047.35  1113.520053.01  1113.5
20104.28  1113.720171.98  1114.320177.65  1114.320228.45 1114.3520296.62 1114.65
20299.45 1114.6520343.83  1114.720383.48    113720420.31    1137 20420.4  1138.5
20420.49 1145.2421293.41    114421737.18    114021793.83    114022171.51    1144

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   17290     .0519304.73    .035 20420.4     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19304.73 20420.4             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1729019304.73  1137.6 20420.422171.51  1138.5

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station     Upstream=   19427    Downstream=   19427
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19551.6    Downstream= 19551.6
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19676.3    Downstream= 19676.3
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19800.9    Downstream= 19800.9
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 19925.5    Downstream= 19925.5
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20050.2    Downstream= 20050.2
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
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    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20174.8    Downstream= 20174.8
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Pier Data
Pier Station     Upstream= 20299.8    Downstream= 20299.8
Upstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141
Downstream     num=       2
    Width   Elev    Width   Elev
    5.66    1110    5.66    1141

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Pressure and Weir flow
           Submerged Inlet Cd          =
           Submerged Inlet + Outlet Cd =      .8
           Max Low Cord                =

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1129.94   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1127.80   E.G. Elev (ft)               1129.81       1129.24
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1127.27       1126.28
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1123.46       1123.45
  Q Weir (cfs)                           Max Chl Dpth (ft)              14.37         13.38
  Weir Sta Lft (ft)                      Vel Total (ft/s)               12.79         13.81
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           13208.41      12238.13
  Weir Submerg                           Froude # Chl                   0.61          0.69
  Weir Max Depth (ft)                    Specif Force (cu ft)       157676.75     150380.42
  Min Top Rd (ft)              1137.00   Hydr Depth (ft)                13.48         12.53
  Min El Prs (ft)              1144.30   W.P. Total (ft)              1206.75       1187.18
  Delta EG (ft)                   0.92   Conv. Total (cfs)          2764387.5     2460980.3
  Delta WS (ft)                   1.43   Top Width (ft)                979.73        976.61
  BR Open Area (sq ft)        25161.30   Frctn Loss (ft)                 0.53          0.12
  BR Open Vel (ft/s)             13.81   C & E Loss (ft)                 0.04          0.09
  Coef of Q                              Shear Total (lb/sq ft)          2.55          3.03
  Br Sel Method            Energy only   Power Total (lb/ft s)          32.68         41.91


BRIDGE OUTPUT    Profile #PF#2
Opening : Bridge #1

  E.G. US. (ft)                1129.94   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1127.79   E.G. Elev (ft)               1129.81       1129.24
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1127.27       1126.28
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1123.46       1123.45
  Q Weir (cfs)                           Max Chl Dpth (ft)              14.37         13.38
  Weir Sta Lft (ft)                      Vel Total (ft/s)               12.80         13.81
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           13204.26      12237.29
  Weir Submerg                           Froude # Chl                   0.61          0.69
  Weir Max Depth (ft)                    Specif Force (cu ft)       157658.80     150374.92
  Min Top Rd (ft)              1144.34   Hydr Depth (ft)                13.52         12.53
  Min El Prs (ft)              1144.30   W.P. Total (ft)              1203.32       1187.16
  Delta EG (ft)                   0.92   Conv. Total (cfs)          2768186.0     2460720.8
  Delta WS (ft)                   1.43   Top Width (ft)                976.88        976.61
```

BR Open Area (sq ft)	24873.54	Frctn Loss (ft)	0.53	0.12
BR Open Vel (ft/s)	13.81	C & E Loss (ft)	0.04	0.09
Coef of Q		Shear Total (lb/sq ft)	2.55	3.04
Br Sel Method	Energy only	Power Total (lb/ft s)	32.68	41.92

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 219.01

INPUT
Description: Downstream face of Hohokam Bridge

Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17290	113617865.96	1134.318102.01		113618281.41		114018715.74		1144	
19304.64	1144.319304.73	1137.619326.92		1137.68 19359.5		1113.8819387.82		1113.1	
19395.38	1112.919424.18	1112.919429.84		1112.919484.41		1112.919548.81		1112.9	
19554.47	1112.919606.22	1112.919673.45		1112.919679.11		1112.919728.96		1112.9	
19771.17	1112.919781.55	1113.619798.08		1113.519803.74		1113.519853.13		1113.3	
19922.71	1113.8519928.38	1113.8519976.81		1113.520047.35		1113.520053.01		1113.5	
20104.28	1113.720171.98	1114.320177.65		1114.320228.45		1114.3520296.62		1114.65	
20299.45	1114.6520343.83	1114.720383.48		113720420.31		1137 20420.4		1138.5	
20420.49	1145.2421293.41	114421737.18		114021793.83		114022171.51		1144	

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17290	.0519304.73	.035	20420.4	.05	

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19304.73	20420.4	111.97	111.97	111.97	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
1729019304.73		1137.6	20420.422171.51		1138.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1129.03	Element			
Vel Head (ft)	2.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1126.36	Reach Len. (ft)	111.97	111.97	111.97
Crit W.S. (ft)	1123.16	Flow Area (sq ft)		12899.76	
E.G. Slope (ft/ft)	0.003271	Area (sq ft)		12899.76	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1022.15	Top Width (ft)		1022.15	
Vel Total (ft/s)	13.10	Avg. Vel. (ft/s)		13.10	
Max Chl Dpth (ft)	13.46	Hydr. Depth (ft)		12.62	
Conv. Total (cfs)	2954795.0	Conv. (cfs)		2954795.0	
Length Wtd. (ft)	111.97	Wetted Per. (ft)		1029.33	
Min Ch El (ft)	1112.90	Shear (lb/sq ft)		2.56	
Alpha	1.00	Stream Power (lb/ft s)		33.53	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)	2014.62	9179.46	750.60
C & E Loss (ft)	0.27	Cum SA (acres)	114.34	548.80	149.00

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1129.03	Element			
Vel Head (ft)	2.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1126.36	Reach Len. (ft)	111.97	111.97	111.97
Crit W.S. (ft)	1123.16	Flow Area (sq ft)		12898.88	
E.G. Slope (ft/ft)	0.003272	Area (sq ft)		12898.88	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1022.15	Top Width (ft)		1022.15	
Vel Total (ft/s)	13.10	Avg. Vel. (ft/s)		13.10	
Max Chl Dpth (ft)	13.46	Hydr. Depth (ft)		12.62	
Conv. Total (cfs)	2954467.0	Conv. (cfs)		2954467.0	
Length Wtd. (ft)	111.97	Wetted Per. (ft)		1029.32	
Min Ch El (ft)	1112.90	Shear (lb/sq ft)		2.56	
Alpha	1.00	Stream Power (lb/ft s)		33.54	
Frctn Loss (ft)	0.25	Cum Volume (acre-ft)		9180.43	0.32
C & E Loss (ft)	0.27	Cum SA (acres)		548.80	0.18

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.97

INPUT
Description: Upstream face of SR153 bridge

Station Elevation Data num= 32

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19459.46	1135.87	19459.49	1135.86	19466.11	1135.15	19468.94	1133.64	19479.54	1133.83
19514.5	1110.28	19546.88	1106.45	19567	1107.56	19619.62	1109.13	19692.07	1108.21
19758.59	1107.67	19818.56	1108.54	19830.19	1110.47	19898.06	1111.21	19960.72	1111.55
20034.81	1112.57	20102.55	1113.82	20108.76	1113.82	20114.29	1112.03	20176.09	1111.76
20220.38	1112.24	20246.16	1111.64	20315.81	1109.66	20366.41	1111.16	20389.63	1110.76
20460.12	1110.52	20486.51	1126.39	20497.67	1126.12	20529.61	1135.47	20537.11	1136.26
20575.51	1125.32	20617.67	1125.62						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19459.46	.05	19459.46	.03	20537.11	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19459.46	20537.11	138.88	138.88	138.88	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19459.46	19459.46	1135.87	20537.11	20617.67	1136.26

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1128.50	Element			
Vel Head (ft)	1.76	Wt. n-Val.		0.035	
W.S. Elev (ft)	1126.74	Reach Len. (ft)	10.90	10.90	10.90
Crit W.S. (ft)	1120.31	Flow Area (sq ft)		15870.60	
E.G. Slope (ft/ft)	0.001620	Area (sq ft)		15870.60	57.24
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1056.96	Top Width (ft)		1009.80	47.16
Vel Total (ft/s)	10.65	Avg. Vel. (ft/s)		10.65	
Max Chl Dpth (ft)	20.29	Hydr. Depth (ft)		15.72	
Conv. Total (cfs)	4198925.0	Conv. (cfs)		4198925.0	
Length Wtd. (ft)	10.90	Wetted Per. (ft)		1020.16	
Min Ch El (ft)	1106.45	Shear (lb/sq ft)		1.57	
Alpha	1.00	Stream Power (lb/ft s)		16.75	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	2014.62	9142.48	750.53
C & E Loss (ft)	0.03	Cum SA (acres)	114.34	546.19	148.94

Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1128.50	Element			
Vel Head (ft)	1.76	Wt. n-Val.		0.035	
W.S. Elev (ft)	1126.74	Reach Len. (ft)	10.90	10.90	10.90
Crit W.S. (ft)	1120.31	Flow Area (sq ft)		15869.73	
E.G. Slope (ft/ft)	0.001620	Area (sq ft)		15869.73	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1009.80	Top Width (ft)		1009.80	
Vel Total (ft/s)	10.65	Avg. Vel. (ft/s)		10.65	
Max Chl Dpth (ft)	20.29	Hydr. Depth (ft)		15.72	
Conv. Total (cfs)	4198557.5	Conv. (cfs)		4198557.5	
Length Wtd. (ft)	10.90	Wetted Per. (ft)		1020.15	
Min Ch El (ft)	1106.45	Shear (lb/sq ft)		1.57	
Alpha	1.00	Stream Power (lb/ft s)		16.76	
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)		9143.46	0.32
C & E Loss (ft)	0.03	Cum SA (acres)		546.18	0.18

BRIDGE RIVER: Salt River
REACH: Reach 4 RS: 218.965

INPUT
Description: SR 153
Distance from Upstream XS = 10.9
Deck/Roadway Width = 117
Weir Coefficient = 2.6
Bridge Deck/Roadway Skew =

```
Upstream  Deck/Roadway Coordinates
    num=      10
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19480.19 1148.46 1141.7919595.74 1149.67    114319720.43 1150.63 1143.96
19851.65 1151.18 1144.5119988.08  1151.3 1144.6320128.34 1151.01 1144.34
20271.02 1150.29 1143.6220414.69 1149.15 1142.4820557.89 1147.59 1140.92
20670.18 1146.05 1139.38

Upstream Bridge Cross Section Data
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19459.46 1135.8719459.491135.86719466.11 1135.1519468.94 1133.6419479.54 1133.83
 19514.5 1110.2819546.88 1106.45   19567 1107.5619619.62 1109.1319692.07 1108.21
19758.59 1107.6719818.56 1108.5419830.19 1110.4719898.06 1111.2119960.72 1111.55
20034.81 1112.5720102.55 1113.8220108.76 1113.8220114.29 1112.0320176.09 1111.76
20220.38 1112.2420246.16 1111.6420315.81 1109.6620366.41 1111.1620389.63 1110.76
20460.12 1110.5220486.51 1126.3920497.67  1126.120529.61 1135.4720537.11 1136.26
20575.51 1125.3220617.67 1125.62

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19459.46     .0519459.46    .03520537.11     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19459.4620537.11             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19459.4619459.46 1135.8720537.1120617.67 1136.26

Downstream  Deck/Roadway Coordinates
    num=      10
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
19480.19 1148.46 1141.7919595.74 1149.67    114319720.43 1150.63 1143.96
19851.65 1151.18 1144.5119988.08  1151.3 1144.6320128.34 1151.01 1144.34
20271.02 1150.29 1143.6220414.69 1149.15 1142.4820557.89 1147.59 1140.92
20670.18 1146.05 1139.38

Downstream Bridge Cross Section Data
Station Elevation Data    num=      27
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
19456.79 1136.1819464.29 1135.7619489.35  1117.819499.81 1118.12 19527.2 1106.31
19575.01 1106.8619638.48 1107.0819694.95 1108.06 19764.4 1108.5219823.34 1109.68
19828.52 1110.8419896.81 1110.9319965.33 1111.4520032.89 1111.9220105.85  1113.1
20175.18 1113.6320247.98 1113.2220326.04 1112.5620392.18 1111.7220465.08 1112.15
20485.85 1125.4920496.63  1125.520529.33 1135.7420537.91 1135.9420572.86 1123.41
20600.86 1123.9220641.85 1122.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19456.79     .0519456.79    .03520537.91     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19456.7920537.91             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19456.7919456.79 1136.1820537.9120641.85 1135.94

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station     Upstream=19595.74    Downstream=19595.74
Upstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=       2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=19720.43    Downstream=19720.43
Upstream     num=       2
```

```
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=19851.65    Downstream=19851.65
Upstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=19988.08    Downstream=19988.08
Upstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20128.34    Downstream=20128.34
Upstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20271.02    Downstream=20271.02
Upstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20414.69    Downstream=20414.69
Upstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Pier Data
Pier Station     Upstream=20557.89    Downstream=20557.89
Upstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145
Downstream     num=        2
    Width   Elev    Width   Elev
     6.5    1110     6.5    1145

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
```

Opening : Bridge #1

E.G. US. (ft)	1128.50	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1126.74	E.G. Elev (ft)	1128.46	1128.12
Q Total (cfs)	169000.00	W.S. Elev (ft)	1126.44	1125.89
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1120.63	1120.99
Q Weir (cfs)		Max Chl Dpth (ft)	19.99	19.58
Weir Sta Lft (ft)		Vel Total (ft/s)	11.39	11.99
Weir Sta Rgt (ft)		Flow Area (sq ft)	14834.71	14100.78
Weir Submerg		Froude # Chl	0.51	0.56
Weir Max Depth (ft)		Specif Force (cu ft)	178982.38	170345.88
Min Top Rd (ft)	1133.39	Hydr Depth (ft)	15.41	14.47
Min El Prs (ft)	1144.63	W.P. Total (ft)	1198.01	1195.82
Delta EG (ft)	0.49	Conv. Total (cfs)	3370954.8	3101385.8
Delta WS (ft)	0.72	Top Width (ft)	1008.92	1050.19
BR Open Area (sq ft)	32826.68	Frctn Loss (ft)	0.32	0.03
BR Open Vel (ft/s)	11.99	C & E Loss (ft)	0.02	0.07
Coef of Q		Shear Total (lb/sq ft)	1.94	2.19
Br Sel Method	Energy only	Power Total (lb/ft s)	22.14	26.20

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

E.G. US. (ft)	1128.50	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	1126.74	E.G. Elev (ft)	1128.46	1128.11
Q Total (cfs)	169000.00	W.S. Elev (ft)	1126.44	1125.88
Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1120.63	1120.99
Q Weir (cfs)		Max Chl Dpth (ft)	19.99	19.57
Weir Sta Lft (ft)		Vel Total (ft/s)	11.39	11.99
Weir Sta Rgt (ft)		Flow Area (sq ft)	14833.88	14099.83
Weir Submerg		Froude # Chl	0.51	0.56
Weir Max Depth (ft)		Specif Force (cu ft)	178973.02	170336.36
Min Top Rd (ft)	1133.39	Hydr Depth (ft)	15.41	14.47
Min El Prs (ft)	1144.63	W.P. Total (ft)	1197.99	1195.80
Delta EG (ft)	0.49	Conv. Total (cfs)	3370677.5	3101073.3
Delta WS (ft)	0.72	Top Width (ft)	1008.91	1050.18
BR Open Area (sq ft)	32826.68	Frctn Loss (ft)	0.32	0.03
BR Open Vel (ft/s)	11.99	C & E Loss (ft)	0.02	0.07
Coef of Q		Shear Total (lb/sq ft)	1.94	2.19
Br Sel Method	Energy only	Power Total (lb/ft s)	22.14	26.20

Note: Momentum answer is not valid if the water surface is above the low chord or if there is weir flow. The momentum answer has been disregarded.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.96

INPUT
Description: Downsteam face of SR 153 Bridge

Station Elevation Data num= 27

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19456.79	1136.18	19464.29	1135.76	19489.35	1117.8	19499.81	1118.12	19527.2	1106.31
19575.01	1106.86	19638.48	1107.08	19694.95	1108.06	19764.4	1108.52	19823.34	1109.68
19828.52	1110.84	19896.81	1110.93	19965.33	1111.45	20032.89	1111.92	20105.85	1113.1
20175.18	1113.63	20247.98	1113.22	20326.04	1112.56	20392.18	1111.72	20465.08	1112.15
20485.85	1125.49	20496.63	1125.52	20529.33	1135.74	20537.91	1135.94	20572.86	1123.41
20600.86	1123.92	20641.85	1122.84						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19456.79	.05	19456.79	.03	20537.91	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19456.79	20537.91	570	812.27	860	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19456.79	19456.79	1136.18	20537.91	20641.85	1135.94

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1128.02	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.99	Wt. n-Val.		0.035	

W.S. Elev (ft)	1126.03	Reach Len. (ft)	570.00	812.27	860.00
Crit W.S. (ft)	1120.64	Flow Area (sq ft)		14931.02	
E.G. Slope (ft/ft)	0.002010	Area (sq ft)		14931.02	184.21
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1096.74	Top Width (ft)		1020.45	76.29
Vel Total (ft/s)	11.32	Avg. Vel. (ft/s)		11.32	
Max Chl Dpth (ft)	19.72	Hydr. Depth (ft)		14.63	
Conv. Total (cfs)	3769359.3	Conv. (cfs)		3769359.3	
Length Wtd. (ft)	812.27	Wetted Per. (ft)		1029.71	
Min Ch El (ft)	1106.31	Shear (lb/sq ft)		1.82	
Alpha	1.00	Stream Power (lb/ft s)		20.60	
Frctn Loss (ft)	1.44	Cum Volume (acre-ft)	2014.62	9096.12	750.18
C & E Loss (ft)	0.08	Cum SA (acres)	114.34	543.09	148.75

Warning: Divided flow computed for this cross-section.
Warning: The cross-section end points had to be extended vertically for the computed water surface.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1128.02	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.99	Wt. n-Val.		0.035	
W.S. Elev (ft)	1126.03	Reach Len. (ft)	570.00	812.27	860.00
Crit W.S. (ft)	1120.67	Flow Area (sq ft)		14930.15	
E.G. Slope (ft/ft)	0.002011	Area (sq ft)		14930.15	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1020.44	Top Width (ft)		1020.44	
Vel Total (ft/s)	11.32	Avg. Vel. (ft/s)		11.32	
Max Chl Dpth (ft)	19.72	Hydr. Depth (ft)		14.63	
Conv. Total (cfs)	3769005.0	Conv. (cfs)		3769005.0	
Length Wtd. (ft)	812.27	Wetted Per. (ft)		1029.70	
Min Ch El (ft)	1106.31	Shear (lb/sq ft)		1.82	
Alpha	1.00	Stream Power (lb/ft s)		20.60	
Frctn Loss (ft)	1.44	Cum Volume (acre-ft)		9097.10	
C & E Loss (ft)	0.08	Cum SA (acres)		543.08	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.80

INPUT
Description:
Station Elevation Data num= 213

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19230.12	1143.619	275.95	1142.49	19298.4	1144.28	19303.6	1144.219	362.21	1142.77
19364.55	1140.419	366.35	1142.661	9389.24	1134.991	9390.52	1122.551	9391.85	1122.6
19416.06	1130.919	425.99	1133.921	9434.92	1133.991	9474.23	1134.441	9480.09	1134.58
19492.34	1124.519	519.89	1106.571	9533.48	1106.111	9592.78	1106.481	9642.24	1105.7
19715.63	1105.819	775.16	1106.681	9831.61	1107.97	19872.3	1108.48	19895.6	1109.05
19928.19	1109.119	966.84	1109.25	20037.5	1109.542	0055.76	1109.492	0162.44	1109.04
20198.37	1109.220	274.27	1110.132	0332.25	1110.082	0384.73	1109.792	0452.41	1109.37
20471.54	1109.420	477.22	1113.162	0493.52	1124.592	0502.73	1124.472	0535.08	1134.09
20552.07	1133.620	585.31	1120.962	0621.87	1120.872	0643.27	1121.362	0749.27	1124.15
20777.33	1124.620	801.74	1125.332	0805.79	1123.692	0853.71	1105.092	0865.69	1106.02
20888.39	1108.620	913.05	1110.62	0935.57	1109.462	0977.88	1108.472	0986.53	1107.98
21008.91	1108.321	050.42	1110.132	1079.18	1111.252	1102.02	1113.492	1107.04	1113.8
21135.68	111	321151.72	1113.012	1172.25	1114.742	1188.09	1114.92	1191.61	1115.1
21258.86	1116.221	268.91	1117.35	21306.2	1120.52	1325.06	1121.572	1339.08	1121.32
21382.66	1125.721	405.75	1126.632	1437.56	1128.922	1454.27	1129.032	1463.86	1128.46
21487.06	1127.421	495.49	1126.212	1514.26	1120.722	1537.98	1114.562	1552.41	1114.4
21626.08	1115.621	671.81	1116.62	1688.82	1117.072	1700.81	1117.322	1702.91	1117.56
21721.4	1117.6	21734.8	1117.71	21761.1	1118.032	1780.54	1118.062	1807.71	1118.39
21822.7	1117.721	848.49	1123.882	1868.08	1123.862	1893.84	1130.122	1938.83	1140.09
21950.2	1143.221	956.33	1142.652	1973.66	1141.52	2005.29	1142.492	2008.68	1142.57
22014.31	1141.122	068.94	1126.05	22071.3	112	622075.71	1124.282	2103.57	1119.37
22106.12	1119.722	113.78	1118.482	2125.91	1118.722	2153.35	1120.12	22180.4	1121.54
22185.65	1123.222	195.49	1122.372	2234.58	1132.052	2241.99	1132.932	2266.04	1139.38
22272.8	1139.422	279.88	1141.292	2314.52	1141.182	2318.47	1140.522	2367.43	1137.26
22376.61	1137.122	424.35	1134.592	2441.67	1134.272	2484.91	1130.712	2499.19	1130.52
22523.07	113	022552.05	1128.582	2597.93	1126.722	2608.56	1125.942	2634.89	1124.45
22654.45	1123.622	664.92	1123.942	2741.48	1124.022	2747.42	1124.542	2755.92	1124.96
22779.02	1124.222	788.15	1123.912	2812.66	1125.82	2823.63	1126.742	2839.46	1126.96
22899.37	1127.522	912.58	1126.92	22915.4	1127.092	2947.98	1126.542	2957.23	1126.42
22968.67	1126.4	22995	1126.782	3026.16	1124.072	3056.06	1126.062	3079.88	1125.62

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23086.46  1125.723110.22 1126.0623151.93 1126.5623168.97 1129.0923194.38 1132.61
23290.06  1134.1 23301.8 1134.3523310.28 1134.3723321.13 1134.2723395.93 1133.92
23443.43  1133.8 23480.6 1133.8223509.86  1133.923529.21 1135.8523552.04 1138.26
23569.37  1136.923592.68 1135.6923612.48 1136.2223630.71 1140.4423636.28 1140.87
23652.07  1139.923682.97 1137.8123713.99 1140.5223764.56 1138.6823773.35  1139.1
23815.87  1141.323837.66 1142.1223901.64 1136.6223913.74  1135.723925.44 1138.06
 23940.8    114123974.94 1136.2823984.38 1134.5624000.07 1133.4824033.62 1133.42
24086.89  1133.424105.37 1133.3924131.81 1133.5824293.82 1135.3624310.94 1135.55
24349.58  1135.124361.28 1135.14   24407 1137.4924417.24 1138.0424455.36 1133.54
24462.51  1132.424534.87 1133.1224550.07 1133.1524640.38 1134.3724663.08 1138.06
24668.93  1138.924699.68 1141.6224715.43 1139.4824720.82 1140.0924732.47  1141.2
 24750.1    114124759.71 1139.5324790.49 1134.5224804.27 1134.5524813.68  1134.9
24876.08  1134.924898.65 1135.0724949.53 1135.35

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
19230.12     .0519480.09    .03520535.08     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19480.0920535.08              480   483.7     500              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
19230.1219480.09 1134.5820535.0824949.53 1134.09

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1126.50   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.73   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1124.77   Reach Len. (ft)            480.00     483.70     500.00
  Crit W.S. (ft)            1118.20   Flow Area (sq ft)                   16024.96
  E.G. Slope (ft/ft)       0.001572   Area (sq ft)                10.06   16024.96   10157.88
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            2479.19   Top Width (ft)               7.89    1011.74    1459.56
  Vel Total (ft/s)            10.55   Avg. Vel. (ft/s)                      10.55
  Max Chl Dpth (ft)           19.68   Hydr. Depth (ft)                      15.84
  Conv. Total (cfs)       4262084.0   Conv. (cfs)                        4262084.0
  Length Wtd. (ft)           483.70   Wetted Per. (ft)                    1022.00
  Min Ch El (ft)            1105.70   Shear (lb/sq ft)                       1.54
  Alpha                        1.00   Stream Power (lb/ft s)                16.23
  Frctn Loss (ft)              0.84   Cum Volume (acre-ft)      2014.55    8807.50     648.09
  C & E Loss (ft)              0.03   Cum SA (acres)             114.29     524.14     133.59


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1126.50   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.73   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1124.77   Reach Len. (ft)            480.00     483.70     500.00
  Crit W.S. (ft)            1118.22   Flow Area (sq ft)                   16023.35
  E.G. Slope (ft/ft)       0.001573   Area (sq ft)                        16023.35
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1011.73   Top Width (ft)                      1011.73
  Vel Total (ft/s)            10.55   Avg. Vel. (ft/s)                      10.55
  Max Chl Dpth (ft)           19.07   Hydr. Depth (ft)                      15.84
  Conv. Total (cfs)       4261395.0   Conv. (cfs)                        4261395.0
  Length Wtd. (ft)           483.70   Wetted Per. (ft)                    1021.99
  Min Ch El (ft)            1105.70   Shear (lb/sq ft)                       1.54
  Alpha                        1.00   Stream Power (lb/ft s)                16.24
  Frctn Loss (ft)              0.84   Cum Volume (acre-ft)                8808.50
  C & E Loss (ft)              0.03   Cum SA (acres)                       524.14


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.71

INPUT
Description:
Station Elevation Data    num=     291
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
13108.87  1138.413278.13 1138.5313307.83 1138.3813369.82 1138.4613396.93  1138.8
13681.94    113913897.73 1137.1313907.57 1136.8614314.75  1139.514476.52 1139.45
 14689.5  1132.7 15041.7 1130.2615083.77 1130.6815151.48 1130.9315504.29 1131.44
15564.72  1132.815830.77 1134.2616062.47 1135.1616238.42 1135.1616416.42 1136.23
16480.68    113416485.06 1133.4916492.54 1134.8916507.64  1135.516531.61 1133.05
 16537.1    113316566.43 1133.8216604.42 1135.2316704.47 1133.4716721.25 1133.25
16727.23  1132.9 16808.6 1132.5416818.38 1132.5516874.33 1132.7316906.02 1132.65
16975.84  1132.416982.59 1132.4617030.46 1132.4217080.83 1132.8317122.75 1133.03
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17174.22  1133.517207.36 1134.33 17218.2 1134.6417224.56 1134.4417340.33 1133.83
17601.54  1131.9   17628 1131.7617647.96 1131.4517657.08 1131.2817666.42 1129.12
17724.79  1131.917772.56 1133.17 17777.1 1130.1817790.25 1130.3417836.23 1130.75
18016.48  1129.918128.88 1129.2318194.29  1129.3   18238 1129.3318243.61 1130.64
18256.49  1132.618278.83 1129.23   18287 1129.3418316.96 1129.9418323.31 1130.38
18332.92  1130.918344.89 1130.5318358.07 1130.0518382.67 1130.0518587.59 1129.78
18623.24  1130.118624.56 1130.48 18746.1  1132.918749.34  1132.718766.91 1132.42
18775.97    113118795.74 1129.27 18814.3 1130.0618834.44 1128.8518838.62 1130.36
18846.35    113418864.57 1138.9818879.51 1138.8818912.85 1137.7318930.83 1137.25
18944.55  1137.718973.23 1137.5419001.84 1137.5619025.44 1131.3819066.86 1120.02
19083.85  1118.419144.47 1118.3419171.15 1118.04 19215.4 1117.9819224.64 1119.98
19233.12    111819300.65 1117.8119361.77  1118.419378.92 1122.1419405.15 1131.47
19410.65  1130.919436.06 1130.4619437.98 1131.0719444.77 1134.3419448.35 1134.51
19476.64  1135.319500.13 1124.4819501.23 1124.1319509.49 1123.8619528.44 1113.43
19542.17    110619564.08 1105.7819571.57 1105.61 19630.1 1105.3819746.14 1105.97
19859.52  1107.919892.83 1108.8719921.72 1109.0520003.31  1109.120074.85 1108.65
20166.82  1109.320212.22  1109.320321.34 1109.9720337.16 1110.0320349.18 1109.84
20411.63    110920450.83 1108.8420472.69 1108.84 20504.8 1128.6420519.04 1131.65
20524.71  1132.620547.92 1133.2720556.12 1133.4720580.57  1126.420603.69 1119.89
20612.35  1121.520637.84 1125.53 20641.6 1125.24 20677.4 1121.7120712.93  1119.5
20739.22  1118.420808.72 1114.5920856.68 1113.7720868.49 1113.5320875.65 1113.13
20940.08  1111.821015.17 1111.1821108.82 1109.8821109.54 1109.9121184.42 1110.28
21206.58  1110.621258.63 1112.2121369.54 1112.4521478.56 1112.17 21503.8 1112.42
21620.62  1112.721626.81 1112.5321638.76 1111.6421660.46 1111.9521684.09 1112.65
21719.47    111721739.99 1119.4521752.31 1120.9921757.21 1121.2221797.09 1122.35
21830.57  1123.121858.67 1123.4121923.95 1109.0721958.12 1109.2421967.64 1112.07
22011.58  1125.422044.59 1124.6522088.13 1117.2622090.44 1116.7322092.67 1117.05
22120.97    1120 22146.3  1119.622181.35 1119.6922189.51 1118.1622194.81 1119.97
22213.55    112722229.71 1130.1122266.38 1131.5722288.71 1134.4822301.95 1135.03
22316.34  1135.322365.48 1136.8722375.39 1136.93 22387.6 1136.1522431.44 1133.09
22484.06  1132.722493.44  1133.522540.73 1131.8422546.12 1132.2122556.56 1131.39
22566.44  1130.322599.84 1128.46 22620.5 1127.4422635.98 1126.1622664.49 1125.49
22685.81  1124.422701.91 1125.3522717.77 1125.7922736.68 1126.5322746.98  1127.1
22783.01  1126.222829.29 1124.8122848.45 1124.6422869.88 1124.5322899.64 1123.26
22923.72  1122.622943.69 1122.14 22948.5 1121.9722986.22 1120.4623019.17 1119.18
 23039.9  1118.623068.79 1116.0923110.64 1113.6223133.17 1116.2623146.64 1118.45
 23171.6    112123212.57 1124.4323232.65 1124.8523281.57 1124.7423307.15 1125.08
23324.89  1125.423375.35 1125.6623416.55 1127.2923447.76 1128.5523475.32 1129.54
23493.64  1130.623506.14 1131.0823535.86 1132.1323602.75 1133.1323621.85 1133.17
23649.32  1133.723722.66 1132.9123759.51 1132.77 23785.2 1132.8123802.65 1133.05
23884.02  1133.723946.91 1133.73 23971.7 1136.6823990.48 1135.9624014.85 1136.68
24039.25  1135.1 24044.2 1135.3524063.83 1137.1724124.43 1137.1924168.68 1136.85
24191.37  1136.624236.32 1137.1224243.91  1137.324299.17 1137.3224337.13 1136.68
24392.36  1137.524404.14 1136.6724453.95 1134.3124469.33 1134.7724501.82 1136.19
 24514.8  1135.524528.89 1135.2824550.09 1133.6924574.19 1133.9324611.53 1134.04
24618.78  1134.124640.33 1134.5824672.32 1135.5424677.18 1135.7224706.31 1138.81
24724.88  1138.524729.54 1138.2224740.65 1137.2224765.72 1134.4724778.49 1132.36
24788.01  1132.324815.55 1132.1624847.55 1135.1524859.82  1136.424883.17 1136.98
24886.57  1137.124910.41 1138.8424915.93 1138.4924941.99  1138.924953.01 1136.56
24968.51  1138.424999.47 1133.9325033.02  1135.225040.52  1135.325101.43 1135.95
25106.12  1135.7

Manning's n Values         num=        3
     Sta   n Val     Sta   n Val     Sta   n Val
13108.87     .0519476.64    .03520556.12     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19476.6420556.12            508.24  508.24  508.24              .1       .3
Ineffective Flow     num=        2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13108.8719476.64  1135.320556.1225106.12 1133.47

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1125.63   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.00   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1123.63   Reach Len. (ft)             508.24     508.24     508.24
  Crit W.S. (ft)            1118.10   Flow Area (sq ft)                    14891.65
  E.G. Slope (ft/ft)        0.001939  Area (sq ft)               1678.89   14891.65   14919.20
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            3165.42   Top Width (ft)              329.41     986.77    1849.24
  Vel Total (ft/s)            11.35   Avg. Vel. (ft/s)                      11.35
  Max Chl Dpth (ft)           18.25   Hydr. Depth (ft)                      15.09
  Conv. Total (cfs)       3838255.0   Conv. (cfs)                         3838255.0
  Length Wtd. (ft)           508.24   Wetted Per. (ft)                     995.51
  Min Ch El (ft)            1105.38   Shear (lb/sq ft)                      1.81
  Alpha                        1.00   Stream Power (lb/ft s)               20.55
  Frctn Loss (ft)              1.00   Cum Volume (acre-ft)       2005.25    8635.85     504.17
  C & E Loss (ft)              0.00   Cum SA (acres)              112.43     513.05     114.60
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Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1125.63	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.00	Wt. n-Val.		0.035	
W.S. Elev (ft)	1123.63	Reach Len. (ft)	508.24	508.24	508.24
Crit W.S. (ft)	1118.10	Flow Area (sq ft)		14889.72	
E.G. Slope (ft/ft)	0.001939	Area (sq ft)		14889.72	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	986.76	Top Width (ft)		986.76	
Vel Total (ft/s)	11.35	Avg. Vel. (ft/s)		11.35	
Max Chl Dpth (ft)	18.25	Hydr. Depth (ft)		15.09	
Conv. Total (cfs)	3837448.8	Conv. (cfs)		3837448.8	
Length Wtd. (ft)	508.24	Wetted Per. (ft)		995.51	
Min Ch El (ft)	1105.38	Shear (lb/sq ft)		1.81	
Alpha	1.00	Stream Power (lb/ft s)		20.56	
Frctn Loss (ft)	1.00	Cum Volume (acre-ft)		8636.87	
C & E Loss (ft)	0.00	Cum SA (acres)		513.04	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.61

INPUT
Description:
Station Elevation Data num= 310

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13289.47	1137.613346.61	1137.6913482.79	1137.6413524.63	1137.7413688.14	1137.42
13855.31	1137.513919.18	1137.1514090.61	1136.2214232.62	1137.0514635.33	1135.72
14873.58	1129.114982.81	1127.915191.31	1129.8215261.79	1130.5215396.44	1131.02
15844.49	1132.3 16148.8	1133.4516363.69	1134.4216707.94	1132.8916805.22	1133.12
16983.62	1131.717212.16	1130.3217224.59	1131.2817233.14	1130.1717346.12	1131.24
17604.77	1129.817635.65	1129.5417645.26	1130.8517654.92	1132.217662.71	1132.17
17810.2	1129.817837.84	1129.5117849.59	1129.2117930.21	1128.6917940.16	1128.66
17952.59	1128.9 17980.9	1128.2918009.99	1130.1818183.13	1130.4118387.14	1131.31
18397.06	1129.618417.48	1129.6618465.37	1129.5918493.07	1128.7818564.61	1129.68
18609.66	113018660.73	1130.8318672.49	1131.37 18695.9	1131.9718703.44	1132.15
18755.9	1134.118816.02	1117.8818839.85	1111.2718852.69	110918869.25	1109.3
18881.75	1109.118916.84	1107.9318921.76	1107.4918952.11	1106.1818955.67	1105.93
18981.82	1112.419003.97	1116.7819055.59	1116.5219074.97	1115.8319079.61	1118.02
19087.8	112019098.23	1123.3819124.36	1122.1219140.32	1121.5919170.65	1121.15
19193.18	1121.119207.75	1125.3519228.42	1131.1119242.79	1130.8619263.02	1130.77
19306.93	1125.119312.04	1124.1219319.87	1124.1319366.08	1124.0319392.22	1125.51
19396.62	1125.519421.36	1127.2119427.81	1128.6319442.05	1132.2519449.11	1132.57
19482.22	1133.619499.23	1124.64 19504.2	1122.2119514.31	1122.7619528.38	1116
19541.06	1107.419630.81	1106.1919658.86	1105.7819730.79	1106.2819780.04	1107.2
19894.68	110919936.32	1109.7219984.17	1109.1120102.24	1108.0220114.96	1107.83
20134.74	1106.220205.93	1103.1120220.47	1101.9120244.57	1102.6820310.43	1106.81
20324.3	1107.920346.83	1108.0620468.14	110820471.94	1107.8120491.39	1120.07
20494.43	1121.820504.21	1123.0720506.16	1123.6520537.49	1132.2320544.75	1132.58
20551.74	1132.320579.63	1121.7720586.05	1119.8820608.67	1118.89 20662	1116.23
20674.67	1116.320680.85	1115.1720694.05	1109.8120719.15	1109.5220728.31	1108.98
20752.41	1108.420762.22	1108.2520766.77	1108.320790.72	1110.4420816.61	1110.84
20839.45	1110.8 20861.8	1111.3520877.19	1110.6120884.38	1110.5120897.32	1110.56
20916.71	1110.920990.92	1110.9521014.14	1110.9321065.12	1110.2921077.78	1110.01
21117.21	1109.621156.35	1109.621163.52	1109.4321238.03	1109.7621256.45	1109.92
21291.06	111021327.34	1110.5221360.83	1110.9121389.39	1110.9521433.02	1111.25
21460.08	1111.121531.74	1112.1521537.12	1112.1821549.16	1113.1821603.09	1112.3
21607.6	1112.121670.02	1112.45 21678.5	1112.51 21688.3	1114.3521710.39	1116.34
21720.35	1117.421727.17	1117.2521766.26	1119.95 21770.7	1119.7421792.95	1120.46
21804.93	1121.721837.79	1126.9121846.13	1126.5621906.58	1124.6421909.29	1125.34
21929.66	1128.221936.81	1129.6 21962.3	1131.3121980.76	1130.5921985.59	1129.73
21993.41	1129.421996.46	1129.5222045.28	1130.3622052.37	1130.0522059.43	1128.13
22063.42	1127.822076.54	1124.2322084.51	1124.122127.04	1123.1922132.06	1123.02
22150.35	1124.522178.85	1122.6422191.89	1120.9222200.66	1120.65 22216.9	1120.48
22251.77	1123.722265.75	1128.5722296.06	1127.4122308.55	1127.0422323.19	1126.36
22367.62	1127.322418.57	1128.2922437.08	1130.3722455.65	1129.5422486.69	1124.45
22502.31	1123.822519.76	1124.97 22562.1	1124.322602.04	1123.9122615.19	1122.85
22623.99	1123.422655.54	1121.8322660.03	1123.1122676.42	1123.8722690.98	1124
22711.45	1123.722730.92	1123.3522784.64	1123.5322809.85	1123.5822842.56	1123.8
22895.97	112422931.57	1124.5422956.78	1124.7723019.28	1125.0923038.53	1124.54
23047.09	1124.623076.14	1125.3323083.49	1125.4723128.33	1125.8523138.25	1125.61
23155.78	1125.923235.12	1126.6 23303.4	1126.69 23334.8	1126.57 23363	1126.56
23393.12	1126.923442.45	112723477.82	1127.5123509.64	1128.3223529.43	1128.91
23554.38	1129.323596.01	1129.3123619.55	1129.4823629.35	1129.423639.35	1129.2
23687.46	1129.523751.05	1124.6923803.22	1123.9123830.76	1122.5523869.72	1121.45

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23929.15  1119.723934.29 1118.8423957.84  1118.823973.32  1120.424001.29 1119.61
 24018.6  1118.424053.99 1118.2624070.18 1117.5324089.61  1117.824139.08 1118.67
24148.68  1120.324159.19 1121.0224170.32 1128.4724184.95 1129.0724197.81 1135.17
24205.02  1134.924232.89 1126.2224279.33 1127.4324318.02 1124.7624353.43 1123.93
24413.74  1126.524459.64 1127.9824527.69 1128.7724546.54  1129.524611.74 1132.52
24627.28  1134.3 24674.5 1134.8224685.21 1134.7724700.05 1134.9124713.14 1134.95
 24799.3    113524804.43 1135.02 24807.1 1135.4424821.43 1140.4624826.53 1139.51
24850.13  1137.324872.13 1135.5224876.66 1134.9224944.38 1134.8624960.25 1134.97
24973.27  1138.2 24980.7 1140.3225022.17 1134.4525025.06 1134.1625048.29 1133.48
25064.13  1133.7 25071.8  1133.725105.59 1133.9725116.87 1134.9325132.09 1136.51
25153.12  1136.225164.17 1136.28 25189.7 1137.7325214.04 1133.4425223.69 1132.41
25242.27  1135.725245.39 1136.3525248.39 1135.9825256.53 1134.5825272.47 1134.91
25348.94  1135.725355.24 1129.0125359.63 1134.7925370.17  1135.925396.51 1136.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13289.47     .0519482.22    .03520544.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19482.2220544.75              510  503.43  503.43             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13289.4719482.22  1133.620544.7525396.51 1132.58

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1124.63   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.02   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1122.61   Reach Len. (ft)            510.00     503.43     503.43
  Crit W.S. (ft)            1117.10   Flow Area (sq ft)                   14827.63
  E.G. Slope (ft/ft)       0.001987   Area (sq ft)              3008.08   14827.63   14041.57
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            3020.79   Top Width (ft)             381.63     994.32    1644.84
  Vel Total (ft/s)            11.40   Avg. Vel. (ft/s)                      11.40
  Max Chl Dpth (ft)           20.70   Hydr. Depth (ft)                      14.91
  Conv. Total (cfs)       3791675.5   Conv. (cfs)                        3791675.5
  Length Wtd. (ft)           503.43   Wetted Per. (ft)                    1003.05
  Min Ch El (ft)            1101.91   Shear (lb/sq ft)                       1.83
  Alpha                        1.00   Stream Power (lb/ft s)                20.90
  Frctn Loss (ft)              1.01   Cum Volume (acre-ft)      1977.91    8462.47     335.22
  C & E Loss (ft)              0.00   Cum SA (acres)             108.28     501.49      94.21


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1124.63   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.02   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1122.61   Reach Len. (ft)            510.00     503.43     503.43
  Crit W.S. (ft)            1117.08   Flow Area (sq ft)                   14824.96
  E.G. Slope (ft/ft)       0.001988   Area (sq ft)                        14824.96
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             994.24   Top Width (ft)                        994.24
  Vel Total (ft/s)            11.40   Avg. Vel. (ft/s)                      11.40
  Max Chl Dpth (ft)           20.70   Hydr. Depth (ft)                      14.91
  Conv. Total (cfs)       3790746.0   Conv. (cfs)                        3790746.0
  Length Wtd. (ft)           503.43   Wetted Per. (ft)                    1002.97
  Min Ch El (ft)            1101.91   Shear (lb/sq ft)                       1.83
  Alpha                        1.00   Stream Power (lb/ft s)                20.91
  Frctn Loss (ft)              1.01   Cum Volume (acre-ft)                8463.52
  C & E Loss (ft)              0.00   Cum SA (acres)                       501.48


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.52

INPUT
Description:
Station Elevation Data    num=     293
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
13520.55  1136.713713.31 1136.5813814.93 1136.7913884.19 1136.6513954.33 1136.67
 14334.5  1134.914700.72 1132.2215036.75  1128.415107.35 1127.7215258.92 1127.77
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15377.61    112815613.04 1130.02 15863.4 1130.7216367.69 1132.4316490.01 1132.98
16574.82  1132.616937.95 1133.4717050.22 1132.5417078.18 1132.35 17107.8 1131.82
17136.29  1131.417179.59 1130.9717232.08  1130.517279.59  1130.4 17321.3 1130.07
17369.88  1130.717412.05 1130.4917523.48 1130.1917566.99 1129.85   17625 1129.36
17694.84    112917720.53 1129.0817760.84 1129.3717779.61 1129.6117856.52 1130.91
17893.45  1130.718025.87 1130.8118040.83 1130.6618114.49 1130.6318192.45 1130.49
 18208.3  1130.418225.32 1131.0318235.41 1130.7818236.01 1129.6418240.94 1128.75
18278.92  1128.318333.44 1127.3918352.18 1127.1618457.54 1125.47 18481.2 1125.43
18498.98  1124.618527.85 1124.4818554.49    112318599.47 1123.5418650.02 1123.68
18712.82  1123.318730.78  1123.418795.31 1124.9218810.33  1124.818831.47 1118.31
18835.93  1117.218838.89 1117.0818857.05 1114.3518866.76 1114.1918868.51  1114.6
18877.42  1118.918880.85 1118.9818881.54 1118.3518887.17 1118.4418910.52 1123.14
18920.95  1122.218941.87 1126.2918947.26 1126.6518960.51 1128.52 18981.6  1132.7
18994.16  1132.519018.91 1132.4219050.87 1138.8119159.68 1158.4119182.71  1158.2
19323.86  1157.5   19325    115719327.65 1154.5719344.49  1147.919382.47 1133.65
19388.43  1133.719432.59 1133.2719466.14 1133.0819479.04 1133.6319487.75 1129.05
 19501.3  1121.119510.55 1121.5819534.34 1109.08 19551.4 1108.3919665.81 1106.79
19705.17  1106.219721.96 1106.1419884.09 1107.2119912.48 1107.4320050.27 1107.75
20057.61  1107.8 20166.9 1106.1920204.03 1104.4320244.72 1102.8420285.16 1101.37
 20301.5  1101.620369.81 1104.6420374.23    110520394.86 1105.6820436.47 1106.97
20477.38    110720481.03 1109.6420496.77 1120.4120506.37 1120.8920538.63 1131.04
20553.62  1131.720591.55 1119.7420594.81 1118.6820613.68 1114.9120635.98 1112.62
20675.54  1099.720678.64 1099.0320682.23 1099.0220739.38 1097.1520788.35 1097.76
20801.92    109820829.02 1101.2220859.02 1103.3320894.78 1102.81 20900.6 1103.25
20903.68  1103.720932.83 1108.6920940.53 1108.8220991.79 1112.0921058.92  1118.3
21085.19  1117.921088.69 1117.4221095.04 1116.2121131.47 1117.0321156.06 1117.27
21195.65  1117.121219.18 1117.0121276.88 1116.14 21291.3 1116.07 21338.7 1121.85
21356.23  1124.221399.91 1130.7921407.41 1130.7921452.82 1132.1521536.82  1131.9
21555.83  1131.921588.13 1131.9721636.88    113221650.96 1131.9621685.86 1132.35
21690.23  1132.321700.14 1132.2621733.05  1132.521757.59 1132.7621778.07  1133.8
21802.82  1137.621804.23 1137.5921846.73 1137.2521857.32 1136.1521880.77  1131.1
 21896.4  1127.621903.63 1126.5321921.13 1126.5521933.54 1125.2421956.75 1124.42
21973.29  1123.222020.69 1122.1722035.17 1121.93 22056.8 1128.4722089.51 1136.91
22103.55  1135.922107.83 1135.8722119.52  1136.522126.06 1135.16 22163.1 1126.68
22182.81    113122194.22  1133.922210.19  1134.722244.21 1134.8422256.17 1134.43
22267.18    112922274.88 1126.53 22290.5 1125.9122312.48 1125.7722319.59  1122.2
22323.34  1119.722374.63 1118.7722379.21 1118.6322386.82 1118.0522403.27 1123.76
22410.86  1125.622415.81 1125.8822424.66 1126.0922436.88 1120.6422441.79 1119.13
22453.68  1119.322527.01 1121.7122532.78 1121.5522534.67 1120.3522554.12 1122.78
22567.56    112522589.46 1123.6522635.82 1123.8722659.76 1122.6722672.91 1121.96
22677.08    112222703.59 1123.3122710.13 1126.07 22728.4 1131.3422748.95 1131.15
22794.47    113022834.69  1129.922844.73 1129.7922923.99  1131.222935.86  1131.3
22965.43  1131.122981.01 1131.4123053.43 1131.9623080.08 1131.8823100.03 1130.64
23174.29  1130.423197.67 1130.3723225.76  1129.823498.31 1126.5123522.66 1127.21
23529.18  1126.923544.73 1126.4923582.11 1126.6423598.43 1126.8123711.29  1128.3
23742.87  1128.7 23753.9 1128.8823845.68 1130.2923893.22 1127.8123934.64 1128.42
 23960.7  1129.124032.63 1130.6724099.62 1132.4924106.15  1132.424183.48 1131.53
24227.48  1131.624250.72 1131.2224308.44 1129.7724349.13 1129.1524384.59 1128.57
24410.64  1128.524453.99 1129.4224470.86 1129.6524490.94 1129.8524539.99 1129.93
24662.52  1130.524667.04 1130.4724710.85 1129.8924728.61 1129.9924749.63 1126.91
24760.99  1127.424799.79 1129.1424828.87 1131.4624914.09 1132.1624924.15 1132.05
   24953  1131.324972.86 1131.6224988.29 1131.6925008.74 1132.2725053.34 1132.33
25062.05  1132.125126.76 1132.72 25187.6  1132.6 25219.2 1132.1625232.25 1131.65
25245.66    113125279.69 1131.7125286.23 1132.0425289.47    113225314.49 1132.24
25348.03  1135.225375.67 1134.8725378.89 1134.7525383.39 1134.9725408.48 1134.65
25435.96  1133.5 25444.9 1133.8425468.99 1134.2325552.04 1133.7925558.09 1133.72
25566.36  1133.4 25567.2 1133.6325571.42 1133.78

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13520.55     .0519487.75    .03520553.62     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19487.7520553.62              520  496.02     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13520.5519487.75 1129.0520553.6225571.42  1131.7

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1123.62   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.03   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1121.59   Reach Len. (ft)            520.00    496.02    460.00
  Crit W.S. (ft)            1116.20   Flow Area (sq ft)                   14789.69
  E.G. Slope (ft/ft)       0.002038   Area (sq ft)               334.90   14789.69   8937.67
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            2019.27   Top Width (ft)              82.02    1008.12    929.12
  Vel Total (ft/s)            11.43   Avg. Vel. (ft/s)                      11.43
  Max Chl Dpth (ft)           24.44   Hydr. Depth (ft)                      14.67
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Conv. Total (cfs)	3743574.5	Conv. (cfs)		3743574.5		
Length Wtd. (ft)	496.02	Wetted Per. (ft)		1015.92		
Min Ch El (ft)	1101.37	Shear (lb/sq ft)		1.85		
Alpha	1.00	Stream Power (lb/ft s)		21.17		
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)	1958.34	8291.32	202.43	
C & E Loss (ft)	0.03	Cum SA (acres)	105.57	489.92	79.34	

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1123.62	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.03	Wt. n-Val.		0.035	
W.S. Elev (ft)	1121.59	Reach Len. (ft)	520.00	496.02	460.00
Crit W.S. (ft)	1116.20	Flow Area (sq ft)		14788.33	
E.G. Slope (ft/ft)	0.002039	Area (sq ft)		14788.33	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1008.12	Top Width (ft)		1008.12	
Vel Total (ft/s)	11.43	Avg. Vel. (ft/s)		11.43	
Max Chl Dpth (ft)	20.22	Hydr. Depth (ft)		14.67	
Conv. Total (cfs)	3743018.5	Conv. (cfs)		3743018.5	
Length Wtd. (ft)	496.02	Wetted Per. (ft)		1015.91	
Min Ch El (ft)	1101.37	Shear (lb/sq ft)		1.85	
Alpha	1.00	Stream Power (lb/ft s)		21.17	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)		8292.40	
C & E Loss (ft)	0.02	Cum SA (acres)		489.91	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.42

INPUT
Description:
Station Elevation Data num= 280

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13775.01	1135.114	10.58	1134.98	14024.29	1135.01	14476.92	1133.61	14664.6	1132.73
15249.61	1129.115	272.55	1128.97	15497.69	1128.24	15619.78	1128.22	15827.23	1129.02
16085.44	1129.916	488.61	1131.27	16651.78	1131.77	16720.37	1131.71	6732.64	1131.77
16747.49	1131.717	267.73	1130.19	17278.36	1129.91	17295.48	1129.33	17322.39	1128.3
17469.28	1122.417	486.47	1122.64	17548.9	1123.88	17669.09	1120.35	17792.62	1129.96
17835.52	1130.417	876.22	1131.35	17910.24	1141.82	17925.46	1146.36	17942.58	1150.47
17951.24	1151.517	959.47	1149.17	17971.21	1147.42	18007.39	1147.49	18021.48	1147.48
18076.85	1147.618	098.93	1147.61	8120.08	1147.71	8230.52	1148.69	18247.11	1148.77
18361.71	115	018371.34	1149.97	18405.87	1150.58	18450.66	1137.63	18465.78	1133.1
18474.03	1133.718	490.29	1135.44	18519.06	1127.51	8528.95	1124.84	18568.93	1123.21
18584.02	1127.318	596.35	1127.03	18661.21	1125.65	18663.21	1126.41	18720.01	1146.17
18757.32	1157.918	760.54	1157.84	18779.39	1157.15	18835.55	1157.27	18916.49	1156.91
19045.66	1156.619	319.48	1155.85	19374.57	1155.81	19417.64	1137.37	19430.47	1131.73
19443.1	1130.719	449.06	1131.04	19466.92	1131.62	19480.61	1131.48	19502.37	1122.14
19524.32	1112.519	564.21	1107.96	19571.3	1107.39	19585.69	1107.26	19627.57	1107.72
19738.83	1106.219	816.62	1105.54	19875.67	1106.32	19888.83	1106.31	19942.45	1107.02
20038.66	1108.120	092.59	1106.72	0123.26	1105.97	20163.88	1104.93	20218.93	1103.78
20266.68	110	320272.84	1101.56	20385.12	1103.63	20394.06	1104.04	20401.77	1103.76
20412.72	1104.420	467.02	110	620482.46	1105.74	20499.22	1117.03	20502.07	1119.07
20512.29	1119.420	536.34	1127.81	20543.39	1130.18	20557.73	1130.92	20566.34	1128.05
20582.27	1124.520	585.48	1123.52	20594.97	1122.22	0621.82	1117.38	20631.3	1119.51
20652.33	1122.720	668.26	1123.26	20702.27	1127.37	20710.06	1128.63	20732.51	1131.4
20758.16	1131.520	795.49	1132.16	20806.82	1129.12	20847.88	1118.33	20864.52	1114.75
20898.27	1114.620	944.31	1128.22	20955.86	1127.92	20972.57	1127.72	21005.35	1118.14
21017.74	1113.521	036.21	1113.54	21093.74	1129.34	21102.08	1131.82	21107.21	1131.77
21139.91	1131.421	173.22	1130.68	21186.04	1130.62	1251.13	1130.84	21275.6	1130.51
21298.56	1130.521	347.39	1130.55	21368.37	1130.55	21373.25	1129.94	21378.56	1129.69
21406.12	1129.521	442.19	1129.49	21465.44	1127.64	21476.37	1126.61	21490.38	1127.15
21525.98	1128.621	556.47	1129.27	21651.65	1131.16	21678.33	1131.34	21733.77	1131.79
21746.38	1131.821	762.15	1132.01	21788.93	1131.66	21846.42	1131.78	21880.42	1131.26
21911.5	1129.821	973.41	1129.23	21986.11	1128.72	2032.49	1129.7	22039.2	1128.83
22056.94	112	622063.39	1126.37	22071.03	1125.34	22087.39	1125.62	22100.05	1123.67
22130.04	1117.222	141.04	1118.85	22154.83	1118.81	22204.54	1117.04	22224.25	1118.25
22232.98	1118.122	247.02	1117.38	22266.11	1118.25	22310	1105.51	22315.56	1105.31
22357.67	110	522362.33	1105.06	22383.86	1109.98	22420.72	1117.95	22423.69	1118.09
22446.86	1116.9	22480	1117.18	22481.83	1117.13	22486.8	1124.07	22500.99	1127.9
22531.09	1117.322	533.46	1117.26	22556.26	1115.96	22566.75	1114.76	22569.13	1115.35
22577.1	1114.722	588.06	1116.92	2596.98	1118.45	22609.35	1120.29	22621.47	1124.08

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22640.38  1124.122662.28 1121.4322713.76 1120.6422722.87  1121.122742.51 1122.87
22748.68  1122.222764.92 1120.5122801.71 1123.0422827.81 1122.4122857.28 1121.58
22879.07  1130.9 22884.7 1133.3722887.08 1133.2422893.55 1132.3822908.19 1132.36
 22913.5  1132.323065.86 1131.5823176.13 1129.96 23301.7 1129.8923359.12 1129.96
23409.31  1129.223692.08 1127.7723732.77 1125.6423760.65 1124.8323763.49 1124.63
23786.32  1125.123812.67 1126.6623836.06 1127.4823846.11 1127.6823930.48  1129.1
23972.68  1129.324063.93 1130.0124113.45 1130.52 24141.3 1130.9824223.71 1131.91
24249.38    113224295.28  1131.924327.93 1131.9824404.92 1132.5724410.12 1132.43
24465.19  1130.624471.68 1130.5524546.64 1129.19 24597.6 1128.8324622.78 1128.68
24686.97  1129.424688.17 1129.4724758.56 1129.1524761.02 1129.1224913.06 1129.62
24922.11  1129.524944.11 1128.3124988.23 1129.1425003.98 1129.1425033.94 1129.55
25070.29  1130.425102.72 1130.8525114.57 1130.5225116.25 1131.0625122.69 1129.84
25127.81  1129.525153.98 1129.4125177.68 1129.1425187.58 1129.1325234.01 1129.23
25282.86  1129.225300.51 1129.9125358.34 1130.0725365.57 1129.7525404.43 1131.61
 25414.9  1131.725448.77 1131.5725457.29 1131.6825468.39 1131.4825513.33 1131.41
25547.39  1134.725565.27  1134.825590.42 1133.6525626.59 1130.45 25655.8 1132.23
25661.35  1132.325709.11 1132.8325724.62 1132.5425726.43 1131.35 25730.8 1132.12
 25743.2  1131.625745.24 1132.2825797.56 1134.1525803.07 1134.9225849.59 1134.74

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13775.01     .0519480.61    .03520557.73     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19480.6120557.73              520  502.97     490             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13775.0119480.61 1131.4820557.7325849.59 1130.92

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1122.48   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.28   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1120.20   Reach Len. (ft)           520.00     502.97     490.00
  Crit W.S. (ft)            1115.71   Flow Area (sq ft)                  13954.61
  E.G. Slope (ft/ft)       0.002468   Area (sq ft)                       13954.61    3062.70
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1630.02   Top Width (ft)                      1007.80     622.21
  Vel Total (ft/s)            12.11   Avg. Vel. (ft/s)                      12.11
  Max Chl Dpth (ft)           18.64   Hydr. Depth (ft)                      13.85
  Conv. Total (cfs)       3401614.5   Conv. (cfs)                       3401614.5
  Length Wtd. (ft)           502.97   Wetted Per. (ft)                    1014.28
  Min Ch El (ft)            1101.56   Shear (lb/sq ft)                      2.12
  Alpha                        1.00   Stream Power (lb/ft s)               25.68
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)      1956.34    8127.67     139.07
  C & E Loss (ft)              0.14   Cum SA (acres)             105.08     478.44      71.15


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1122.48   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                2.28   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1120.20   Reach Len. (ft)           520.00     502.97     490.00
  Crit W.S. (ft)            1115.71   Flow Area (sq ft)                  13954.61
  E.G. Slope (ft/ft)       0.002468   Area (sq ft)                       13954.61
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1007.80   Top Width (ft)                      1007.80
  Vel Total (ft/s)            12.11   Avg. Vel. (ft/s)                      12.11
  Max Chl Dpth (ft)           18.64   Hydr. Depth (ft)                      13.85
  Conv. Total (cfs)       3401621.3   Conv. (cfs)                       3401621.3
  Length Wtd. (ft)           502.97   Wetted Per. (ft)                    1014.28
  Min Ch El (ft)            1101.56   Shear (lb/sq ft)                      2.12
  Alpha                        1.00   Stream Power (lb/ft s)               25.68
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)                8128.75
  C & E Loss (ft)              0.14   Cum SA (acres)                       478.44


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 218.33

INPUT
Description:
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Station Elevation Data num= 44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19387.78	1144.119	429.55	1124.711	9449.63	1126.119	472.34	1127.571	9492.02	1118.59
19511.87	111019	534.79	1108.419	542.81	1107.94	19578.9	1108.511	9663.53	1107.59
19764.35	1106.319	769.36	1106.191	9825.17	1104.821	9868.37	1104.819	892.81	1103.54
19948.78	1100.119	973.71	1100.741	9988.39	1101.012	0011.72	1104.562	0091.58	1101.71
20153.7	1099.320	209.26	1100.862	0254.62	1101.942	0337.67	1102.612	0362.43	1102.91
20378.77	110320	387.77	1103.232	0508.48	1105.632	0514.91	1109.432	0529.36	1118.94
20540.63	1119.220	571.05	1129.212	0584.85	1130.742	0606.94	1123.92	0614.38	1126.66
20618.72	1127.820	652.72	1127.352	0707.48	1126.982	0729.09	1127.422	0739.18	1126.24
20744.96	1125.820	766.02	1127.082	0810.51	1127.52	0886.12	1128.01		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19387.78	.05	19472.34	.03	20584.85	.05

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19472.34	20584.85	540	490.24	430	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19387.78	19472.34	1127.57	20584.85	20886.12	1130.74

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1121.29	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.81	Wt. n-Val.		0.035	
W.S. Elev (ft)	1119.49	Reach Len. (ft)	540.00	490.24	430.00
Crit W.S. (ft)	1113.65	Flow Area (sq ft)		15672.82	
E.G. Slope (ft/ft)	0.001773	Area (sq ft)		15672.82	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1051.45	Top Width (ft)		1051.45	
Vel Total (ft/s)	10.78	Avg. Vel. (ft/s)		10.78	
Max Chl Dpth (ft)	20.19	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	4013301.0	Conv. (cfs)		4013301.0	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1058.05	
Min Ch El (ft)	1099.30	Shear (lb/sq ft)		1.64	
Alpha	1.00	Stream Power (lb/ft s)		17.68	
Frctn Loss (ft)	0.97	Cum Volume (acre-ft)	1956.34	7956.62	121.84
C & E Loss (ft)	0.03	Cum SA (acres)	105.08	466.55	67.65

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1121.29	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.81	Wt. n-Val.		0.035	
W.S. Elev (ft)	1119.49	Reach Len. (ft)	540.00	490.24	430.00
Crit W.S. (ft)	1113.65	Flow Area (sq ft)		15672.70	
E.G. Slope (ft/ft)	0.001773	Area (sq ft)		15672.70	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1051.45	Top Width (ft)		1051.45	
Vel Total (ft/s)	10.78	Avg. Vel. (ft/s)		10.78	
Max Chl Dpth (ft)	20.19	Hydr. Depth (ft)		14.91	
Conv. Total (cfs)	4013251.0	Conv. (cfs)		4013251.0	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1058.05	
Min Ch El (ft)	1099.30	Shear (lb/sq ft)		1.64	
Alpha	1.00	Stream Power (lb/ft s)		17.68	
Frctn Loss (ft)	0.97	Cum Volume (acre-ft)		7957.70	
C & E Loss (ft)	0.03	Cum SA (acres)		466.55	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.24

INPUT
Description:
Station Elevation Data num= 324

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14281.15	1132.31	4294.13	1132.221	4327.07	1132.631	4444.34	1132.29	14473.6	1132.04
14812.04	1130.9	14850.4	1130.561	4891.53	1130.391	4908.34	1133.191	4928.23	1130.3
14933.22	1129.31	4941.85	1129.451	4974.01	1130.331	5003.74	1128.621	5020.27	1127.76
15079.03	112815	088.04	1128.251	5242.58	1127.51	5489.93	1126.251	5549.45	1127.35
15564.61	1127.31	5608.44	1126.271	5682.97	1124.731	5687.27	1125.391	5695.05	1127.11
15710.18	112715	715.16	1124.21	5719.03	1124.151	5721.97	1127.291	5752.54	1127.65
15752.69	1126.61	5758.62	1126.831	5770.79	1127.791	5776.01	1126.38	15788.1	1124.29
15819.42	112315	835.05	1124.861	5867.55	1123.511	5876.02	1123.351	5906.46	1123.78
15954.59	1124.51	5982.54	1124.521	5994.01	1125.791	6063.25	1125.781	6151.28	1126.16
16207.83	112616	278.28	1126.611	6282.62	1126.631	6355.64	1127.311	6388.04	1127.58
16531.67	1127.21	6541.91	1127.161	6583.04	1127.041	6727.63	1127.361	6824.43	1128
17061.82	112917	085.46	112917	100.15	1129.291	7106.77	1126.841	7117.12	1130.56

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17126.18  1130.417134.91 1128.7917146.65 1128.3517165.73 1127.8317174.12 1127.92
17185.89  1127.617191.97 1127.9417318.87 1128.8417332.85 1125.9417334.08 1125.62
 17402.7  1125.917412.17 1125.4617472.29  1125.8 17497.5  1125.717532.13 1125.67
17545.25    112617566.52 1125.8117671.52 1125.35 17788.5 1124.8817813.93 1125.31
17823.82    112517839.63 1125.0917863.14 1125.0217870.61 1125.1617934.37 1124.27
18023.41  1123.118035.66 1122.5318059.85 1122.0218125.47 1122.1318138.27 1121.98
18168.78  1121.618186.76 1121.7318198.69 1121.4518233.59  1123.118242.95 1122.77
18246.99  1123.318267.59 1124.23 18314.4 1142.9318321.06 1145.1118345.79 1144.88
18349.32    114518373.63 1155.5218376.41 1156.82 18433.9 1156.8218630.99 1157.04
18777.37  1156.118818.63    114518867.89  1131.9 18880.1    112818893.85 1127.32
18901.85  1128.618916.95 1125.8718935.45 1122.0318951.27 1119.2718982.36 1119.01
19005.36  1121.519011.28 1122.0519015.06 1122.1919031.88  1122.519106.52 1148.14
19125.17  1146.819181.33 1148.3419228.76    114919283.57 1150.0119313.78 1135.95
19331.42    1127 19342.2  1127.419354.24 1125.99 19367.3 1123.05 19381.9 1123.21
19402.58  1124.219443.72 1108.3719471.62 1106.8419480.14  1106.619516.23 1106.49
19589.68  1106.419697.03 1105.6619730.91 1105.3419746.01 1105.3319769.76 1104.71
19868.35  1102.719883.89 1102.2619931.39 1101.5919957.76 1100.8220042.64 1097.97
20126.23  1100.320176.46 1102.5920207.92  1103.720250.28 1102.8420326.23 1103.73
20432.28  1109.320433.99 1109.4520471.71 1126.7920485.96 1127.1420523.63  1128.2
 20544.5  1129.320568.69  1129.620603.51 1127.9420701.54 1124.6320702.21 1124.62
20813.09  1126.220826.16 1126.8920863.31 1128.3520894.59 1129.7420903.36 1129.71
20970.77  1129.820996.41 1129.6221048.71 1129.5721056.52 1129.1821080.73 1127.63
21108.17  1127.121228.87 1124.2621241.08 1124.1621263.84 1122.9321272.69    1124
21322.72  1126.521331.62 1127.0321340.68 1127.1321364.71 1127.1321401.73 1128.31
21452.16  1129.621476.08 1129.4321492.69 1128.8321504.29 1128.6921528.64 1128.66
21545.85  1128.721577.95 1128.9721623.11 1129.8221660.11 1130.5421702.15 1130.95
21744.94  1131.1 21774.1 1130.6521789.64 1130.2921839.52 1130.4221874.34  1130.7
21913.79  1131.222022.05 1131.96   22073  1132.422076.85 1132.4722200.69 1133.72
22214.11  1133.822287.79 1134.3422314.82 1134.37 22325.6 1134.8222363.39 1124.23
22406.05  1114.122426.12 1113.7222470.29 1116.5722488.42 1119.1722498.19 1120.38
22507.98  1120.922525.74 1124.0122567.51 1122.3822578.13 1122.8922586.38 1122.09
22647.15  1120.522666.66 1120.7222681.19 1120.8122705.18 1119.7522736.27 1121.34
22749.25  1119.822756.63 1119.0722784.53 1116.0522790.26 1115.62 22815.2 1115.09
22841.03  1115.322876.59 1134.9622878.62 1135.7322910.16 1134.8922922.83 1134.86
23114.14  1133.523169.47    1133 23215.7 1132.3923407.55 1131.4123450.64 1131.42
23490.55  1131.223528.56 1130.8723563.62 1130.4623799.81  1131.923848.96 1132.08
23871.12  1131.5 23921.1 1130.6923993.48 1127.4424002.94 1127.0724049.87  1125.6
24092.02  1128.224104.78 1129.0824133.99 1129.3624163.13 1129.6924173.94 1129.75
24244.74  1127.124277.59 1126.5724286.89 1126.4624303.01 1126.5124345.78 1126.75
24387.44  1127.924411.12 1128.5324423.87 1128.99 24460.4 1130.5424490.97 1131.01
24506.05  1131.424531.86 1131.6224575.75 1132.1224649.38 1131.3924700.08 1129.79
24754.03  1128.924776.59 1128.5624817.88 1126.6624822.08 1126.4424842.73 1126.58
24894.53  1127.424961.15 1128.47 24972.7 1128.5725001.71 1128.1625084.39 1126.72
25096.93  1128.225109.76  1131.225129.07 1129.0625136.25 1128.4225145.94 1128.72
25171.53  1129.9 25181.2 1126.9725186.07 1128.4925187.12 1129.0425249.47 1128.45
 25258.1  1128.425264.74  1128.525299.93 1128.3525328.56 1127.3825343.06 1127.07
25363.92  1127.325390.79 1127.4625409.45 1127.9625420.07 1128.0925436.16 1129.31
25469.58  1128.925521.34 1128.9125613.95  1128.625666.19 1129.0825710.72 1128.79
25731.38    113025741.87 1129.2525760.39 1127.4825768.13 1128.9525782.49 1131.99
 25787.4  1131.825792.25 1132.0325810.17 1129.4625817.06 1128.5725835.57 1132.57
25872.44  1127.7 25891.8 1129.42 25901.1  1130.725922.95 1129.3725964.82 1129.19
25969.18  1128.925975.96  1128.125978.38 1127.9425982.79 1128.5725987.59 1128.38
25991.84  1129.826007.52 1130.3326009.17 1130.5626057.44 1130.37

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14281.15     .0519402.58    .03520471.71     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19402.5820471.71              530   499.8     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14281.1519402.58  1124.220471.7126057.44 1126.79

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1120.30   Element                    Left OB    Channel   Right OB
  Vel Head (ft)                2.10   Wt. n-Val.                              0.035
  W.S. Elev (ft)            1118.20   Reach Len. (ft)            530.00     499.80    460.00
  Crit W.S. (ft)            1113.34   Flow Area (sq ft)                    14549.39
  E.G. Slope (ft/ft)       0.002218   Area (sq ft)                         14549.39     456.77
  Q Total (cfs)           169000.00   Flow (cfs)                          169000.00
  Top Width (ft)            1209.33   Top Width (ft)                        1034.85     174.48
  Vel Total (ft/s)            11.62   Avg. Vel. (ft/s)                        11.62
  Max Chl Dpth (ft)           20.23   Hydr. Depth (ft)                        14.06
  Conv. Total (cfs)       3588570.0   Conv. (cfs)                         3588570.0
  Length Wtd. (ft)           499.80   Wetted Per. (ft)                      1039.01
  Min Ch El (ft)            1097.97   Shear (lb/sq ft)                         1.94
  Alpha                        1.00   Stream Power (lb/ft s)                  22.52
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Frctn Loss (ft)	1.05	Cum Volume (acre-ft)	1956.34	7786.55	119.59
C & E Loss (ft)	0.04	Cum SA (acres)	105.08	454.81	66.79

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1120.29	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.10	Wt. n-Val.		0.035	
W.S. Elev (ft)	1118.20	Reach Len. (ft)	530.00	499.80	460.00
Crit W.S. (ft)	1113.34	Flow Area (sq ft)		14549.26	
E.G. Slope (ft/ft)	0.002218	Area (sq ft)		14549.26	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1034.85	Top Width (ft)		1034.85	
Vel Total (ft/s)	11.62	Avg. Vel. (ft/s)		11.62	
Max Chl Dpth (ft)	20.23	Hydr. Depth (ft)		14.06	
Conv. Total (cfs)	3588521.8	Conv. (cfs)		3588521.8	
Length Wtd. (ft)	499.80	Wetted Per. (ft)		1039.01	
Min Ch El (ft)	1097.97	Shear (lb/sq ft)		1.94	
Alpha	1.00	Stream Power (lb/ft s)		22.52	
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)		7787.64	
C & E Loss (ft)	0.04	Cum SA (acres)		454.81	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 218.14

INPUT
Description:
Station Elevation Data num= 318

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14350.76	1131.4	14360.5	1131.19	14380.3	1130.99	14402.86	1130.31	14523.31	1130.4
14558.91	1130.51	14601.58	1131.52	14607.6	1130.75	14614.45	1130.71	14640.8	1131.37
14643.11	1131.41	14662.14	1128.62	14674.8	1128.07	14682.93	1127.22	14744.46	1126.69
14768.12	1126.21	14773.04	1126.98	14787.2	1127.72	14806.51	1129.24	14824.82	1129.08
14866.74	1129.51	14881.86	1129.59	14910.06	1129.44	14927.4	1129.43	14943.48	1130.9
14952.89	1130.71	14977.11	1130.14	14989.12	1130.08	15017.11	1130.16	15033.54	1128.84
15048.73	1127.51	15056.11	1127.28	15085.71	1127.16	15209.5	1126.37	15261.62	1126.35
15295.84	1125.61	15419.85	1124.93	15690.95	1123.23	15720.15	1122.95	15785.69	1122.08
15800.05	112	15804.38	1122.83	15816.3	1124.57	15819.09	1125.66	15835.48	1125.52
15874.31	112	15894.58	1124.91	15895.96	1124.94	15900.13	1124.31	15906.72	1123.58
15930.36	1121.41	15936.63	1121.81	15947.56	1121.91	15974.16	1121.95	16016.36	1121.83
16077.77	1122.81	16092.84	1123.06	16119.47	1123.11	16337.61	1124.36	16489.75	1125.38
16571.31	1125.91	16583.51	1126.71	16603.58	1126.53	16652.76	1125.78	16711.29	1127.7
16721.78	1127.71	16820.47	1126.84	16870.62	1127.23	17155.31	1127.54	17209.46	1127.64
17241.33	112	17289.47	1126.65	17295.26	1126.45	17420.9	1127.19	17443.24	1127.22
17523.36	1125.8	17640.8	1124.83	17661.78	1124.51	17675.93	1125.49	17683.63	1123.97
17705.03	1125.31	17723.81	1125.91	17732.55	1125.87	17905.79	1124.28	17944.72	1124.69
17946.94	1124.61	17957.23	1123.31	17970.64	1123.19	17998.24	1123.37	18014	1124.37
18044.09	1124.2	18096.7	1123.36	18131.43	1122.87	18157.23	1122.61	18197.27	1122.04
18331.89	1120.21	18345.39	1122.98	18370.13	1125.59	18378.71	1125.32	18383.68	1126.39
18385.72	1126.61	18396.44	1126.46	18430.4	1137.82	18473.63	1146.46	18488.54	1147.2
18500.26	1147	18510.1	1146.89	18524.49	1150.32	18537.76	1151.97	18547.33	1151.61
18562.12	1150.5	18577.7	1149.03	18587.35	1148.21	18612.13	1146.54	18643.16	1145.07
18662.15	114	18718.32	1145.41	18740.77	1146.51	18765.55	1145.56	18774.7	1144.91
18811.46	1141.91	18825.91	1140.03	18866.94	1137.41	18884.39	1135.94	18897.58	1133.7
18937.82	112	18957.94	1126.06	18969.28	1125.61	18988	1126.62	19020.92	1127.19
19025.1	1127.71	19059.91	1119.41	19064.89	1119.32	19147	1118.73	19196.03	1119.11
19302.51	1119.61	19337.55	1123.77	19356.32	1124.1	19371.2	1124.66	19394.21	1115.35
19415.94	1106.71	19425.04	1106.31	19434.74	1106.03	19498.22	1106.08	19552.71	1106.72
19581.09	110	19629.75	1106.95	19660.81	1107.32	19690.23	1103.83	19697.76	1103
19716.45	1102.6	19829.2	1098.85	19866.79	1097.81	19909.76	1097.44	19995.42	1096.58
20006.26	1096.82	20023.96	1097.24	20085.84	1099.15	20115.65	1099.97	20182.6	1101.96
20283	1103.62	20349.46	1104.73	20371.68	1105.22	20380.43	1105.49	20405.54	1107.57
20407.13	1108.42	20439.17	1127.59	20443.28	1127.42	20479.36	1125.25	20486.53	1125.45
20510.81	1126.32	20537.57	1126.69	20540.25	1126.57	20544.23	1126.79	20562.34	1127.27
20603.9	1127.72	20612.27	1127.78	20633.08	1128.23	20685.44	1128.57	20713.21	1128.87
20724.9	1128.92	20808.95	1128.29	20843.53	1128.57	20884.76	1128.79	20923.99	1129.06
21008.49	1130.32	21041.05	1130.56	21067.09	1131.06	21146.87	1131.19	21252.16	1128.62
21277.89	1128.62	21308.89	1128.42	21329.11	1128.66	21348.83	1128.55	21371.59	1128.78
21421.52	1129.82	21460.12	1130.52	21478.73	1130.99	21495.99	1130.61	21545.78	1128.71
21560.66	1128.52	21593.98	1127.59	21596.07	1127.73	21611.54	1127.57	21667.83	1128.58
21730.45	1130.32	21779.03	1131.22	21797.76	1131.52	21816.59	1131.44	21855.31	1130.98

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22073.65  1132.822372.55 1135.2122384.75  1135.322428.62 1133.2822438.48 1132.72
22443.59  1132.822447.83 1131.9722490.73  1117.222493.13 1116.2222529.32 1116.88
22536.55  1117.622574.86 1116.7222618.58 1118.3422640.82 1117.39 22645.3 1117.04
22669.98  1114.722675.32 1114.3522697.34 1113.8422704.24 1114.37 22721.9  1113.9
22722.46    1114 22765.5 1116.01 22773.6 1115.6622832.46 1115.1222868.61 1114.72
22882.99  1115.122920.52 1116.4822958.38 1131.9622995.46 1135.4823196.44 1135.17
23243.36  1135.223337.14 1135.1123455.35 1134.0223586.54 1133.4223625.18 1133.11
23674.29  1133.123740.74 1133.0523928.91 1132.5823999.09 1132.0724023.54 1131.05
24073.23  1128.824088.58 1128.2124125.81 1126.3424169.63 1128.8524178.41 1129.23
24251.68  1130.724280.87 1129.6424321.48 1128.0324333.82 1127.6524363.84 1126.83
24421.49  1127.724483.92 1128.0924515.57 1129.2624532.73 1129.9524581.95 1131.16
24615.01  1131.1 24653.2 1131.17 24709.3 1130.59 24725.8  1130.524735.01 1130.31
24777.12  1129.924856.35 1128.12 24865.8 1127.9424907.23  1125.724920.27 1125.79
24973.31  1126.725051.33 1127.0725079.85 1127.07 25153.6 1126.5825188.05 1128.94
25223.43    112925254.08 1130.2425269.45 1130.3325273.77 1129.9325317.22 1127.88
25328.61  1127.425354.49 1127.4525380.43  1126.7 25385.4 1126.62 25436.9 1127.12
25502.21  1127.725527.97 1127.0625535.81    112725554.55 1127.55 25570.5 1127.35
25633.81  1128.325699.62 1128.6725742.65 1129.15 25771.9 1129.3725792.08 1128.67
25835.89  1127.825850.73 1131.8325853.04 1132.2825866.15 1133.2125876.19 1131.85
25898.18  1130.425909.01 1131.6925913.03 1131.6125938.93 1130.5925954.13 1128.84
25961.67  1127.925966.17 1127.8525975.16 1128.3826017.24 1128.4326055.88 1128.69
26064.78  1128.826071.65 1128.5326202.12 1128.02

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14350.76     .05 19371.2    .03520439.17     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
       19371.220439.17              570  508.89     460              .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14350.76 19371.2 1124.6620439.1726202.12 1127.59

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1119.21   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1117.25   Reach Len. (ft)           570.00     508.89     460.00
  Crit W.S. (ft)            1111.91   Flow Area (sq ft)                  15052.31
  E.G. Slope (ft/ft)       0.001977   Area (sq ft)                       15052.31     625.29
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1392.06   Top Width (ft)                      1032.39     359.67
  Vel Total (ft/s)            11.23   Avg. Vel. (ft/s)                      11.23
  Max Chl Dpth (ft)           20.67   Hydr. Depth (ft)                      14.58
  Conv. Total (cfs)       3801053.0   Conv. (cfs)                       3801053.0
  Length Wtd. (ft)           508.89   Wetted Per. (ft)                    1037.63
  Min Ch El (ft)            1096.58   Shear (lb/sq ft)                      1.79
  Alpha                        1.00   Stream Power (lb/ft s)               20.10
  Frctn Loss (ft)              1.00   Cum Volume (acre-ft)      1956.34    7616.73     113.87
  C & E Loss (ft)              0.01   Cum SA (acres)             105.08     442.95      63.97


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1119.21   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.96   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1117.25   Reach Len. (ft)           570.00     508.89     460.00
  Crit W.S. (ft)            1111.91   Flow Area (sq ft)                  15052.18
  E.G. Slope (ft/ft)       0.001977   Area (sq ft)                       15052.18
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1032.39   Top Width (ft)                      1032.39
  Vel Total (ft/s)            11.23   Avg. Vel. (ft/s)                      11.23
  Max Chl Dpth (ft)           20.67   Hydr. Depth (ft)                      14.58
  Conv. Total (cfs)       3801005.0   Conv. (cfs)                       3801005.0
  Length Wtd. (ft)           508.89   Wetted Per. (ft)                    1037.63
  Min Ch El (ft)            1096.58   Shear (lb/sq ft)                      1.79
  Alpha                        1.00   Stream Power (lb/ft s)               20.10
  Frctn Loss (ft)              1.00   Cum Volume (acre-ft)                7617.81
  C & E Loss (ft)              0.01   Cum SA (acres)                       442.95


Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION          RIVER: Salt River
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REACH: Reach 4 RS: 218.04

INPUT
Description:
Station Elevation Data num= 130

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17025.05	1126.717	046.46	1126.6617	139.85	1126.68	17265.6	1126.98	17285.3	1126.99
17339.8	1127.117	368.81	1127.7117	375.93	1127.9617	387.18	1128.1717	399.25	1127.84
17425.14	1126.717	437.07	1126.49	17443.1	1125.6617	467.12	1123.7517	508.82	1122.55
17536.65	112317	568.13	1123.0117	580.98	1122.3817	590.29	1122.4317	737.66	1123.45
17892.94	1124.617	942.04	1124.6717	951.06	1123.7118	005.77	1119.67	18021	1119.54
18108.49	1118.518	113.14	1118.5618	129.44	1118.318	131.07	1118.6218	140.77	1119.36
18159.33	1118.818	165.64	1118.8118	293.58	1119.5118	321.22	1119.5418	390.72	1121.27
18439.76	1122.1	18441.1	1121.7118	457.03	1122.6518	466.03	1121.87	18467.4	1121.17
18470.13	1120.7	18474.7	1120.9718	485.79	1120.9818	515.24	1116.82	18517.3	1116.63
18549.38	1118.918	564.81	1119.3118	595.58	1120.0518	630.98	1121.3218	644.41	1121.61
18659.16	1121.718	670.18	1126.3218	672.29	1126.7218	689.39	1126.0318	707.18	1125.77
18714.82	1125.718	750.94	1125.4918	765.73	1124.81	18771.4	1124.4418	787.46	1123.56
18862.77	1122.218	887.84	1121.6718	909.59	1121.5219	049.37	1120.9319	094.29	1121.96
19129.54	112119	132.79	1120.9219	136.43	1127.4619	145.96	1127.519	158.33	1126.69
19170.06	1126.9	19198.7	1121.9819	200.91	1121.7719	219.25	1120.7519	316.08	1120.12
19340.27	1123.519	351.62	1123.1919	368.53	1123.619	373.14	1123.59	19383	1119.27
19413.55	1106.419	423.75	1106.15	19454.2	1106.0719	510.81	1106.9219	515.21	1106.82
19530.82	1106.719	539.61	1106.0819	596.44	1104.6419	612.21	1104.4819	614.42	1104.01
19628.94	1100.219	678.34	1099.73	19708.5	1099.8619	778.52	1097.919	799.29	1097.18
19818.75	1096.919	885.99	1095.5119	934.83	1096.6	19989.8	1097.9120	057.89	1098.84
20096.88	1099.820	130.66	1100.6420	148.07	1100.9620	181.53	1101.7720	219.75	1102.33
20259.67	1103.220	339.61	1104.9220	350.78	1105.1620	367.87	1105.3520	406.19	1105.85
20408.5	1105.9	20411.5	1107.5320	446.86	1125.39	20467.7	1124.1920	481.88	1123.33
20490.04	1123.820	513.05	1125.2720	532.42	1125.5120	536.37	1125.64	20537.8	1125.4
20549.12	1124.620	567.27	1125.6620	581.06	1126.0720	588.15	1125.7220	618.54	1126.06
20620.89	1126.220	648.58	1126.33	20670.2	1127.8520	705.59	1128.4920	744.91	1129.44

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17025.05	.035	19373.14	.035	20446.86	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19373.14	20446.86	540	508.91	460	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17025.05	19373.14	1123.59	20446.86	20744.91	1125.39

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1118.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.93	Wt. n-Val.		0.035	
W.S. Elev (ft)	1116.27	Reach Len. (ft)	540.00	508.91	460.00
Crit W.S. (ft)	1110.88	Flow Area (sq ft)		15159.76	
E.G. Slope (ft/ft)	0.001946	Area (sq ft)		15159.76	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1038.69	Top Width (ft)		1038.69	
Vel Total (ft/s)	11.15	Avg. Vel. (ft/s)		11.15	
Max Chl Dpth (ft)	20.76	Hydr. Depth (ft)		14.60	
Conv. Total (cfs)	3830866.3	Conv. (cfs)		3830866.3	
Length Wtd. (ft)	508.91	Wetted Per. (ft)		1043.94	
Min Ch El (ft)	1095.51	Shear (lb/sq ft)		1.76	
Alpha	1.00	Stream Power (lb/ft s)		19.67	
Frctn Loss (ft)	0.88	Cum Volume (acre-ft)	1956.34	7440.25	110.57
C & E Loss (ft)	0.07	Cum SA (acres)	105.08	430.85	62.07

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1118.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.93	Wt. n-Val.		0.035	
W.S. Elev (ft)	1116.27	Reach Len. (ft)	540.00	508.91	460.00
Crit W.S. (ft)	1110.88	Flow Area (sq ft)		15159.63	
E.G. Slope (ft/ft)	0.001946	Area (sq ft)		15159.63	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1038.69	Top Width (ft)		1038.69	
Vel Total (ft/s)	11.15	Avg. Vel. (ft/s)		11.15	
Max Chl Dpth (ft)	20.76	Hydr. Depth (ft)		14.59	
Conv. Total (cfs)	3830817.3	Conv. (cfs)		3830817.3	
Length Wtd. (ft)	508.91	Wetted Per. (ft)		1043.94	
Min Ch El (ft)	1095.51	Shear (lb/sq ft)		1.76	
Alpha	1.00	Stream Power (lb/ft s)		19.67	
Frctn Loss (ft)	0.88	Cum Volume (acre-ft)		7441.34	
C & E Loss (ft)	0.07	Cum SA (acres)		430.85	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.95

INPUT
Description:
Station Elevation Data num= 119

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17269.81	1125.117	273.65	1125.31	17289.07	1126.85	17434.97	1126.91	7475.06	1126.89
17493.89	1126.9	17506.3	1125.66	17546.6	1125.04	17678.95	1124.76	17692.55	1124.75
17751.24	112	417816.86	1123.93	17839.6	1123.74	17848.23	1120.88	17852.14	1119.42
17876.17	1119.51	7936.73	1119.71	7973.64	1119.46	18018.6	1119.09	18087.43	1119.08
18147.97	1119.41	8189.16	1119.44	18196.58	1119.55	18235.93	1118.54	18249.03	1118.3
18334.83	1119.21	8407.85	1119.58	18448.5	1119.97	18467.9	1120.21	18500.62	1120.46
18563.9	1120.31	8638.14	1120.51	18712.75	1120.52	18765.5	1120.39	18793.15	1120.44
18809.28	1120.7	18831	1120.71	8971.23	1120.25	19017.17	1120.19	19080.19	1119.71
19143.83	1118.8	19163.6	1118.75	19200.56	1118.03	19203.44	1117.91	19216.64	1117.75
19241.81	111	819247.01	1117.81	9304.49	1117.73	19309.51	1117.59	19327.42	1119.41
19336.96	1118.41	9344.65	1119.81	19356.41	1119.64	19373.44	1119.52	19392	1123.52
19396.21	1124.21	9414.44	1123.69	19423.35	1123.32	19457.46	1104.92	19459.3	1104.34
19465.43	1103.21	9478.29	1102.71	19502.95	1101.11	19508.31	1100.61	19520.09	1099.29
19534.74	1100.31	9561.92	1099.99	19566.24	1099.98	19579.98	1099.13	19594.74	1100.04
19601.92	110	019624.85	1101.19	19633.23	1102.03	19644.34	1102.04	19679.09	1099.62
19718.32	1096.71	9722.87	1096.49	19748.34	1095.81	9755.07	1095.02	19785.83	1093.62
19805.29	1092.61	9835.21	1092.47	19858.9	1093.26	19871.17	1093.82	19898.88	1094.42
19903.64	1094.41	9955.08	1095.59	20015.76	1097.41	20028.6	1097.52	20053.19	1096.86
20096.73	1097.9	20112.7	1097.99	20160.62	1102.67	20177.69	1104.32	0185.65	1104.19
20231.67	1103.72	0255.62	1103.73	20324.77	1103.85	20340.48	1103.95	20344.93	1104.06
20373.56	1104.5	20423.2	1105.22	20458.01	1105.22	20489.12	1119.94	20495.39	1123.1
20526.71	1121.92	0546.88	1122.83	20551.73	1122.92	20575.75	1125.53	20590.74	1123.37
20615.29	1124.32	0618.98	1124.31	20712.77	1126.26	20722.68	1126.42	20743.4	1126.07
20762.2	1127.32	0768.52	1127.17	20797.01	1127.17	20837.27	1127.58		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17269.81	.035	19423.35	.035	20495.39	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19423.35	20495.39		480	489.76	489.76	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17269.81	19423.35	1123.32	20495.39	20837.27	1123.1

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1117.24	Element			
Vel Head (ft)	1.68	Wt. n-Val.		0.035	
W.S. Elev (ft)	1115.56	Reach Len. (ft)	480.00	489.76	489.76
Crit W.S. (ft)	1109.16	Flow Area (sq ft)		16240.07	
E.G. Slope (ft/ft)	0.001556	Area (sq ft)		16240.07	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1042.14	Top Width (ft)		1042.14	
Vel Total (ft/s)	10.41	Avg. Vel. (ft/s)		10.41	
Max Chl Dpth (ft)	23.09	Hydr. Depth (ft)		15.58	
Conv. Total (cfs)	4284419.0	Conv. (cfs)		4284419.0	
Length Wtd. (ft)	489.76	Wetted Per. (ft)		1048.39	
Min Ch El (ft)	1092.47	Shear (lb/sq ft)		1.50	
Alpha	1.00	Stream Power (lb/ft s)		15.66	
Frctn Loss (ft)	0.76	Cum Volume (acre-ft)	1956.34	7256.83	110.57
C & E Loss (ft)	0.01	Cum SA (acres)	105.08	418.70	62.07

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1117.24	Element			
Vel Head (ft)	1.68	Wt. n-Val.		0.035	
W.S. Elev (ft)	1115.56	Reach Len. (ft)	480.00	489.76	489.76
Crit W.S. (ft)	1109.16	Flow Area (sq ft)		16240.07	
E.G. Slope (ft/ft)	0.001556	Area (sq ft)		16240.07	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1042.14	Top Width (ft)		1042.14	
Vel Total (ft/s)	10.41	Avg. Vel. (ft/s)		10.41	
Max Chl Dpth (ft)	23.09	Hydr. Depth (ft)		15.58	
Conv. Total (cfs)	4284418.0	Conv. (cfs)		4284418.0	
Length Wtd. (ft)	489.76	Wetted Per. (ft)		1048.39	
Min Ch El (ft)	1092.47	Shear (lb/sq ft)		1.50	
Alpha	1.00	Stream Power (lb/ft s)		15.66	
Frctn Loss (ft)	0.76	Cum Volume (acre-ft)		7257.92	

C & E Loss (ft) 0.01 Cum SA (acres) 418.70

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.86

INPUT
Description:
Station Elevation Data num= 171

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17078.98	1127.04	17117.34	1126.61	7131.91	1126.72	17144.52	1126.53	17172.48	1126.55
17204.49	1126.51	17221.97	1126.41	7304.37	1125.36	17352.83	1125.32	17367.66	1125.48
17411.95	1125.1	17436.4	112	517508.42	1125.02	17590.84	1125.15	17616.69	1125.16
17630.56	1124.35	17685.03	1124.11	7785.59	1123.59	17806.54	1123.47	17906.06	1122.75
17936.31	1120.97	17943.18	1120.91	7953.79	1120.07	17954.8	1118.38	17967.12	1117.68
18025.43	1118.26	18041.07	1118.9	18057.5	1118.45	18082.12	1117.92	18101.97	1118.31
18116.81	1118.51	8227.91	1118.71	8336.13	1118.17	18346.49	1119.05	18368.76	1119.01
18438.69	1119.05	18469.08	1119.11	8483.98	1119.33	18499.75	1122.37	18501.49	1121.58
18541.4	1104.52	18551.36	1104.51	8573.43	1104.65	18605.75	1104.71	18623.04	1104.79
18627.6	1104.75	18659.96	1104.81	8660.85	1104.76	18684.48	1116.93	18693.71	1121.82
18696.44	1121.63	18728.94	1117.81	8748.07	1117.69	18750.8	1117.64	18782.11	1118.09
18823.37	1118.86	18877.62	1119.81	8882.44	112	018890.83	1119.91	18957.44	1119.69
18998.75	1118.93	19031.46	1118.1	19046.7	1117.94	19060.05	1117.87	19070.2	1117.66
19085.41	1117.85	19151.43	1117.21	9186.68	1118.91	9207.55	1119.12	19307.48	1120
19373.63	1120.31	9381.44	1119.91	9403.68	1119.74	19413.37	1122.09	19416.58	1123.01
19437.06	1123.78	19456.28	1123.21	9458.45	1122.62	19462.82	1122.89	19480.48	1121.89
19494.97	1115.91	19522.47	1103.61	9564.08	1103.12	19596.01	1103.38	19619	1103.74
19653.41	1104.69	19666.21	1104.51	9676.03	1104.75	19701.3	1103.7	19726.7	1103.73
19734.12	1103.51	19745.14	1102.21	9761.36	1100.14	19825.98	1088.65	19847.42	1088.6
19875.54	1088.88	19884.18	1089.11	9899.82	1089.18	19960.22	1092.66	19992.54	1093.61
20002.61	1093.03	20021.16	1093	20090.5	1093.12	0097.42	1093.05	20133.52	1094.22
20163.22	1094.97	20169.4	1095.82	0205.62	1102.61	20222.55	1102.77	20273.85	1103.07
20306.43	1102.92	20371.13	1103.12	0392.57	1102.97	20410.69	1103.27	20522.58	1103.94
20553.05	1121.71	20583.17	1122.42	0601.67	1123.28	20605.56	1123.31	20611.6	1123.86
20620.46	1123.68	20636.41	1123.72	0653.03	1122.22	20660.32	1122.91	20684.42	1125.51
20713.5	1125.43	20806.16	1125.52	0839.53	1125.62	20853.48	1126.52	20864.06	1127.29
20898.25	1126.72	20935.28	1127.4	20984.1	1126.45	21010.78	1124.94	21020.26	1124.46
21043.59	1124.29	21090.25	1124.12	1109.74	1124.23	21156.37	1124.36	21174.01	1124.86
21207.33	1126.32	21217.88	1126.72	1250.75	1127.83	21284.09	1127.78	21338.59	1127.88
21413.84	1127.42	21436.95	112	721478.69	1126.23	21507.42	1124.68	21525.41	1123.67
21549.84	1123.31	21583.05	1123.42	1640.05	1125.64	21645.23	1125.78	21650.27	1126.16
21656.45	1126.22	21740.28	112	721808.21	1125.99	21821.16	1125.64	21841.85	1124.74
21864.8	1123.94	21904.39	1125.62	1994.14	1127.25	22058.96	1127.99	22079.42	1128.33
22139.44	1128.79	22161.17	1128.72	2263.41	1129.87	22295.96	1130.14	22396.5	1130.57
22411.39	1130.72								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17078.98	.035	19437.06	.035	20611.6	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19437.06	20611.6	470	512.67	540	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17078.98	19437.06	1123.78	20611.6	22411.39	1123.86

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1116.48	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.66	Wt. n-Val.		0.035	
W.S. Elev (ft)	1114.82	Reach Len. (ft)	470.00	512.67	540.00
Crit W.S. (ft)	1108.27	Flow Area (sq ft)		16329.44	
E.G. Slope (ft/ft)	0.001533	Area (sq ft)	1432.66	16329.44	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1206.90	Top Width (ft)	163.07	1043.83	
Vel Total (ft/s)	10.35	Avg. Vel. (ft/s)		10.35	
Max Chl Dpth (ft)	26.22	Hydr. Depth (ft)		15.64	
Conv. Total (cfs)	4315816.5	Conv. (cfs)		4315816.5	
Length Wtd. (ft)	512.67	Wetted Per. (ft)		1051.30	
Min Ch El (ft)	1088.60	Shear (lb/sq ft)		1.49	
Alpha	1.00	Stream Power (lb/ft s)		15.39	
Frctn Loss (ft)	1.17	Cum Volume (acre-ft)	1948.44	7073.74	110.57
C & E Loss (ft)	0.18	Cum SA (acres)	104.18	406.97	62.07

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less

than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1116.48	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.66	Wt. n-Val.		0.035	
W.S. Elev (ft)	1114.82	Reach Len. (ft)	470.00	512.67	540.00
Crit W.S. (ft)	1108.27	Flow Area (sq ft)		16329.32	
E.G. Slope (ft/ft)	0.001533	Area (sq ft)		16329.32	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1043.82	Top Width (ft)		1043.82	
Vel Total (ft/s)	10.35	Avg. Vel. (ft/s)		10.35	
Max Chl Dpth (ft)	26.22	Hydr. Depth (ft)		15.64	
Conv. Total (cfs)	4315769.5	Conv. (cfs)		4315769.5	
Length Wtd. (ft)	512.67	Wetted Per. (ft)		1051.29	
Min Ch El (ft)	1088.60	Shear (lb/sq ft)		1.49	
Alpha	1.00	Stream Power (lb/ft s)		15.39	
Frctn Loss (ft)	1.17	Cum Volume (acre-ft)		7074.82	
C & E Loss (ft)	0.18	Cum SA (acres)		406.97	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.76

INPUT
Description:
Station Elevation Data num= 105

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18696.26	1131.5	18704.4	1129.2	18708.16	1126.5	18723.72	1113.0	18733.67	1113.04
18747.99	1112.8	18761.93	1118.7	18768.63	1121.7	18787.92	112	118800.11	1120.45
18804.79	1121.7	18811.76	1123.2	18842.98	1128.4	18872.95	1131.3	18874.31	1131.55
18898.39	1127.6	18914.36	1123.3	18942.8	1123.6	18946.55	1123.7	18977.23	1117.62
18985.07	1117.6	18988.68	1116.59	18996.3	1116.5	19048.98	1117.1	19075.91	1117.36
19118.51	1114.3	19121.71	1114.1	19819125.71	1114.0	19140.48	1114.46	19194.3	1115.7
19209.65	1116.2	19251.27	1116.2	19260.11	1114.2	19269.27	1113.8	19287.02	1113.49
19302.34	1113.9	19320.61	1114.7	19328.5	1115.3	19416.97	1117.2	19447.56	1116.72
19454.34	1116.8	19460.63	1117.6	19468.83	1119.7	19475.55	1121.5	19478.28	1121.66
19491.87	1122.61	19506.5	1122.8	19527.24	1121.9	19532.35	1121.7	19549.15	1114.56
19560.66	1109.5	19566.72	1106.6	19595.17	1105.4	19607.57	1105.4	19620.51	1105.24
19694.19	1103.6	19703.83	1103.5	19713.94	1103.6	19716.38	1103.4	19746.13	1103.55
19754.83	1103.65	19810.5	1103.9	19814.58	1102.3	19822.14	1099.8	19840.89	1093.64
19881.09	1093.8	19929.82	109	319952.35	1092.7	19954.71	1092.5	20010.46	1092.19
20012.53	1092.3	20048.72	1092.2	20135.92	1093.05	20155.3	1093.0	20177.38	1092.54
20185.54	1093.4	20204.39	1094.8	20219.2	1094.4	20233.32	1095.0	20239.91	1095
20262.89	1095.6	20311.58	1098.3	20347.84	1101.5	20357.92	1102.6	20392.73	1117.38
20401.2	1121.1	20415.35	1121.6	20425.11	1121.1	20435.31	1121.14	20492.9	1121.13
20502.18	1121.1	20533.15	1121.3	20548.06	1120.8	20573.49	1120.81	20606.3	1120.63
20642.39	1120.9	20658.83	1122.2	20679.17	1122.4	20706.16	1122.9	20712.94	1122.71
20757.82	1123.6	20875.26	112	420913.28	1123.9	20925.68	1124.0	20967.17	1124.99

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18696.26	.035	19532.35	.035	20401.2	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19532.35	20401.2	440	496.98	560	.1	.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1115.14	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.43	Wt. n-Val.		0.035	
W.S. Elev (ft)	1111.71	Reach Len. (ft)	440.00	496.98	560.00
Crit W.S. (ft)		Flow Area (sq ft)		11373.31	
E.G. Slope (ft/ft)	0.003729	Area (sq ft)		11373.31	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	823.68	Top Width (ft)		823.68	
Vel Total (ft/s)	14.86	Avg. Vel. (ft/s)		14.86	
Max Chl Dpth (ft)	19.52	Hydr. Depth (ft)		13.81	
Conv. Total (cfs)	2767516.3	Conv. (cfs)		2767516.3	
Length Wtd. (ft)	496.98	Wetted Per. (ft)		828.84	

Min Ch El (ft)	1092.19	Shear (lb/sq ft)		3.19	
Alpha	1.00	Stream Power (lb/ft s)		47.47	
Frctn Loss (ft)	1.31	Cum Volume (acre-ft)	1940.72	6910.72	110.57
C & E Loss (ft)	0.44	Cum SA (acres)	103.30	395.98	62.07

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1115.14	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.43	Wt. n-Val.		0.035	
W.S. Elev (ft)	1111.71	Reach Len. (ft)	440.00	496.98	560.00
Crit W.S. (ft)		Flow Area (sq ft)		11373.01	
E.G. Slope (ft/ft)	0.003729	Area (sq ft)		11373.01	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	823.68	Top Width (ft)		823.68	
Vel Total (ft/s)	14.86	Avg. Vel. (ft/s)		14.86	
Max Chl Dpth (ft)	19.52	Hydr. Depth (ft)		13.81	
Conv. Total (cfs)	2767402.8	Conv. (cfs)		2767402.8	
Length Wtd. (ft)	496.98	Wetted Per. (ft)		828.84	
Min Ch El (ft)	1092.19	Shear (lb/sq ft)		3.19	
Alpha	1.00	Stream Power (lb/ft s)		47.47	
Frctn Loss (ft)	1.31	Cum Volume (acre-ft)		6911.81	
C & E Loss (ft)	0.44	Cum SA (acres)		395.98	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.66

INPUT
Description:
Station Elevation Data num= 372

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
13410.42	1123.113	473.99	1122.911	3516.62	1131.131	3543.66	1137.511	3584.78	1134.64
13596.45	1133.9	13619.3	1136.491	3626.52	1135.681	3677.48	1130.671	3717.14	1128.34
13776.9	1126.81	3804.61	1126.171	3834.66	1126.131	3859.65	1126.911	3882.59	1127.2
13906.27	1122.3	13927	1115.951	3935.96	1115.931	3966.69	1123.991	3988.92	1124.03
14057.49	1124.11	4168.71	1123.971	4185.98	1122.631	4226.67	1131.881	4260.04	1138.88
14284.22	1139.21	4296.65	1139.371	4303.35	1133.831	4318.65	1123.161	4381.69	1123.02
14395.23	1123.91	4409.22	1123.681	4451.38	1122.851	4686.66	1123.41	4708.91	1123.48
14720.56	1123.51	4771.92	1123.71	4775.61	1124.071	4783.01	1124.31	14893.4	1124.41
15021.73	1124.31	5065.51	1124.291	5152.12	1124.421	5166.47	1125.451	5169.36	1124.47
15173.39	1122.31	5184.39	1125.311	5197.33	1121.851	5209.72	1122.091	5221.25	1122.1
15261.61	1122.21	5273.44	1122.151	5472.27	1121.851	5515.15	1121.741	5653.06	1122.36
15687.14	1122.61	5694.72	1120.451	5705.26	1120.581	5708.14	1120.49	15711.1	1119.23
15718.06	1115.71	5726.44	1112.141	5731.84	1114.881	5735.56	1116.321	5745.42	1119.87
15759.29	1120.61	5775.81	1121.051	5818.82	1120.61	5838.97	1120.581	5981.18	1120.58
16009.13	1120.5	16051.3	1120.961	6054.83	1120.941	6081.64	1121.141	6107.61	1121.52
16133.09	1121.5	16284	1121.311	6355.84	1121.47	16362.6	1121.451	6455.75	1121.69
16494.23	1121.61	6511.76	1121.681	6682.87	1121.641	6751.88	1121.71	6772.61	1122.1
16856.98	1122.4	16986.6	1122.751	6993.55	1119.981	6999.97	1117.011	7006.97	1119.86
17011.4	1121.41	7068.59	1121.621	7330.83	1122.881	7336.66	1122.771	7342.37	1122.23
17471.22	112	17523.38	1121.831	7537.29	1121.751	7706.17	1120.561	7757.42	1120.15
17772.44	1119.7	17797.8	1119.881	7843.85	1120.021	7846.29	1119.981	7904.52	1120.37
17932.13	112	17961.76	1119.521	8098.62	1117.041	8120.45	1117.261	8141.36	1114.53
18192.83	1115.81	8212.37	1116.351	8246.14	1114.991	8265.67	1115.81	8279.11	1116.7
18285.4	1116.71	8475.61	1115.971	8517.59	1115.781	8527.31	1115.351	8537.22	1115.4
18634.69	1115.11	8636.28	1115.051	8651.27	1115.71	18681.6	1115.651	8721.36	1115.23
18732.89	1119.51	8751.61	1125.921	8796.59	1124.721	8810.83	1124.411	8813.56	1123.32
18833.84	1114.51	8876.74	1113.931	8884.46	1118.021	8910.38	1113.761	8939.94	1113.73
18961.41	1113.41	9001.48	1113.111	9015.49	1112.681	9023.38	1112.781	9039.73	1113.98
19069.1	1116.31	9093.22	1116.41	9130.33	1116.14	19141.7	1115.91	9265.87	1121.29
19293.94	1124.6	19334.5	1124.331	9354.41	1124.15	19356.6	1123.791	9410.55	1114.35
19414.17	1113.81	9433.06	1111.53	19441.8	1111.531	9450.12	1115.021	9466.46	1122.48
19494.33	1122.11	9515.26	1121.811	9539.84	1121.161	9580.79	1107.881	9594.81	1102.95
19596.51	110	31960 0.29	1102.181	9636.62	1102.451	9670.06	1102.311	9693.25	1102.1
19724.56	110	21975 8.95	1102.331	9793.46	1101.81	9828.27	1101.191	9869.42	1094.53
19875.54	1093.41	9881.49	1093.381	9915.76	1092.34	19935.3	1092.312	0012.91	1091.97
20134.14	1090.12	0186.97	1089.452	0267.56	1088.382	0280.62	1088.142	0300.88	1088.56
20321.71	1088.62	0370.15	1100.82	0444.71	1101.972	0457.16	1102.062	0496.87	1102.77

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20570.08  1102.420595.78  1113.720611.59 1120.9120626.26 1120.9720681.12  1121.2
20719.24    112220730.66 1121.5420748.21 1116.07 20772.6 1117.8920794.31 1118.17
20806.14  1118.7   20820 1118.76 20835.7 1116.7720852.57 1115.7620859.93 1116.29
20897.72  1119.4 20914.2 1120.3920936.74 1120.96   21040 1123.0221080.02 1124.35
21118.54  1124.5 21153.4 1125.1521172.76 1125.2621190.21 1125.2721198.03 1125.08
21227.59  1123.721237.84 1122.7521258.59 1121.4221286.08 1120.5421298.81  1120.2
21344.09    112121362.52 1121.2521389.25 1121.9721423.61 1122.9721444.34 1123.69
21482.28  1124.921551.91 1124.9721630.03 1125.4921686.22 1123.8521730.36  1122.5
21772.83  1120.821807.93 1118.9821829.36  1119.921889.27 1123.8921908.41 1124.61
21957.53  1125.3   22029  1124.722046.76 1124.1222096.45 1122.2822107.92 1122.52
22134.75  1123.222175.16 1123.92 22212.2 1124.6722282.56 1124.5222301.52 1124.52
22313.23  1124.422360.42 1123.9622453.56 1124.11 22499.1 1123.7722568.82 1122.85
22600.22  1123.222760.33 1123.5222795.48 1123.2922946.59 1124.8122961.54 1124.91
22973.66  1113.422976.98 1110.8323014.87  1111.723021.87  1111.8 23026.6 1112.23
23036.03  1113.323084.59 1113.5523126.41 1112.7423160.75 1112.5623187.77  1115.1
 23284.7  1112.723287.36 1112.6623310.27 1111.3123319.93 1113.0923326.38 1112.41
23354.29  1111.223358.17 1111.15 23362.3 1110.8323376.07 1110.7123397.66 1111.46
23413.46  1111.923416.02  1124.823422.05 1128.8123434.88  1127.223444.61 1131.45
23449.55  1130.123467.88 1126.6523476.08 1124.7323480.33 1123.9523513.25 1123.77
23526.72  1123.123588.94 1122.31 23609.4 1122.3223623.44 1121.5723644.03 1121.11
23660.06  1121.123672.26 1120.8723719.12  1121.123727.25 1120.9323783.98 1120.19
23804.35  1120.523833.72 1120.4323868.86 1120.21 23940.8 1119.4424000.97 1119.45
24011.32  1119.3 24030.5 1118.65 24034.9  1118.324049.97 1118.7424086.64 1119.71
24097.36  1120.524121.77 1123.0324250.12 1122.1624286.75 1122.0124299.77 1122.06
24318.71  1122.224326.95 1123.0124337.31 1124.3724362.95 1124.3924415.05 1124.63
24453.48  1124.924487.85 1125.1924508.31 1124.7424563.28 1123.7124611.54  1121.3
24670.84  1123.724744.16 1125.0424817.27 1124.2224851.05 1123.8124875.81 1123.72
24908.85    112324938.38 1122.2424984.44 1122.5524988.71 1122.5525017.47 1122.93
25071.65  1124.725147.19  1126.225219.12 1125.6125231.11 1125.1725271.87 1123.52
25310.51  1122.525363.56 1120.8525398.47 1119.6825417.31 1119.8325485.13 1120.47
25492.62    112125553.87 1121.3725595.25 1121.21 25608.8  1120.725616.61 1120.33
25621.07  1120.825635.19 1122.4225679.65    112225700.64 1121.3725714.87  1121.7
 25764.3  1122.225797.69 1122.27 25803.4 1122.7425840.75 1123.7525861.23 1122.27
25899.09    112125943.38 1121.1125965.86 1120.9225997.55 1121.0326027.88 1121.03
26193.91  1121.426231.58 1120.9526242.65 1120.6526261.99 1121.4226317.07 1123.54
26345.09  1123.826357.86 1124.05 26374.6 1124.5826383.03  1124.726400.99  1124.4
26432.91  1120.626436.28 1120.1826439.46 1120.2326507.57 1122.56 26523.1 1121.51
26559.65  1120.826568.23 1120.39

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
13410.42    .03519539.84    .03520611.59    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19539.8420611.59              450  512.72     610             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
13410.4219539.84 1121.1620611.5926568.23 1120.91

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1113.39   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1111.41   Reach Len. (ft)            450.00     512.72     610.00
  Crit W.S. (ft)            1106.01   Flow Area (sq ft)                   14996.01
  E.G. Slope (ft/ft)       0.001973   Area (sq ft)                        14996.01      27.00
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1096.23   Top Width (ft)                       1020.69      75.54
  Vel Total (ft/s)            11.27   Avg. Vel. (ft/s)                       11.27
  Max Chl Dpth (ft)           23.27   Hydr. Depth (ft)                       14.69
  Conv. Total (cfs)       3805127.8   Conv. (cfs)                        3805127.8
  Length Wtd. (ft)           512.72   Wetted Per. (ft)                     1026.31
  Min Ch El (ft)            1088.14   Shear (lb/sq ft)                        1.80
  Alpha                        1.00   Stream Power (lb/ft s)                 20.28
  Frctn Loss (ft)              1.05   Cum Volume (acre-ft)      1940.72    6760.29     110.40
  C & E Loss (ft)              0.01   Cum SA (acres)             103.30     385.46      61.58


Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross
         section.  This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1113.39   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.97   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1111.41   Reach Len. (ft)            450.00     512.72     610.00
  Crit W.S. (ft)            1106.01   Flow Area (sq ft)                   14995.52
  E.G. Slope (ft/ft)       0.001973   Area (sq ft)                        14995.52
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Q Total (cfs)	169000.00	Flow (cfs)	169000.00
Top Width (ft)	1020.69	Top Width (ft)	1020.69
Vel Total (ft/s)	11.27	Avg. Vel. (ft/s)	11.27
Max Chl Dpth (ft)	23.27	Hydr. Depth (ft)	14.69
Conv. Total (cfs)	3804926.8	Conv. (cfs)	3804926.8
Length Wtd. (ft)	512.72	Wetted Per. (ft)	1026.30
Min Ch El (ft)	1088.14	Shear (lb/sq ft)	1.80
Alpha	1.00	Stream Power (lb/ft s)	20.28
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)	6761.39
C & E Loss (ft)	0.01	Cum SA (acres)	385.46

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.57

INPUT
Description:
Station Elevation Data num= 105

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18013.92	1116.718	030.44	1116.7718	050.63	1116.618	124.33	1115.87	18144.5	1115.64
18154.92	1114.41	18158.3	1113.7918	171.62	1113.418	200.22	1113.78	18249.2	1114.76
18266.95	1115.68	18280.84	1114.7618	429.88	1113.818	454.55	1113.62	18487.31	1113.66
18545.3	1113.618	565.51	1114.6918	581.96	1116.618	605.39	1116.24	18683.97	1115.91
18713.94	1116.02	18721	1115.9518	738.56	1115.918	756.25	1116.15	18765.47	1116.71
18771.16	1116.71	18776.2	1116.4518	778.79	111618	796.35	1115.09	18813.36	1112.34
18835.01	1112.43	18860.91	1113.1718	921.01	1113.218	979.66	1113.24	19077.95	1113.09
19108.89	1113.09	19154.6	1113.6719	331.07	1113.719	363.04	1113.73	19368.48	1110.99
19386.38	1116.41	19390.31	1116.8619	399.78	1121.319	441.79	1120.26	19485.2	1119.25
19501.28	1119.43	19517.83	1111.9619	542.42	1100.819	562.16	1100.51	19573.71	1100.43
19641.56	1100.15	19684.46	1100.2719	701.88	1101.319	744.82	1101.15	19760.44	1103.05
19763.19	1103.26	19765.82	1102.7519	813.71	109519	882.78	1093.95	19949.38	1093.86
20056.13	1091.89	20072.3	1091.5120	084.44	1091.620	107.99	1091.63	20116.34	1091.72
20137.39	1091.43	20220.85	1090.84	20249.2	1089.9	20340.4	1092.34	20349.92	1092.62
20392.31	1099.25	20465.11	1099.3320	495.23	1099.1	20519.8	1099.62	20539.7	1100.15
20581.07	1118.54	20584.26	1120.0120	585.96	112020	610.43	1118.85	20619.07	1118.72
20644.43	1117.93	20682.45	1116.39	20683.6	1117.420	692.98	1116.92	20718.89	1119.63
20724.51	1119.62	20786.53	1119.7120	817.17	1119.320	836.38	1118.95	20871.36	1118.94
20876.01	1118.36	20886.18	1118.120	897.97	1117.120	918.52	1117.46	20923.93	1117.42
20943.41	1117.88	20969.17	1118.4420	995.25	1118.521	016.21	1118.74	21157.2	1120.99
21158.67	1121.22	21198.38	1122.37	21205.2	1122.521	244.33	1123.05	21283.18	1124.4

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18013.92	.035	19501.28	.035	20584.26	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19501.28	20584.26	440	481.39	550	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18013.92	19501.28	1119.43	20584.26	21283.18	1120.01

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1112.33	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.04	Wt. n-Val.		0.035	
W.S. Elev (ft)	1110.29	Reach Len. (ft)	440.00	481.39	550.00
Crit W.S. (ft)	1105.33	Flow Area (sq ft)		14759.05	
E.G. Slope (ft/ft)	0.002135	Area (sq ft)		14759.05	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1041.01	Top Width (ft)		1041.01	
Vel Total (ft/s)	11.45	Avg. Vel. (ft/s)		11.45	
Max Chl Dpth (ft)	20.39	Hydr. Depth (ft)		14.18	
Conv. Total (cfs)	3657246.0	Conv. (cfs)		3657246.0	
Length Wtd. (ft)	481.39	Wetted Per. (ft)		1046.66	
Min Ch El (ft)	1089.90	Shear (lb/sq ft)		1.88	
Alpha	1.00	Stream Power (lb/ft s)		21.52	
Frctn Loss (ft)	0.97	Cum Volume (acre-ft)	1940.72	6585.18	110.21
C & E Loss (ft)	0.04	Cum SA (acres)	103.30	373.33	61.05

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1112.33	Element	Left OB	Channel	Right OB

Vel Head (ft)	2.04	Wt. n-Val.			0.035	
W.S. Elev (ft)	1110.29	Reach Len. (ft)		440.00	481.39	550.00
Crit W.S. (ft)	1105.33	Flow Area (sq ft)			14758.29	
E.G. Slope (ft/ft)	0.002136	Area (sq ft)			14758.29	
Q Total (cfs)	169000.00	Flow (cfs)			169000.00	
Top Width (ft)	1041.00	Top Width (ft)			1041.00	
Vel Total (ft/s)	11.45	Avg. Vel. (ft/s)			11.45	
Max Chl Dpth (ft)	20.39	Hydr. Depth (ft)			14.18	
Conv. Total (cfs)	3656946.5	Conv. (cfs)			3656946.5	
Length Wtd. (ft)	481.39	Wetted Per. (ft)			1046.65	
Min Ch El (ft)	1089.90	Shear (lb/sq ft)			1.88	
Alpha	1.00	Stream Power (lb/ft s)			21.53	
Frctn Loss (ft)	0.97	Cum Volume (acre-ft)			6586.28	
C & E Loss (ft)	0.04	Cum SA (acres)			373.32	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.48

INPUT
Description:
Station Elevation Data num= 97

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18236.01	1115.05	18272.78	1113.88	18299.5	1113.71	8461.95	1114.16	18582.8	1113.67
18624.01	1113.31	8715.24	1113.17	18745.54	1112.91	8823.91	1112.71	18846.96	1112.57
18909.1	1111.99	18953.02	1111.81	18967.9	1111.61	8979.02	1111.64	19012.67	1112.25
19020.47	1112.43	19161.51	1112.46	19286.59	1112.81	9289.43	1110.58	19291.33	1108.23
19313.73	1107.49	19325.12	1107.55	19339.03	1108.71	9355.96	1108.79	19373.28	1114.84
19386.09	1119.49	19400.18	1119.62	19414.72	1119.51	9455.38	1100.62	19458.49	1099.22
19474.03	1099	19563.4	1098.78	19603.52	1097.31	9638.95	1096.94	19660.85	1097.57
19768.13	1095.74	19800.17	1095.22	19882.6	1094.21	9956.71	1092.95	20030.08	1092.03
20076.99	1091.65	20113.27	1091.29	20220.52	1090.82	0232.88	1091.02	20294.34	1092.46
20300.97	1093.07	20325.41	1093.25	20377.34	1093.82	0417.34	1093.72	20445.53	1093.85
20450.8	1093.77	20491.19	1113.91	20498.98	1117.72	0513.25	1118.44	20542.36	1114.68
20544.57	1114.98	20555.29	1118.05	20575.97	1107.12	0599.36	1096.93	20605.23	1097.02
20634.43	1096.68	20651.66	1096.15	20664.64	1096.52	0666.24	1096.68	20691.83	1098.05
20706.82	1099.46	20720.66	1099.48	20742.45	1100.92	0758.79	1099.19	20801.19	1096.79
20811.68	1096.49	20830.24	1098.42	20839.88	1099.92	0864.97	1099.29	20911.54	1095.31
20913.45	1095.27	20932.99	1096.91	20934.71	1097.92	0962.36	1103.86	20964.19	1104.52
20985.71	1110.46	20988.58	1110.89	21014.49	1116.82	1030.88	1121.03	21042.74	1121.04
21077.31	1121.44	21112.3	1121.02	21119.26	1121	21131.41	1120.81	21157.18	1122.19
21160.98	1122.51	21216.92	1122.18	21234.98	1122.32	1275.95	1122.91	21296.32	1123
21355.12	1123.54	21359.24	1123.64						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18236.01	.035	19400.18	.035	20513.25	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19400.18	20513.25	440	502.74	570	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18236.01	19400.18	1119.62	20513.25	21359.24	1118.44

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1111.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.89	Wt. n-Val.		0.035	
W.S. Elev (ft)	1109.42	Reach Len. (ft)	440.00	502.74	570.00
Crit W.S. (ft)	1103.96	Flow Area (sq ft)		15312.30	
E.G. Slope (ft/ft)	0.001901	Area (sq ft)	87.42	15312.30	4343.11
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1523.56	Top Width (ft)	67.41	1045.77	410.38
Vel Total (ft/s)	11.04	Avg. Vel. (ft/s)		11.04	
Max Chl Dpth (ft)	18.62	Hydr. Depth (ft)		14.64	
Conv. Total (cfs)	3875793.0	Conv. (cfs)		3875793.0	
Length Wtd. (ft)	502.74	Wetted Per. (ft)		1051.84	
Min Ch El (ft)	1090.80	Shear (lb/sq ft)		1.73	
Alpha	1.00	Stream Power (lb/ft s)		19.07	
Frctn Loss (ft)	0.98	Cum Volume (acre-ft)	1940.27	6419.02	82.79
C & E Loss (ft)	0.01	Cum SA (acres)	102.96	361.80	58.46

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1111.31	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.89	Wt. n-Val.		0.035	
W.S. Elev (ft)	1109.42	Reach Len. (ft)	440.00	502.74	570.00
Crit W.S. (ft)	1103.96	Flow Area (sq ft)		15311.27	
E.G. Slope (ft/ft)	0.001902	Area (sq ft)		15311.27	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1045.77	Top Width (ft)		1045.77	
Vel Total (ft/s)	11.04	Avg. Vel. (ft/s)		11.04	
Max Chl Dpth (ft)	18.62	Hydr. Depth (ft)		14.64	
Conv. Total (cfs)	3875377.3	Conv. (cfs)		3875377.3	
Length Wtd. (ft)	502.74	Wetted Per. (ft)		1051.84	
Min Ch El (ft)	1090.80	Shear (lb/sq ft)		1.73	
Alpha	1.00	Stream Power (lb/ft s)		19.08	
Frctn Loss (ft)	0.98	Cum Volume (acre-ft)		6420.13	
C & E Loss (ft)	0.01	Cum SA (acres)		361.79	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.38

INPUT
Description:
Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18086.73	1112.05	18126.89	1112.42	18150.62	1112.09	18201.77	1113.61	18220.17	1114
18237.96	1115.41	18287.77	1111.68	18344.46	1112.07	18357.62	1112.11	18382.37	1112.5
18426.79	1112.69	18439.52	1112.56	18457.61	1112.62	18702.97	1111.81	18907.87	1111.14
19011.51	1111.12	19178.13	1111.69	19301.14	1112.1	19317.4	1105.11	19320.63	1103.76
19335.04	1103.43	19351.16	1103.26	19358.14	1104.35	19370.25	1107.21	19381.46	1110.01
19395.65	1115.67	19402.86	1118.29	19431.07	1118.71	19439.66	1118.6	19442.3	1117.62
19484.06	1098.95	19540.04	1097.31	19613.99	1095.05	19621.74	1092.71	19630.27	1093.05
19693.84	1095.34	19708.66	1095.48	19797.26	1095.47	19890.58		19519950.72	1094.15
19986.47		19420001.92	1094.55	20006.51	1094.32	20014.34		19220017.76	1091.13
20122.42	1091.58	20137.88	1091.52	20199.08	1090.99	20247.14	1090.72	20266.57	1090.72
20284.24	1090.81	20369.63	1090.83	20388.79	1091.04	20435.65	1091.82	20464.45	1092.28
20482.16	1100.81	20517.96	1118.46	20522.43	1118.68	20533.82	1119.82	20551.54	1116.77
20563.25	1114.98	20578.85	1118.35	20607.13	1116.88	20613.72	1115.22	20625.52	1115.32
20699.29	1112.92	20784.31	1114.33	20858.69	1114.51	20942.13	1115.22	20971.88	1115.46
20986.64	1115.62	20994.77	1115.82	21006.23	1115.73	21029.87	1116.62	21038.75	1117.47
21069.36	1118.32	21124.54	1117.91	21131.75	1118.27	21141.23	1120.1		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18086.73	.035	19431.07	.035	20533.82	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19431.07	20533.82	480	491.58	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18086.73	19431.07	1118.71	20533.82	21141.23	1119.8

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1110.33	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.97	Wt. n-Val.		0.035	
W.S. Elev (ft)	1108.36	Reach Len. (ft)	480.00	491.58	500.00
Crit W.S. (ft)	1103.09	Flow Area (sq ft)		15019.71	
E.G. Slope (ft/ft)	0.002000	Area (sq ft)	240.44	15019.71	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1099.53	Top Width (ft)	65.06	1034.47	
Vel Total (ft/s)	11.25	Avg. Vel. (ft/s)		11.25	
Max Chl Dpth (ft)	17.66	Hydr. Depth (ft)		14.52	
Conv. Total (cfs)	3778859.8	Conv. (cfs)		3778859.8	
Length Wtd. (ft)	491.58	Wetted Per. (ft)		1041.13	
Min Ch El (ft)	1090.70	Shear (lb/sq ft)		1.80	
Alpha	1.00	Stream Power (lb/ft s)		20.27	
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)	1938.62	6243.98	54.37
C & E Loss (ft)	0.02	Cum SA (acres)	102.29	349.79	55.78

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1110.33	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.97	Wt. n-Val.		0.035	

W.S. Elev (ft)	1108.36	Reach Len. (ft)	480.00	491.58	500.00
Crit W.S. (ft)	1103.08	Flow Area (sq ft)		15018.44	
E.G. Slope (ft/ft)	0.002001	Area (sq ft)		15018.44	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1034.46	Top Width (ft)		1034.46	
Vel Total (ft/s)	11.25	Avg. Vel. (ft/s)		11.25	
Max Chl Dpth (ft)	17.66	Hydr. Depth (ft)		14.52	
Conv. Total (cfs)	3778346.3	Conv. (cfs)		3778346.3	
Length Wtd. (ft)	491.58	Wetted Per. (ft)		1041.12	
Min Ch El (ft)	1090.70	Shear (lb/sq ft)		1.80	
Alpha	1.00	Stream Power (lb/ft s)		20.27	
Frctn Loss (ft)	1.05	Cum Volume (acre-ft)		6245.10	
C & E Loss (ft)	0.02	Cum SA (acres)		349.79	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.29

INPUT
Description:
Station Elevation Data num= 116

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17592.29	1111.717	614.88	1111.817	664.02	1111.711	7752.58	1111.911	7843.08	1112.08
17920.11	1112.081	7944.56	1112.417	982.64	1112.721	8013.13	1111.941	8087.65	1112.95
18090.45	1113.061	8114.24	1114.4	18124.9	1111.85	18131.2	1112.171	8155.06	1112.5
18189.89	1113.321	8274.36	1112.51	8291.98	1112.261	8333.14	1111.911	8344.34	1111.11
18371.02	1111.341	8421.76	1111.31	8427.34	1111.671	8444.57	1113.121	8462.13	1112.67
18497.57	1111.991	8551.54	111	21861	0.97	1111.671	8621.63	1111.581	8633.54	1110.94
18648.88	1110.421	8657.86	1110.91	8672.68	1110.021	8687.43	1109.471	8708.66	1109.79
18717.04	1109.661	8753.11	1109.71	8807.22	1110.011	8812.62	1110.071	8948.31	1110.02
19090.58	1111.11	9120.56	1111	19190.9	1111.31	9226.21	1097.421	9258.62	1084.15
19290.38	1083.851	9300.61	1083.51	9302.57	1083.071	9307.96	1083.391	9316.86	1084.69
19331.74	1084.231	9344.83	1083.91	9422.26	1108.051	9444.61	1115.211	9452.65	1117.55
19462.9	1117.95	19477.1	1118.31	9486.17	1118.891	9496.87	1114.071	9531.51	1096.62
19546.03	1097.331	9548.73	1097.21	9558.04	1097.481	9574.74	1097.611	9591.87	1092.21
19597.05	1090.291	9618.15	1091.21	9660.06	1091.861	9673.55	1092.931	9739.34	1094.67
19756.1	1095.171	9763.03	1095.31	9792.66	1095.1	19850.8	1094.931	9903.19	1095.06
19913.69	1090.361	9933.59	1091.9	19946	1092.672	0049.21	1092.842	0056.98	1092.83
20077.25	1092.42	0174.92	1090.52	0182.61	1090.542	0238.41	1090.742	0250.25	1090.69
20267.27	1090.352	0365.21	1089.72	0386.55	1090.112	0473.48	1091.062	0479.07	1091.14
20481.6	1092.412	0527.91	1116.52	0544.71	1117.582	0551.28	1116.792	0580.82	1114.1
20586.62	1115.222	0592.95	1116.1	20623.3	1115.982	0635.89	1116.252	0639.82	1116.07
20646.67	1116.032	0655.38	1116.22	0712.57	1116.032	0739.26	111620	740.92	1116.07
20762.38	1115.282	0774.06	1115.32	0779.97	1115.24	20786.6	1115.342	0835.43	1116.46
20846.42	1121.552	0850.12	1121.32	0857.54	1119.872	0878.44	1116.532	0941.72	1116.53
20982.95	1116.48								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17592.29	.035	19486.17	.035	20544.71	.035

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19486.17	20544.71	511.81	511.81	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17592.29	19486.17	1118.89	20544.71	20982.95	1117.58

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1109.25	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1107.06	Reach Len. (ft)	511.81	511.81	520.00
Crit W.S. (ft)	1102.31	Flow Area (sq ft)		14234.06	
E.G. Slope (ft/ft)	0.002291	Area (sq ft)	3495.32	14234.06	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1216.42	Top Width (ft)	217.42	999.00	
Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)		11.87	
Max Chl Dpth (ft)	23.99	Hydr. Depth (ft)		14.25	
Conv. Total (cfs)	3530980.8	Conv. (cfs)		3530980.8	
Length Wtd. (ft)	511.81	Wetted Per. (ft)		1007.79	
Min Ch El (ft)	1089.70	Shear (lb/sq ft)		2.02	
Alpha	1.00	Stream Power (lb/ft s)		23.98	
Frctn Loss (ft)	1.36	Cum Volume (acre-ft)	1918.04	6078.91	54.37
C & E Loss (ft)	0.05	Cum SA (acres)	100.74	338.32	55.78

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1109.25	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1107.06	Reach Len. (ft)	511.81	511.81	520.00
Crit W.S. (ft)	1102.31	Flow Area (sq ft)		14234.06	
E.G. Slope (ft/ft)	0.002291	Area (sq ft)		14234.06	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	998.99	Top Width (ft)		998.99	
Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)		11.87	
Max Chl Dpth (ft)	17.36	Hydr. Depth (ft)		14.25	
Conv. Total (cfs)	3530987.8	Conv. (cfs)		3530987.8	
Length Wtd. (ft)	511.81	Wetted Per. (ft)		1007.79	
Min Ch El (ft)	1089.70	Shear (lb/sq ft)		2.02	
Alpha	1.00	Stream Power (lb/ft s)		23.98	
Frctn Loss (ft)	1.36	Cum Volume (acre-ft)		6080.04	
C & E Loss (ft)	0.05	Cum SA (acres)		338.32	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.19

INPUT
Description:
Station Elevation Data num= 131

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17868.47	111317872.22	1112.96	17878.5	1112.4317906.06		1112.217937.27		1112.15	
17948.67	1112.0117971.46	1111.8617986.85		1112.2418013.53		1112.218096.19		1111.12	
18102.73	1111.2218134.04	1112.0518142.05		1112.118145.04		1111.718154.15		1111.25	
18183.36	1110.51	18196.9	1110.3718225.44	1110.7418234.36		1110.518292.49		1110.84	
18353.78	1110.15	18501.8	1109.9618642.55	1110.25	18712.4	1110.718716.06		1110.96	
18719.43	1110.6818726.98	1110.4418788.74		1107.8718797.78		1107.618833.04		1108.51	
18848.04	1109.0118870.09	1109.2518889.15		1109.5118904.84		1109.918911.41		1110.26	
19029.77	1111.35	19032.7	1111.3919104.02	1081.9319114.16		1081.319134.01		1080.09	
19183.28	1047.79	19188.4	1044.6119195.79	1044.5819307.62		1044.419372.04		1084.4	
19396.15	1083.2919410.84	1087.7119457.52		1102.8619482.12		111019487.07		1112.23	
19503.99	1117.8819535.55	1118.2319580.46		109619594.73		1095.619603.61		1093.85	
19631.85	1087.47	19672.7	1087.1119678.04	1087.1619701.97		1087.919714.89		1090.68	
19726.52	1092.7419728.93	1092.93	19733.6	1090.6819748.63		1092.319756.06		1090.27	
19770.57	1086.4319789.83	1089.8619799.13		1091.7919815.12		1092.219846.41		1093.75	
19880.57	1093.8319923.81	1093.8419958.55		1093.8119993.29		1094.120012.94		1094	
20084.62	1093.9220119.46	1093.7620130.95		1093.4320162.91		1092.420224.37		1089.79	
20233.29	1089.7620242.06	1089.3420265.26		1089.1420296.53		1088.620367.15		1089.11	
20390.04	1089.2620427.85	1089.5620481.37		1090.5320522.87		1110.720530.53		1114.35	
20543.32	1115.1420548.79	1115.5720580.16		1113.6320596.01		1112.520606.62		1115.42	
20633.35	1115.8520642.78	1116.0720682.36		1115.6620749.89		1114.520800.98		1114.31	
20808.82	111520811.14	1114.1220857.81		1114.0820970.04		1113.520977.08		1113.52	
20981.42	1114.3220985.68	1114.7821028.25		1114.9621044.92		1114.621070.55		1115.24	
21135.67	1115.8421210.52	1115.05	21233.2	1114.9421353.11		1114.921435.26		1115.53	
21438.1	1115.6421457.55	1115.6821487.41		1115.4821498.25		1115.421529.39		1114.78	
21567.97	1115.1221595.46	1114.821620.49		1114.8621704.77		1115.321785.89		1115.77	
21855.84	1116.9821950.96	1117.8421962.58		1117.5121980.48		1117.322033.04		1117.97	
22041.35	1118.12								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17868.47	.035	19535.55	.035	20548.79	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
19535.5520548.79 490 502.45 520 .1 .3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17868.47	19535.55	1118.23	20548.79	22041.35	1115.57

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1107.84	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.73	Wt. n-Val.		0.035	

W.S. Elev (ft)	1105.11	Reach Len. (ft)	490.00	502.45	520.00
Crit W.S. (ft)	1101.53	Flow Area (sq ft)		12740.54	
E.G. Slope (ft/ft)	0.003099	Area (sq ft)	14820.63	12740.54	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1366.69	Top Width (ft)	417.37	949.31	
Vel Total (ft/s)	13.26	Avg. Vel. (ft/s)		13.26	
Max Chl Dpth (ft)	60.71	Hydr. Depth (ft)		13.42	
Conv. Total (cfs)	3035751.0	Conv. (cfs)		3035751.0	
Length Wtd. (ft)	502.45	Wetted Per. (ft)		958.21	
Min Ch El (ft)	1086.43	Shear (lb/sq ft)		2.57	
Alpha	1.00	Stream Power (lb/ft s)		34.12	
Frctn Loss (ft)	0.99	Cum Volume (acre-ft)	1810.43	5920.44	54.37
C & E Loss (ft)	0.31	Cum SA (acres)	97.01	326.87	55.78

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1107.84	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.73	Wt. n-Val.		0.035	
W.S. Elev (ft)	1105.11	Reach Len. (ft)	490.00	502.45	520.00
Crit W.S. (ft)	1101.53	Flow Area (sq ft)		12740.54	
E.G. Slope (ft/ft)	0.003099	Area (sq ft)		12740.54	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	949.31	Top Width (ft)		949.31	
Vel Total (ft/s)	13.26	Avg. Vel. (ft/s)		13.26	
Max Chl Dpth (ft)	18.68	Hydr. Depth (ft)		13.42	
Conv. Total (cfs)	3035751.0	Conv. (cfs)		3035751.0	
Length Wtd. (ft)	502.45	Wetted Per. (ft)		958.21	
Min Ch El (ft)	1086.43	Shear (lb/sq ft)		2.57	
Alpha	1.00	Stream Power (lb/ft s)		34.12	
Frctn Loss (ft)	0.99	Cum Volume (acre-ft)		5921.58	
C & E Loss (ft)	0.31	Cum SA (acres)		326.87	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 217.10

INPUT
Description:
Station Elevation Data num= 138

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17600.59	1112.97	17620.68	1112.34	17646.86	1112.03	17688.41	1111.74	17704.24	1112.1
17719.14	1112.18	17741.7	1111.68	17756.4	1111.07	17848.24	1110.96	18074.7	1111.3
18124.9	1111.23	18130.99	1110.62	18263.83	1109.98	18349.69	1109.65	18551.23	1110
18587.18	1109.89	18617.17	1109.76	18679.02	1109.56	18790.59	1109.24	18799.21	1109.2
18826.91	1109.38	18858.24	1108.36	18865.89	1108.2	18871.8	1109.02	18888.69	1111.7
18924.73	1094.26	18950.29	1081.46	18981.7	1080.71	19039.03	1045.05	19290.6	1045.4
19355.94	1045.47	19360.51	1048.54	19414.92	1085.6	19438.51	1084.48	19442.09	1085.4
19479.15	1095.56	19513.38	1107.78	19519.12	1110.01	19523.16	1111.11	19527.72	1112
19543.34	1116.59	19557.04	1117.46	19576.88	1118.05	19625.46	1096.98	19630.49	1094.9
19636.74	1084.58	19656.27	1083.62	19664	1083.18	19707.71	1083.72	19719.1	1084.8
19752.09	1088.43	19764.19	1089.53	19778.39	1090.58	19819.8	1092.18	19851.38	1094
19859.54	1089.46	19866.15	1085.4	19901.3	1085.07	19960.76	1083.75	19990.62	1083
20044.95	1083.12	20059.64	1083.07	20069.32	1083.61	20085.24	1084.23	20093.93	1088.3
20100.95	1091.32	20119.63	1090.54	20142.57	1089.73	20157.78	1089.12	20182.35	1088.3
20238.55	1086.83	20252.74	1086.55	20296.58	1086.02	20303.64	1086.23	20311.45	1085.7
20323.94	1085.37	20342.66	1084.94	20355.06	1084.95	20378.95	1085.82	20390.46	1085.6
20408.3	1085.93	20431.7	1085.48	20467.32	1085.77	20478.03	1085.82	20495.77	1094.6
20534.13	1112.96	20539.41	1113.15	20545.86	1113.16	20551.73	1113.34	20608.55	1110.1
20612.3	1111.24	20622.42	1113.61	20630.42	1113.64	20660.12	1113.59	20683.8	1114.2
20797.02	1116.45	20802.59	1116.48	20819.36	1113.9	20973.36	1114.12	20993.05	1114.2
21007.1	1115.05	21015.63	1114.93	21024.21	1114.14	21047.61	1114.18	21063.7	1114.3
21091.99	1114.58	21217.52	1114.72	1282.21	1114.44	21373.52	1114.53	21392.21	1115
21426	1114.24	21435.77	1114.17	21463.99	1114.83	21517.28	1114.77	21539.61	1114.6

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 21542.9 1114.7221602.03 1114.5621650.05 1114.5321747.34 1114.6621788.15  1114.8
21843.92 1114.0621877.29 1113.7721888.46 1113.7721906.58 1113.4421918.44  1113.6
21977.61 1114.2721997.78 1114.1222002.26 1114.1922004.64 1113.8422112.68  1113.6
22115.58 1114.8722134.58 1116.15 22165.7 1115.8722209.46 1114.6722245.06  1114.7
22272.55 1114.0322349.62 1114.6822409.32 1114.41

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
17600.59    .03519576.88    .03520551.73    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19576.8820551.73           481.37  481.37  481.37             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
17600.5919576.88 1118.0520551.7322409.32 1113.34

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1106.55   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.71   Wt. n-Val.                          0.035
  W.S. Elev (ft)            1104.84   Reach Len. (ft)           481.37    481.37     481.37
  Crit W.S. (ft)            1097.07   Flow Area (sq ft)                  16093.27
  E.G. Slope (ft/ft)       0.001360   Area (sq ft)            26088.09   16093.27
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1512.06   Top Width (ft)            602.26    909.81
  Vel Total (ft/s)            10.50   Avg. Vel. (ft/s)                    10.50
  Max Chl Dpth (ft)           59.79   Hydr. Depth (ft)                    17.69
  Conv. Total (cfs)       4582329.5   Conv. (cfs)                       4582329.5
  Length Wtd. (ft)           481.37   Wetted Per. (ft)                    926.56
  Min Ch El (ft)            1083.00   Shear (lb/sq ft)                     1.47
  Alpha                        1.00   Stream Power (lb/ft s)              15.49
  Frctn Loss (ft)              0.63   Cum Volume (acre-ft)      1580.35  5754.15      54.37
  C & E Loss (ft)              0.02   Cum SA (acres)              91.27   316.15      55.78


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1106.55   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.71   Wt. n-Val.                          0.035
  W.S. Elev (ft)            1104.83   Reach Len. (ft)           481.37    481.37     481.37
  Crit W.S. (ft)            1097.08   Flow Area (sq ft)                  16092.72
  E.G. Slope (ft/ft)       0.001360   Area (sq ft)                       16092.72
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             909.80   Top Width (ft)                      909.80
  Vel Total (ft/s)            10.50   Avg. Vel. (ft/s)                    10.50
  Max Chl Dpth (ft)           21.83   Hydr. Depth (ft)                    17.69
  Conv. Total (cfs)       4582072.0   Conv. (cfs)                       4582072.0
  Length Wtd. (ft)           481.37   Wetted Per. (ft)                    926.56
  Min Ch El (ft)            1083.00   Shear (lb/sq ft)                     1.48
  Alpha                        1.00   Stream Power (lb/ft s)              15.49
  Frctn Loss (ft)              0.63   Cum Volume (acre-ft)               5755.28
  C & E Loss (ft)              0.02   Cum SA (acres)                      316.15


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 217.00

INPUT
Description:
Station Elevation Data    num=     226
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
14098.54  1120.514128.08 1120.14 14198.7 1120.0114421.36 1119.2814431.34 1119.84
14448.43  1119.314456.42 1119.3414471.01 1119.0614490.05 1118.8814516.45 1119.53
14537.44  1119.714554.43 1119.5814617.79  1119.914660.16 1119.6514666.56 1119.38
14787.23  1118.914878.68 1119.7814889.68 1118.8714909.73  1119.614913.37 1119.56
14934.09  1120.115004.13 1120.0215086.65 1120.83 15149.1 1119.7215170.02 1119.89
15211.59  1120.415214.69 1119.08   15221 1117.1315223.38 1117.4115231.65 1119.09
15369.53  1118.415529.51 1117.5815568.29 1117.6515589.35 1117.7315625.57 1117.19
15713.69  1117.215728.81 1117.3915756.29  1117.315778.83 1118.9915786.84 1118.99
15860.73  1118.615896.88 1118.3816022.87    111816123.06 1116.7216218.41 1116.25
16287.25  1115.816300.33 1117.7416307.46 1117.92 16312.8 1117.77   16334 1108.63
16334.91    110916352.76 1117.5716359.24 1117.5516368.86 1116.9516396.58 1116.92
16404.96  1116.616496.79 1115.5816509.53 1115.7416540.83 1115.53 16545.1 1115.56
16719.07  1116.616790.96 1116.5716831.51 1116.6116898.02 1116.8416936.04 1116.86
16953.66  1116.716979.21 1116.8817023.76 1117.6917046.68 1117.9317068.68 1118.12
17072.78  1118.217080.88 1114.1217095.31 1119.1417112.28 1118.8417122.51 1117.68
17124.11  1117.717151.42  1114.417210.52 1107.3317265.35  1109.617279.62 1110.22
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17323.85  1110.717327.55 1110.7917339.24 1110.71 17455.2 1110.6817513.41 1110.58
17539.87  1110.517573.18 1111.0417591.05 1111.1917607.24 1110.6117633.85 1110.87
17658.39  1109.417668.45 1109.4717742.89 1109.7517841.92 1110.3517990.57 1110.29
18050.32  1110.4 18104.4 1110.8918111.39 1110.9118127.89 1110.7118160.16 1111.14
18166.69  1111.218319.16 1110.0118410.48 1109.9818426.92 1109.8118479.03 1109.33
18518.93  1109.618557.34 1109.9118562.47 1109.92 18596.5 1109.6718602.19 1109.68
18677.67  1109.218690.17 1108.9918715.41 1108.7918722.39 1109.3618734.94  1110.2
18740.09  1110.818780.12 1091.1618802.42 1080.9218813.26    108118834.72 1080.55
18889.72  1051.618903.97 1044.4119200.31 1045.2419354.64 1046.1319368.47 1046.18
19370.82  1047.819425.74 1084.1819443.19 1083.4919485.52 1094.1819493.29 1096.86
19532.95  1109.919544.05 1113.8219551.29 1116.2919560.29 1116.1219574.59 1116.78
19584.47  1117.519632.35 1094.7319637.36 1092.2819648.07 1092.4219657.88 1087.81
19670.13  1085.619677.79 1084.8919724.59 1082.9819785.99 1083.2319801.01 1083.06
19819.83  1083.219833.32 1083.2419843.23 1083.0619893.28 1081.9919914.53 1081.38
19934.85  1081.319942.34 1081.8319970.45 1082.8419973.18 1082.4320001.14 1083.03
20034.89  1084.820050.24 1084.7420065.58 1084.8320068.23 1084.6720103.24 1084.14
20131.69  1082.720143.96 1085.3620148.75 1088.5820176.06 1087.8620181.16 1087.84
20214.08  1088.220228.34 1087.66 20255.4 1087.7520266.51 1088.5420293.74 1088.64
20315.95  1088.920340.21 1088.8820357.96 1088.6820368.51 1088.3220383.76 1088.06
20393.33  1087.220428.08 1086.4620448.71 1086.9620485.81    108920518.72 1104.87
20535.78  1113.320540.04 1113.4420551.23 1113.1620580.83 1111.8420589.82 1112.24
20600.75  1111.620615.43 1110.4920646.56 1110.6620697.83 1109.93   20706 1110.67
20707.21  1110.120715.01 1115.9120728.15 1118.6320730.93 1120.6620743.72 1114.93
 20745.4  1114.420785.35 1114.9420789.93 1116.83 20809.4 1122.6520837.73 1122.07
20861.48  1114.420900.21 1114.2820939.63 1114.0120945.97 1113.7120974.02 1111.87
20982.49  1112.220990.46 1113.28   21006 1113.1521055.12 1113.8221160.88 1114.41
21227.71  1114.421317.97 1113.6521340.57 1113.6621367.07 1113.8321407.84 1113.83
21455.78  1113.421480.61 1113.5621489.69  1113.421551.01 1112.9521621.93 1112.61
21681.36  1112.821734.31 1112.6221813.77 1112.2721854.83 1112.1321976.67 1111.87
22006.05  1111.8

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
14098.54    .03519584.47    .03520540.04    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19584.4720540.04               510  506.49  506.49             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14098.5419584.47  1117.520540.0422006.05 1113.44

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1105.90   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.65   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1104.25   Reach Len. (ft)            510.00     506.49     506.49
  Crit W.S. (ft)            1096.14   Flow Area (sq ft)                   16376.45
  E.G. Slope (ft/ft)       0.001261   Area (sq ft)             35082.66   16376.45
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1667.39   Top Width (ft)             762.31     905.09
  Vel Total (ft/s)            10.32   Avg. Vel. (ft/s)                       10.32
  Max Chl Dpth (ft)           59.84   Hydr. Depth (ft)                       18.09
  Conv. Total (cfs)       4759874.5   Conv. (cfs)                        4759874.5
  Length Wtd. (ft)           506.49   Wetted Per. (ft)                      914.21
  Min Ch El (ft)            1081.30   Shear (lb/sq ft)                       1.41
  Alpha                        1.00   Stream Power (lb/ft s)                14.55
  Frctn Loss (ft)              0.71   Cum Volume (acre-ft)      1242.35    5574.74      54.37
  C & E Loss (ft)              0.02   Cum SA (acres)              83.73     306.12      55.78


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1105.90   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.65   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1104.25   Reach Len. (ft)            510.00     506.49     506.49
  Crit W.S. (ft)            1096.12   Flow Area (sq ft)                   16375.79
  E.G. Slope (ft/ft)       0.001261   Area (sq ft)                        16375.79
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             905.09   Top Width (ft)                        905.09
  Vel Total (ft/s)            10.32   Avg. Vel. (ft/s)                       10.32
  Max Chl Dpth (ft)           22.95   Hydr. Depth (ft)                       18.09
  Conv. Total (cfs)       4759559.0   Conv. (cfs)                        4759559.0
  Length Wtd. (ft)           506.49   Wetted Per. (ft)                      914.21
  Min Ch El (ft)            1081.30   Shear (lb/sq ft)                       1.41
  Alpha                        1.00   Stream Power (lb/ft s)                14.55
  Frctn Loss (ft)              0.71   Cum Volume (acre-ft)                 5575.88
  C & E Loss (ft)              0.02   Cum SA (acres)                        306.12
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CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.91

INPUT
Description:
Station Elevation Data num= 211

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14099.2	1119.714559.42	1118.4814566.97	1118.5114578.11	1119.4614593.53	1119.09				
14601.62	1118.814746.19	1119.1114854.73	1118.6814937.59	1118.4314951.24	1117.55				
14966.68	1117.414990.32	1118.0815006.25	1118.3615033.56	1118.2715048.46	1118.25				
15062.29	1118 15083.6	1120.4115093.56	1120.2915108.89	1119.7315234.76	1120.77				
15337.22	111915374.11	1119.0815404.53	1118.8915474.81	1118.2915587.87	1117.53				
15589.63	1117.615604.39	1118.9815646.54	1119.215679.98	1119.2915705.15	1118.52				
15713.71	1118.515778.73	1119.0515798.21	1118.9915827.48	1118.25 15897.7	1117.91				
15921.07	1117.415929.28	1116.6815931.21	11615949.88	1115.7615973.81	1115.71				
15991.09	1116.816180.68	1115.7516274.57	1114.7516288.72	1114.6816314.26	1114.45				
16402.38	111416429.73	1113.8516441.14	1116.6216451.87	1116.3316458.12	1113.19				
16470.06	110716487.19	1115.0416491.62	1116.8116504.46	1116.916509.38	1115.83				
16514.62	1115.516530.29	1115.9616543.87	1115.9316636.54	1115.9416757.34	1115.65				
16760.46	111616771.55	1115.4916775.94	1115.216794.31	1115.4616813.69	1116.08				
16944.03	1115.416966.49	1115.1616976.03	1114.6616993.21	1113.9417023.17	1113.55				
17058.98	1112.9 17099.6	1111.6617134.49	1109.16 17172.2	1109.0717315.71	1108.88				
17381.63	1108.917422.97	1109.317426.29	1109.0517446.84	1107.8717498.83	1109.49				
17518.15	1110.217530.75	1111.11 17545.5	1110.7817557.96	1110.9817596.95	1111.04				
17620.83	1110.617686.59	1110.517707.19	1110.5417803.03	1110.4917862.12	1110.02				
17903.23	1109.917956.17	1109.717992.63	1109.52 17999.6	1109.5318086.52	1109.38				
18347.34	110918413.24	1108.9518479.03	1109.1118494.69	1107.9118513.77	1109.06				
18550.3	1108.218568.86	1109.2918573.12	1109.6118584.94	1109.9718629.91	1089.27				
18649.22	1080.118674.53	1080.4318684.62	1075.7718751.76	1045.8119017.44	1045.16				
19362.16	1045.519380.07	1057.119419.67	1083.2219469.66	1091.1819489.79	1094.18				
19494.38	1095.719510.69	1101.6719550.02	1115.219570.88	1116.0919579.12	1116.14				
19606.91	1102.319629.92	1090.4219637.51	1090.1219644.24	1089.6219646.83	1088.31				
19648.97	1087.819689.66	1083.4619695.04	1083.1519721.45	1082.3219750.64	1084.27				
19792.85	1084.519827.51	1083.419875.56	1083.4819883.38	1083.5219904.38	1083.27				
19946.63	1083.119996.87	1082.7320001.81	1082.6820066.92	1084.5620106.23	1083.09				
20115.87	108320146.21	1083.120171.89	1082.99 20203.8	1082.9620223.46	1082.77				
20228.02	1086.320238.83	1092.6820243.18	1090.6420250.58	1090.2620284.19	1090.18				
20308.83	1090.420319.78	1089.820333.36	1089.9120356.79	1088.9120391.15	1089.01				
20399.3	1089.220411.96	1089.6720446.41	1090.7920468.88	1091.5620484.39	1091.9				
20494.43	1095.720506.88	1102.1620525.95	1111.0520542.47	1112.3520588.08	1111.82				
20603.92	1111.920609.85	1113.3920614.96	1113.1520669.51	1112.0420688.84	1111.49				
20707	1111.220734.16	1111.2220793.21	1110.5820809.02	1110.3620829.83	1110.92				
20852.41	1112.420876.38	1112.7520906.45	1112.82 20937.2	1113.4420983.26	1114.06				
21016.37	1113.321024.58	1113.3321034.96	1113.1821053.76	1112.6321074.52	1111.84				
21094.09	1111.6 21101.4	1111.1421111.91	1110.1321123.63	1110.3221142.99	1110.89				
21181.47	1111.821203.41	1112.221254.24	1112.2121300.76	1111.1621318.07	1112.06				
21404.77	111221588.54	1112.1321607.47	1111.7721651.58	1111.9721678.44	1112.06				
21691.4	1110.321706.27	1112.4521782.41	1112.0521815.83	1111.6121896.63	1111.46				
21901.86	1111.521931.58	1112.3522003.66	1112.57 22039.7	1112.522465.13	1110.71				
22514.01	1110.6								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14099.2	.03519579.12	.03520542.47	.035		

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19579.1	220542.47	503.44	503.44	503.44	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
14099.2	19579.12	1116.1	420542.4	722514.01	1112.35

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1105.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.87	Wt. n-Val.		0.035	
W.S. Elev (ft)	1103.31	Reach Len. (ft)	503.44	503.44	503.44
Crit W.S. (ft)	**1096.30**	**Flow Area (sq ft)**		**15408.17**	
E.G. Slope (ft/ft)	0.001545	Area (sq ft)	42993.48	15408.17	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1820.47	Top Width (ft)	916.03	904.45	
Vel Total (ft/s)	10.97	Avg. Vel. (ft/s)		10.97	
Max Chl Dpth (ft)	58.15	Hydr. Depth (ft)		17.04	
Conv. Total (cfs)	4299575.0	Conv. (cfs)		4299575.0	
Length Wtd. (ft)	503.44	Wetted Per. (ft)		914.39	
Min Ch El (ft)	1082.32	Shear (lb/sq ft)		1.63	
Alpha	1.00	Stream Power (lb/ft s)		17.83	
Frctn Loss (ft)	0.69	Cum Volume (acre-ft)	785.30	5389.96	54.37

C & E Loss (ft)	0.07	Cum SA (acres)	73.91	295.60	55.78

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1105.17	Element			
Vel Head (ft)	1.87	Wt. n-Val.		0.035	
W.S. Elev (ft)	1103.30	Reach Len. (ft)	503.44	503.44	503.44
Crit W.S. (ft)	1096.31	Flow Area (sq ft)		15407.28	
E.G. Slope (ft/ft)	0.001545	Area (sq ft)		15407.28	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	904.44	Top Width (ft)		904.44	
Vel Total (ft/s)	10.97	Avg. Vel. (ft/s)		10.97	
Max Chl Dpth (ft)	20.98	Hydr. Depth (ft)		17.04	
Conv. Total (cfs)	4299177.0	Conv. (cfs)		4299177.0	
Length Wtd. (ft)	503.44	Wetted Per. (ft)		914.38	
Min Ch El (ft)	1082.32	Shear (lb/sq ft)		1.63	
Alpha	1.00	Stream Power (lb/ft s)		17.83	
Frctn Loss (ft)	0.69	Cum Volume (acre-ft)		5391.11	
C & E Loss (ft)	0.07	Cum SA (acres)		295.60	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.81

INPUT
Description:
Station Elevation Data num= 207

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
14826.86	1117.315074.81	1117.3215121.98	1117.415234.89	1117.1615368.88	1116.83				
15374.04	1117.815395.67	1122.3915417.92	1122.1115421.66	112215554.53	1118.45				
15577.36	1119.315719.49	1114.915731.96	1113.8915742.84	1113.15 15776.7	1115.71				
15945.17	1115.515966.24	1115.5416005.02	1115.42 16009.4	1116.7816018.59	1118.76				
16025.55	1116.716031.99	1115.4816122.77	1115.6116131.04	1117.3216147.34	1120.1				
16169.01	1114.616180.01	1114.5516219.77	1114.1616225.87	1114.1616240.21	1113.18				
16284.9	1113.716305.02	1113.7416452.71	1113.9316465.24	1115.2316478.67	1114.97				
16487.9	1109.416495.05	1105.6716508.62	1112.01 16516.7	1115.3916523.38	1115.3				
16535.02	1115.716550.34	1115.3416563.07	1114.7416568.64	1114.7916577.33	1115.17				
16611.89	1113.816622.88	1113.6416644.22	1113.6316652.51	1113.7216696.87	1113.95				
16728.68	1113.916734.43	1114.1116808.69	1115.4416840.78	1115.6916894.19	1115.07				
16942.9	111516958.95	1114.9916986.36	1114.4116994.93	1114.3117000.64	1113.59				
17007.03	1113.117010.39	1113.14 17020.3	1114.2 17069.5	1113.4417090.81	1113.43				
17110.64	111317117.84	1112.2417147.92	1111.2617188.49	111117209.44	1110.53				
17256.88	1109.817282.12	1109.9617305.71	1109.8417331.56	1109.6517372.28	1110.32				
17373.99	1110.517384.34	1110.417469.49	1110.1417509.83	1109.2317519.01	1108.92				
17551.66	1108.217578.56	1108.0517626.01	1108.6317667.54	1108.28 17898	1109.08				
17920.34	1109.217956.23	1109.3118005.24	1109.0618161.61	1108.5818331.29	1108.01				
18351.89	1108.918392.86	1107.6518423.28	1108.1918577.84	1107.6118586.22	1107.59				
18602.22	1109.418613.37	1109.7518642.23	1099.7418702.44	1081.0718721.85	1081.29				
18788.63	105518812.86	1045.3 18834.8	1045.1318883.55	1045.3218988.23	1044.74				
19257.63	1044.9 19316.1	1044.9119372.68	1072.2519385.55	1080.419393.08	1080.33				
19411.19	1080.519434.69	1086.4319442.05	1088.1319453.88	1091.5119464.06	1094.18				
19490.85	1104.819511.71	1113.6619532.66	1111.8219548.98	1112.1219557.65	1112.45				
19562.91	1113.619565.56	1113.51 19577.4	1113.619622.58	1096.6819646.03	1087.62				
19658.12	1087.219664.26	1085.5619691.93	1084.1419727.69	1082.1319753.37	1081.99				
19779.03	1082.519789.25	1082.5419834.99	1080.0919890.35	1081.619933.18	1083.41				
19935.92	1083.5 19961.9	1083.2719980.83	1083.0319995.55	1083.2320005.99	1082.91				
20022.31	1082.620040.29	1082.2920080.75	1081.8120099.51	1082.1320130.96	1081.32				
20144.15	1082.3 20145	1082.7820156.68	1086.520163.67	1089.320168.14	1090.38				
20179.75	1091.820183.35	1090.7520194.66	1086.3120205.53	1082.320214.36	1082.3				
20220.69	1083.720229.44	1087.3620251.13	1084.4920262.14	1085.0320271.54	1080.74				
20280.37	1079.9 20287.7	1079.5520300.81	1084.4620358.85	1084.4220381.15	1084.2				
20397.02	1084.520467.37	1086.120517.23	1110.4520533.96	1110.6820570.19	1110.64				
20594.26	1110.320610.59	1110.420632.61	1110.2620674.67	1110.4320701.11	1110.57				
21037.42	1111 21124.1	1110.9621136.91	1111.1321179.36	1111.321182.02	1111.27				
21202.46	1110.721219.63	1112.6321221.91	1112.6221258.72	1111.6121333.79	1109.91				
21340.19	**1109.721388.49**	**1109.6721725.44**	**1110.1321891.54**	**1110.3221894.05**	**1110.29**				
21912.43	1109.621938.45	1109.3921983.98	1109.2722000.48	1108.5122023.47	1109.89				
22041.79	111022072.76	1109.9722184.77	1110.12 22202.1	1110.222227.52	1110.66				
22237.06	1110.822260.98	1110.56 22301.5	1110.59 22873.9	1109.0722942.44	1108.51				
22955.28	1107.322990.05	1107.36							

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
14826.86	.035	19577.4	.03	20517.23	.035

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

```
      19577.420517.23          498.18  498.18  498.18            .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
14826.86 19577.4  1113.620517.2322990.05 1110.45
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1104.41	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.64	Wt. n-Val.		0.035	
W.S. Elev (ft)	1102.78	Reach Len. (ft)	498.18	498.18	498.18
Crit W.S. (ft)	1094.35	Flow Area (sq ft)		16455.12	
E.G. Slope (ft/ft)	0.001230	Area (sq ft)	38204.85	16455.12	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1747.47	Top Width (ft)	852.26	895.21	
Vel Total (ft/s)	10.27	Avg. Vel. (ft/s)		10.27	
Max Chl Dpth (ft)	58.04	Hydr. Depth (ft)		18.38	
Conv. Total (cfs)	4818069.5	Conv. (cfs)		4818069.5	
Length Wtd. (ft)	498.18	Wetted Per. (ft)		908.52	
Min Ch El (ft)	1079.55	Shear (lb/sq ft)		1.39	
Alpha	1.00	Stream Power (lb/ft s)		14.29	
Frctn Loss (ft)	0.57	Cum Volume (acre-ft)	316.08	5205.83	54.37
C & E Loss (ft)	0.04	Cum SA (acres)	63.69	285.20	55.78

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1104.41	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.64	Wt. n-Val.		0.035	
W.S. Elev (ft)	1102.77	Reach Len. (ft)	498.18	498.18	498.18
Crit W.S. (ft)	1094.37	Flow Area (sq ft)		16454.13	
E.G. Slope (ft/ft)	0.001231	Area (sq ft)		16454.13	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	895.20	Top Width (ft)		895.20	
Vel Total (ft/s)	10.27	Avg. Vel. (ft/s)		10.27	
Max Chl Dpth (ft)	23.22	Hydr. Depth (ft)		18.38	
Conv. Total (cfs)	4817613.0	Conv. (cfs)		4817613.0	
Length Wtd. (ft)	498.18	Wetted Per. (ft)		908.51	
Min Ch El (ft)	1079.55	Shear (lb/sq ft)		1.39	
Alpha	1.00	Stream Power (lb/ft s)		14.29	
Frctn Loss (ft)	0.57	Cum Volume (acre-ft)		5206.99	
C & E Loss (ft)	0.04	Cum SA (acres)		285.20	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.72

INPUT
Description:
Station Elevation Data num= 166

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15417.47	1116.115474.29	1115.9515547.94	1116.2115569.22	1116.2215709.49	1115.31				
15721.83	1115.2 15778.3	1121.8115787.24	1122.3515809.79	1123.5615819.12	1123.39				
15850.98	1123.815869.71	1122.7415892.68	1118.94 15909.8	1119.1615995.41	1116.79				
16017.62	1116.116022.65	1116.4416051.43	1117.7516149.15	1115.0316186.44	1113.96				
16270.13	1124.9 16273.2	1125.3816279.29	1125.4516347.32	1125.7816403.26	1121.94				
16454.9	1115.916501.53	1111.1116536.68	1113.09 16550.6	1113.616579.09	1113.04				
16613.89	110716634.61	1103.516695.61	1103.5116721.07	1103.5716737.76	1106.35				
16753.95	1108.216757.65	1113.5816777.91	1117.7116820.39	1126.6916841.31	1129.83				
16928.63	1127.616931.47	1127.5816943.11	1124.8316992.13	1113.5417010.85	1113.65				
17025.38	1113.617038.21	1111.6817047.17	1110.4417055.95	1110.4517114.12	1110.28				
17234.89	1109.817512.57	1108.1917553.86	1107.8217598.86	1107.5717670.56	1107.36				
17804.97	110717971.68	1106.5318088.71	1106.0418104.41	1106.0218131.14	1106.19				
18186.07	1106.818226.13	1106.54 18254.5	1106.418266.22	1106.9418292.31	1106.98				
18329.34	1106.718362.99	1106.63 18447.6	1106.7618532.58	1106.9618584.51	1107.09				
18595.09	1107.318662.68	1107.7118794.66	1107.9818892.55	1108.0818911.03	1107.96				
18975.29	1107.919003.02	1107.8519134.52	1107.7819170.42	1107.9619188.23	1107.95				
19344.38	1108.519404.19	1108.5419546.41	1108.8719550.04	1108.8519559.44	1111.18				
19569.21	1112.119622.28	1093.27 19646.4	1084.6219714.35	1083.7619737.49	1083.74				
19767.27	1082.7 19787	1082.1119845.37	1080.6519898.93	1080.3319903.45	1080.5				
19973.17	1082.719976.11	1082.7420043.38	1081.0420055.06	1080.7920118.31	1080.17				
20136.87	1080.420206.06	1080.49 20212.4	1080.78 20218.2	1082.120260.96	1080.89				
20269.28	1080.620271.57	1080.9620312.74	1085.7320378.18	1082.5720456.41	1085.24				
20460.07	1085.320509.38	1109.4320523.78	1110.5820530.13	1110.5120589.99	1108.84				
20604.23	1108.920617.71	1109.5220684.05	1109.3420695.96	1109.2720804.74	1109.46				
20942.06	1109.821026.78	1109.8321215.57	1110.1621268.95	1110.4621380.55	1110.76				
21406.78	111121446.98	1110.7921469.18	1109.9921509.85	1109.9521547.67	1110.01				
21601.77	1109.821625.14	1109.8521630.48	1109.8121645.52	1108.521701.95	1107.87				

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21919.77  1107.221953.35 1107.2321977.46  1107.222192.68 1107.3122212.18 1106.98
22273.96  1107.422285.04 1106.6422291.96 1106.0422333.53 1106.4722352.34 1106.74
22365.19    1107 22371.8 1107.0422376.74 1107.2722381.57 1107.7622404.63 1108.01
 22415.5  1108.622426.85 1109.0922439.42  1109.122503.13 1109.2322771.44  1108.9
22782.52  1108.922824.21  1108.722825.73 1108.1422838.66 1104.7422874.12 1104.65
22891.81  1104.7 22901.3 1104.54   22905 1105.9222919.78 1109.4522988.94 1109.12
 23211.3  1107.9

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
15417.47    .03519569.21    .03520523.78    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19569.2120523.78              500  508.39     520             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
15417.4719569.21  1112.120523.78 23211.3 1110.58
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1103.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1102.29	Reach Len. (ft)	500.00	508.39	520.00
Crit W.S. (ft)	1093.15	Flow Area (sq ft)		17099.27	
E.G. Slope (ft/ft)	0.001078	Area (sq ft)		17099.27	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	897.91	Top Width (ft)		897.91	
Vel Total (ft/s)	9.88	Avg. Vel. (ft/s)		9.88	
Max Chl Dpth (ft)	22.12	Hydr. Depth (ft)		19.04	
Conv. Total (cfs)	5147435.5	Conv. (cfs)		5147435.5	
Length Wtd. (ft)	508.39	Wetted Per. (ft)		905.63	
Min Ch El (ft)	1080.17	Shear (lb/sq ft)		1.27	
Alpha	1.00	Stream Power (lb/ft s)		12.56	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)	97.61	5013.95	54.37
C & E Loss (ft)	0.02	Cum SA (acres)	58.81	274.95	55.78

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1103.80	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1102.29	Reach Len. (ft)	500.00	508.39	520.00
Crit W.S. (ft)	1093.15	Flow Area (sq ft)		17098.18	
E.G. Slope (ft/ft)	0.001078	Area (sq ft)		17098.18	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	897.91	Top Width (ft)		897.91	
Vel Total (ft/s)	9.88	Avg. Vel. (ft/s)		9.88	
Max Chl Dpth (ft)	22.12	Hydr. Depth (ft)		19.04	
Conv. Total (cfs)	5146910.5	Conv. (cfs)		5146910.5	
Length Wtd. (ft)	508.39	Wetted Per. (ft)		905.62	
Min Ch El (ft)	1080.17	Shear (lb/sq ft)		1.27	
Alpha	1.00	Stream Power (lb/ft s)		12.56	
Frctn Loss (ft)	0.63	Cum Volume (acre-ft)		5015.13	
C & E Loss (ft)	0.02	Cum SA (acres)		274.95	

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CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.62

INPUT
Description:
Station Elevation Data    num=     128
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 17142.5  1115.817184.69 1109.7717189.53 1109.3217259.99 1108.4217304.26 1107.66
17319.68  1105.717329.73 1104.3117375.77 1098.1517385.87 1097.9817407.25 1098.07
17460.95  1106.617479.37 1109.4717507.52 1109.84   17512 1109.3917534.88 1107.69
 17543.2  1106.717614.91 1106.4717685.22 1106.1917854.67 1105.9117959.61 1105.83
 18032.1    110618093.53 1106.0318105.57  1105.618236.52 1106.0318340.33 1105.88
 18462.7  1105.518594.48 1105.5918709.29 1105.6718762.77 1105.7618765.56 1105.67
18934.43  1106.318943.81 1106.3618965.82  1107.918972.63 1108.6219018.75 1109.19
19055.14    110919116.38 1108.7919165.03 1111.2719184.54 1111.1419250.11 1110.58
19257.95  1109.6 19289.7 1106.5819307.87 1107.3119324.83 1107.8519342.73 1103.51
19352.54    110119369.09  1100.919452.78 1106.87 19464.6 1108.5919499.01 1108.85
19522.86  1108.819525.52 1108.6219538.92 1108.5819547.37 1108.6819548.15 1108.84
19553.43  1111.219564.56 1111.0519584.87 1103.8919632.28 1086.6219639.92  1083.9
19641.78    108419679.02 1083.9919738.88 1083.1819788.98 1083.3219815.96 1082.59
19863.35  1081.719910.35 1081.0119945.76 1080.6619965.57 1080.6320021.96 1081.11
20032.29  1081.220047.02 1081.91 20104.6 1084.2620150.01 1082.9220158.64 1082.78
20177.75  1084.220227.23 1078.6920234.38 1078.9120239.96 1079.2320257.65 1079.48
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20264.91  1079.520285.15 1080.28 20290.2  1079.720299.23 1078.3320302.46 1078.39
20306.78  1079.220322.87 1082.9420358.89 1083.36 20360.7 1083.5120396.11 1087.98
20423.78  1088.3 20458.1 1088.5520465.44 1090.3820499.35 1099.5320505.64 1101.28
20513.86  1101.420540.01 1101.4120577.65 1101.7620608.55 1102.2920649.81 1101.57
20650.06  1104.320671.03 1104.2620754.59 1103.7720804.75 1105.4320840.84 1106.33
20844.54  1106.5   20876 1108.9220900.25  1108.320930.29 1108.0720960.84 1108.07
21408.47  1109.321426.76 1109.2621613.71    110921660.45 1108.6121671.94 1107.77
21675.14  1107.421683.28 1109.4221699.37  1108.9 21726.2 1108.4421746.45 1108.84
21896.19  1108.621910.62 1108.0321920.67 1107.8421941.45 1107.8722118.94 1108.49
22492.85  1107.622533.76 1108.34 22583.5 1108.99

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
 17142.5    .03519564.56    .035   20876    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19564.56   20876              470  499.71     570             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
 17142.519564.56 1111.05   20876 22583.5 1108.92

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1103.15   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.72   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1101.44   Reach Len. (ft)           470.00     499.71     570.00
  Crit W.S. (ft)            1093.62   Flow Area (sq ft)                  16067.80
  E.G. Slope (ft/ft)       0.001429   Area (sq ft)              193.54   16067.80
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)            1054.35   Top Width (ft)            103.03     951.32
  Vel Total (ft/s)            10.52   Avg. Vel. (ft/s)                     10.52
  Max Chl Dpth (ft)           23.11   Hydr. Depth (ft)                     16.89
  Conv. Total (cfs)       4471166.0   Conv. (cfs)                       4471166.0
  Length Wtd. (ft)           499.71   Wetted Per. (ft)                    957.53
  Min Ch El (ft)            1078.33   Shear (lb/sq ft)                      1.50
  Alpha                        1.00   Stream Power (lb/ft s)               15.74
  Frctn Loss (ft)              0.85   Cum Volume (acre-ft)       96.50    4820.41      54.37
  C & E Loss (ft)              0.03   Cum SA (acres)             58.22     264.16      55.78


Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1103.15   Element                  Left OB    Channel   Right OB
  Vel Head (ft)                1.72   Wt. n-Val.                           0.035
  W.S. Elev (ft)            1101.44   Reach Len. (ft)           470.00     499.71     570.00
  Crit W.S. (ft)            1093.62   Flow Area (sq ft)                  16066.40
  E.G. Slope (ft/ft)       0.001429   Area (sq ft)                       16066.40
  Q Total (cfs)           169000.00   Flow (cfs)                        169000.00
  Top Width (ft)             951.16   Top Width (ft)                       951.16
  Vel Total (ft/s)            10.52   Avg. Vel. (ft/s)                     10.52
  Max Chl Dpth (ft)           23.11   Hydr. Depth (ft)                     16.89
  Conv. Total (cfs)       4471017.5   Conv. (cfs)                       4471017.5
  Length Wtd. (ft)           499.71   Wetted Per. (ft)                    957.37
  Min Ch El (ft)            1078.33   Shear (lb/sq ft)                      1.50
  Alpha                        1.00   Stream Power (lb/ft s)               15.75
  Frctn Loss (ft)              0.85   Cum Volume (acre-ft)               4821.59
  C & E Loss (ft)              0.03   Cum SA (acres)                      264.16


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 216.52

INPUT
Description: Upstream face of I-10 bridge


Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02  1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120
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Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18100     .0419487.53    .03520561.59     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19487.5320561.59            256.5   256.5   256.5             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1102.27   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.07   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1100.20   Reach Len. (ft)             23.50     23.50      23.50
  Crit W.S. (ft)            1094.26   Flow Area (sq ft)                   14652.61
  E.G. Slope (ft/ft)       0.002072   Area (sq ft)                        14652.61
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             999.71   Top Width (ft)                        999.71
  Vel Total (ft/s)            11.53   Avg. Vel. (ft/s)                      11.53
  Max Chl Dpth (ft)           17.00   Hydr. Depth (ft)                      14.66
  Conv. Total (cfs)       3712868.5   Conv. (cfs)                        3712868.5
  Length Wtd. (ft)            23.50   Wetted Per. (ft)                     1004.88
  Min Ch El (ft)            1083.20   Shear (lb/sq ft)                       1.89
  Alpha                        1.00   Stream Power (lb/ft s)                21.75
  Frctn Loss (ft)              0.06   Cum Volume (acre-ft)        95.45    4644.20      54.37
  C & E Loss (ft)              0.04   Cum SA (acres)              57.67     252.97      55.78


CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1102.27   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                2.07   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1100.20   Reach Len. (ft)             23.50     23.50      23.50
  Crit W.S. (ft)            1094.26   Flow Area (sq ft)                   14653.22
  E.G. Slope (ft/ft)       0.002072   Area (sq ft)                        14653.22
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)             999.72   Top Width (ft)                        999.72
  Vel Total (ft/s)            11.53   Avg. Vel. (ft/s)                      11.53
  Max Chl Dpth (ft)           17.00   Hydr. Depth (ft)                      14.66
  Conv. Total (cfs)       3713115.8   Conv. (cfs)                        3713115.8
  Length Wtd. (ft)            23.50   Wetted Per. (ft)                     1004.88
  Min Ch El (ft)            1083.20   Shear (lb/sq ft)                       1.89
  Alpha                        1.00   Stream Power (lb/ft s)                21.75
  Frctn Loss (ft)              0.06   Cum Volume (acre-ft)                 4645.39
  C & E Loss (ft)              0.04   Cum SA (acres)                        252.97


BRIDGE                  RIVER: Salt River
REACH: Reach 4             RS: 216.505

INPUT
Description: I-10 Bridge
Distance from Upstream XS =    23.5
Deck/Roadway Width        =     210
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      12
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18100    1120    112019233.73    1124    112419487.43 1123.08 1123.08
19487.53 1123.08    1116 19618.9 1123.42 1116.3419753.06 1123.48  1116.4
19887.31 1123.53 1116.4520027.54 1123.49 1116.41 20161.8 1123.26 1116.19
20296.05 1123.02 1115.9320430.31 1122.69  1115.620561.59 1122.45 1115.37

Upstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02  1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18100     .0419487.53    .03520561.59     .04
```

```
Bank Sta: Left   Right    Coeff Contr.   Expan.
      19487.5320561.59             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

Downstream  Deck/Roadway Coordinates
    num=      12
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18100    1120    112019233.73    1124    112419487.43 1123.08 1123.08
19487.53 1123.08    1116 19618.9 1123.42 1116.3419753.06 1123.48  1116.4
19887.31 1123.53 1116.4520027.54 1123.49 1116.41 20161.8 1123.26 1116.19
20296.05 1123.02 1115.9320430.31 1122.69  1115.620561.59 1122.45 1115.37

Downstream Bridge Cross Section Data
Station Elevation Data    num=      34
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18100    112019233.73    112419487.43 1123.0819487.53    111619521.34  1099.5
19587.97  1098.1 19618.9 1087.7519624.77 1087.7519641.67  1083.219664.55  1083.2
19753.06 1084.4519759.02  1084.519822.18  1083.219887.31  1083.219893.28  1083.2
19956.43  1083.220021.57  1083.220027.54  1083.220090.69  1083.220155.83  1083.2
 20161.8  1083.220224.95  1083.220290.09  1083.220296.05  1083.220359.21  1083.2
20424.34  1083.220430.31  1083.220441.25  1083.2   20486  1097.320515.84  1098.2
20545.67    111420561.59  1115.320561.69  1122.4 21103.4    1120

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18100     .0419487.53    .03520561.59     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19487.5320561.59             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1810019487.53    111620561.59 21103.4  1115.3

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  7

Pier Data
Pier Station     Upstream=   19620    Downstream=   19620
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   19755    Downstream=   19755
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   19890    Downstream=   19890
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20025    Downstream=   20025
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
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    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20160    Downstream=   20160
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20295    Downstream=   20295
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Pier Data
Pier Station     Upstream=   20430    Downstream=   20430
Upstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119
Downstream     num=       2
    Width   Elev    Width   Elev
       6    1080       6    1119

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum              Cd   =     1.2
       Yarnell               KVal =    1.05
Selected Low Flow Methods = Energy

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1102.27   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1100.20   E.G. Elev (ft)               1102.17       1101.33
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1099.75       1098.38
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1094.62       1094.61
  Q Weir (cfs)                           Max Chl Dpth (ft)              16.55         15.18
  Weir Sta Lft (ft)                      Vel Total (ft/s)               12.48         13.78
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           13544.36      12267.22
  Weir Submerg                           Froude # Chl                   0.58          0.66
  Weir Max Depth (ft)                    Specif Force (cu ft)       173610.44     162761.94
  Min Top Rd (ft)              1115.30   Hydr Depth (ft)                14.17         13.64
  Min El Prs (ft)              1116.45   W.P. Total (ft)             1180.25       1104.36
  Delta EG (ft)                   1.12   Conv. Total (cfs)          2925549.0     2592762.8
  Delta WS (ft)                   1.67   Top Width (ft)                955.95        899.64
  BR Open Area (sq ft)        29744.80   Frctn Loss (ft)                 0.79          0.08
  BR Open Vel (ft/s)             13.78   C & E Loss (ft)                 0.05          0.10
  Coef of Q                              Shear Total (lb/sq ft)          2.39          2.95
  Br Sel Method            Energy only   Power Total (lb/ft s)          29.83         40.59

Warning: The velocity head has changed by more than 0.5 ft (0.15 m).  This may indicate the need for
         additional cross sections.

BRIDGE OUTPUT    Profile #PF#2
Opening : Bridge #1

  E.G. US. (ft)                1102.27   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1100.20   E.G. Elev (ft)               1102.17       1101.33
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1099.75       1098.38
```

Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1094.62	1094.61
Q Weir (cfs)		Max Chl Dpth (ft)	16.55	15.18
Weir Sta Lft (ft)		Vel Total (ft/s)	12.48	13.78
Weir Sta Rgt (ft)		Flow Area (sq ft)	13545.18	12268.43
Weir Submerg		Froude # Chl	0.58	0.66
Weir Max Depth (ft)		Specif Force (cu ft)	173618.06	162771.28
Min Top Rd (ft)	1115.30	Hydr Depth (ft)	14.17	13.64
Min El Prs (ft)	1116.45	W.P. Total (ft)	1180.27	1104.45
Delta EG (ft)	1.11	Conv. Total (cfs)	2925816.0	2593054.5
Delta WS (ft)	1.67	Top Width (ft)	955.95	899.71
BR Open Area (sq ft)	29744.80	Frctn Loss (ft)	0.79	0.08
BR Open Vel (ft/s)	13.78	C & E Loss (ft)	0.05	0.10
Coef of Q		Shear Total (lb/sq ft)	2.39	2.95
Br Sel Method	Energy only	Power Total (lb/ft s)	29.82	40.58

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.49

INPUT
Description: Downstream face of I-10 bridge

Station Elevation Data num= 34

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18100	112019233.73		112419487.43	1123.0819487.53		111619521.34		1099.5	
19587.97	1098.1	19618.9	1087.7519624.77	1087.7519641.67		1083.219664.55		1083.2	
19753.06	1084.4519759.02		1084.519822.18	1083.219887.31		1083.219893.28		1083.2	
19956.43	1083.220021.57		1083.220027.54	1083.220090.69		1083.220155.83		1083.2	
20161.8	1083.220224.95		1083.220290.09	1083.220296.05		1083.220359.21		1083.2	
20424.34	1083.220430.31		1083.220441.25	1083.2	20486	1097.320515.84		1098.2	
20545.67	111420561.59		1115.320561.69	1122.4	21103.4	1120			

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18100	.04	19487.53	.03	20561.59	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19487.53	20561.59	23.25	23.25	23.25	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18100	19487.53	1116	20561.59	21103.4	1115.3

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1101.15	Element			
Vel Head (ft)	2.62	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.53	Reach Len. (ft)	23.25	23.25	23.25
Crit W.S. (ft)	1094.27	Flow Area (sq ft)		13010.51	
E.G. Slope (ft/ft)	0.002871	Area (sq ft)		13010.51	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	949.03	Top Width (ft)		949.03	
Vel Total (ft/s)	12.99	Avg. Vel. (ft/s)		12.99	
Max Chl Dpth (ft)	15.33	Hydr. Depth (ft)		13.71	
Conv. Total (cfs)	3153832.0	Conv. (cfs)		3153832.0	
Length Wtd. (ft)	23.25	Wetted Per. (ft)		953.60	
Min Ch El (ft)	1083.20	Shear (lb/sq ft)		2.45	
Alpha	1.00	Stream Power (lb/ft s)		31.77	
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	95.45	4567.70	54.37
C & E Loss (ft)	0.16	Cum SA (acres)	57.67	247.48	55.78

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1101.15	Element			
Vel Head (ft)	2.62	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.53	Reach Len. (ft)	23.25	23.25	23.25
Crit W.S. (ft)	1094.27	Flow Area (sq ft)		13011.78	
E.G. Slope (ft/ft)	0.002870	Area (sq ft)		13011.78	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	949.02	Top Width (ft)		949.02	
Vel Total (ft/s)	12.99	Avg. Vel. (ft/s)		12.99	

Max Chl Dpth (ft)	15.33	Hydr. Depth (ft)	13.71
Conv. Total (cfs)	3154346.0	Conv. (cfs)	3154346.0
Length Wtd. (ft)	23.25	Wetted Per. (ft)	953.61
Min Ch El (ft)	1083.20	Shear (lb/sq ft)	2.45
Alpha	1.00	Stream Power (lb/ft s)	31.76
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	4568.89
C & E Loss (ft)	0.16	Cum SA (acres)	247.48

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.42

INPUT
Description:
Station Elevation Data num= 72

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
15777.7	1112.1	15814.7	1111.7	15831.8	1110.6	15875.7	1110.6	15885.9	1111.3
15893.7	1110.9	16065.1	1110.8	16181.6	1110.4	16240.1	1110.4	16387.1	1109.3
16549.8	1108.9	16759.7	1109.7	16884.3	1111.2	16896.3	1107.6	16901.6	1105.5
16913.6	1111	16927.7	1110.7	16938.6	1109.3	17091.4	1109.6	17141.3	1105.7
17272	1104.7	17353.3	1106.1	17450	1106.2	17489	1105.9	17502.3	1107.2
17504.8	1107.2	17515.4	1105.7	17645.7	1105.4	17957.8	1104.6	18072.2	1104.6
18179.4	1104.8	18216.5	1105	18243.2	1104.5	18287	1102.9	18295	1103.8
18318	1105.2	18344.5	1103.3	18351.5	1102	18404.5	1102.5	18478.9	1099.8
18570.3	1099.5	18605.7	1098.9	18636.3	1099	18687.6	1107.9	18696.7	1107.4
18726.1	1101.6	18730.1	1100.6	18787.2	1100.9	18803.2	1100.4	18861.6	1100.1
18886.8	1100.3	18910.6	1099.7	18933	1098.7	18949.5	1098.8	18971.8	1098.2
19069.8	1100	19105.6	1101.7	19140.3	1102.6	19190.3	1106.6	19238.1	1106.5
19263.1	1102.7	19282	1099.5	19320.5	1099.6	19503	1099	19535.3	1098.8
19593	1082.7	20065.5	1082.3	20416.4	1082	20517.4	1107.9	20540.4	1108.4
21279.3	1108.4	21332.3	1117.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
15777.7	.04	19535.3	.035	20517.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19535.3	20517.4	510	488.7	410	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
15777.7	19238.1	1106.6	20517.4	21332.3	1107.9

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1100.93	Element			
Vel Head (ft)	2.08	Wt. n-Val.	0.040	0.035	
W.S. Elev (ft)	1098.86	Reach Len. (ft)	510.00	488.70	410.00
Crit W.S. (ft)	1093.10	Flow Area (sq ft)	0.26	14613.04	
E.G. Slope (ft/ft)	0.001943	Area (sq ft)	22.02	14613.04	
Q Total (cfs)	169000.00	Flow (cfs)	0.04	168999.95	
Top Width (ft)	1034.14	Top Width (ft)	87.30	946.84	
Vel Total (ft/s)	11.56	Avg. Vel. (ft/s)	0.15	11.57	
Max Chl Dpth (ft)	16.86	Hydr. Depth (ft)	0.03	15.43	
Conv. Total (cfs)	3834042.0	Conv. (cfs)	0.9	3834041.0	
Length Wtd. (ft)	488.70	Wetted Per. (ft)	9.21	951.17	
Min Ch El (ft)	1082.00	Shear (lb/sq ft)	0.00	1.86	
Alpha	1.00	Stream Power (lb/ft s)	0.00	21.55	
Frctn Loss (ft)	0.81	Cum Volume (acre-ft)	95.45	4560.33	54.37
C & E Loss (ft)	0.13	Cum SA (acres)	57.64	246.97	55.78

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1100.93	Element			
Vel Head (ft)	2.08	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.86	Reach Len. (ft)	510.00	488.70	410.00
Crit W.S. (ft)	1093.10	Flow Area (sq ft)		14614.20	
E.G. Slope (ft/ft)	0.001943	Area (sq ft)		14614.20	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	946.84	Top Width (ft)		946.84	
Vel Total (ft/s)	11.56	Avg. Vel. (ft/s)		11.56	
Max Chl Dpth (ft)	16.86	Hydr. Depth (ft)		15.43	
Conv. Total (cfs)	3834380.0	Conv. (cfs)		3834380.0	
Length Wtd. (ft)	488.70	Wetted Per. (ft)		951.23	

Min Ch El (ft)	1082.00	Shear (lb/sq ft)	1.86
Alpha	1.00	Stream Power (lb/ft s)	21.55
Frctn Loss (ft)	0.81	Cum Volume (acre-ft)	4561.51
C & E Loss (ft)	0.13	Cum SA (acres)	246.97

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.33

INPUT
Description:
Station Elevation Data num= 74

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16758.3	1108.5	16790.3	1107.7	16915.7	1107.5	16918.4	1107.9	16967.4	1107.4
17088.3	1107.2	17177.1	1106.2	17230.7	1104.1	17307.8	1103.2	17334.2	1104.9
17463	1103.9	17551.9	1102.8	17622.5	1102.7	17630	1102.1	17648.2	1103
17795.3	1103.3	17860	1103.2	17891.3	1102.2	17916.7	1102.4	17965.2	1101.9
18006.5	1101	18033.6	1102.9	18180.2	1102.5	18367.3	1102	18378.1	1101.3
18378.9	1101.5	18394.8	1101.2	18436.8	1101.5	18455.1	1100.2	18456.6	1099.1
18460.2	1098.5	18515.1	1096.6	18522	1099.8	18679.4	1098.3	18698.7	1105.3
18708.3	1106	18720.5	1103.8	18776.6	1098.7	18854.4	1098	18903.5	1095.3
18944.6	1095.5	19011.4	1101.4	19047.5	1101.5	19084.2	1098.3	19216.8	1097.9
19269.7	1097.9	19277.9	1097.7	19340.8	1106.5	19365.5	1107.1	19449.3	1085.8
19464.7	1082.2	19617.8	1081.5	19658.8	1081.1	20011.3	1080.8	20067.2	1081
20260.4	1081.5	20350	1081.5	20372.7	1082.2	20453.9	1106.7	20475	1107.5
21204.4	1107.5	21217.8	1103.3	21250.9	1104.2	21299.5	1103.3	21362.4	1102.8
21472.6	1102.9	21493.1	1102.9	21553.9	1103.7	21577.9	1103.5	21604.5	1102.4
21612.7	1101.6	21638.7	1101.3	21661.9	1095.5	21751.1	1112.9		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16758.3	.04	19365.5	.035	20453.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19365.5	20453.9	600	490.24	380	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16758.3	19365.5	1107.1	20453.9	21751.1	1106.7

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1099.99	Element			
Vel Head (ft)	1.63	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.35	Reach Len. (ft)	600.00	490.24	380.00
Crit W.S. (ft)	1091.37	Flow Area (sq ft)		16489.69	
E.G. Slope (ft/ft)	0.001446	Area (sq ft)	370.01	16489.69	37.18
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1473.62	Top Width (ft)	421.23	1026.33	26.05
Vel Total (ft/s)	10.25	Avg. Vel. (ft/s)		10.25	
Max Chl Dpth (ft)	17.55	Hydr. Depth (ft)		16.07	
Conv. Total (cfs)	4444829.0	Conv. (cfs)		4444829.0	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1030.72	
Min Ch El (ft)	1080.80	Shear (lb/sq ft)		1.44	
Alpha	1.00	Stream Power (lb/ft s)		14.80	
Frctn Loss (ft)	0.60	Cum Volume (acre-ft)	93.15	4385.86	54.20
C & E Loss (ft)	0.10	Cum SA (acres)	54.67	235.90	55.66

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1099.99	Element			
Vel Head (ft)	1.63	Wt. n-Val.		0.035	
W.S. Elev (ft)	1098.36	Reach Len. (ft)	600.00	490.24	380.00
Crit W.S. (ft)	1091.37	Flow Area (sq ft)		16490.95	
E.G. Slope (ft/ft)	0.001445	Area (sq ft)		16490.95	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1026.33	Top Width (ft)		1026.33	
Vel Total (ft/s)	10.25	Avg. Vel. (ft/s)		10.25	
Max Chl Dpth (ft)	17.56	Hydr. Depth (ft)		16.07	
Conv. Total (cfs)	4445389.5	Conv. (cfs)		4445389.5	
Length Wtd. (ft)	490.24	Wetted Per. (ft)		1030.72	
Min Ch El (ft)	1080.80	Shear (lb/sq ft)		1.44	
Alpha	1.00	Stream Power (lb/ft s)		14.79	
Frctn Loss (ft)	0.60	Cum Volume (acre-ft)		4387.03	
C & E Loss (ft)	0.10	Cum SA (acres)		235.90	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.23

INPUT
Description:
Station Elevation Data num= 79

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16307.2	1106.8	16347.4	1106.3	16584.4	1106.6	16655.9	1106.7	16722.9	1105
16805.1	1104.8	16843.8	1105.4	16940.7	1105.1	17025.5	1103.7	17072.4	1104.3
17106.6	1103.9	17271.4	1105.1	17286.3	1105.2	17300.1	1103	17309.7	1103.1
17479.7	1103.3	17486.2	1103.3	17748.9	1103.1	17792.4	1103	17807.8	1101.8
17964.2	1101.2	18041.5	1100.9	18063.2	1101.5	18221.3	1101.1	18316.7	1097.6
18393.9	1100.2	18494.3	1099.7	18526.6	1100.5	18534.7	1099.9	18548.2	1097
18576.9	1100.1	18638.8	1099.4	18676.7	1096.6	18856.1	1094.3	18888.6	1092.6
18923.6	1105.7	18937.2	1105.4	18965.6	1093.9	18973.7	1091.2	18983.9	1091.1
19024.1	1096.2	19175.7	1097.7	19329.5	1097.3	19356.4	1093	19372.4	1091.7
19394.5	1090.9	19443.1	1084.8	19458.8	1083.8	19477	1083.8	19514.7	1080.5
19554.9	1078.5	19707.6	1078.8	19807	1078.7	19970	1078.7	20101	1079.1
20257.8	1079.2	20360.8	1079.3	20429.8	1103.9	20444.5	1103.8	21274.9	1103.8
21292.4	1106.1	21298.1	1106.3	21304.5	1103.8	21313.9	1101.7	21457.4	1101.4
21690	1101.2	21797.9	1101.7	21816.8	1103.7	21840.4	1102.2	21943.8	1102.1
21957.3	1102.8	21973.7	1101.5	22038.8	1101	22065.3	1102.4	22088.6	1101
22106	1098	22140.9	1104.1	22146.7	1104.5	22197.5	1114		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16307.2	.04	19329.5	.035	20429.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19329.5	20429.8	590	517.61	450	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16307.2	19329.5	1105	20429.8	22197.5	1105

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1099.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.30	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.99	Reach Len. (ft)	590.00	517.61	450.00
Crit W.S. (ft)	1089.39	Flow Area (sq ft)		18502.08	
E.G. Slope (ft/ft)	0.001058	Area (sq ft)	1205.93	18502.08	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1738.50	Top Width (ft)	654.78	1083.71	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.49	Hydr. Depth (ft)		17.07	
Conv. Total (cfs)	5194599.5	Conv. (cfs)		5194599.5	
Length Wtd. (ft)	517.61	Wetted Per. (ft)		1087.96	
Min Ch El (ft)	1078.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.26	
Frctn Loss (ft)	0.52	Cum Volume (acre-ft)	82.30	4188.95	54.04
C & E Loss (ft)	0.03	Cum SA (acres)	47.26	224.03	55.54

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1099.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.30	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.99	Reach Len. (ft)	590.00	517.61	450.00
Crit W.S. (ft)	1089.39	Flow Area (sq ft)		18503.28	
E.G. Slope (ft/ft)	0.001059	Area (sq ft)		18503.28	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1083.71	Top Width (ft)		1083.71	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.49	Hydr. Depth (ft)		17.07	
Conv. Total (cfs)	5192976.0	Conv. (cfs)		5192976.0	
Length Wtd. (ft)	517.61	Wetted Per. (ft)		1088.65	
Min Ch El (ft)	1078.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.26	
Frctn Loss (ft)	0.52	Cum Volume (acre-ft)		4190.11	
C & E Loss (ft)	0.03	Cum SA (acres)		224.03	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 216.13

INPUT
Description:

Station Elevation Data num= 67

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
16426.6	1105.9	16587.5	1104.7	16635.7	1102.6	16819.4	1103.3	16993.1	1102.9
17098.1	1102.8	17115.4	1100.5	17132.4	1100.6	17142	1102.8	17188.2	1102.3
17212.9	1103.3	17259.7	1102.7	17444	1103	17594.1	1102.7	17626.7	1102.3
17648.9	1100.8	17726.6	1100.8	17763	1102.2	17831.1	1102.1	17922.1	1103.5
17930.8	1101.9	17948.1	1103.8	17970.1	1100.9	18007	1100.9	18014.4	1095.7
18705.2	1095.7	18812.9	1096.6	18825.4	1095.8	18974.2	1096.9	19012	1096.6
19022.3	1098.1	19071.7	1097.7	19097.3	1098.8	19117.4	1098.8	19143.8	1101.1
19154.2	1103.6	19166	1103.6	19179.4	1099.6	19318.1	1099.4	19345.1	1091.3
19390.3	1087	19444.1	1082.8	19458.1	1083	19534.5	1080	19580.9	1082.3
19595.2	1078.2	19849.2	1078.4	19937.8	1078.2	20155.1	1078	20385	1078.6
20445.7	1100.3	21392	1100.3	21412.6	1104.5	21436	1098.6	21594.6	1099.3
21748.3	1100.3	21786.3	1099.8	21807.4	1098.6	21868.2	1100	21940	1100.5
22096.1	1101.4	22142.8	1101.3	22335.7	1100	22363.4	1098.9	22490.9	1100.4
22516.1	1096.7	22597.4	1115.1						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16426.6	.04	19318.1	.035	20445.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19318.1	20445.7	550	500.46	390	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16426.6	19318.1	1099.4	20445.7	22597.4	1100.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1098.73	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.54	Reach Len. (ft)	550.00	500.46	390.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		19303.70	
E.G. Slope (ft/ft)	0.000954	Area (sq ft)	1650.34	19303.70	3.97
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	2129.80	Top Width (ft)	1006.68	1113.68	9.44
Vel Total (ft/s)	8.75	Avg. Vel. (ft/s)		8.75	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		17.33	
Conv. Total (cfs)	5471702.5	Conv. (cfs)		5471702.5	
Length Wtd. (ft)	500.46	Wetted Per. (ft)		1118.94	
Min Ch El (ft)	1078.00	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		8.99	
Frctn Loss (ft)	0.50	Cum Volume (acre-ft)	62.96	3964.33	54.02
C & E Loss (ft)	0.01	Cum SA (acres)	36.00	210.97	55.49

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1098.73	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1097.54	Reach Len. (ft)	550.00	500.46	390.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		19304.79	
E.G. Slope (ft/ft)	0.000954	Area (sq ft)		19304.79	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1113.68	Top Width (ft)		1113.68	
Vel Total (ft/s)	8.75	Avg. Vel. (ft/s)		8.75	
Max Chl Dpth (ft)	19.54	Hydr. Depth (ft)		17.33	
Conv. Total (cfs)	5472215.0	Conv. (cfs)		5472215.0	
Length Wtd. (ft)	500.46	Wetted Per. (ft)		1118.94	
Min Ch El (ft)	1078.00	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		8.99	
Frctn Loss (ft)	0.50	Cum Volume (acre-ft)		3965.48	
C & E Loss (ft)	0.01	Cum SA (acres)		210.97	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 **RS: 216.04**

INPUT
Description:
Station Elevation Data num= 63

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17056.9	1104.8	17064.5	1104.7	17069.2	1099.8	17072	1101.9	17078.9	1105
17149.1	1103.4	17162.9	1101.9	17281	1100	17549.7	1099.4	17599.6	1100.8
17818.3	1099.8	17961.6	1101.8	18091.7	1101.7	18098	1099.8	18798.9	1099.8
18807.5	1094.8	18960.8	1094.8	19054.4	1094.7	19081.9	1095.5	19098	1093.5
19151.6	1094.3	19175.6	1095	19188.4	1098.5	19201	1100	19214.9	1098.4

19219.3	1099.1	19227.7	1103.2	19386.1	1101.6	19417.8	1089	19500.7	1080.6
19516.7	1080.2	19531.5	1078.4	19608.3	1077.5	19724.9	1081.7	19739.1	1080.4
19758.6	1081.1	19770	1077.8	19800	1077.8	20231.5	1078.4	20418.1	1078.3
20424.4	1078.2	20473.4	1099.4	20478	1099	21487.5	1099	21501.9	1098.9
21528.7	1104.2	21544.2	1099.7	21573.3	1099.2	21582.6	1100.4	21586.2	1102.2
21768	1099.8	21775.2	1099	21961	1098.7	21988.6	1099.7	22183.1	1099.4
22224.8	1100.5	22465.8	1100	22481.3	1098.4	22530.7	1098.7	22555.3	1100.8
22840.9	1100.4	22866.7	1097.9	22941.8	1117.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17056.9	.04	19386.1	.035	20473.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19386.1	20473.4	540	507.78	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17056.9	19386.1	1101.6	20473.4	22941.8	1099.4

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1098.22	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.29	Wt. n-Val.		0.035	
W.S. Elev (ft)	1096.93	Reach Len. (ft)	540.00	507.78	500.00
Crit W.S. (ft)	1088.52	Flow Area (sq ft)		18515.97	
E.G. Slope (ft/ft)	0.001041	Area (sq ft)	847.18	18515.97	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1448.65	Top Width (ft)	378.81	1069.83	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.43	Hydr. Depth (ft)		17.31	
Conv. Total (cfs)	5238312.5	Conv. (cfs)		5238312.5	
Length Wtd. (ft)	507.78	Wetted Per. (ft)		1076.39	
Min Ch El (ft)	1077.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.20	
Frctn Loss (ft)	0.94	Cum Volume (acre-ft)	47.19	3747.08	54.00
C & E Loss (ft)	0.21	Cum SA (acres)	27.26	198.43	55.45

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1098.22	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.29	Wt. n-Val.		0.035	
W.S. Elev (ft)	1096.93	Reach Len. (ft)	540.00	507.78	500.00
Crit W.S. (ft)	1088.52	Flow Area (sq ft)		18517.14	
E.G. Slope (ft/ft)	0.001041	Area (sq ft)		18517.14	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1069.84	Top Width (ft)		1069.84	
Vel Total (ft/s)	9.13	Avg. Vel. (ft/s)		9.13	
Max Chl Dpth (ft)	19.43	Hydr. Depth (ft)		17.31	
Conv. Total (cfs)	5238850.5	Conv. (cfs)		5238850.5	
Length Wtd. (ft)	507.78	Wetted Per. (ft)		1076.39	
Min Ch El (ft)	1077.50	Shear (lb/sq ft)		1.12	
Alpha	1.00	Stream Power (lb/ft s)		10.20	
Frctn Loss (ft)	0.94	Cum Volume (acre-ft)		3748.21	
C & E Loss (ft)	0.21	Cum SA (acres)		198.43	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.94

INPUT
Description:
Station Elevation Data num= 65

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev

17234.9	1103.6	17416.5	1099.3	17481.8	1099.6	17669.1	1098.4	17750	1099.1
17946.3	1099.3	18106.7	1099.8	18125.7	1102.5	18151.3	1094.6	18167.9	1094.6
18209	1090.7	18234.4	1099.1	18274.9	1092.7	18296.5	1092.5	18324.6	1096.4
18363.1	1100	18415	1106.7	18417.8	1107.8	18426.6	1103.4	19038.8	1103.4
19077.4	1103.5	19085.3	1101.4	19097.5	1104.1	19147.9	1103.4	19268.7	1104.6
19306.1	1104.5	19526.4	1107.5	19620.3	1079.3	19632.6	1079.5	19650.2	1077.8
19673.9	1077.8	20074	1078.4	20226	1078.4	20242.2	1082.6	20312.6	1082.8
20361.4	1085.9	20380.6	1089.1	20408	1090.1	20426	1093.3	20477.9	1093.4
20496.8	1098.5	20512.7	1098	20521.3	1094.3	20544.4	1094.2	20552.5	1096.4
21573.5	1096.4	21577.1	1100.2	21638.8	1099.7	21664.8	1103.7	21680.7	1100.4
21856.5	1099.3	22065	1098.8	22070.7	1098.8	22073.1	1097.8	22355.6	1099.5
22366.6	1099.8	22599.5	1099.2	22620.8	1098.1	22669.8	1098	22679.1	1099.5
22906.4	1098.8	23101.2	1100.9	23111.4	1099.5	23139.6	1106.3	23179.1	1117.8

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17234.9	.04	19526.4	.035	20496.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19526.4	20496.8	560	540.02	520	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17234.9	19526.4	1107.5	20496.8	23179.1	1098.5

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1097.08	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.38	Wt. n-Val.		0.035	
W.S. Elev (ft)	1093.70	Reach Len. (ft)	560.00	540.02	520.00
Crit W.S. (ft)	1090.81	Flow Area (sq ft)		11461.59	
E.G. Slope (ft/ft)	0.004117	Area (sq ft)	93.26	11461.59	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	983.97	Top Width (ft)	77.30	906.67	
Vel Total (ft/s)	14.74	Avg. Vel. (ft/s)		14.74	
Max Chl Dpth (ft)	15.90	Hydr. Depth (ft)		12.64	
Conv. Total (cfs)	2633937.0	Conv. (cfs)		2633937.0	
Length Wtd. (ft)	540.02	Wetted Per. (ft)		910.11	
Min Ch El (ft)	1077.80	Shear (lb/sq ft)		3.24	
Alpha	1.00	Stream Power (lb/ft s)		47.73	
Frctn Loss (ft)	2.09	Cum Volume (acre-ft)	41.36	3572.36	54.00
C & E Loss (ft)	0.04	Cum SA (acres)	24.43	186.91	55.45

Warning: Divided flow computed for this cross-section.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1097.08	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.37	Wt. n-Val.		0.035	
W.S. Elev (ft)	1093.70	Reach Len. (ft)	560.00	540.02	520.00
Crit W.S. (ft)	1090.81	Flow Area (sq ft)		11464.57	
E.G. Slope (ft/ft)	0.004113	Area (sq ft)		11464.57	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	906.67	Top Width (ft)		906.67	
Vel Total (ft/s)	14.74	Avg. Vel. (ft/s)		14.74	
Max Chl Dpth (ft)	15.90	Hydr. Depth (ft)		12.64	
Conv. Total (cfs)	2635069.5	Conv. (cfs)		2635069.5	
Length Wtd. (ft)	540.02	Wetted Per. (ft)		910.12	
Min Ch El (ft)	1077.80	Shear (lb/sq ft)		3.23	
Alpha	1.00	Stream Power (lb/ft s)		47.68	
Frctn Loss (ft)	2.09	Cum Volume (acre-ft)		3573.46	
C & E Loss (ft)	0.04	Cum SA (acres)		186.91	

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.84

INPUT
Description:
Station Elevation Data num= 55

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17657.2	1101.6	17764.4	1101.1	17778.7	1099.6	17915.7	1096.1	18947	1096.1
18949.6	1098.8	18966	1095.8	19012.5	1096.3	19065.4	1099.6	19087.3	1099.8
19091.9	1097.4	19117.9	1099	19128.4	1100.8	19135.6	1097.9	19142.8	1097.9

19299.1	1098.5	19370.8	1098.4	19556.3	1100.9	19597.1	1077	19685.5	1077.2
19875.2	1077.5	19951	1077.7	19963.2	1080.6	19989.6	1080.1	19999.6	1077.7
20186.5	1077.9	20315.6	1078.3	20324.3	1075.8	20340	1076	20351.9	1079.6
20416.4	1079	20443.6	1092.1	20461.6	1098.2	20612.7	1096.8	20680.5	1097.4
21713	1097.4	21721.9	1098	21747.8	1102.3	21761.3	1098.5	21898.1	1098.1
22152.1	1097.3	22203.5	1096.9	22219.4	1097.9	22403	1099.1	22420.2	1097.7
22434.6	1098.7	22545.4	1098.4	22704	1099.2	22777.7	1097.8	22788.5	1100.1
22799.7	1097.6	22986.5	1097.8	23064	1099.6	23323.1	1098.4	23377.2	1117.2

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17657.2	.04	19556.3	.035	20461.6	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19556.3	20461.6	120	123.82	130	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17657.2	19556.3	1100.9	20461.6	23377.2	1098.2

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1094.94	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.23	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.71	Reach Len. (ft)	120.00	123.82	130.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		11719.46	
E.G. Slope (ft/ft)	0.003651	Area (sq ft)		11719.46	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	870.81	Top Width (ft)		870.81	
Vel Total (ft/s)	14.42	Avg. Vel. (ft/s)		14.42	
Max Chl Dpth (ft)	15.91	Hydr. Depth (ft)		13.46	
Conv. Total (cfs)	2797094.8	Conv. (cfs)		2797094.8	
Length Wtd. (ft)	123.82	Wetted Per. (ft)		879.22	
Min Ch El (ft)	1075.80	Shear (lb/sq ft)		3.04	
Alpha	1.00	Stream Power (lb/ft s)		43.81	
Frctn Loss (ft)	0.36	Cum Volume (acre-ft)	40.76	3428.67	54.00
C & E Loss (ft)	0.21	Cum SA (acres)	23.93	175.89	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1094.94	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.23	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.72	Reach Len. (ft)	120.00	123.82	130.00
Crit W.S. (ft)	1088.70	Flow Area (sq ft)		11725.41	
E.G. Slope (ft/ft)	0.003644	Area (sq ft)		11725.41	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	870.81	Top Width (ft)		870.81	
Vel Total (ft/s)	14.41	Avg. Vel. (ft/s)		14.41	
Max Chl Dpth (ft)	15.92	Hydr. Depth (ft)		13.46	
Conv. Total (cfs)	2799436.0	Conv. (cfs)		2799436.0	
Length Wtd. (ft)	123.82	Wetted Per. (ft)		879.24	
Min Ch El (ft)	1075.80	Shear (lb/sq ft)		3.03	
Alpha	1.00	Stream Power (lb/ft s)		43.73	
Frctn Loss (ft)	0.36	Cum Volume (acre-ft)		3429.72	
C & E Loss (ft)	0.21	Cum SA (acres)		175.89	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.82

INPUT
Description: Upstream Face of 24th St. Bridge
Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18260	1096	18620	1094.7	19170	1096	19549.9	1097.71	19550	1094.5
19550.1	1088.1	19553.1	1088.1	19587.4	1076	20384.4	1076	20407.9	1085.7
20410.9	1085.7	20410.9	1094.7	20411	1097.8	21080	1097.4	21490	1100

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18260	.04	19550	.035	20410.9	.04

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

```
        19550 20410.9          115.96  115.96  115.96            .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7
```

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1094.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.53	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.84	Reach Len. (ft)	25.98	25.98	25.98
Crit W.S. (ft)	1087.02	Flow Area (sq ft)		13249.11	
E.G. Slope (ft/ft)	0.002409	Area (sq ft)		13249.11	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.86	Top Width (ft)		860.86	
Vel Total (ft/s)	12.76	Avg. Vel. (ft/s)		12.76	
Max Chl Dpth (ft)	15.84	Hydr. Depth (ft)		15.39	
Conv. Total (cfs)	3443549.0	Conv. (cfs)		3443549.0	
Length Wtd. (ft)	25.98	Wetted Per. (ft)		874.68	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.28	
Alpha	1.00	Stream Power (lb/ft s)		29.05	
Frctn Loss (ft)	0.08	Cum Volume (acre-ft)	40.76	3393.18	54.00
C & E Loss (ft)	0.04	Cum SA (acres)	23.93	173.43	55.45

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1094.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.52	Wt. n-Val.		0.035	
W.S. Elev (ft)	1091.85	Reach Len. (ft)	25.98	25.98	25.98
Crit W.S. (ft)	1087.02	Flow Area (sq ft)		13254.68	
E.G. Slope (ft/ft)	0.002405	Area (sq ft)		13254.68	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.86	Top Width (ft)		860.86	
Vel Total (ft/s)	12.75	Avg. Vel. (ft/s)		12.75	
Max Chl Dpth (ft)	15.85	Hydr. Depth (ft)		15.40	
Conv. Total (cfs)	3445927.3	Conv. (cfs)		3445927.3	
Length Wtd. (ft)	25.98	Wetted Per. (ft)		874.69	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.28	
Alpha	1.00	Stream Power (lb/ft s)		29.01	
Frctn Loss (ft)	0.08	Cum Volume (acre-ft)		3394.22	
C & E Loss (ft)	0.04	Cum SA (acres)		173.43	

```
BRIDGE                  RIVER: Salt River
REACH: Reach 4             RS: 215.815

INPUT
Description: 24th Street
Distance from Upstream XS =   25.98
Deck/Roadway Width        =      64
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19550 1097.71 1094.54 19618.9 1098.05 1094.87 19690.9 1098.45 1095.27
 19762.9 1098.66 1095.48 19837.9 1098.67  1095.5 19906.9 1098.93 1095.76
 19978.9 1098.93 1095.76 20053.9 1098.94 1095.77 20125.9 1098.83 1095.66
 20197.9 1098.69 1095.51 20269.9 1098.47  1095.3 20341.9 1098.19 1095.01
 20410.9 1097.85 1094.68

Upstream Bridge Cross Section Data
Station Elevation Data    num=      15
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18260    1096   18620  1094.7   19170    1096 19549.9 1097.71   19550  1094.5
 19550.1  1088.1 19553.1  1088.1 19587.4    1076 20384.4    1076 20407.9  1085.7
 20410.9  1085.7 20410.9  1094.7   20411  1097.8   21080  1097.4   21490    1100

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18260     .04   19550    .035 20410.9     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
        19550 20410.9            .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7

Downstream  Deck/Roadway Coordinates
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```
    num=       13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   19550 1097.71 1094.54 19618.9 1098.05 1094.87 19690.9 1098.45 1095.27
 19762.9 1098.66 1095.48 19837.9 1098.67  1095.5 19906.9 1098.93 1095.76
 19978.9 1098.93 1095.76 20053.9 1098.94 1095.77 20125.9 1098.83 1095.66
 20197.9 1098.69 1095.51 20269.9 1098.47  1095.3 20341.9 1098.19 1095.01
 20410.9 1097.85 1094.68

Downstream Bridge Cross Section Data
Station Elevation Data    num=      15
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18260    1096   18620  1094.7   19170    1096 19549.9 1097.71   19550  1094.5
 19550.1  1088.1 19553.1  1088.1 19587.4    1076 20384.4    1076 20407.9  1085.7
 20410.9  1085.7 20410.9  1094.7   20411  1097.8   21080  1097.4   21490    1100

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18260     .04   19550    .035 20410.9     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
         19550 20410.9             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   18260   19550  1094.5 20410.9   21490  1085.7

Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  11

Pier Data
Pier Station     Upstream= 19620.4    Downstream= 19620.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1094.8
Downstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1094.8

Pier Data
Pier Station     Upstream= 19692.4    Downstream= 19692.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3 1095.27
Downstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3 1095.27

Pier Data
Pier Station     Upstream= 19764.4    Downstream= 19764.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3 1095.48
Downstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3 1095.48

Pier Data
Pier Station     Upstream= 19836.4    Downstream= 19836.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1095.5
Downstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1095.5

Pier Data
Pier Station     Upstream= 19908.4    Downstream= 19908.4
Upstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
        3    1076       3  1095.7
```

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Pier Data
Pier Station     Upstream= 19980.4    Downstream= 19980.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
Pier Station     Upstream= 20052.4    Downstream= 20052.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.7

Pier Data
Pier Station     Upstream= 20124.4    Downstream= 20124.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.6
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.6

Pier Data
Pier Station     Upstream= 20196.4    Downstream= 20196.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.5

Pier Data
Pier Station     Upstream= 20268.4    Downstream= 20268.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.3
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3  1095.3

Pier Data
Pier Station     Upstream= 20340.4    Downstream= 20340.4
Upstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3    1095
Downstream     num=       2
    Width   Elev    Width   Elev
       3    1076       3    1095

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd   =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1094.37   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1091.84   E.G. Elev (ft)               1094.24       1093.90
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1091.30       1090.71
```

Q Bridge (cfs)	169000.00	Crit W.S. (ft)	1087.33	1087.32
Q Weir (cfs)		Max Chl Dpth (ft)	15.30	14.71
Weir Sta Lft (ft)		Vel Total (ft/s)	13.77	14.33
Weir Sta Rgt (ft)		Flow Area (sq ft)	12274.94	11791.49
Weir Submerg		Froude # Chl	0.63	0.67
Weir Max Depth (ft)		Specif Force (cu ft)	164743.48	160678.91
Min Top Rd (ft)	1094.50	Hydr Depth (ft)	14.83	14.24
Min El Prs (ft)	1095.77	W.P. Total (ft)	1177.03	1163.08
Delta EG (ft)	0.65	Conv. Total (cfs)	2487522.5	2344965.3
Delta WS (ft)	1.03	Top Width (ft)	827.85	827.84
BR Open Area (sq ft)	15655.29	Frctn Loss (ft)	0.31	0.10
BR Open Vel (ft/s)	14.33	C & E Loss (ft)	0.02	0.09
Coef of Q		Shear Total (lb/sq ft)	3.01	3.29
Br Sel Method	Energy only	Power Total (lb/ft s)	41.37	47.12

BRIDGE OUTPUT Profile #PF#2
Opening : Bridge #1

		Element	Inside BR US	Inside BR DS
E.G. US. (ft)	1094.37	E.G. Elev (ft)	1094.24	1093.90
W.S. US. (ft)	1091.85	W.S. Elev (ft)	1091.30	1090.71
Q Total (cfs)	169000.00	Crit W.S. (ft)	1087.33	1087.32
Q Bridge (cfs)	169000.00	Max Chl Dpth (ft)	15.30	14.71
Q Weir (cfs)		Vel Total (ft/s)	13.76	14.33
Weir Sta Lft (ft)		Flow Area (sq ft)	12281.21	11792.30
Weir Submerg		Froude # Chl	0.63	0.67
Weir Max Depth (ft)		Specif Force (cu ft)	164799.55	160685.28
Min Top Rd (ft)	1094.50	Hydr Depth (ft)	14.84	14.24
Min El Prs (ft)	1095.77	W.P. Total (ft)	1177.27	1163.10
Delta EG (ft)	0.66	Conv. Total (cfs)	2489299.8	2345201.5
Delta WS (ft)	1.03	Top Width (ft)	827.85	827.84
BR Open Area (sq ft)	15655.29	Frctn Loss (ft)	0.31	0.10
BR Open Vel (ft/s)	14.33	C & E Loss (ft)	0.03	0.09
Coef of Q		Shear Total (lb/sq ft)	3.00	3.29
Br Sel Method	Energy only	Power Total (lb/ft s)	41.31	47.11

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.81

INPUT
Description: Downstream Face of 24th St. Bridge
Station Elevation Data num= 15

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18260	1096	18620	1094.7	19170	1096	19549.9	1097.71	19550	1094.5
19550.1	1088.1	19553.1	1088.1	19587.4	1076	20384.4	1076	20407.9	1085.7
20410.9	1085.7	20410.9	1094.7	20411	1097.8	21080	1097.4	21490	1100

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18260	.04	19550	.035	20410.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19550	20410.9	300	264.36	230	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18260	19550	1094.5	20410.9	21490	1085.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1093.71	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.90	Wt. n-Val.		0.035	
W.S. Elev (ft)	1090.81	Reach Len. (ft)	300.00	264.36	230.00
Crit W.S. (ft)	1087.03	Flow Area (sq ft)		12363.67	
E.G. Slope (ft/ft)	0.003024	Area (sq ft)		12363.67	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.84	Top Width (ft)		860.84	
Vel Total (ft/s)	13.67	Avg. Vel. (ft/s)		13.67	
Max Chl Dpth (ft)	14.81	Hydr. Depth (ft)		14.36	
Conv. Total (cfs)	3073424.0	Conv. (cfs)		3073424.0	
Length Wtd. (ft)	264.36	Wetted Per. (ft)		872.62	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.67	
Alpha	1.00	Stream Power (lb/ft s)		36.56	
Frctn Loss (ft)	1.04	Cum Volume (acre-ft)	40.76	3360.68	54.00
C & E Loss (ft)	0.12	Cum SA (acres)	23.93	171.21	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for

additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1093.71	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.90	Wt. n-Val.		0.035	
W.S. Elev (ft)	1090.81	Reach Len. (ft)	300.00	264.36	230.00
Crit W.S. (ft)	1087.03	Flow Area (sq ft)		12364.51	
E.G. Slope (ft/ft)	0.003023	Area (sq ft)		12364.51	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	860.84	Top Width (ft)		860.84	
Vel Total (ft/s)	13.67	Avg. Vel. (ft/s)		13.67	
Max Chl Dpth (ft)	14.81	Hydr. Depth (ft)		14.36	
Conv. Total (cfs)	3073767.5	Conv. (cfs)		3073767.5	
Length Wtd. (ft)	264.36	Wetted Per. (ft)		872.62	
Min Ch El (ft)	1076.00	Shear (lb/sq ft)		2.67	
Alpha	1.00	Stream Power (lb/ft s)		36.55	
Frctn Loss (ft)	1.04	Cum Volume (acre-ft)		3361.71	
C & E Loss (ft)	0.12	Cum SA (acres)		171.21	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.75

INPUT
Description:
Station Elevation Data num= 56

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17125.3	1100.1	17248.5	1099.8	17267.3	1100.8	17468.2	1100.1	17719.4	1099.7
17947.7	1097.8	18060.6	1099.3	18081.3	1096.7	18136.4	1097.4	19508	1097.7
19508.1	1097.6	19524	1097.4	19542.9	1095.1	19551.7	1095.7	19565.8	1090.9
19639.9	1074.2	19781.5	1073.6	19800.3	1075	20035.2	1074.5	20197.2	1075.1
20278.8	1076.8	20300	1074.7	20349.4	1079.3	20362	1082.9	20390.2	1083.6
20417.4	1087.3	20492.6	1093.4	20522.5	1094.6	21418.5	1094.6	21459.6	1096.1
21491.5	1096.3	21500.1	1097.2	21614.1	1094.5	21671.6	1098.1	21725.1	1102
21736.3	1098.2	21746.9	1098.3	21761.2	1095.9	21937.7	1095.8	22101	1095.7
22107.9	1097.1	22124.7	1093.9	22195.8	1094.6	22429.3	1094.9	22460.5	1094.9
22651.2	1094.2	22731.5	1094.6	22743.8	1096.2	22841.4	1095.8	22852.4	1097.3
23039.9	1097.6	23152.1	1097.4	23353.9	1096.6	23520.2	1097.5	23562	1097.4
23577.6	1110.7								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17125.3	.04	19508.1	.035	20522.5	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19508.1	20522.5	520	500.69	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17125.3	19508.1	1097.6	20522.5	23577.6	1094.6

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1092.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	4.11	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.44	Reach Len. (ft)	520.00	500.69	470.00
Crit W.S. (ft)	1086.81	Flow Area (sq ft)		10385.16	
E.G. Slope (ft/ft)	0.005283	Area (sq ft)		10385.16	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	854.81	Top Width (ft)		854.81	
Vel Total (ft/s)	16.27	Avg. Vel. (ft/s)		16.27	
Max Chl Dpth (ft)	14.84	Hydr. Depth (ft)		12.15	
Conv. Total (cfs)	2325027.8	Conv. (cfs)		2325027.8	
Length Wtd. (ft)	500.69	Wetted Per. (ft)		857.59	
Min Ch El (ft)	1073.60	Shear (lb/sq ft)		3.99	
Alpha	1.00	Stream Power (lb/ft s)		65.00	
Frctn Loss (ft)	1.52	Cum Volume (acre-ft)	40.76	3291.65	54.00
C & E Loss (ft)	0.58	Cum SA (acres)	23.93	166.00	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1092.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	4.11	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.45	Reach Len. (ft)	520.00	500.69	470.00
Crit W.S. (ft)	1086.81	Flow Area (sq ft)		10389.02	
E.G. Slope (ft/ft)	0.005277	Area (sq ft)		10389.02	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	854.81	Top Width (ft)		854.81	
Vel Total (ft/s)	16.27	Avg. Vel. (ft/s)		16.27	
Max Chl Dpth (ft)	14.85	Hydr. Depth (ft)		12.15	
Conv. Total (cfs)	2326448.0	Conv. (cfs)		2326448.0	
Length Wtd. (ft)	500.69	Wetted Per. (ft)		857.60	
Min Ch El (ft)	1073.60	Shear (lb/sq ft)		3.99	
Alpha	1.00	Stream Power (lb/ft s)		64.92	
Frctn Loss (ft)	1.51	Cum Volume (acre-ft)		3292.67	
C & E Loss (ft)	0.58	Cum SA (acres)		166.00	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.65

INPUT
Description:
Station Elevation Data num= 61

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17237.9	1100	17294.9	1096.4	17506.5	1098	17570	1097.1	17577.1	1095.1
17602.5	1096.9	17605.7	1096.1	17674.7	1096.1	17931.2	1097.4	17961.2	1099.7
18192.8	1099.1	18200.6	1096.9	18232.2	1096.2	18235	1095.4	19571.5	1095.4
19624.9	1079.1	19666.3	1071.3	19745.1	1071	19765.3	1069.6	19937	1074.4
19947.9	1074.8	19985.2	1069.8	20174.6	1072.1	20310.4	1071.3	20317.9	1069.1
20354.5	1069.6	20364.9	1068.3	20392.2	1069.1	20433.1	1070.7	20501.7	1094
20596.4	1094.2	20609.1	1096.1	21422	1096.1	21423.7	1096.4	21575	1098
21679	1097.1	21682	1100.7	21704.4	1100.7	21722.1	1093.9	21744.5	1094.6
21842.9	1093.7	22013.6	1093.5	22043.6	1093.5	22083.7	1091.8	22095.5	1090.2
22108.8	1092.3	22174.7	1093.2	22431	1094.3	22454	1092.8	22649.2	1092.4
22655.2	1091.7	22737.1	1093.4	22922.4	1093.5	23042.9	1093.2	23072.9	1091.9
23243.1	1091.8	23338.1	1092	23510.7	1093.7	23552.2	1093.6	23611.8	1095.2
23634.8	1117.2								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17237.9	.04	19571.5	.035	20501.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19571.5	20501.7	500	495.44	490	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17237.9	19571.5	1095.4	20501.7	23634.8	1094

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1090.46	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.27	Reach Len. (ft)	500.00	495.44	490.00
Crit W.S. (ft)	1082.38	Flow Area (sq ft)		14232.62	
E.G. Slope (ft/ft)	0.001959	Area (sq ft)		14232.62	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	890.00	Top Width (ft)		890.00	
Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)		11.87	
Max Chl Dpth (ft)	19.97	Hydr. Depth (ft)		15.99	
Conv. Total (cfs)	3818479.8	Conv. (cfs)		3818479.8	
Length Wtd. (ft)	495.44	Wetted Per. (ft)		895.92	
Min Ch El (ft)	1068.30	Shear (lb/sq ft)		1.94	
Alpha	1.00	Stream Power (lb/ft s)		23.07	
Frctn Loss (ft)	0.73	Cum Volume (acre-ft)	40.76	3150.17	54.00
C & E Loss (ft)	0.19	Cum SA (acres)	23.93	155.98	55.45

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1090.47	Element	Left OB	Channel	Right OB
Vel Head (ft)	2.19	Wt. n-Val.		0.035	
W.S. Elev (ft)	1088.28	Reach Len. (ft)	500.00	495.44	490.00
Crit W.S. (ft)	1082.38	Flow Area (sq ft)		14237.18	
E.G. Slope (ft/ft)	0.001957	Area (sq ft)		14237.18	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	890.00	Top Width (ft)		890.00	
Vel Total (ft/s)	11.87	Avg. Vel. (ft/s)		11.87	
Max Chl Dpth (ft)	19.98	Hydr. Depth (ft)		16.00	
Conv. Total (cfs)	3820484.5	Conv. (cfs)		3820484.5	
Length Wtd. (ft)	495.44	Wetted Per. (ft)		895.93	
Min Ch El (ft)	1068.30	Shear (lb/sq ft)		1.94	
Alpha	1.00	Stream Power (lb/ft s)		23.04	
Frctn Loss (ft)	0.73	Cum Volume (acre-ft)		3151.14	
C & E Loss (ft)	0.19	Cum SA (acres)		155.97	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.56

INPUT
Description:
Station Elevation Data num= 59

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17244.5	1098.1	17272.8	1096	17490.4	1096.7	17563.5	1095.2	17636	1095.1
17908.7	1094.9	17949.5	1094.8	18148.7	1095.2	18255.9	1095.3	18329.2	1093.3
18342.1	1093.5	18349	1091.5	19576.8	1091.5	19646	1068.5	19758.9	1068.7
19783.4	1070.3	19891.8	1071.1	19918.1	1069.5	19960.4	1066.1	19980	1066.1
20229.6	1066.6	20268.2	1066.9	20299.5	1068.6	20316.3	1068.8	20323.7	1066.5
20361	1067.1	20366.3	1068.2	20406.8	1070.9	20445.6	1071.5	20469	1079.6
20510	1092.7	20617	1091.5	20632.4	1095.1	21437.6	1095.1	21444	1099.4
21597.8	1096.9	21664.2	1096.1	21674.8	1099.6	21689.5	1099.9	21706.3	1092.8
21832.1	1092.2	22077.5	1091.9	22106.9	1090.7	22148.1	1091.8	22286.4	1092
22419.1	1092.6	22464.2	1091.4	22630.1	1091.1	22636.8	1090.6	22754	1091.4
22759.4	1092.2	22832.1	1091.7	22984	1091.4	23017.5	1091.4	23054.9	1093
23104	1092.4	23477.4	1092.3	23608.9	1093.9	23646	1111.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17244.5	.04	19576.8	.035	20510	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19576.8	20510	500	498.23	500	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17244.5	19576.8	1091.5	20510	23646	1092.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1089.55	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.56	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.99	Reach Len. (ft)	500.00	498.23	500.00
Crit W.S. (ft)	1079.15	Flow Area (sq ft)		16859.61	
E.G. Slope (ft/ft)	0.001145	Area (sq ft)		16859.61	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	907.87	Top Width (ft)		907.87	
Vel Total (ft/s)	10.02	Avg. Vel. (ft/s)		10.02	
Max Chl Dpth (ft)	21.89	Hydr. Depth (ft)		18.57	
Conv. Total (cfs)	4995001.5	Conv. (cfs)		4995001.5	
Length Wtd. (ft)	498.23	Wetted Per. (ft)		914.55	
Min Ch El (ft)	1066.10	Shear (lb/sq ft)		1.32	
Alpha	1.00	Stream Power (lb/ft s)		13.21	
Frctn Loss (ft)	0.51	Cum Volume (acre-ft)	40.76	2973.36	54.00
C & E Loss (ft)	0.06	Cum SA (acres)	23.93	145.75	55.45

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1089.55	Element	Left OB	Channel	Right OB

Vel Head (ft)	1.56	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.99	Reach Len. (ft)	500.00	498.23	500.00
Crit W.S. (ft)	1079.15	Flow Area (sq ft)		16864.71	
E.G. Slope (ft/ft)	0.001144	Area (sq ft)		16864.71	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	907.88	Top Width (ft)		907.88	
Vel Total (ft/s)	10.02	Avg. Vel. (ft/s)		10.02	
Max Chl Dpth (ft)	21.89	Hydr. Depth (ft)		18.58	
Conv. Total (cfs)	4997458.5	Conv. (cfs)		4997458.5	
Length Wtd. (ft)	498.23	Wetted Per. (ft)		914.56	
Min Ch El (ft)	1066.10	Shear (lb/sq ft)		1.32	
Alpha	1.00	Stream Power (lb/ft s)		13.19	
Frctn Loss (ft)	0.51	Cum Volume (acre-ft)		2974.27	
C & E Loss (ft)	0.06	Cum SA (acres)		145.75	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.46

INPUT
Description:
Station Elevation Data num= 64

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17157.6	1097	17197.5	1096.6	17218.9	1095.4	17367.9	1095.7	17545.9	1094.6
17740.4	1094.3	17965.1	1094.4	18148.7	1093.9	18153.7	1093.7	18356.5	1094.4
18485.3	1095.5	18487.7	1094.7	18549.4	1094.8	18565.7	1098.7	18592.7	1095.4
18606.4	1087.7	18625.8	1094.7	18648.9	1093.4	18656.9	1091.5	18657.5	1090.8
19591	1090.8	19645.5	1070	19690.6	1068.5	19884.9	1068	19970.8	1067.7
20003.1	1064.6	20025.6	1064.6	20257.6	1065.1	20338.3	1065.3	20360.8	1069
20415.1	1068.3	20460.8	1066.1	20521.1	1089.5	20665.6	1090.6	20667	1089
21339.6	1089	21437	1088.7	21480.8	1089.5	21632.1	1087.7	21658.8	1098.3
21669	1098.1	21686	1091.3	21692.6	1092.4	21873.1	1090.1	21942.8	1090.1
21975.7	1091.4	22045.5	1090.4	22054.9	1090.9	22073.1	1090	22126.3	1089.8
22139.4	1091.2	22375.5	1090	22396.5	1089.8	22591.1	1088.8	22602.5	1088.7
22603.9	1089.5	22794	1090.1	22983.8	1090.8	23032.5	1092.7	23062.2	1092.6
23377	1091.1	23496.3	1091.1	23528.4	1091.9	23621.3	1105.3		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17157.6	.04	19591	.035	20521.1	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19591	20521.1	510	519.75	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17157.6	19591	1090.8	20521.1	23621.3	1089.5

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1088.97	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.37	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.61	Reach Len. (ft)	510.00	519.75	530.00
Crit W.S. (ft)	1077.65	Flow Area (sq ft)		18009.56	
E.G. Slope (ft/ft)	0.000932	Area (sq ft)		18009.56	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	916.86	Top Width (ft)		916.86	
Vel Total (ft/s)	9.38	Avg. Vel. (ft/s)		9.38	
Max Chl Dpth (ft)	23.01	Hydr. Depth (ft)		19.64	
Conv. Total (cfs)	5534893.0	Conv. (cfs)		5534893.0	
Length Wtd. (ft)	519.75	Wetted Per. (ft)		924.66	
Min Ch El (ft)	1064.60	Shear (lb/sq ft)		1.13	
Alpha	1.00	Stream Power (lb/ft s)		10.64	
Frctn Loss (ft)	0.42	Cum Volume (acre-ft)	40.76	2773.94	54.00
C & E Loss (ft)	0.06	Cum SA (acres)	23.93	135.32	55.45

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1088.98	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.37	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.61	Reach Len. (ft)	510.00	519.75	530.00
Crit W.S. (ft)	1077.65	Flow Area (sq ft)		18015.04	
E.G. Slope (ft/ft)	0.000931	Area (sq ft)		18015.04	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	916.85	Top Width (ft)		916.85	
Vel Total (ft/s)	9.38	Avg. Vel. (ft/s)		9.38	
Max Chl Dpth (ft)	23.01	Hydr. Depth (ft)		19.65	
Conv. Total (cfs)	5537668.5	Conv. (cfs)		5537668.5	
Length Wtd. (ft)	519.75	Wetted Per. (ft)		924.67	

Min Ch El (ft)	1064.60	Shear (lb/sq ft)	1.13
Alpha	1.00	Stream Power (lb/ft s)	10.63
Frctn Loss (ft)	0.42	Cum Volume (acre-ft)	2774.79
C & E Loss (ft)	0.06	Cum SA (acres)	135.32

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.36

INPUT
Description:
Station Elevation Data num= 64

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17106.4	1095.4	17213.1	1093.4	17305.8	1093	17386.4	1093.9	17614.5	1092.9
17741.1	1093.2	17826.6	1091.9	17953.5	1092.2	17968	1091.5	17977.8	1092.7
18139.6	1091.8	18170.3	1091.2	18258.3	1093.1	18362.4	1091.3	18522.8	1092.1
18599.4	1092.9	18641.9	1094.1	18654.3	1087.1	19618	1087.1	19693.8	1066.8
19739.6	1066.6	19764.2	1064.8	19975	1063.2	20080.9	1063	20309.6	1064
20382.2	1064.8	20413.8	1065.9	20478.9	1065.5	20537	1086.8	21350.7	1086.8
21356.2	1089.5	21442.6	1086.9	21548.9	1086	21595	1088.3	21621.4	1088.7
21647.6	1094.8	21684.8	1088.3	21717.1	1090.1	21875.2	1088.9	21917	1089.2
22096.8	1089.1	22215.6	1086.1	22360.8	1085.8	22395.8	1085.8	22542	1086.6
22595.4	1085.7	22650.1	1086.5	22655.9	1087.2	22804.8	1086.6	22841.4	1086.7
22875	1086.4	22885	1088.1	22968.8	1087.7	23111.1	1087.6	23285.5	1087.4
23328.3	1087.9	23371.5	1087.5	23577	1087.6	23593.2	1090.2	23609.1	1088.9
23648.3	1097.3	23658.9	1096	23675.8	1090.6	23715.5	1101.6		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17106.4	.04	19618	.035	20537	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19618	20537	500	489.19	470	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17106.4	19618	1100	20537	23715.5	1100

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.49	Element			
Vel Head (ft)	1.15	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.34	Reach Len. (ft)	500.00	489.19	470.00
Crit W.S. (ft)	1075.36	Flow Area (sq ft)		19624.04	
E.G. Slope (ft/ft)	0.000701	Area (sq ft)	231.68	19624.04	1263.00
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	3559.77	Top Width (ft)	964.13	919.00	1676.65
Vel Total (ft/s)	8.61	Avg. Vel. (ft/s)		8.61	
Max Chl Dpth (ft)	24.34	Hydr. Depth (ft)		21.35	
Conv. Total (cfs)	6382255.0	Conv. (cfs)		6382255.0	
Length Wtd. (ft)	489.19	Wetted Per. (ft)		925.55	
Min Ch El (ft)	1063.00	Shear (lb/sq ft)		0.93	
Alpha	1.00	Stream Power (lb/ft s)		7.99	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)	39.40	2549.42	46.32
C & E Loss (ft)	0.01	Cum SA (acres)	18.29	124.36	45.25

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.50	Element			
Vel Head (ft)	1.15	Wt. n-Val.		0.035	
W.S. Elev (ft)	1087.35	Reach Len. (ft)	500.00	489.19	470.00
Crit W.S. (ft)	1075.36	Flow Area (sq ft)		19629.43	
E.G. Slope (ft/ft)	0.000701	Area (sq ft)		19629.43	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	919.00	Top Width (ft)		919.00	
Vel Total (ft/s)	8.61	Avg. Vel. (ft/s)		8.61	
Max Chl Dpth (ft)	24.35	Hydr. Depth (ft)		21.36	
Conv. Total (cfs)	6381531.0	Conv. (cfs)		6381531.0	
Length Wtd. (ft)	489.19	Wetted Per. (ft)		926.34	
Min Ch El (ft)	1063.00	Shear (lb/sq ft)		0.93	
Alpha	1.00	Stream Power (lb/ft s)		7.99	
Frctn Loss (ft)	0.38	Cum Volume (acre-ft)		2550.21	
C & E Loss (ft)	0.01	Cum SA (acres)		124.36	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.27

INPUT
Description:
Station Elevation Data num= 77

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17090.5	1092.5	17125.9	1091.8	17271.2	1091	17438.5	1089.2	17533.4	1088.9
17640	1089.9	17664.2	1089.2	17876.8	1089	17899.3	1089.2	18048.7	1090.8
18192.2	1092.2	18319.4	1092.6	18358.5	1091.5	18364.6	1092	18578.6	1091.7
18646.5	1091.7	18655.9	1091.3	18680.5	1096.9	18688.1	1094.3	18692.1	1091.9
18696.3	1090.6	18744.7	1089	18753.3	1083.4	19610.6	1083.4	19638.3	1081.9
19658.6	1082	19664.5	1078.4	19689.8	1074.5	19734.4	1072.4	19788.6	1068.1
19800.7	1064.5	19816.1	1063.5	19988.7	1063.7	20291.3	1064	20359.1	1064.8
20485.4	1064	20492.7	1064.5	20543.3	1084.9	20553.9	1085.3	20674.7	1084.1
20741.1	1082.7	20810.5	1083.9	20988.4	1084.7	21096.9	1085.3	21291.5	1086.3
21372.9	1086.6	21433.7	1087.4	21444.6	1088.4	21500.3	1090	21568.4	1090
21595.8	1088	21615.4	1088.1	21621.3	1086.5	21640.8	1086.3	21657.4	1087.6
21816	1087.7	21877.8	1087.7	22012.9	1086.8	22120.8	1086.1	22257	1086.3
22398.5	1085.7	22567.9	1085.3	22633.4	1085.1	22673	1086	22821.6	1086.1
22954.1	1086.7	22955.4	1086.7	23113.9	1086.3	23261	1086.3	23311.5	1086.2
23360.5	1088.2	23492.9	1089	23595.2	1089.4	23637	1094.2	23668.2	1090
23685.9	1088.4	23765.1	1104.7						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17090.5	.04	19610.6	.035	20553.9	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19610.6	20553.9	550	493.27	420	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17090.5	19610.6	1100	20553.9	23765.1	1100

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.10	Element			
Vel Head (ft)	1.26	Wt. n-Val.		0.035	
W.S. Elev (ft)	1086.84	Reach Len. (ft)	550.00	493.27	420.00
Crit W.S. (ft)	1076.00	Flow Area (sq ft)		18736.49	
E.G. Slope (ft/ft)	0.000846	Area (sq ft)	2959.30	18736.49	2611.68
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	3991.40	Top Width (ft)	862.58	943.30	2185.52
Vel Total (ft/s)	9.02	Avg. Vel. (ft/s)		9.02	
Max Chl Dpth (ft)	23.34	Hydr. Depth (ft)		19.86	
Conv. Total (cfs)	5809018.0	Conv. (cfs)		5809018.0	
Length Wtd. (ft)	493.27	Wetted Per. (ft)		949.42	
Min Ch El (ft)	1063.50	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.41	
Frctn Loss (ft)	0.82	Cum Volume (acre-ft)	21.09	2334.02	25.41
C & E Loss (ft)	0.38	Cum SA (acres)	7.81	113.91	24.41

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1088.11	Element			
Vel Head (ft)	1.26	Wt. n-Val.		0.035	
W.S. Elev (ft)	1086.85	Reach Len. (ft)	550.00	493.27	420.00
Crit W.S. (ft)	1076.00	Flow Area (sq ft)		18740.87	
E.G. Slope (ft/ft)	0.000852	Area (sq ft)		18740.87	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	943.30	Top Width (ft)		943.30	
Vel Total (ft/s)	9.02	Avg. Vel. (ft/s)		9.02	
Max Chl Dpth (ft)	23.35	Hydr. Depth (ft)		19.87	
Conv. Total (cfs)	5790998.5	Conv. (cfs)		5790998.5	
Length Wtd. (ft)	493.27	Wetted Per. (ft)		954.41	
Min Ch El (ft)	1063.50	Shear (lb/sq ft)		1.04	
Alpha	1.00	Stream Power (lb/ft s)		9.41	
Frctn Loss (ft)	0.82	Cum Volume (acre-ft)		2334.75	
C & E Loss (ft)	0.38	Cum SA (acres)		113.91	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for

additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.18

INPUT
Description:
Station Elevation Data num= 82

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17264.2	1090.8	17267.2	1089.3	17273	1087.3	17291.3	1090.2	17304	1090.3
17325	1088.7	17458.3	1088	17486.9	1086.8	17535	1086.4	17628.8	1087.9
17696.9	1090.1	17830.5	1089.7	17979.7	1089.7	18157.5	1090.9	18287.9	1091.3
18300.1	1090.7	18347.7	1091.3	18585.6	1090.1	18646.8	1090.3	18667.5	1089.9
18679.9	1092.5	18692.8	1096.2	18714.9	1089.4	18737.9	1089.2	18743.1	1085.6
19632.1	1085.6	19675.5	1084.4	19680.3	1082.6	19742.5	1067.1	19752.8	1067.2
19761.7	1067.9	19783.3	1067.4	19806.4	1062.2	19944.1	1062.7	20163.9	1063.5
20177.3	1063.5	20291.4	1084.5	20332.7	1088.4	20361.5	1080.3	20367.6	1077.9
20376.7	1078.6	20417.9	1079.6	20435.7	1084.6	20442.6	1085.5	20492.9	1084.1
20569.6	1084.3	20749.1	1084.6	20914.6	1084.5	21029.5	1083.7	21215.8	1083.6
21233.3	1083.6	21261.9	1088.4	21398.3	1089.8	21450.7	1091.6	21475.8	1079.6
21498.2	1082.4	21659.9	1084.5	21881.6	1084.7	22049.7	1085.2	22106.3	1085.4
22138.4	1086	22270.3	1086.2	22336.5	1086.7	22396.7	1085.4	22535.4	1085.6
22591.4	1086	22633	1087	22652.7	1088.3	22794.6	1088.5	23004.1	1088.8
23096.1	1088.2	23105.4	1089.3	23217.9	1088.7	23251.2	1087.2	23262.6	1087.5
23297	1086.7	23345.6	1087.8	23359.3	1088.6	23512.7	1088.2	23575.8	1087.7
23635.4	1088.2	23708.6	1103.3						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17264.2	.04	19632.1	.035	20332.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19632.1	20332.7	560	481.96	420	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17264.2	19632.1	1085.6	20332.7	23708.6	1088.4

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1086.91	Element	Left OB	Channel	Right OB
Vel Head (ft)	5.04	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.87	Reach Len. (ft)	560.00	481.96	420.00
Crit W.S. (ft)	1079.42	Flow Area (sq ft)		9382.04	
E.G. Slope (ft/ft)	0.004584	Area (sq ft)		9382.04	203.69
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	686.90	Top Width (ft)		593.90	93.00
Vel Total (ft/s)	18.01	Avg. Vel. (ft/s)		18.01	
Max Chl Dpth (ft)	19.67	Hydr. Depth (ft)		15.80	
Conv. Total (cfs)	2496246.8	Conv. (cfs)		2496246.8	
Length Wtd. (ft)	481.96	Wetted Per. (ft)		598.00	
Min Ch El (ft)	1062.20	Shear (lb/sq ft)		4.49	
Alpha	1.00	Stream Power (lb/ft s)		80.87	
Frctn Loss (ft)	1.73	Cum Volume (acre-ft)	2.41	2174.82	11.84
C & E Loss (ft)	0.41	Cum SA (acres)	2.36	105.20	13.43

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1086.91	Element	Left OB	Channel	Right OB
Vel Head (ft)	5.04	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.87	Reach Len. (ft)	560.00	481.96	420.00
Crit W.S. (ft)	1079.42	Flow Area (sq ft)		9382.77	
E.G. Slope (ft/ft)	0.004582	Area (sq ft)		9382.77	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	593.90	Top Width (ft)		593.90	
Vel Total (ft/s)	18.01	Avg. Vel. (ft/s)		18.01	
Max Chl Dpth (ft)	19.67	Hydr. Depth (ft)		15.80	
Conv. Total (cfs)	2496562.5	Conv. (cfs)		2496562.5	
Length Wtd. (ft)	481.96	Wetted Per. (ft)		598.00	

Min Ch El (ft)	1062.20	Shear (lb/sq ft)	4.49
Alpha	1.00	Stream Power (lb/ft s)	80.85
Frctn Loss (ft)	1.73	Cum Volume (acre-ft)	2175.52
C & E Loss (ft)	0.41	Cum SA (acres)	105.20

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 215.09

INPUT
Description:
Station Elevation Data num= 85

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17408.5	1090.9	17416.6	1088.2	17421.3	1086	17442.5	1089.1	17476.3	1089.2
17546	1088.1	17558.7	1086.5	17572.7	1085.3	17703.3	1086	17806.6	1085.5
17909.6	1086.8	17924.4	1087.8	17983.8	1088.9	18162.6	1089.2	18175.2	1089.2
18515.9	1088.2	18545.9	1088.1	18607.3	1088.6	18713.9	1088.5	18807.7	1087.4
18955	1087.1	18958.8	1087.1	18981.5	1088.6	18992.5	1088.9	19625.7	1088.9
19652.2	1090.1	19661.5	1090.9	19663	1088.6	19671.4	1082.4	19701.2	1068.5
19706.6	1065.2	19710.4	1063.8	19728.4	1062.2	19740	1061.7	19850.6	1061.7
20037.2	1062.4	20199.1	1063	20266.5	1063.2	20300.4	1085.9	20376.8	1085
20573.3	1084.2	20754.5	1084.4	20797.5	1084.5	20844	1088.4	20895.9	1096.6
20944	1100	20968.9	1099.8	21092.4	1085.1	21164.6	1085.1	21295.4	1085.8
21349.7	1087.3	21430.1	1089	21447.6	1082.9	21471.4	1082.9	21513.2	1084.1
21561.7	1084	21748.6	1085.6	21846.1	1086.5	22044.7	1085.1	22068.2	1085.1
22104.8	1086.2	22198.3	1085.4	22331	1086.6	22392.4	1085.5	22427.1	1085.7
22569.2	1086.2	22579.3	1086.1	22596.4	1086.5	22617.4	1086.4	22634.7	1087.5
22750	1087.9	22789.2	1087.3	22835.4	1087.8	22986	1087.7	23133.3	1088.2
23240.2	1087.3	23275.3	1086.4	23337	1086.7	23342.5	1087.3	23353.1	1087.8
23397.8	1087.8	23559.8	1086.9	23602	1086.8	23694.4	1090.1	23776.7	1107.1

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17408.5	.04	19661.5	.035	20300.4	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19661.5	20300.4	510	506.22	510	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17408.5	19661.5	1090.9	20300.4	23776.7	1085.9

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1084.77	Element			
Vel Head (ft)	3.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.09	Reach Len. (ft)	510.00	506.22	510.00
Crit W.S. (ft)	1076.37	Flow Area (sq ft)		10986.08	
E.G. Slope (ft/ft)	0.002894	Area (sq ft)		10986.08	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	619.02	Top Width (ft)		619.02	
Vel Total (ft/s)	15.38	Avg. Vel. (ft/s)		15.38	
Max Chl Dpth (ft)	19.39	Hydr. Depth (ft)		17.75	
Conv. Total (cfs)	3141385.8	Conv. (cfs)		3141385.8	
Length Wtd. (ft)	506.22	Wetted Per. (ft)		628.51	
Min Ch El (ft)	1061.70	Shear (lb/sq ft)		3.16	
Alpha	1.00	Stream Power (lb/ft s)		48.58	
Frctn Loss (ft)	1.47	Cum Volume (acre-ft)	2.41	2062.14	10.86
C & E Loss (ft)	0.13	Cum SA (acres)	2.36	98.49	12.98

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1084.77	Element			
Vel Head (ft)	3.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1081.10	Reach Len. (ft)	510.00	506.22	510.00
Crit W.S. (ft)	1076.37	Flow Area (sq ft)		10987.06	
E.G. Slope (ft/ft)	0.002893	Area (sq ft)		10987.06	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	619.02	Top Width (ft)		619.02	
Vel Total (ft/s)	15.38	Avg. Vel. (ft/s)		15.38	
Max Chl Dpth (ft)	19.40	Hydr. Depth (ft)		17.75	

Conv. Total (cfs)	3141842.0	Conv. (cfs)	3141842.0
Length Wtd. (ft)	506.22	Wetted Per. (ft)	628.52
Min Ch El (ft)	1061.70	Shear (lb/sq ft)	3.16
Alpha	1.00	Stream Power (lb/ft s)	48.57
Frctn Loss (ft)	1.47	Cum Volume (acre-ft)	2062.83
C & E Loss (ft)	0.13	Cum SA (acres)	98.49

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.99

INPUT
Description:
Station Elevation Data num= 83

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17407.8	1089.5	17423.9	1089.2	17429.3	1087.9	17485.8	1086.4	17505.6	1086.4
17523	1085.7	17609.3	1085.7	17618.9	1085.4	17743	1084.6	17878.9	1086.3
18005.4	1087.2	18122.3	1087.5	18136.6	1087.3	18144.6	1088.4	18167.8	1087.2
18307.7	1087.4	18356.8	1087.4	18518.3	1087.2	18532.6	1087.2	18670.1	1087.4
18800.7	1087	18814.1	1087.3	18841.1	1087	18876.6	1088.6	19535	1088.6
19537.3	1089.4	19576.5	1090	19647.7	1061.3	19774.3	1061.6	19811	1063.5
19862.3	1062.3	19880.7	1061.4	20041	1063.2	20098.1	1067.8	20122.6	1070.7
20129.8	1067.6	20144.8	1063.2	20173.6	1063.1	20299.7	1063	20317	1072.8
20339.8	1086.2	20525.1	1086.2	20650.8	1085.7	20674.7	1085.6	20699.2	1086.5
20716.1	1086.6	20846.1	1088.1	20861.2	1088.3	20978.5	1087.6	21008	1084.2
21091.3	1083.5	21285.7	1083.9	21419.6	1084.3	21479.2	1084.8	21650.3	1085.6
22046	1085.5	22169.3	1084.9	22233.7	1085.5	22353.8	1085.3	22372.2	1085.3
22392.8	1084.4	22402.3	1085	22421.9	1084.9	22433.5	1085.2	22439.7	1085.8
22461.8	1085.4	22651.2	1085.4	22691.6	1085.5	22821.4	1086.1	22866.5	1086.4
22987.8	1086.7	23105.7	1086.9	23132.5	1085	23156.1	1084.5	23177.8	1087
23227.7	1086.3	23297	1086	23335.6	1086.6	23474.8	1086.3	23490.7	1088.5
23517.5	1088.2	23570.5	1089.8	23652.7	1107.1				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17407.8	.04	19576.5	.035	20339.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19576.5	20339.8	480	505.18	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17407.8	19576.5	1090	20339.8	23652.7	1086.2

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1083.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.25	Wt. n-Val.		0.035	
W.S. Elev (ft)	1079.91	Reach Len. (ft)	480.00	505.18	530.00
Crit W.S. (ft)	1075.58	Flow Area (sq ft)		11672.67	
E.G. Slope (ft/ft)	0.002926	Area (sq ft)		11672.67	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	727.58	Top Width (ft)		727.58	
Vel Total (ft/s)	14.48	Avg. Vel. (ft/s)		14.48	
Max Chl Dpth (ft)	18.61	Hydr. Depth (ft)		16.04	
Conv. Total (cfs)	3124136.5	Conv. (cfs)		3124136.5	
Length Wtd. (ft)	505.18	Wetted Per. (ft)		737.43	
Min Ch El (ft)	1061.30	Shear (lb/sq ft)		2.89	
Alpha	1.00	Stream Power (lb/ft s)		41.87	
Frctn Loss (ft)	1.63	Cum Volume (acre-ft)	2.41	1930.48	10.86
C & E Loss (ft)	0.01	Cum SA (acres)	2.36	90.67	12.98

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1083.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.25	Wt. n-Val.		0.035	
W.S. Elev (ft)	1079.92	Reach Len. (ft)	480.00	505.18	530.00
Crit W.S. (ft)	1075.58	Flow Area (sq ft)		11674.45	
E.G. Slope (ft/ft)	0.002925	Area (sq ft)		11674.45	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	727.58	Top Width (ft)		727.58	
Vel Total (ft/s)	14.48	Avg. Vel. (ft/s)		14.48	
Max Chl Dpth (ft)	18.62	Hydr. Depth (ft)		16.05	

Conv. Total (cfs)	3124912.0	Conv. (cfs)	3124912.0
Length Wtd. (ft)	505.18	Wetted Per. (ft)	737.44
Min Ch El (ft)	1061.30	Shear (lb/sq ft)	2.89
Alpha	1.00	Stream Power (lb/ft s)	41.85
Frctn Loss (ft)	1.63	Cum Volume (acre-ft)	1931.15
C & E Loss (ft)	0.01	Cum SA (acres)	90.67

Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.9

INPUT
Description:
Station Elevation Data num= 90

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
17273.7	1090.9	17286.3	1084.9	17295.6	1086.7	17304.6	1089	17343.3	1087.2
17361	1086.8	17420	1086.8	17464	1086.4	17476.4	1085.5	17563.2	1085.1
17570.1	1085.5	17695.7	1085.2	17812.7	1085.2	17858	1085.6	18002.1	1086.5
18035.5	1086.6	18055.5	1087.1	18135.4	1086.5	18262.5	1086	18362.4	1086
18497.3	1086.1	18624.5	1086.1	18665	1086.1	18714.4	1086.8	19289	1086.8
19292	1088	19353.9	1088.5	19494.2	1088.1	19537.4	1088	19609.3	1061.2
19764.9	1061.4	19806	1062.4	19829	1061.4	20013.5	1062.6	20062.9	1062.8
20089.1	1068.5	20158.2	1066.8	20297.6	1062.8	20315.9	1062.4	20373.4	1077.9
20419	1088.6	20423.3	1089	20466.5	1103.6	20501.8	1104.2	20532.8	1102.4
20550.3	1104.7	20579.1	1099.4	20585.2	1096.6	20607.1	1084.9	20640.5	1084.3
20667.3	1083	20680.5	1078.6	20687.2	1078	20808.2	1077.9	20840	1082.7
20852.6	1085.5	20855.2	1084.5	20889.3	1084.2	20907.9	1083.6	20920.2	1082.1
20931.6	1081.2	21060.7	1081.2	21142.3	1081.4	21160.5	1082.7	21218.3	1083.3
21443.8	1084.2	21688.5	1083.8	21722.5	1083.8	21848.4	1083.6	21865.2	1084.2
22041	1084.3	22200.7	1085.2	22219.2	1085	22278.4	1086	22363	1085
22451.4	1085.4	22567.2	1086.6	22662.3	1086.2	22753.5	1086.2	22924.8	1085
22954.2	1085.1	22991.2	1084.4	22997.7	1085.1	23004.4	1086.9	23029.6	1086.4
23200.8	1088.7	23354.3	1090.2	23416.1	1090.1	23433.4	1089.7	23466.2	1098.9

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
17273.7	.04	19537.4	.035	20466.5	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19537.4	20466.5	340	568.44	730	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
17273.7	19537.4	1088	20466.5	23466.2	1103.6

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1081.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.39	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.13	Reach Len. (ft)	340.00	568.44	730.00
Crit W.S. (ft)	1074.91	Flow Area (sq ft)		11434.89	
E.G. Slope (ft/ft)	0.003589	Area (sq ft)		11434.89	22.14
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	934.49	Top Width (ft)		810.50	123.99
Vel Total (ft/s)	14.78	Avg. Vel. (ft/s)		14.78	
Max Chl Dpth (ft)	16.93	Hydr. Depth (ft)		14.11	
Conv. Total (cfs)	2820910.8	Conv. (cfs)		2820910.8	
Length Wtd. (ft)	568.44	Wetted Per. (ft)		816.37	
Min Ch El (ft)	1061.20	Shear (lb/sq ft)		3.14	
Alpha	1.00	Stream Power (lb/ft s)		46.39	
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)	2.41	1796.49	10.72
C & E Loss (ft)	0.59	Cum SA (acres)	2.36	81.75	12.23

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1081.53	Element	Left OB	Channel	Right OB
Vel Head (ft)	3.39	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.14	Reach Len. (ft)	340.00	568.44	730.00

Crit W.S. (ft)	1074.91	Flow Area (sq ft)	11439.94
E.G. Slope (ft/ft)	0.003584	Area (sq ft)	11439.94
Q Total (cfs)	169000.00	Flow (cfs)	169000.00
Top Width (ft)	810.50	Top Width (ft)	810.50
Vel Total (ft/s)	14.77	Avg. Vel. (ft/s)	14.77
Max Chl Dpth (ft)	16.94	Hydr. Depth (ft)	14.11
Conv. Total (cfs)	2822963.0	Conv. (cfs)	2822963.0
Length Wtd. (ft)	568.44	Wetted Per. (ft)	816.38
Min Ch El (ft)	1061.20	Shear (lb/sq ft)	3.14
Alpha	1.00	Stream Power (lb/ft s)	46.32
Frctn Loss (ft)	1.11	Cum Volume (acre-ft)	1797.12
C & E Loss (ft)	0.58	Cum SA (acres)	81.75

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.
Warning: The conveyance ratio (upstream conveyance divided by downstream conveyance) is less than 0.7 or greater than 1.4. This may indicate the need for additional cross sections.
Warning: The energy loss was greater than 1.0 ft (0.3 m). between the current and previous cross section. This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.79

INPUT
Description: Upstream Face of 16th St. Bridge
Station Elevation Data num= 44

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18602	1086.519	189.33	1088	19457.59	1093.05	19457.68	1080.34	19457.78	1078.84
19460.58	1078.819	510.81	1060.85	19571.38	1058.81	9576.21	1059	19603.16	1059
19676.68	1059	19690.2	1059	19695.03	1057.61	9728.16	1059.91	9809.02	1058.85
19813.85	1059	19875	1059.61	9927.64	1060.31	9932.47	1060.31	9991.88	1060.7
20046.65	1059.852	0051.48	1059.85	20100.07	1060.62	0148.37	1059	20165.47	1062.5
20170.3	1062.52	0230.48	1063.45	20284.29	1062.95	20289.12	1062.95	20312.59	1063.7
20346.4	1064.152	0403.11	1063.92	0407.94	1063.95	20471.98	1064.22	0518.83	1078.6
20521.63	1078.62	0521.73	1080.12	20521.83	1092.83	20590.03	1088	20744.59	1084
20957.11	1080	21227.59	1080	21923.11	1084	22261.21	1086.5		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18602	.04	19457.68	.03	20521.73	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19457.68	20521.73	116.34	116.34	116.34	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18602	19457.68	1080.34	20521.73	22261.21	1080.12

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1079.83	Element			
Vel Head (ft)	1.44	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.39	Reach Len. (ft)	26.17	26.17	26.17
Crit W.S. (ft)	1070.68	Flow Area (sq ft)		17557.55	
E.G. Slope (ft/ft)	0.001221	Area (sq ft)		17557.55	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1056.41	Top Width (ft)		1056.41	
Vel Total (ft/s)	9.63	Avg. Vel. (ft/s)		9.63	
Max Chl Dpth (ft)	20.79	Hydr. Depth (ft)		16.62	
Conv. Total (cfs)	4836427.0	Conv. (cfs)		4836427.0	
Length Wtd. (ft)	26.17	Wetted Per. (ft)		1062.34	
Min Ch El (ft)	1057.60	Shear (lb/sq ft)		1.26	
Alpha	1.00	Stream Power (lb/ft s)		12.13	
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	2.41	1607.32	10.54
C & E Loss (ft)	0.02	Cum SA (acres)	2.36	69.57	11.19

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1079.83	Element			
Vel Head (ft)	1.44	Wt. n-Val.		0.035	
W.S. Elev (ft)	1078.40	Reach Len. (ft)	26.17	26.17	26.17
Crit W.S. (ft)	1070.68	Flow Area (sq ft)		17564.39	
E.G. Slope (ft/ft)	0.001219	Area (sq ft)		17564.39	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1056.41	Top Width (ft)		1056.41	
Vel Total (ft/s)	9.62	Avg. Vel. (ft/s)		9.62	
Max Chl Dpth (ft)	20.80	Hydr. Depth (ft)		16.63	
Conv. Total (cfs)	4839535.5	Conv. (cfs)		4839535.5	

Length Wtd. (ft)	26.17	Wetted Per. (ft)	1062.35
Min Ch El (ft)	1057.60	Shear (lb/sq ft)	1.26
Alpha	1.00	Stream Power (lb/ft s)	12.11
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	1607.87
C & E Loss (ft)	0.02	Cum SA (acres)	69.57

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BRIDGE                    RIVER: Salt River
REACH: Reach 4               RS: 214.785

INPUT
Description: 16th Street
Distance from Upstream XS =   26.17
Deck/Roadway Width        =      64
Weir Coefficient          =     2.6
Bridge Deck/Roadway Skew  =
Upstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18602  1086.5  1086.519189.33    1088    108819457.59 1093.05 1093.05
19457.68 1093.05 1080.3419571.38 1095.18 1082.43 19690.2 1096.76 1084.02
19809.02 1097.88 1085.1519927.64 1098.32 1085.6320051.48 1098.32  1085.6
 20170.3  1097.7 1085.0320289.12 1096.59 1083.8620407.94 1094.99 1082.24
20521.73  1092.8 1080.12

Upstream Bridge Cross Section Data
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03  1057.619728.16  1059.919809.02 1058.85
19813.85    1059   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19457.6820521.73             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

Downstream  Deck/Roadway Coordinates
    num=      13
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   18602  1086.5  1086.519189.33    1088    108819457.59 1093.05 1093.05
19457.68 1093.05 1080.3419571.38 1095.18 1082.43 19690.2 1096.76 1084.02
19809.02 1097.88 1085.1519927.64 1098.32 1085.6320051.48 1098.32  1085.6
 20170.3  1097.7 1085.0320289.12 1096.59 1083.8620407.94 1094.99 1082.24
20521.73  1092.8 1080.12

Downstream Bridge Cross Section Data
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03    105919728.16  1059.919809.02 1058.85
19813.85 1058.85   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Coeff Contr.   Expan.
      19457.6820521.73             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12
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Upstream Embankment side slope              =         horiz. to 1.0 vertical
Downstream Embankment side slope            =         horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Piers =  8

Pier Data
Pier Station     Upstream= 19574.1    Downstream= 19574.1
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1058.8    4.83 1082.51
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1058.8    4.83 1082.51

Pier Data
Pier Station     Upstream= 19692.8    Downstream= 19692.8
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1057.6    4.83  1084.1
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1057.6    4.83  1084.1

Pier Data
Pier Station     Upstream= 19811.6    Downstream= 19811.6
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1058.85    4.83  1085.2
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1058.85    4.83  1085.2

Pier Data
Pier Station     Upstream= 19930.5    Downstream= 19930.5
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1060.3    4.83  1085.6
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1060.3    4.83  1085.6

Pier Data
Pier Station     Upstream= 20049.5    Downstream= 20049.5
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1059.85    4.83  1085.6
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1059.85    4.83  1085.6

Pier Data
Pier Station     Upstream= 20167.6    Downstream= 20167.6
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1062.5    4.83  1085.1
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1062.5    4.83  1085.1

Pier Data
Pier Station     Upstream= 20286.4    Downstream= 20286.4
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83 1062.95    4.83  1083.9
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83 1062.95    4.83  1083.9

Pier Data
Pier Station     Upstream= 20405.8    Downstream= 20405.8
Upstream     num=       2
    Width   Elev    Width   Elev
    4.83  1063.9    4.83  1082.3
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```
Downstream     num=       2
    Width   Elev    Width   Elev
    4.83  1063.9    4.83  1082.3

Number of Bridge Coefficient Sets =  1

Low Flow Methods and Data
       Energy
       Momentum                Cd    =     1.2
       Yarnell                 KVal =    1.05
Selected Low Flow Methods = Highest Energy Answer

High Flow Method
       Energy Only

Additional Bridge Parameters
       Add Friction component to Momentum
       Do not add Weight component to Momentum
       Class B flow critical depth computations use critical depth
           inside the bridge at the upstream end
       Criteria to check for pressure flow = Upstream energy grade line

BRIDGE OUTPUT    Profile #PF#1
Opening : Bridge #1

  E.G. US. (ft)                1079.83   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1078.39   E.G. Elev (ft)               1079.77       1079.65
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1078.17       1078.01
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1071.00       1071.00
  Q Weir (cfs)                           Max Chl Dpth (ft)              20.56         19.21
  Weir Sta Lft (ft)                      Vel Total (ft/s)               10.15         10.26
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           16656.43      16472.73
  Weir Submerg                           Froude # Chl                   0.44          0.45
  Weir Max Depth (ft)                    Specif Force (cu ft)       196198.91     193742.33
  Min Top Rd (ft)              1080.12   Hydr Depth (ft)                16.39         16.22
  Min El Prs (ft)              1085.63   W.P. Total (ft)              1301.74       1296.74
  Delta EG (ft)                   0.26   Conv. Total (cfs)          3868540.5     3807459.5
  Delta WS (ft)                   0.33   Top Width (ft)               1016.55       1015.56
  BR Open Area (sq ft)        22419.11   Frctn Loss (ft)                0.12          0.04
  BR Open Vel (ft/s)             10.26   C & E Loss (ft)                0.00          0.04
  Coef of Q                              Shear Total (lb/sq ft)         1.52          1.56
  Br Sel Method            Energy only   Power Total (lb/ft s)         15.47         16.03


BRIDGE OUTPUT    Profile #PF#2
Opening : Bridge #1

  E.G. US. (ft)                1079.83   Element                 Inside BR US  Inside BR DS
  W.S. US. (ft)                1078.40   E.G. Elev (ft)               1079.78       1079.65
  Q Total (cfs)              169000.00   W.S. Elev (ft)               1078.18       1078.02
  Q Bridge (cfs)             169000.00   Crit W.S. (ft)               1071.00       1071.00
  Q Weir (cfs)                           Max Chl Dpth (ft)              20.57         19.22
  Weir Sta Lft (ft)                      Vel Total (ft/s)               10.14         10.25
  Weir Sta Rgt (ft)                      Flow Area (sq ft)           16663.08      16479.79
  Weir Submerg                           Froude # Chl                   0.44          0.45
  Weir Max Depth (ft)                    Specif Force (cu ft)       196287.41     193833.88
  Min Top Rd (ft)              1092.89   Hydr Depth (ft)                16.40         16.23
  Min El Prs (ft)              1085.63   W.P. Total (ft)              1301.14       1296.89
  Delta EG (ft)                   0.26   Conv. Total (cfs)          3872308.5     3809880.0
  Delta WS (ft)                   0.33   Top Width (ft)               1015.88       1015.60
  BR Open Area (sq ft)        22402.95   Frctn Loss (ft)                0.12          0.04
  BR Open Vel (ft/s)             10.25   C & E Loss (ft)                0.00          0.04
  Coef of Q                              Shear Total (lb/sq ft)         1.52          1.56
  Br Sel Method            Energy only   Power Total (lb/ft s)         15.45         16.01


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 214.78

INPUT
Description: Downstream Face of 16th St. Bridge
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   18602  1086.519189.33    108819457.59 1093.0519457.68 1080.3419457.78 1078.84
19460.58  1078.819510.81 1060.8519571.38  1058.819576.21    105919603.16    1059
19676.68    1059 19690.2    105919695.03    105919728.16  1059.919809.02 1058.85
19813.85 1058.85   19875  1059.619927.64  1060.319932.47  1060.319991.88  1060.7
20046.65 1059.8520051.48 1059.8520100.07  1060.620148.37    105920165.47  1062.5
 20170.3  1062.520230.48 1063.4520284.29 1062.9520289.12 1062.9520312.59  1063.7
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 20346.4 1064.1520403.11  1063.920407.94 1063.9520471.98  1064.220518.83  1078.6
20521.63  1078.620521.73 1080.1220521.83 1092.8320590.03    108820744.59    1084
20957.11    108021227.59    108021923.11    108422261.21  1086.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   18602     .0419457.68    .03520521.73     .04

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      19457.6820521.73              520  310.05      80             .1       .3
Ineffective Flow     num=       2
   Sta L   Sta R    Elev   Sta L   Sta R    Elev
   1860219457.68 1080.3420521.7322261.21 1080.12

CROSS SECTION OUTPUT    Profile #PF#1

  E.G. Elev (ft)            1079.56   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.50   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1078.06   Reach Len. (ft)            520.00     310.05      80.00
  Crit W.S. (ft)            1070.73   Flow Area (sq ft)                   17192.07
  E.G. Slope (ft/ft)       0.001306   Area (sq ft)                        17192.07
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1054.44   Top Width (ft)                      1054.44
  Vel Total (ft/s)             9.83   Avg. Vel. (ft/s)                       9.83
  Max Chl Dpth (ft)           19.26   Hydr. Depth (ft)                      16.30
  Conv. Total (cfs)       4676684.5   Conv. (cfs)                        4676684.5
  Length Wtd. (ft)           310.05   Wetted Per. (ft)                    1059.99
  Min Ch El (ft)            1058.80   Shear (lb/sq ft)                       1.32
  Alpha                        1.00   Stream Power (lb/ft s)                13.00
  Frctn Loss (ft)              0.40   Cum Volume (acre-ft)         2.41   1562.59      10.54
  C & E Loss (ft)              0.02   Cum SA (acres)               2.36     66.83      11.19


CROSS SECTION OUTPUT    Profile #PF#2

  E.G. Elev (ft)            1079.57   Element                   Left OB    Channel   Right OB
  Vel Head (ft)                1.50   Wt. n-Val.                            0.035
  W.S. Elev (ft)            1078.07   Reach Len. (ft)            520.00     310.05      80.00
  Crit W.S. (ft)            1070.73   Flow Area (sq ft)                   17199.27
  E.G. Slope (ft/ft)       0.001304   Area (sq ft)                        17199.27
  Q Total (cfs)           169000.00   Flow (cfs)                         169000.00
  Top Width (ft)            1054.44   Top Width (ft)                      1054.44
  Vel Total (ft/s)             9.83   Avg. Vel. (ft/s)                       9.83
  Max Chl Dpth (ft)           19.27   Hydr. Depth (ft)                      16.31
  Conv. Total (cfs)       4679914.5   Conv. (cfs)                        4679914.5
  Length Wtd. (ft)           310.05   Wetted Per. (ft)                    1060.01
  Min Ch El (ft)            1058.80   Shear (lb/sq ft)                       1.32
  Alpha                        1.00   Stream Power (lb/ft s)                12.98
  Frctn Loss (ft)              0.40   Cum Volume (acre-ft)                1563.13
  C & E Loss (ft)              0.02   Cum SA (acres)                        66.83


CROSS SECTION          RIVER: Salt River
REACH: Reach 4            RS: 214.71

INPUT
Description:
Station Elevation Data    num=      96
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
 16537.2  1088.3 16558.9  1085.9 16592.9  1085.9 16763.8  1086.2 16859.7  1086.5
 16868.8    1087 17046.9  1087.1 17161.4  1088.2 17171.7  1082.1 17181.2  1086.1
 17183.9  1086.7 17186.7  1087.9 17200.4  1088.1 17218.3  1086.4 17227.2  1087.1
 17278.8  1086.7 17455.3  1086.4 17496.2  1085.4   17655  1084.9 17741.4  1083.4
 17806.6  1083.9 18000.9  1084.3 18157.7  1083.7 18217.1  1085.5 18338.5  1084.8
 18351.8  1084.1 18406.2  1083.5 18423.6  1082.7 18570.8  1083.4 18631.7  1082.3
 18689.9  1082.2 18730.4    1083 18877.7  1084.3 18897.5  1084.2 18913.9  1085.7
 19052.5  1085.8 19136.3  1086.3   19280  1085.5 19302.7  1085.3 19375.5  1086.5
 19516.2  1085.3 19591.2  1085.2   19613  1086.9 19679.3    1064 19710.2  1055.3
 19776.6  1057.1 19789.2  1055.6 19878.5  1055.1 19950.4  1058.1 19985.7  1058.8
 20217.6  1058.8 20282.8  1058.4 20409.7  1059.5 20459.9  1062.1 20501.3  1063.5
 20513.5  1067.4   20556  1082.5 20564.1    1082 20574.4  1082.3 20578.1  1079.7
 20580.1  1079.2 20718.7  1080.6   20735  1083.7 20810.9  1083.1 21042.8  1082.6
 21165.2  1083.1 21184.4  1080.5   21197  1079.9 21225.3  1082.8 21322.8  1082.6
 21486.4  1082.2 21544.2    1082 21551.3  1081.1 21570.6  1084.8 21585.1  1084.6
 21759.9  1083.1 21812.7  1083.8 21931.7  1084.3 22062.2  1085.4 22077.8  1085.4
 22114.7  1086.6 22227.5  1086.1 22315.6  1086.8 22453.6  1087.2 22491.4  1087.2
 22621.3  1087.6 22727.1  1088.5 22765.4  1088.2 22839.8  1088.5 23019.9  1089.1
 23040.6  1089.4 23089.5    1088   23154  1089.2 23157.8  1090.1 23161.9  1089.9
 23206.9  1107.7
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Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
16537.2	.04	19613	.035	20556	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19613	20556	500	508.55	450	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
16537.2	19613	1086.9	20556	23206.9	1082.5

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1079.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.48	Reach Len. (ft)	500.00	508.55	450.00
Crit W.S. (ft)	1069.29	Flow Area (sq ft)		16287.19	
E.G. Slope (ft/ft)	0.001272	Area (sq ft)		16287.19	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	901.57	Top Width (ft)		901.57	
Vel Total (ft/s)	10.38	Avg. Vel. (ft/s)		10.38	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		18.07	
Conv. Total (cfs)	4739388.0	Conv. (cfs)		4739388.0	
Length Wtd. (ft)	508.55	Wetted Per. (ft)		907.66	
Min Ch El (ft)	1055.10	Shear (lb/sq ft)		1.42	
Alpha	1.00	Stream Power (lb/ft s)		14.78	
Frctn Loss (ft)	0.48	Cum Volume (acre-ft)	2.41	1443.44	10.54
C & E Loss (ft)	0.11	Cum SA (acres)	2.36	59.87	11.19

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1079.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.67	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.48	Reach Len. (ft)	500.00	508.55	450.00
Crit W.S. (ft)	1069.29	Flow Area (sq ft)		16294.01	
E.G. Slope (ft/ft)	0.001270	Area (sq ft)		16294.01	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	901.57	Top Width (ft)		901.57	
Vel Total (ft/s)	10.37	Avg. Vel. (ft/s)		10.37	
Max Chl Dpth (ft)	22.38	Hydr. Depth (ft)		18.07	
Conv. Total (cfs)	4742644.5	Conv. (cfs)		4742644.5	
Length Wtd. (ft)	508.55	Wetted Per. (ft)		907.67	
Min Ch El (ft)	1055.10	Shear (lb/sq ft)		1.42	
Alpha	1.00	Stream Power (lb/ft s)		14.76	
Frctn Loss (ft)	0.48	Cum Volume (acre-ft)		1443.93	
C & E Loss (ft)	0.11	Cum SA (acres)		59.87	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.61

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19556.5	1090.7	19575.8	1083.7	19604	1083	19610.6	1082.9	19612.9	1082.9
19644.9	1083.1	19651.7	1083.5	19652	1083.3	19667.4	1082.4	19671.3	1082.1
19705.3	1070.2	19734.4	1059.9	19741.4	1059.3	19748	1058.8	19778	1052.1
19779.3	1051.9	19816.2	1051.8	20190.1	1050.7	20241.7	1050.4	20265.2	1051.1
20282.3	1051.7	20311.7	1051.9	20401.7	1053.1	20478.1	1077.4	20490.2	1081.3
20493	1081.2	20569.1	1081.3	20872.2	1081.7	21019.6	1081.8	21020.5	1080.9
21033.8	1081.6	21035.8	1081.5	21050.2	1081.5	21050.8	1082.2	21072	1081.6
21073.4	1082	21087.1	1081.8	21155	1081.6	21337.9	1081	21391.3	1080.8
21411.1	1080.4	21430.2	1082	21430.6	1082	21445.5	1082.7	21446.6	1082.9
21449.3	1082.9	21454.5	1082.8	21492.8	1083.2	21525.4	1083.8	21540.7	1083.8
21548.1	1083.8	21644.1	1084.5	21661.2	1084.7	21670.8	1084.7	21686.1	1084.9
21694.5	1085.5	21699.7	1086	21770.9	1085.7	21773.6	1085.7	21783.8	1085.6
21878	1085.1	21882	1085.2	21936.8	1086.2	21960.9	1085.7	21970.7	1085.5
21971.9	1085.8	21979.1	1086	21982.1	1086.2	21983.3	1086.4	22095.3	1085.7
22108.3	1085.5	22121.6	1085.5	22244.5	1085.6	22270	1085.6	22368.7	1085.5
22494.6	1085.6	22513.4	1085.6	22576.4	1085.9	22577.8	1085.9	22583	1086.1
22584.3	1086.1	22587.2	1086.2	22590.7	1086.2	22623.8	1086.6	22635.7	1086.6
22658.8	1086.7	22665.4	1086.7	22764.4	1087	22889.6	1087.5	22950.3	1086.7
22951.2	1086.5	22992.3	1087.4	22996.7	1087.5	22998	1087.5	23025.3	1087.8
23027	1089.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

19556.5 .04 19651.7 .035 20490.2 .04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19651.7	20490.2	480	493.82	490	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19556.5	19651.7	1083.5	20490.2	23027	1081.3

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1078.56	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.32	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.25	Reach Len. (ft)	480.00	493.82	490.00
Crit W.S. (ft)	1064.26	Flow Area (sq ft)		18346.45	
E.G. Slope (ft/ft)	0.000723	Area (sq ft)		18346.45	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	792.44	Top Width (ft)		792.44	
Vel Total (ft/s)	9.21	Avg. Vel. (ft/s)		9.21	
Max Chl Dpth (ft)	26.85	Hydr. Depth (ft)		23.15	
Conv. Total (cfs)	6287221.5	Conv. (cfs)		6287221.5	
Length Wtd. (ft)	493.82	Wetted Per. (ft)		799.99	
Min Ch El (ft)	1050.40	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		9.53	
Frctn Loss (ft)	0.26	Cum Volume (acre-ft)	2.41	1241.27	10.54
C & E Loss (ft)	0.15	Cum SA (acres)	2.36	49.98	11.19

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1078.57	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.32	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.25	Reach Len. (ft)	480.00	493.82	490.00
Crit W.S. (ft)	1064.26	Flow Area (sq ft)		18352.64	
E.G. Slope (ft/ft)	0.000722	Area (sq ft)		18352.64	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	792.44	Top Width (ft)		792.44	
Vel Total (ft/s)	9.21	Avg. Vel. (ft/s)		9.21	
Max Chl Dpth (ft)	26.85	Hydr. Depth (ft)		23.16	
Conv. Total (cfs)	6290683.0	Conv. (cfs)		6290683.0	
Length Wtd. (ft)	493.82	Wetted Per. (ft)		800.00	
Min Ch El (ft)	1050.40	Shear (lb/sq ft)		1.03	
Alpha	1.00	Stream Power (lb/ft s)		9.52	
Frctn Loss (ft)	0.26	Cum Volume (acre-ft)		1241.69	
C & E Loss (ft)	0.15	Cum SA (acres)		49.98	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.52

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18720.8	1088.9	18742	1088.8	18817.1	1087.2	18852.5	1085.6	18880.5	1085.2
18899.4	1085	18968.6	1084.4	18992.4	1084.1	19069.7	1083.1	19080.7	1083.1
19124.1	1083.4	19129.6	1083.4	19171.3	1083.5	19252.9	1082.9	19307.3	1082.4
19347.5	1082.2	19395	1080	19410	1078.6	19468.6	1078.3	19471.7	1078.3
19472.1	1078.4	19502.5	1082.1	19512.6	1081.9	19530.4	1075.5	19587.6	1058.3
19588.4	1058.2	19631.6	1049.1	19632.2	1049	19654.8	1048.9	20209.9	1048
20236.1	1049	20250.8	1050	20271.2	1049.9	20335.4	1050.8	20343.6	1050.6
20369.5	1059.1	20388.5	1060.2	20436.1	1072.8	20461.7	1079.5	20551.8	1079.4
20611.2	1079.6	20954.9	1080	20964	1080	20970.6	1080.1	20974.1	1080.7
20989.2	1081.9	20999.7	1081.1	21003	1080.5	21009.8	1081	21042.5	1081.5
21050.5	1081.8	21079.1	1083.3	21085.5	1083.5	21116.9	1082.1	21130.4	1081.5
21219.7	1082.4	21240.1	1082.6	21282.6	1084.4	21286	1083.5	21288.4	1082.3
21332.6	1082.1	21387.4	1082.6	21392.5	1082.4	21406.8	1081.5	21439.6	1083.8
21439.8	1083.8	21481	1083	21531.4	1083.5	21564.3	1083.6	21583	1083.6
21641	1083.6	21706.4	1084	21785.5	1084.9	21787.2	1084.8	21792.9	1084.7
21803.4	1084.8	21839.8	1084.4	21972.1	1084.1	21979.9	1084.1	22043.3	1084.2
22124	1084.1	22153.7	1084.1	22249.3	1084.2	22303.8	1084.1	22323.8	1084.2
22426.9	1084.1	22443.4	1085	22456.6	1085.2	22483.5	1085.4	22648.6	1085.7
22681.1	1085.7	22718.5	1085.6	22853.3	1085.1	22877.5	1085.6	22879.9	1087.3
22883.2	1089.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18720.8	.04	19502.5	.035	20461.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19502.5	20461.7	470	500.39	530	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18720.8	19502.5	1082.1	20461.7	22883.2	1079.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1078.15	Element			
Vel Head (ft)	0.80	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.35	Reach Len. (ft)	470.00	500.39	530.00
Crit W.S. (ft)	1060.59	Flow Area (sq ft)		23492.53	
E.G. Slope (ft/ft)	0.000391	Area (sq ft)		23492.53	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	928.22	Top Width (ft)		928.22	
Vel Total (ft/s)	7.19	Avg. Vel. (ft/s)		7.19	
Max Chl Dpth (ft)	29.35	Hydr. Depth (ft)		25.31	
Conv. Total (cfs)	8551625.0	Conv. (cfs)		8551625.0	
Length Wtd. (ft)	500.39	Wetted Per. (ft)		935.71	
Min Ch El (ft)	1048.00	Shear (lb/sq ft)		0.61	
Alpha	1.00	Stream Power (lb/ft s)		4.40	
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)	2.41	1004.12	10.54
C & E Loss (ft)	0.06	Cum SA (acres)	2.36	40.23	11.19

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1078.16	Element			
Vel Head (ft)	0.80	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.36	Reach Len. (ft)	470.00	500.39	530.00
Crit W.S. (ft)	1060.59	Flow Area (sq ft)		23499.67	
E.G. Slope (ft/ft)	0.000390	Area (sq ft)		23499.67	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	928.22	Top Width (ft)		928.22	
Vel Total (ft/s)	7.19	Avg. Vel. (ft/s)		7.19	
Max Chl Dpth (ft)	29.36	Hydr. Depth (ft)		25.32	
Conv. Total (cfs)	8555852.0	Conv. (cfs)		8555852.0	
Length Wtd. (ft)	500.39	Wetted Per. (ft)		935.73	
Min Ch El (ft)	1048.00	Shear (lb/sq ft)		0.61	
Alpha	1.00	Stream Power (lb/ft s)		4.40	
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)		1004.45	
C & E Loss (ft)	0.06	Cum SA (acres)		40.23	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.42

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18493.5	1089	18623	1088.7	18649.2	1088.3	18719.9	1086.7	18729.4	1086.4
18866.3	1084.6	18902.2	1083.9	18965.6	1081.6	19017.4	1081.3	19068.3	1081.3
19082.8	1081.1	19105.8	1080.5	19165.7	1079.2	19179.2	1079.1	19277.4	1079.4
19283.5	1079.5	19328.1	1079.3	19378	1077.9	19379.9	1078	19421	1065.1
19464.1	1052.5	19491.1	1052.2	19495.8	1051.2	19508.9	1049.2	20099.7	1048.5
20317.7	1048.3	20325.7	1048.2	20347.5	1054.7	20431.8	1079.7	20447.5	1078.7
20725.9	1079.2	20806.7	1079.3	20820.7	1074	20847.2	1077.8	20868.3	1075.7
20885.3	1074.7	20896.5	1075.4	20920.2	1076.4	20930.8	1076.7	20963.3	1076.8
20975	1077.5	21027	1078.5	21053	1078.5	21067.1	1078.7	21145.4	1078.8
21171.1	1078.5	21208	1078.9	21230.1	1079	21334.3	1080.4	21478.9	1080.2
21530.4	1080.1	21531.4	1080.2	21535.5	1080.2	21625.6	1081.4	21660.4	1081.5
21692.6	1081.9	21702.4	1082.4	21711.2	1083.1	21729.2	1083	21737.7	1083.2
21758.6	1083.2	21952.1	1083.8	22040.6	1083.1	22131.3	1083.1	22152.7	1083.7
22160.1	1082.9	22166.5	1082.7	22236.9	1082.7	22242.2	1082.8	22242.8	1082.7
22252.8	1083.3	22275.5	1084.3	22277.6	1083.8	22282.4	1082.9	22284.3	1082.9
22289.4	1082.5	22385	1082.7	22412	1082.8	22425.6	1083.3	22522.2	1083.2
22566.8	1083.5	22586.5	1083.4	22620.8	1084	22647.4	1084.9	22647.5	1085
22651.3	1085	22655.3	1084.8	22666.5	1085.2	22711.9	1084.8	22728.7	1084.5
22764.2	1084.3	22785.3	1084	22798.5	1084.7	22805.8	1085.4	22828.6	1085.6
22834	1088.8								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val

18493.5	.04	19379.9	.035	20431.8	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19379.9	20431.8	510	496.64	480	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18493.5	19379.9	1078	20431.8	22834	1079.7

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1077.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.61	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.32	Reach Len. (ft)	510.00	496.64	480.00
Crit W.S. (ft)	1059.39	Flow Area (sq ft)		26966.97	
E.G. Slope (ft/ft)	0.000288	Area (sq ft)		26966.97	189.82
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1193.48	Top Width (ft)		1041.69	151.79
Vel Total (ft/s)	6.27	Avg. Vel. (ft/s)		6.27	
Max Chl Dpth (ft)	29.12	Hydr. Depth (ft)		25.89	
Conv. Total (cfs)	9966912.0	Conv. (cfs)		9966912.0	
Length Wtd. (ft)	496.64	Wetted Per. (ft)		1049.86	
Min Ch El (ft)	1048.20	Shear (lb/sq ft)		0.46	
Alpha	1.00	Stream Power (lb/ft s)		2.89	
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)	2.41	714.29	9.38
C & E Loss (ft)	0.02	Cum SA (acres)	2.36	28.91	10.27

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1077.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.61	Wt. n-Val.		0.035	
W.S. Elev (ft)	1077.33	Reach Len. (ft)	510.00	496.64	480.00
Crit W.S. (ft)	1059.39	Flow Area (sq ft)		26975.11	
E.G. Slope (ft/ft)	0.000287	Area (sq ft)		26975.11	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1041.69	Top Width (ft)		1041.69	
Vel Total (ft/s)	6.27	Avg. Vel. (ft/s)		6.27	
Max Chl Dpth (ft)	29.13	Hydr. Depth (ft)		25.90	
Conv. Total (cfs)	9971823.0	Conv. (cfs)		9971823.0	
Length Wtd. (ft)	496.64	Wetted Per. (ft)		1049.87	
Min Ch El (ft)	1048.20	Shear (lb/sq ft)		0.46	
Alpha	1.00	Stream Power (lb/ft s)		2.89	
Frctn Loss (ft)	0.17	Cum Volume (acre-ft)		714.54	
C & E Loss (ft)	0.02	Cum SA (acres)		28.91	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.33

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
19133.3	1085.2	19150.1	1084.8	19166.8	1082.9	19183.1	1081.7	19209.9	1081.3
19301.3	1080.3	19344.7	1079.4	19434.1	1078.7	19465.4	1078.4	19483.8	1078.5
19487.4	1078.4	19523.4	1066.7	19566.6	1052.5	19603.1	1051.4	19616.9	1048.8
19618.9	1048.5	20162.4	1048.5	20297.1	1048.6	20328.4	1057.9	20398	1078.8
20412.3	1077.8	20446.7	1077.9	20657.5	1078.6	20676	1070.3	20677.2	1069.9
20699.8	1076	20737.1	1074.4	20751.7	1072.8	20760.5	1073.4	20805.9	1074.8
20836.7	1075.5	20869.8	1076.4	20918.3	1076.8	20949.1	1076.9	20987.3	1076.4
21007.5	1076	21018.5	1076.4	21020.1	1076.7	21036.8	1076.9	21114	1077.6
21129.5	1077.8	21152.8	1078.4	21167.5	1078.9	21188.3	1079	21274.4	1079
21283.2	1078.8	21287.2	1078.8	21339.5	1078.5	21371.1	1077.7	21383.5	1077.2
21417.4	1077.4	21422	1077.5	21453	1077.4	21457.4	1077.6	21484.4	1078.1
21507	1079	21536.8	1078.7	21546.2	1078.5	21548.8	1079	21562.6	1082.6
21570.5	1082.2	21584.1	1078.7	21599.4	1080.2	21608.1	1081.8	21609	1081.8
21686.1	1081.7	21711.3	1081.7	21759	1082.3	21794	1082.3	21961.8	1081.9
22070.5	1082.3	22107.7	1082.5	22117.3	1082.5	22139.1	1084.1	22245.2	1081.7
22259.2	1081.5	22311.2	1081.5	22328.9	1082.2	22367.6	1082.5	22412.4	1083
22434.9	1083.7	22480	1083.4	22488.3	1083.5	22501.1	1083.3	22505.8	1083.9
22523	1083.8	22534.2	1083.9	22540.3	1083.8	22556.6	1083.2	22675.7	1082.9
22714.1	1082.9	22740.7	1084.5	22763.1	1084.9	22765.9	1084.7	22770.5	1087.7
22776.7	1088								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
19133.3	.04	19483.8	.035	20398	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19483.8	20398	440	507.15	560	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
19133.3	19483.8	1078.5	20398	22776.7	1078.8

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1077.73	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.85	Wt. n-Val.		0.035	
W.S. Elev (ft)	1076.88	Reach Len. (ft)	440.00	507.15	560.00
Crit W.S. (ft)	1060.42	Flow Area (sq ft)		22823.58	
E.G. Slope (ft/ft)	0.000413	Area (sq ft)		22823.58	546.43
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1266.50	Top Width (ft)		899.54	366.96
Vel Total (ft/s)	7.40	Avg. Vel. (ft/s)		7.40	
Max Chl Dpth (ft)	28.38	Hydr. Depth (ft)		25.37	
Conv. Total (cfs)	8315551.0	Conv. (cfs)		8315551.0	
Length Wtd. (ft)	507.15	Wetted Per. (ft)		907.85	
Min Ch El (ft)	1048.50	Shear (lb/sq ft)		0.65	
Alpha	1.00	Stream Power (lb/ft s)		4.80	
Frctn Loss (ft)	0.28	Cum Volume (acre-ft)	2.41	430.45	5.33
C & E Loss (ft)	0.06	Cum SA (acres)	2.36	17.85	7.41

Warning: Divided flow computed for this cross-section.
Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1077.74	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.85	Wt. n-Val.		0.035	
W.S. Elev (ft)	1076.89	Reach Len. (ft)	440.00	507.15	560.00
Crit W.S. (ft)	1060.42	Flow Area (sq ft)		22830.94	
E.G. Slope (ft/ft)	0.000413	Area (sq ft)		22830.94	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	899.54	Top Width (ft)		899.54	
Vel Total (ft/s)	7.40	Avg. Vel. (ft/s)		7.40	
Max Chl Dpth (ft)	28.39	Hydr. Depth (ft)		25.38	
Conv. Total (cfs)	8319916.5	Conv. (cfs)		8319916.5	
Length Wtd. (ft)	507.15	Wetted Per. (ft)		907.87	
Min Ch El (ft)	1048.50	Shear (lb/sq ft)		0.65	
Alpha	1.00	Stream Power (lb/ft s)		4.80	
Frctn Loss (ft)	0.28	Cum Volume (acre-ft)		430.62	
C & E Loss (ft)	0.06	Cum SA (acres)		17.85	

Warning: The velocity head has changed by more than 0.5 ft (0.15 m). This may indicate the need for additional cross sections.

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.23

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18784.1	1083	18804.5	1082.7	18829.1	1082.8	18859.6	1082.2	18872.7	1082.1
18901.7	1080.8	18937.2	1079.1	18949.3	1078.7	18993.6	1076.9	19014.1	1076.2
19019.1	1076	19059.1	1075.3	19071.7	1075.2	19140.8	1074.8	19164.5	1074.3
19204	1074	19250.8	1076.3	19289.1	1078.8	19308.2	1079.3	19327.2	1079.4
19383.2	1079.8	19398.8	1080.2	19482.4	1079.4	19525.9	1078.7	19586	1078.4
19602.4	1078	19608.5	1078	19627.1	1071.4	19679	1054.8	19716.3	1049.1
19735.4	1049.5	19750.3	1050.1	19754.7	1049.9	19765.5	1049.7	19776.3	1048.7
19795	1048.7	20005.3	1048.9	20084.2	1049	20254.8	1049.1	20264.9	1051.9
20361.7	1078.5	20382.3	1076.8	20444.8	1077.5	20517.6	1077.1	20541.3	1077.2
20594	1077	20670.3	1076.8	20683.5	1076.6	20732.6	1075.7	20741.7	1076
20744	1076	20815.4	1076.1	20831.3	1076.5	20866.2	1076.8	20912.2	1077.1
20978	1077.2	20998.8	1076.9	21008.6	1077	21025.7	1076.4	21089	1076.5
21093.4	1076.5	21125.9	1078.5	21149.4	1077.2	21195.1	1075.3	21231.1	1074.6
21239	1074.6	21282.1	1075.3	21304.7	1075.4	21378.1	1077	21396.4	1078.6
21405.7	1079.3	21416.4	1077.7	21418.8	1077.6	21492.6	1079.6	21526.7	1079.8
21540.8	1080.1	21640.2	1080.5	21651.2	1077.8	21654.9	1076.6	21672.5	1076.5
21682.8	1076.7	21695	1077.7	21718.3	1079.8	21746.9	1079.9	21771.5	1079.8
21876.1	1080.4	21901.8	1080.5	21957.9	1080.4	22021.8	1080.6	22062.3	1081.1
22115.9	1081.6	22173.3	1082.2	22270.7	1082.8	22330.2	1082.8	22335	1083.1
22345.5	1083.3								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18784.1	.04	19608.5	.035	20361.7	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19608.5	20361.7	495	494.49	495	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18784.1	19608.5	1078	20361.7	22345.5	1078.5

CROSS SECTION OUTPUT Profile #PF#1

			Left OB	Channel	Right OB
E.G. Elev (ft)	1077.39	Element			
Vel Head (ft)	1.46	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.93	Reach Len. (ft)	495.00	494.49	495.00
Crit W.S. (ft)	1062.84	Flow Area (sq ft)		17406.42	
E.G. Slope (ft/ft)	0.000784	Area (sq ft)	224.37	17406.42	114.05
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1126.00	Top Width (ft)	219.92	737.99	168.09
Vel Total (ft/s)	9.71	Avg. Vel. (ft/s)		9.71	
Max Chl Dpth (ft)	27.23	Hydr. Depth (ft)		23.59	
Conv. Total (cfs)	6036928.5	Conv. (cfs)		6036928.5	
Length Wtd. (ft)	494.49	Wetted Per. (ft)		745.49	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.14	
Alpha	1.00	Stream Power (lb/ft s)		11.09	
Frctn Loss (ft)	0.39	Cum Volume (acre-ft)	1.27	196.26	1.08
C & E Loss (ft)	0.00	Cum SA (acres)	1.25	8.31	3.97

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

			Left OB	Channel	Right OB
E.G. Elev (ft)	1077.40	Element			
Vel Head (ft)	1.46	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.94	Reach Len. (ft)	495.00	494.49	495.00
Crit W.S. (ft)	1062.84	Flow Area (sq ft)		17413.27	
E.G. Slope (ft/ft)	0.000783	Area (sq ft)		17413.27	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	738.00	Top Width (ft)		738.00	
Vel Total (ft/s)	9.71	Avg. Vel. (ft/s)		9.71	
Max Chl Dpth (ft)	27.24	Hydr. Depth (ft)		23.60	
Conv. Total (cfs)	6040764.0	Conv. (cfs)		6040764.0	
Length Wtd. (ft)	494.49	Wetted Per. (ft)		745.51	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.14	
Alpha	1.00	Stream Power (lb/ft s)		11.08	
Frctn Loss (ft)	0.39	Cum Volume (acre-ft)		196.34	
C & E Loss (ft)	0.00	Cum SA (acres)		8.31	

CROSS SECTION RIVER: Salt River
REACH: Reach 4 RS: 214.14

INPUT
Description:
Station Elevation Data num= 96

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
18555.4	1082.6	18577.7	1082.5	18586.5	1082.5	18650.6	1082	18678.8	1082.1
18707.4	1081.7	18729.5	1082	18771.6	1082.1	18793.7	1081.8	18836	1080.9
18859.7	1080.3	18935.6	1078.9	19050.6	1077.2	19056.7	1077.2	19059.9	1077.1
19062.9	1076.9	19063.3	1077	19067.8	1077.1	19071.9	1077.1	19078.2	1077.1
19188.3	1078.1	19249.7	1079.4	19290.2	1080.1	19298.1	1080.2	19313.1	1080.4
19327.5	1080.7	19358.6	1080.6	19391.6	1080.5	19412.8	1080.3	19520.8	1077.9
19554.8	1077.5	19580.2	1077.3	19610.8	1076.5	19651.9	1076.7	19697.7	1058.7
19715.9	1051.7	19732.8	1050.2	19750.7	1048.7	20032.7	1049	20292.3	1049.2
20350.9	1065.9	20388.3	1077.5	20405.5	1075.6	20406	1075.6	20439.7	1075.6
20637.3	1075.5	20899.6	1075.4	20920.6	1075.5	20941.8	1075.4	20947.4	1075.5
20962	1075.5	20980	1075.4	20989.9	1075.4	21074.1	1075.4	21119.6	1075.7
21168.7	1076.8	21222	1076.6	21326.8	1076.2	21327.4	1076.2	21342.2	1075
21390.6	1075	21428.8	1075	21455.3	1075.3	21502.1	1076.4	21502.4	1076.2
21505.4	1076.4	21551.9	1077.5	21591.8	1077.6	21726.3	1078.4	21759.2	1078.5
21766.3	1078.3	21792.4	1078.4	21884.6	1078.9	22013	1079.1	22034.3	1079.5
22101.6	1079.7	22156.1	1080.1	22201.4	1080	22204.6	1079.9	22217.3	1080.5
22235	1081.3	22238.1	1081.3	22264.5	1081	22267.7	1080.9	22269.4	1080.7
22269.9	1080.6	22272.4	1080.4	22280.3	1079.8	22341.9	1080.2	22431	1080.6
22501.3	1081.2	22591.2	1081.8	22602.9	1082	22619.7	1083	22686.6	1082.9
22710.3	1082.5								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
18555.4	.04	19651.9	.035	20388.3	.04

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
19651.9	20388.3	475	510.51	570	.1	.3

Ineffective Flow num= 2

Sta L	Sta R	Elev	Sta L	Sta R	Elev
18555.4	19651.9	1076.7	20388.3	22710.3	1077.5

CROSS SECTION OUTPUT Profile #PF#1

E.G. Elev (ft)	1076.99	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.50	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.49	Reach Len. (ft)			
Crit W.S. (ft)	1062.63	Flow Area (sq ft)		17171.67	
E.G. Slope (ft/ft)	0.000805	Area (sq ft)		17171.67	76.05
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	1257.06	Top Width (ft)		726.84	530.22
Vel Total (ft/s)	9.84	Avg. Vel. (ft/s)		9.84	
Max Chl Dpth (ft)	26.79	Hydr. Depth (ft)		23.63	
Conv. Total (cfs)	5956564.5	Conv. (cfs)		5956564.5	
Length Wtd. (ft)		Wetted Per. (ft)		735.24	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.17	
Alpha	1.00	Stream Power (lb/ft s)		11.55	
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Warning: Divided flow computed for this cross-section.

CROSS SECTION OUTPUT Profile #PF#2

E.G. Elev (ft)	1077.00	Element	Left OB	Channel	Right OB
Vel Head (ft)	1.50	Wt. n-Val.		0.035	
W.S. Elev (ft)	1075.50	Reach Len. (ft)			
Crit W.S. (ft)	1062.66	Flow Area (sq ft)		17178.94	
E.G. Slope (ft/ft)	0.000804	Area (sq ft)		17178.94	
Q Total (cfs)	169000.00	Flow (cfs)		169000.00	
Top Width (ft)	726.84	Top Width (ft)		726.84	
Vel Total (ft/s)	9.84	Avg. Vel. (ft/s)		9.84	
Max Chl Dpth (ft)	26.80	Hydr. Depth (ft)		23.64	
Conv. Total (cfs)	5960669.0	Conv. (cfs)		5960669.0	
Length Wtd. (ft)		Wetted Per. (ft)		735.26	
Min Ch El (ft)	1048.70	Shear (lb/sq ft)		1.17	
Alpha	1.00	Stream Power (lb/ft s)		11.54	
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

SUMMARY OF MANNING'S N VALUES

River:Salt River

Reach	River Sta.	n1	n2	n3
Reach 4	223.08	.05	.035	.05
Reach 4	223.02	.05	.035	.05
Reach 4	222.93	.05	.035	.05
Reach 4	222.83	.05	.035	.05
Reach 4	222.74	.05	.035	.05
Reach 4	222.70	.015	.015	.015
Reach 4	222.695	.015	.015	.015
Reach 4	222.69	.015	.015	.015
Reach 4	222.68	Bridge		
Reach 4	222.67	.015	.015	.015
Reach 4	222.66	.05	.035	.05
Reach 4	222.65	.05	.035	.05
Reach 4	222.55	.04	.03	.04
Reach 4	222.45	.04	.03	.04
Reach 4	222.36	.04	.03	.04
Reach 4	222.27	.04	.03	.04
Reach 4	222.17	.04	.03	.04
Reach 4	222.09	.04	.03	.04
Reach 4	222.085	Bridge		
Reach 4	222.08	.04	.03	.04
Reach 4	221.99	.04	.03	.04

Reach 4	221.89	.04	.03	.04
Reach 4	221.80	.04	.03	.04
Reach 4	221.70	.04	.03	.04
Reach 4	221.61	.04	.03	.04
Reach 4	221.50	.04	.03	.04
Reach 4	221.40	.05	.035	.05
Reach 4	221.31	.05	.035	.05
Reach 4	221.26	.05	.035	.05
Reach 4	221.25	Bridge		
Reach 4	221.24	.05	.035	.05
Reach 4	221.2	.05	.035	.05
Reach 4	221.195	Bridge		
Reach 4	221.19	.05	.035	.05
Reach 4	221.06	.05	.035	.05
Reach 4	221.055	Bridge		
Reach 4	221.05	.035	.035	.035
Reach 4	221.02	.035	.035	.035
Reach 4	220.92	.035	.035	.035
Reach 4	220.82	.035	.035	.035
Reach 4	220.756	.015	.015	.015
Reach 4	220.755	.015	.015	.015
Reach 4	220.752	Bridge		
Reach 4	220.75	.015	.015	.015
Reach 4	220.74	.032	.032	.032
Reach 4	220.735	.035	.035	.035
Reach 4	220.73	.035	.035	.035
Reach 4	220.63	.035	.035	.035
Reach 4	220.54	.035	.035	.035
Reach 4	220.45	.035	.035	.035
Reach 4	220.35	.035	.035	.035
Reach 4	220.25	.035	.035	.035
Reach 4	220.16	.035	.035	.035
Reach 4	220.06	.035	.035	.035
Reach 4	220.05	Bridge		
Reach 4	220.03	.035	.035	.035
Reach 4	219.88	.035	.035	.035
Reach 4	219.79	.035	.035	.035
Reach 4	219.70	.035	.035	.035
Reach 4	219.61	.035	.035	.035
Reach 4	219.51	.035	.035	.035
Reach 4	219.42	.035	.035	.035
Reach 4	219.33	.035	.035	.035
Reach 4	219.24	.035	.035	.035
Reach 4	219.14	.05	.035	.05
Reach 4	219.03	.05	.035	.05
Reach 4	219.02	Bridge		
Reach 4	219.01	.05	.035	.05
Reach 4	218.97	.05	.035	.05
Reach 4	218.965	Bridge		
Reach 4	218.96	.05	.035	.05
Reach 4	218.80	.05	.035	.05
Reach 4	218.71	.05	.035	.05
Reach 4	218.61	.05	.035	.05
Reach 4	218.52	.05	.035	.05
Reach 4	218.42	.05	.035	.05
Reach 4	218.33	.05	.035	.05
Reach 4	218.24	.05	.035	.05
Reach 4	218.14	.05	.035	.05
Reach 4	218.04	.035	.035	.035
Reach 4	217.95	.035	.035	.035
Reach 4	217.86	.035	.035	.035
Reach 4	217.76	.035	.035	.035
Reach 4	217.66	.035	.035	.035
Reach 4	217.57	.035	.035	.035
Reach 4	217.48	.035	.035	.035
Reach 4	217.38	.035	.035	.035
Reach 4	217.29	.035	.035	.035
Reach 4	217.19	.035	.035	.035
Reach 4	217.10	.035	.035	.035
Reach 4	217.00	.035	.035	.035
Reach 4	216.91	.035	.035	.035
Reach 4	216.81	.035	.035	.035
Reach 4	216.72	.035	.035	.035
Reach 4	216.62	.035	.035	.035
Reach 4	216.52	.04	.035	.04
Reach 4	216.505	Bridge		
Reach 4	216.49	.04	.035	.04
Reach 4	216.42	.04	.035	.04
Reach 4	216.33	.04	.035	.04

Reach 4	216.23	.04	.035	.04
Reach 4	216.13	.04	.035	.04
Reach 4	216.04	.04	.035	.04
Reach 4	215.94	.04	.035	.04
Reach 4	215.84	.04	.035	.04
Reach 4	215.82	.04	.035	.04
Reach 4	215.815	Bridge		
Reach 4	215.81	.04	.035	.04
Reach 4	215.75	.04	.035	.04
Reach 4	215.65	.04	.035	.04
Reach 4	215.56	.04	.035	.04
Reach 4	215.46	.04	.035	.04
Reach 4	215.36	.04	.035	.04
Reach 4	215.27	.04	.035	.04
Reach 4	215.18	.04	.035	.04
Reach 4	215.09	.04	.035	.04
Reach 4	214.99	.04	.035	.04
Reach 4	214.9	.04	.035	.04
Reach 4	214.79	.04	.035	.04
Reach 4	214.785	Bridge		
Reach 4	214.78	.04	.035	.04
Reach 4	214.71	.04	.035	.04
Reach 4	214.61	.04	.035	.04
Reach 4	214.52	.04	.035	.04
Reach 4	214.42	.04	.035	.04
Reach 4	214.33	.04	.035	.04
Reach 4	214.23	.04	.035	.04
Reach 4	214.14	.04	.035	.04

SUMMARY OF REACH LENGTHS

River: Salt River

Reach	River Sta.	Left	Channel	Right
Reach 4	223.08	170	268.54	370
Reach 4	223.02	500	494.97	480
Reach 4	222.93	470	502.27	520
Reach 4	222.83	497.11	497.11	497.11
Reach 4	222.74	216.81	216.81	216.81
Reach 4	222.70	25	25	25
Reach 4	222.695	3.4	3.4	3.4
Reach 4	222.69	30	30	30
Reach 4	222.68	Bridge		
Reach 4	222.67	21.5	21.5	21.5
Reach 4	222.66	186	186	186
Reach 4	222.65	525	522.87	470
Reach 4	222.55	530	514.6	510
Reach 4	222.45	420	480.98	550
Reach 4	222.36	630	487.06	380
Reach 4	222.27	580	492.86	420
Reach 4	222.17	410	381.57	360
Reach 4	222.09	154.01	154.01	154.01
Reach 4	222.085	Bridge		
Reach 4	222.08	580	440.56	330
Reach 4	221.99	560	510.5	470
Reach 4	221.89	520	490.84	460
Reach 4	221.80	520	512.31	500
Reach 4	221.70	480	491.61	500
Reach 4	221.61	420	571.5	760
Reach 4	221.50	510	506.96	520
Reach 4	221.40	460	504.7	540
Reach 4	221.31	220	262.31	780
Reach 4	221.26	101.04	101.04	101.04
Reach 4	221.25	Bridge		
Reach 4	221.24	185.11	185.11	185.11
Reach 4	221.2	91.95	91.95	91.95
Reach 4	221.195	Bridge		
Reach 4	221.19	790	650.87	300
Reach 4	221.06	84.74	84.74	84.74
Reach 4	221.055	Bridge		
Reach 4	221.05	210	167.68	80
Reach 4	221.02	530	503.55	450
Reach 4	220.92	560	518.52	450
Reach 4	220.82	197	191.93	187
Reach 4	220.756	6	6	6

Reach 4	220.755	54	54	54
Reach 4	220.752	Bridge		
Reach 4	220.75	31	31	31
Reach 4	220.74	30	30	30
Reach 4	220.735	182	182	182
Reach 4	220.73	510	501.55	490
Reach 4	220.63	490	501.08	510
Reach 4	220.54	470	492.46	510
Reach 4	220.45	500	506.77	520
Reach 4	220.35	490	500.81	520
Reach 4	220.25	500	500.83	490
Reach 4	220.16	480	495.84	550
Reach 4	220.06	176.4	176.4	176.4
Reach 4	220.05	Bridge		
Reach 4	220.03	840	799.9	720
Reach 4	219.88	460	484.7	520
Reach 4	219.79	420	490.52	550
Reach 4	219.70	460	477.05	540
Reach 4	219.61	470	499.49	550
Reach 4	219.51	450	497.52	570
Reach 4	219.42	410	470.96	560
Reach 4	219.33	380	467.92	590
Reach 4	219.24	510	511.34	500
Reach 4	219.14	760	550.34	260
Reach 4	219.03	190.12	190.12	190.12
Reach 4	219.02	Bridge		
Reach 4	219.01	111.97	111.97	111.97
Reach 4	218.97	138.88	138.88	138.88
Reach 4	218.965	Bridge		
Reach 4	218.96	570	812.27	860
Reach 4	218.80	480	483.7	500
Reach 4	218.71	508.24	508.24	508.24
Reach 4	218.61	510	503.43	503.43
Reach 4	218.52	520	496.02	460
Reach 4	218.42	520	502.97	490
Reach 4	218.33	540	490.24	430
Reach 4	218.24	530	499.8	460
Reach 4	218.14	570	508.89	460
Reach 4	218.04	540	508.91	460
Reach 4	217.95	480	489.76	489.76
Reach 4	217.86	470	512.67	540
Reach 4	217.76	440	496.98	560
Reach 4	217.66	450	512.72	610
Reach 4	217.57	440	481.39	550
Reach 4	217.48	440	502.74	570
Reach 4	217.38	480	491.58	500
Reach 4	217.29	511.81	511.81	520
Reach 4	217.19	490	502.45	520
Reach 4	217.10	481.37	481.37	481.37
Reach 4	217.00	510	506.49	506.49
Reach 4	216.91	503.44	503.44	503.44
Reach 4	216.81	498.18	498.18	498.18
Reach 4	216.72	500	508.39	520
Reach 4	216.62	470	499.71	570
Reach 4	216.52	256.5	256.5	256.5
Reach 4	216.505	Bridge		
Reach 4	216.49	23.25	23.25	23.25
Reach 4	216.42	510	488.7	410
Reach 4	216.33	600	490.24	380
Reach 4	216.23	590	517.61	450
Reach 4	216.13	550	500.46	390
Reach 4	216.04	540	507.78	500
Reach 4	215.94	560	540.02	520
Reach 4	215.84	120	123.82	130
Reach 4	215.82	115.96	115.96	115.96
Reach 4	215.815	Bridge		
Reach 4	215.81	300	264.36	230
Reach 4	215.75	520	500.69	470
Reach 4	215.65	500	495.44	490
Reach 4	215.56	500	498.23	500
Reach 4	215.46	510	519.75	530
Reach 4	215.36	500	489.19	470
Reach 4	215.27	550	493.27	420
Reach 4	215.18	560	481.96	420
Reach 4	215.09	510	506.22	510
Reach 4	214.99	480	505.18	530
Reach 4	214.9	340	568.44	730
Reach 4	214.79	116.34	116.34	116.34
Reach 4	214.785	Bridge		

Reach 4	214.78	520	310.05	80
Reach 4	214.71	500	508.55	450
Reach 4	214.61	480	493.82	490
Reach 4	214.52	470	500.39	530
Reach 4	214.42	510	496.64	480
Reach 4	214.33	440	507.15	560
Reach 4	214.23	495	494.49	495
Reach 4	214.14	475	510.51	570

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Salt River

Reach	River Sta.	Contr.	Expan.
Reach 4	223.08	.1	.3
Reach 4	223.02	.1	.3
Reach 4	222.93	.1	.3
Reach 4	222.83	.1	.3
Reach 4	222.74	.1	.3
Reach 4	222.70	.1	.3
Reach 4	222.695	.1	.3
Reach 4	222.69	.1	.3
Reach 4	222.68	Bridge	
Reach 4	222.67	.1	.3
Reach 4	222.66	.1	.3
Reach 4	222.65	.1	.3
Reach 4	222.55	.1	.3
Reach 4	222.45	.1	.3
Reach 4	222.36	.1	.3
Reach 4	222.27	.1	.3
Reach 4	222.17	.1	.3
Reach 4	222.09	.1	.3
Reach 4	222.085	Bridge	
Reach 4	222.08	.1	.3
Reach 4	221.99	.1	.3
Reach 4	221.89	.1	.3
Reach 4	221.80	.1	.3
Reach 4	221.70	.1	.3
Reach 4	221.61	.1	.3
Reach 4	221.50	.1	.3
Reach 4	221.40	.1	.3
Reach 4	221.31	.1	.3
Reach 4	221.26	.1	.3
Reach 4	221.25	Bridge	
Reach 4	221.24	.1	.3
Reach 4	221.2	.1	.3
Reach 4	221.195	Bridge	
Reach 4	221.19	.1	.3
Reach 4	221.06	.1	.3
Reach 4	221.055	Bridge	
Reach 4	221.05	.1	.3
Reach 4	221.02	.1	.3
Reach 4	220.92	.1	.3
Reach 4	220.82	.1	.3
Reach 4	220.756	.1	.3
Reach 4	220.755	.1	.3
Reach 4	220.752	Bridge	
Reach 4	220.75	.1	.3
Reach 4	220.74	.1	.3
Reach 4	220.735	.1	.3
Reach 4	220.73	.1	.3
Reach 4	220.63	.1	.3
Reach 4	220.54	.1	.3
Reach 4	220.45	.1	.3
Reach 4	220.35	.1	.3
Reach 4	220.25	.1	.3
Reach 4	220.16	.1	.3
Reach 4	220.06	.1	.3
Reach 4	220.05	Bridge	
Reach 4	220.03	.1	.3
Reach 4	219.88	.1	.3
Reach 4	219.79	.1	.3
Reach 4	219.70	.1	.3
Reach 4	219.61	.1	.3
Reach 4	219.51	.1	.3

Reach 4	219.42		.1	.3
Reach 4	219.33		.1	.3
Reach 4	219.24		.1	.3
Reach 4	219.14		.1	.3
Reach 4	219.03		.1	.3
Reach 4	219.02	Bridge		
Reach 4	219.01		.1	.3
Reach 4	218.97		.1	.3
Reach 4	218.965	Bridge		
Reach 4	218.96		.1	.3
Reach 4	218.80		.1	.3
Reach 4	218.71		.1	.3
Reach 4	218.61		.1	.3
Reach 4	218.52		.1	.3
Reach 4	218.42		.1	.3
Reach 4	218.33		.1	.3
Reach 4	218.24		.1	.3
Reach 4	218.14		.1	.3
Reach 4	218.04		.1	.3
Reach 4	217.95		.1	.3
Reach 4	217.86		.1	.3
Reach 4	217.76		.1	.3
Reach 4	217.66		.1	.3
Reach 4	217.57		.1	.3
Reach 4	217.48		.1	.3
Reach 4	217.38		.1	.3
Reach 4	217.29		.1	.3
Reach 4	217.19		.1	.3
Reach 4	217.10		.1	.3
Reach 4	217.00		.1	.3
Reach 4	216.91		.1	.3
Reach 4	216.81		.1	.3
Reach 4	216.72		.1	.3
Reach 4	216.62		.1	.3
Reach 4	216.52		.1	.3
Reach 4	216.505	Bridge		
Reach 4	216.49		.1	.3
Reach 4	216.42		.1	.3
Reach 4	216.33		.1	.3
Reach 4	216.23		.1	.3
Reach 4	216.13		.1	.3
Reach 4	216.04		.1	.3
Reach 4	215.94		.1	.3
Reach 4	215.84		.1	.3
Reach 4	215.82		.1	.3
Reach 4	215.815	Bridge		
Reach 4	215.81		.1	.3
Reach 4	215.75		.1	.3
Reach 4	215.65		.1	.3
Reach 4	215.56		.1	.3
Reach 4	215.46		.1	.3
Reach 4	215.36		.1	.3
Reach 4	215.27		.1	.3
Reach 4	215.18		.1	.3
Reach 4	215.09		.1	.3
Reach 4	214.99		.1	.3
Reach 4	214.9		.1	.3
Reach 4	214.79		.1	.3
Reach 4	214.785	Bridge		
Reach 4	214.78		.1	.3
Reach 4	214.71		.1	.3
Reach 4	214.61		.1	.3
Reach 4	214.52		.1	.3
Reach 4	214.42		.1	.3
Reach 4	214.33		.1	.3
Reach 4	214.23		.1	.3
Reach 4	214.14		.1	.3

Profile Output Table - Standard Table 1

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Reach 4	214.14	169000.00	1048.70	1075.49	1062.63	1076.99	0.000805	9.84	17171.67	1257.06	0.36
Reach 4	214.14	169000.00	1048.70	1075.50	1062.66	1077.00	0.000804	9.84	17178.94	726.84	0.36
Reach 4	214.23	169000.00	1048.70	1075.93	1062.84	1077.39	0.000784	9.71	17406.42	1126.00	0.35
Reach 4	214.23	169000.00	1048.70	1075.94	1062.84	1077.40	0.000783	9.71	17413.27	738.00	0.35
Reach 4	214.33	169000.00	1048.50	1076.88	1060.42	1077.73	0.000413	7.40	22823.58	1266.50	0.26
Reach 4	214.33	169000.00	1048.50	1076.89	1060.42	1077.74	0.000413	7.40	22830.94	899.54	0.26
Reach 4	214.42	169000.00	1048.20	1077.32	1059.39	1077.93	0.000288	6.27	26966.97	1193.48	0.22
Reach 4	214.42	169000.00	1048.20	1077.33	1059.39	1077.93	0.000287	6.27	26975.11	1041.69	0.22
Reach 4	214.52	169000.00	1048.00	1077.35	1060.59	1078.15	0.000391	7.19	23492.53	928.22	0.25
Reach 4	214.52	169000.00	1048.00	1077.36	1060.59	1078.16	0.000390	7.19	23499.67	928.22	0.25
Reach 4	214.61	169000.00	1050.40	1077.25	1064.26	1078.56	0.000723	9.21	18346.45	792.44	0.34
Reach 4	214.61	169000.00	1050.40	1077.25	1064.26	1078.57	0.000722	9.21	18352.64	792.44	0.34
Reach 4	214.71	169000.00	1055.10	1077.48	1069.29	1079.15	0.001272	10.38	16287.19	901.57	0.43
Reach 4	214.71	169000.00	1055.10	1077.48	1069.29	1079.15	0.001270	10.37	16294.01	901.57	0.43
Reach 4	214.78	169000.00	1058.80	1078.06	1070.73	1079.56	0.001306	9.83	17192.07	1054.44	0.43
Reach 4	214.78	169000.00	1058.80	1078.07	1070.73	1079.57	0.001304	9.83	17199.27	1054.44	0.43
Reach 4	214.785	Bridge									
Reach 4	214.79	169000.00	1057.60	1078.39	1070.68	1079.83	0.001221	9.63	17557.55	1056.41	0.42
Reach 4	214.79	169000.00	1057.60	1078.40	1070.68	1079.83	0.001219	9.62	17564.39	1056.41	0.42
Reach 4	214.9	169000.00	1061.20	1078.13	1074.91	1081.52	0.003589	14.78	11434.89	934.49	0.69
Reach 4	214.9	169000.00	1061.20	1078.14	1074.91	1081.53	0.003584	14.77	11439.94	810.50	0.69
Reach 4	214.99	169000.00	1061.30	1079.91	1075.58	1083.17	0.002926	14.48	11672.67	727.58	0.64
Reach 4	214.99	169000.00	1061.30	1079.92	1075.58	1083.17	0.002925	14.48	11674.45	727.58	0.64
Reach 4	215.09	169000.00	1061.70	1081.09	1076.37	1084.77	0.002894	15.38	10986.08	619.02	0.64
Reach 4	215.09	169000.00	1061.70	1081.10	1076.37	1084.77	0.002893	15.38	10987.06	619.02	0.64
Reach 4	215.18	169000.00	1062.20	1081.87	1079.42	1086.91	0.004584	18.01	9382.04	686.90	0.80
Reach 4	215.18	169000.00	1062.20	1081.87	1079.42	1086.91	0.004582	18.01	9382.77	593.90	0.80
Reach 4	215.27	169000.00	1063.50	1086.84	1076.00	1088.10	0.000846	9.02	18736.49	3991.40	0.36
Reach 4	215.27	169000.00	1063.50	1086.85	1076.00	1088.11	0.000852	9.02	18740.87	943.30	0.36
Reach 4	215.36	169000.00	1063.00	1087.34	1075.36	1088.49	0.000701	8.61	19624.04	3559.77	0.33
Reach 4	215.36	169000.00	1063.00	1087.35	1075.36	1088.50	0.000701	8.61	19629.43	919.00	0.33
Reach 4	215.46	169000.00	1064.60	1087.61	1077.65	1088.97	0.000932	9.38	18009.56	916.86	0.37
Reach 4	215.46	169000.00	1064.60	1087.61	1077.65	1088.98	0.000931	9.38	18015.04	916.85	0.37

Reach 4	215.56	169000.00	1066.10	1087.99	1079.15	1089.55	0.001145	10.02	16859.61	907.87	0.41
Reach 4	215.56	169000.00	1066.10	1087.99	1079.15	1089.55	0.001144	10.02	16864.71	907.88	0.41
Reach 4	215.65	169000.00	1068.30	1088.27	1082.38	1090.46	0.001959	11.87	14232.62	890.00	0.52
Reach 4	215.65	169000.00	1068.30	1088.28	1082.38	1090.47	0.001957	11.87	14237.18	890.00	0.52
Reach 4	215.75	169000.00	1073.60	1088.44	1086.81	1092.56	0.005283	16.27	10385.16	854.81	0.82
Reach 4	215.75	169000.00	1073.60	1088.45	1086.81	1092.56	0.005277	16.27	10389.02	854.81	0.82
Reach 4	215.81	169000.00	1076.00	1090.81	1087.03	1093.71	0.003024	13.67	12363.67	860.84	0.64
Reach 4	215.81	169000.00	1076.00	1090.81	1087.03	1093.71	0.003023	13.67	12364.51	860.84	0.64
Reach 4	215.815	Bridge									
Reach 4	215.82	169000.00	1076.00	1091.84	1087.02	1094.37	0.002409	12.76	13249.11	860.86	0.57
Reach 4	215.82	169000.00	1076.00	1091.85	1087.02	1094.37	0.002405	12.75	13254.68	860.86	0.57
Reach 4	215.84	169000.00	1075.80	1091.71	1088.70	1094.94	0.003651	14.42	11719.46	870.81	0.69
Reach 4	215.84	169000.00	1075.80	1091.72	1088.70	1094.94	0.003644	14.41	11725.41	870.81	0.69
Reach 4	215.94	169000.00	1077.80	1093.70	1090.81	1097.08	0.004117	14.74	11461.59	983.97	0.73
Reach 4	215.94	169000.00	1077.80	1093.70	1090.81	1097.08	0.004113	14.74	11464.57	906.67	0.73
Reach 4	216.04	169000.00	1077.50	1096.93	1088.52	1098.22	0.001041	9.13	18515.97	1448.65	0.39
Reach 4	216.04	169000.00	1077.50	1096.93	1088.52	1098.22	0.001041	9.13	18517.14	1069.84	0.39
Reach 4	216.13	169000.00	1078.00	1097.54	1088.70	1098.73	0.000954	8.75	19303.70	2129.80	0.37
Reach 4	216.13	169000.00	1078.00	1097.54	1088.70	1098.73	0.000954	8.75	19304.79	1113.68	0.37
Reach 4	216.23	169000.00	1078.50	1097.99	1089.39	1099.28	0.001058	9.13	18502.08	1738.50	0.39
Reach 4	216.23	169000.00	1078.50	1097.99	1089.39	1099.28	0.001059	9.13	18503.28	1083.71	0.39
Reach 4	216.33	169000.00	1080.80	1098.35	1091.37	1099.99	0.001446	10.25	16489.69	1473.62	0.45
Reach 4	216.33	169000.00	1080.80	1098.36	1091.37	1099.99	0.001445	10.25	16490.95	1026.33	0.45
Reach 4	216.42	169000.00	1082.00	1098.86	1093.10	1100.93	0.001943	11.57	14613.30	1034.14	0.52
Reach 4	216.42	169000.00	1082.00	1098.86	1093.10	1100.93	0.001943	11.56	14614.20	946.84	0.52
Reach 4	216.49	169000.00	1083.20	1098.53	1094.27	1101.15	0.002871	12.99	13010.51	949.03	0.62
Reach 4	216.49	169000.00	1083.20	1098.53	1094.27	1101.15	0.002870	12.99	13011.78	949.02	0.62
Reach 4	216.505	Bridge									
Reach 4	216.52	169000.00	1083.20	1100.20	1094.26	1102.27	0.002072	11.53	14652.61	999.71	0.53
Reach 4	216.52	169000.00	1083.20	1100.20	1094.26	1102.27	0.002072	11.53	14653.22	999.72	0.53
Reach 4	216.62	169000.00	1078.33	1101.44	1093.62	1103.15	0.001429	10.52	16067.80	1054.35	0.45
Reach 4	216.62	169000.00	1078.33	1101.44	1093.62	1103.15	0.001429	10.52	16066.40	951.16	0.45
Reach 4	216.72	169000.00	1080.17	1102.29	1093.15	1103.80	0.001078	9.88	17099.27	897.91	0.40
Reach 4	216.72	169000.00	1080.17	1102.29	1093.15	1103.80	0.001078	9.88	17098.18	897.91	0.40
Reach 4	216.81	169000.00	1079.55	1102.78	1094.35	1104.41	0.001230	10.27	16455.12	1747.47	0.42
Reach 4	216.81	169000.00	1079.55	1102.77	1094.37	1104.41	0.001231	10.27	16454.13	895.20	0.42
Reach 4	216.91	169000.00	1082.32	1103.31	1096.30	1105.17	0.001545	10.97	15408.17	1820.47	0.47

Reach 4	216.91	169000.00	1082.32	1103.30	1096.31	1105.17	0.001545	10.97	15407.28	904.44	0.47
Reach 4	217.00	169000.00	1081.30	1104.25	1096.14	1105.90	0.001261	10.32	16376.45	1667.39	0.43
Reach 4	217.00	169000.00	1081.30	1104.25	1096.12	1105.90	0.001261	10.32	16375.79	905.09	0.43
Reach 4	217.10	169000.00	1083.00	1104.84	1097.07	1106.55	0.001360	10.50	16093.27	1512.06	0.44
Reach 4	217.10	169000.00	1083.00	1104.83	1097.08	1106.55	0.001360	10.50	16092.72	909.80	0.44
Reach 4	217.19	169000.00	1086.43	1105.11	1101.53	1107.84	0.003099	13.26	12740.54	1366.69	0.64
Reach 4	217.19	169000.00	1086.43	1105.11	1101.53	1107.84	0.003099	13.26	12740.54	949.31	0.64
Reach 4	217.29	169000.00	1089.70	1107.06	1102.31	1109.25	0.002291	11.87	14234.06	1216.42	0.55
Reach 4	217.29	169000.00	1089.70	1107.06	1102.31	1109.25	0.002291	11.87	14234.06	998.99	0.55
Reach 4	217.38	169000.00	1090.70	1108.36	1103.09	1110.33	0.002000	11.25	15019.71	1099.53	0.52
Reach 4	217.38	169000.00	1090.70	1108.36	1103.08	1110.33	0.002001	11.25	15018.44	1034.46	0.52
Reach 4	217.48	169000.00	1090.80	1109.42	1103.96	1111.32	0.001901	11.04	15312.30	1523.56	0.51
Reach 4	217.48	169000.00	1090.80	1109.42	1103.96	1111.31	0.001902	11.04	15311.27	1045.77	0.51
Reach 4	217.57	169000.00	1089.90	1110.29	1105.33	1112.33	0.002135	11.45	14759.05	1041.01	0.54
Reach 4	217.57	169000.00	1089.90	1110.29	1105.33	1112.33	0.002136	11.45	14758.29	1041.00	0.54
Reach 4	217.66	169000.00	1088.14	1111.41	1106.01	1113.39	0.001973	11.27	14996.01	1096.23	0.52
Reach 4	217.66	169000.00	1088.14	1111.41	1106.01	1113.39	0.001973	11.27	14995.52	1020.69	0.52
Reach 4	217.76	169000.00	1092.19	1111.71		1115.14	0.003729	14.86	11373.31	823.68	0.70
Reach 4	217.76	169000.00	1092.19	1111.71		1115.14	0.003729	14.86	11373.01	823.68	0.70
Reach 4	217.86	169000.00	1088.60	1114.82	1108.27	1116.48	0.001533	10.35	16329.44	1206.90	0.46
Reach 4	217.86	169000.00	1088.60	1114.82	1108.27	1116.48	0.001533	10.35	16329.32	1043.82	0.46
Reach 4	217.95	169000.00	1092.47	1115.56	1109.16	1117.24	0.001556	10.41	16240.07	1042.14	0.46
Reach 4	217.95	169000.00	1092.47	1115.56	1109.16	1117.24	0.001556	10.41	16240.07	1042.14	0.46
Reach 4	218.04	169000.00	1095.51	1116.27	1110.88	1118.20	0.001946	11.15	15159.76	1038.69	0.51
Reach 4	218.04	169000.00	1095.51	1116.27	1110.88	1118.20	0.001946	11.15	15159.63	1038.69	0.51
Reach 4	218.14	169000.00	1096.58	1117.25	1111.91	1119.21	0.001977	11.23	15052.31	1392.06	0.52
Reach 4	218.14	169000.00	1096.58	1117.25	1111.91	1119.21	0.001977	11.23	15052.18	1032.39	0.52
Reach 4	218.24	169000.00	1097.97	1118.20	1113.34	1120.30	0.002218	11.62	14549.39	1209.33	0.55
Reach 4	218.24	169000.00	1097.97	1118.20	1113.34	1120.29	0.002218	11.62	14549.26	1034.85	0.55
Reach 4	218.33	169000.00	1099.30	1119.49	1113.65	1121.29	0.001773	10.78	15672.82	1051.45	0.49
Reach 4	218.33	169000.00	1099.30	1119.49	1113.65	1121.29	0.001773	10.78	15672.70	1051.45	0.49
Reach 4	218.42	169000.00	1101.56	1120.20	1115.71	1122.48	0.002468	12.11	13954.61	1630.02	0.57
Reach 4	218.42	169000.00	1101.56	1120.20	1115.71	1122.48	0.002468	12.11	13954.61	1007.80	0.57
Reach 4	218.52	169000.00	1101.37	1121.59	1116.20	1123.62	0.002038	11.43	14789.69	2019.27	0.53
Reach 4	218.52	169000.00	1101.37	1121.59	1116.20	1123.62	0.002039	11.43	14788.33	1008.12	0.53
Reach 4	218.61	169000.00	1101.91	1122.61	1117.10	1124.63	0.001987	11.40	14827.63	3020.79	0.52
Reach 4	218.61	169000.00	1101.91	1122.61	1117.08	1124.63	0.001988	11.40	14824.96	994.24	0.52

Reach 4	218.71	169000.00	1105.38	1123.63	1118.10	1125.63	0.001939	11.35	14891.65	3165.42	0.51
Reach 4	218.71	169000.00	1105.38	1123.63	1118.10	1125.63	0.001939	11.35	14889.72	986.76	0.51
Reach 4	218.80	169000.00	1105.70	1124.77	1118.20	1126.50	0.001572	10.55	16024.96	2479.19	0.47
Reach 4	218.80	169000.00	1105.70	1124.77	1118.22	1126.50	0.001573	10.55	16023.35	1011.73	0.47
Reach 4	218.96	169000.00	1106.31	1126.03	1120.64	1128.02	0.002010	11.32	14931.02	1096.74	0.52
Reach 4	218.96	169000.00	1106.31	1126.03	1120.67	1128.02	0.002011	11.32	14930.15	1020.44	0.52
Reach 4	218.965	Bridge									
Reach 4	218.97	169000.00	1106.45	1126.74	1120.31	1128.50	0.001620	10.65	15870.60	1056.96	0.47
Reach 4	218.97	169000.00	1106.45	1126.74	1120.31	1128.50	0.001620	10.65	15869.73	1009.80	0.47
Reach 4	219.01	169000.00	1112.90	1126.36	1123.16	1129.03	0.003271	13.10	12899.76	1022.15	0.65
Reach 4	219.01	169000.00	1112.90	1126.36	1123.16	1129.03	0.003272	13.10	12898.88	1022.15	0.65
Reach 4	219.02	Bridge									
Reach 4	219.03	169000.00	1112.90	1127.80	1123.15	1129.94	0.002299	11.76	14369.09	1026.67	0.55
Reach 4	219.03	169000.00	1112.90	1127.79	1123.15	1129.94	0.002300	11.76	14367.08	1026.66	0.55
Reach 4	219.14	169000.00	1110.40	1129.20	1123.56	1131.11	0.001887	11.10	15229.76	2551.49	0.51
Reach 4	219.14	169000.00	1110.40	1129.20	1123.56	1131.11	0.001888	11.10	15228.51	1023.27	0.51
Reach 4	219.24	169000.00	1112.10	1130.16	1124.65	1132.12	0.001989	11.23	15051.38	2682.75	0.52
Reach 4	219.24	169000.00	1112.10	1130.16	1124.65	1132.12	0.001989	11.23	15050.38	1032.44	0.52
Reach 4	219.33	169000.00	1113.40	1131.10	1125.53	1133.03	0.001929	11.17	15131.52	2726.06	0.51
Reach 4	219.33	169000.00	1113.40	1131.10	1125.53	1133.03	0.001929	11.17	15130.65	1024.85	0.51
Reach 4	219.42	169000.00	1111.83	1132.00	1126.37	1133.94	0.001898	11.18	15121.63	2400.89	0.51
Reach 4	219.42	169000.00	1111.83	1132.00	1126.37	1133.94	0.001898	11.18	15120.89	1010.17	0.51
Reach 4	219.51	169000.00	1111.64	1132.93	1127.37	1134.90	0.001942	11.27	14993.73	1910.40	0.51
Reach 4	219.51	169000.00	1111.64	1132.93	1127.37	1134.90	0.001943	11.27	14993.11	1006.15	0.51
Reach 4	219.61	169000.00	1112.39	1133.86	1128.49	1135.93	0.002051	11.54	14649.74	2912.62	0.53
Reach 4	219.61	169000.00	1112.39	1133.86	1128.49	1135.93	0.002051	11.54	14649.25	988.76	0.53
Reach 4	219.70	169000.00	1115.81	1134.63	1130.64	1137.22	0.002805	12.91	13091.68	2045.78	0.61
Reach 4	219.70	169000.00	1115.81	1134.63	1130.64	1137.22	0.002806	12.91	13091.33	945.15	0.61
Reach 4	219.79	169000.00	1119.30	1135.96	1132.24	1138.69	0.003008	13.26	12747.50	2039.42	0.63
Reach 4	219.79	169000.00	1119.30	1135.96	1132.24	1138.69	0.003008	13.26	12747.28	931.90	0.63
Reach 4	219.88	169000.00	1119.50	1137.44	1133.46	1140.11	0.002850	13.11	12889.63	2003.65	0.62
Reach 4	219.88	169000.00	1119.50	1137.44	1133.46	1140.11	0.002850	13.11	12889.52	918.51	0.62
Reach 4	220.03	169000.00	1122.90	1139.74	1135.40	1142.32	0.002656	12.90	13097.09	906.62	0.60
Reach 4	220.03	169000.00	1122.90	1139.73	1135.40	1142.32	0.002656	12.90	13096.98	906.62	0.60
Reach 4	220.05	Bridge									
Reach 4	220.06	169000.00	1122.90	1140.72	1135.39	1142.99	0.002141	12.08	13992.87	909.54	0.54
Reach 4	220.06	169000.00	1122.90	1140.72	1135.39	1142.99	0.002142	12.08	13991.64	909.53	0.54

Reach 4	220.16	169000.00	1124.58	1141.74	1136.90	1144.14	0.002357	12.43	13591.57	1469.89	0.57
Reach 4	220.16	169000.00	1124.58	1141.74	1136.90	1144.14	0.002358	12.44	13590.57	912.67	0.57
Reach 4	220.25	169000.00	1124.01	1143.14	1137.06	1145.23	0.001890	11.59	14576.74	1743.60	0.51
Reach 4	220.25	169000.00	1124.01	1143.14	1137.06	1145.23	0.001890	11.59	14576.18	919.65	0.51
Reach 4	220.35	169000.00	1123.99	1144.24	1137.09	1146.10	0.001554	10.95	15436.37	1375.54	0.47
Reach 4	220.35	169000.00	1123.99	1144.24	1137.09	1146.10	0.001554	10.95	15435.92	915.58	0.47
Reach 4	220.45	169000.00	1125.43	1144.97	1138.52	1146.99	0.001759	11.39	14836.82	1293.58	0.50
Reach 4	220.45	169000.00	1125.43	1144.97	1138.52	1146.99	0.001759	11.39	14836.49	908.82	0.50
Reach 4	220.54	169000.00	1127.32	1145.84	1139.51	1147.86	0.001789	11.42	14796.15	1107.01	0.50
Reach 4	220.54	169000.00	1127.32	1145.84	1139.51	1147.86	0.001790	11.42	14795.70	915.24	0.50
Reach 4	220.63	169000.00	1127.10	1146.74	1140.24	1148.75	0.001734	11.37	14857.16	981.94	0.49
Reach 4	220.63	169000.00	1127.10	1146.74	1140.24	1148.75	0.001735	11.38	14856.83	903.29	0.49
Reach 4	220.73	169000.00	1127.69	1147.59	1141.05	1149.62	0.001715	11.43	14782.77	1018.38	0.49
Reach 4	220.73	169000.00	1127.69	1147.59	1141.05	1149.62	0.001716	11.43	14782.43	884.55	0.49
Reach 4	220.735	169000.00	1129.00	1148.38		1149.92	0.001121	9.94	16994.82	906.00	0.40
Reach 4	220.735	169000.00	1129.00	1148.38		1149.92	0.001121	9.94	16994.49	906.00	0.40
Reach 4	220.74	169000.00	1129.00	1148.42		1149.95	0.000931	9.92	17028.55	906.00	0.40
Reach 4	220.74	169000.00	1129.00	1148.42		1149.95	0.000931	9.92	17028.33	906.00	0.40
Reach 4	220.75	169000.00	1131.67	1147.99		1150.16	0.000364	11.81	14304.64	906.00	0.52
Reach 4	220.75	169000.00	1131.67	1147.99		1150.16	0.000364	11.81	14304.42	906.00	0.52
Reach 4	220.752	Bridge									
Reach 4	220.755	169000.00	1132.00	1148.62	1142.67	1150.71	0.000341	11.59	14586.65	906.00	0.51
Reach 4	220.755	169000.00	1132.00	1148.62	1142.67	1150.71	0.000341	11.59	14586.43	906.00	0.51
Reach 4	220.756	169000.00	1129.00	1149.39		1150.78	0.000173	9.44	17910.45	906.00	0.37
Reach 4	220.756	169000.00	1129.00	1149.39		1150.78	0.000173	9.44	17910.33	906.00	0.37
Reach 4	220.82	169000.00	1129.56	1149.14	1141.71	1150.99	0.001445	10.90	15498.47	1177.32	0.45
Reach 4	220.82	169000.00	1129.56	1149.14	1141.71	1150.99	0.001445	10.90	15498.37	868.33	0.45
Reach 4	220.92	169000.00	1129.16	1149.88	1142.46	1151.76	0.001473	10.99	15374.35	1140.72	0.46
Reach 4	220.92	169000.00	1129.16	1149.88	1142.46	1151.76	0.001473	10.99	15374.24	863.27	0.46
Reach 4	221.02	169000.00	1130.06	1150.78	1142.42	1152.45	0.001232	10.37	16302.64	1182.09	0.42
Reach 4	221.02	169000.00	1130.06	1150.78	1142.42	1152.45	0.001232	10.37	16302.64	869.89	0.42
Reach 4	221.05	169000.00	1126.00	1151.12	1140.98	1152.65	0.000983	9.94	16999.54	1262.73	0.38
Reach 4	221.05	169000.00	1126.00	1151.12	1140.98	1152.65	0.000983	9.94	16999.54	814.05	0.38
Reach 4	221.055	Bridge									
Reach 4	221.06	169000.00	1126.00	1151.37	1140.96	1152.84	0.000934	9.74	17359.38	1260.04	0.37
Reach 4	221.06	169000.00	1126.00	1151.37	1140.96	1152.84	0.000934	9.74	17359.38	828.94	0.37

Reach 4	221.19	169000.00	1128.00	1151.99	1142.33	1153.47	0.001000	9.75	17327.40	1097.93	0.39
Reach 4	221.19	169000.00	1128.00	1151.99	1142.33	1153.47	0.001000	9.75	17327.29	873.37	0.39
Reach 4	221.195	Bridge									
Reach 4	221.2	169000.00	1128.00	1152.27	1142.32	1153.70	0.000959	9.61	17587.27	1174.15	0.38
Reach 4	221.2	169000.00	1128.00	1152.27	1142.32	1153.70	0.000959	9.61	17587.16	878.26	0.38
Reach 4	221.24	169000.00	1129.24	1152.41	1143.40	1153.91	0.001059	9.81	17226.21	1169.84	0.39
Reach 4	221.24	169000.00	1129.24	1152.41	1143.40	1153.91	0.001061	9.81	17226.43	898.86	0.39
Reach 4	221.25	Bridge									
Reach 4	221.26	169000.00	1129.24	1152.69	1143.39	1154.18	0.001027	9.80	17251.77	1212.63	0.39
Reach 4	221.26	169000.00	1129.24	1152.69	1143.41	1154.18	0.001030	9.80	17251.98	881.94	0.39
Reach 4	221.31	172000.00	1131.43	1152.48	1146.72	1154.82	0.002299	12.28	14008.63	1181.89	0.56
Reach 4	221.31	172000.00	1131.43	1152.48	1146.72	1154.83	0.002298	12.28	14009.54	933.69	0.56
Reach 4	221.40	172000.00	1133.21	1153.69	1147.88	1155.98	0.002260	12.13	14174.48	1061.37	0.55
Reach 4	221.40	172000.00	1133.21	1153.70	1147.88	1155.98	0.002260	12.13	14175.05	949.21	0.55
Reach 4	221.50	172000.00	1134.08	1154.62	1149.12	1157.02	0.001747	12.42	13849.34	1332.48	0.57
Reach 4	221.50	172000.00	1134.08	1154.62	1149.12	1157.02	0.001747	12.42	13849.68	928.87	0.57
Reach 4	221.61	172000.00	1133.98	1155.71	1149.61	1157.98	0.001598	12.10	14214.60	1387.75	0.54
Reach 4	221.61	172000.00	1133.98	1155.71	1149.61	1157.98	0.001598	12.10	14214.71	926.34	0.54
Reach 4	221.70	172000.00	1134.30	1156.76	1149.52	1158.71	0.001267	11.22	15328.98	1465.94	0.49
Reach 4	221.70	172000.00	1134.30	1156.76	1149.52	1158.71	0.001267	11.22	15328.98	940.02	0.49
Reach 4	221.80	172000.00	1136.35	1157.41	1150.48	1159.36	0.001262	11.22	15325.47	1214.37	0.49
Reach 4	221.80	172000.00	1136.35	1157.41	1150.48	1159.36	0.001262	11.22	15325.47	935.84	0.49
Reach 4	221.89	172000.00	1136.20	1158.07	1151.48	1160.00	0.001323	11.14	15436.00	1150.91	0.50
Reach 4	221.89	172000.00	1136.20	1158.07	1151.48	1160.00	0.001323	11.14	15436.00	986.37	0.50
Reach 4	221.99	172000.00	1138.14	1158.97	1151.13	1160.63	0.001055	10.32	16673.81	1183.17	0.45
Reach 4	221.99	172000.00	1138.14	1158.97	1151.13	1160.63	0.001055	10.32	16673.69	1012.24	0.45
Reach 4	222.08	172000.00	1136.00	1159.88	1148.68	1161.02	0.000590	8.56	20088.99	1230.50	0.34
Reach 4	222.08	172000.00	1136.00	1159.88	1148.68	1161.02	0.000590	8.56	20088.87	1038.85	0.34
Reach 4	222.085	Bridge									
Reach 4	222.09	172000.00	1136.00	1160.09	1148.70	1161.21	0.000574	8.49	20247.59	1233.23	0.34
Reach 4	222.09	172000.00	1136.00	1160.09	1148.70	1161.21	0.000574	8.49	20247.47	1040.76	0.34
Reach 4	222.17	172000.00	1137.16	1160.17	1150.99	1161.54	0.000771	9.39	18318.73	1225.15	0.39
Reach 4	222.17	172000.00	1137.16	1160.17	1150.99	1161.54	0.000771	9.39	18318.60	1009.69	0.39
Reach 4	222.27	172000.00	1139.19	1160.62	1151.87	1161.93	0.000774	9.16	18775.86	1212.82	0.39
Reach 4	222.27	172000.00	1139.19	1160.62	1151.87	1161.93	0.000774	9.16	18775.72	1077.08	0.39
Reach 4	222.36	172000.00	1138.87	1161.24	1151.57	1162.28	0.000608	8.21	20953.76	1412.66	0.34
Reach 4	222.36	172000.00	1138.87	1161.24	1151.57	1162.28	0.000608	8.21	20953.62	1182.42	0.34

Reach 4	222.45	172000.00	1139.54	1161.83	1150.87	1162.55	0.000402	6.80	25277.04	1641.51	0.28
Reach 4	222.45	172000.00	1139.54	1161.83	1150.87	1162.55	0.000402	6.80	25276.87	1387.37	0.28
Reach 4	222.55	172000.00	1139.60	1161.98	1151.35	1162.80	0.000448	7.30	23556.78	1816.03	0.30
Reach 4	222.55	172000.00	1139.60	1161.98	1151.35	1162.81	0.000458	7.30	23559.88	1270.18	0.30
Reach 4	222.65	172000.00	1138.75	1162.11	1151.58	1163.17	0.000737	8.24	20877.25	2079.47	0.33
Reach 4	222.65	172000.00	1140.14	1162.12	1151.58	1163.18	0.000753	8.23	20887.53	1079.34	0.33
Reach 4	222.66	172000.00	1141.75	1162.14		1163.36	0.000821	8.86	19412.44	968.00	0.35
Reach 4	222.66	172000.00	1141.75	1162.15		1163.37	0.000820	8.86	19423.55	968.00	0.35
Reach 4	222.67	172000.00	1143.33	1161.99		1163.44	0.000202	9.68	17761.94	968.00	0.40
Reach 4	222.67	172000.00	1143.33	1162.00		1163.45	0.000202	9.68	17773.28	968.00	0.40
Reach 4	222.68	Bridge									
Reach 4	222.69	172000.00	1143.33	1162.07	1153.49	1163.51	0.000199	9.64	17844.89	968.00	0.40
Reach 4	222.69	172000.00	1143.33	1162.08	1153.49	1163.52	0.000199	9.63	17855.99	968.00	0.40
Reach 4	222.695	172000.00	1143.33	1162.07		1163.51	0.000199	9.64	17845.60	968.00	0.40
Reach 4	222.695	172000.00	1143.33	1162.08		1163.52	0.000199	9.63	17856.70	968.00	0.40
Reach 4	222.70	172000.00	1141.75	1162.35		1163.54	0.000146	8.77	19612.14	968.00	0.34
Reach 4	222.70	172000.00	1141.75	1162.36		1163.55	0.000146	8.77	19622.66	968.00	0.34
Reach 4	222.74	172000.00	1134.16	1162.62	1150.41	1163.62	0.000638	8.02	21451.15	2044.20	0.31
Reach 4	222.74	172000.00	1134.16	1162.63	1150.41	1163.63	0.000637	8.01	21461.92	1038.31	0.31
Reach 4	222.83	172000.00	1127.92	1162.93	1149.43	1163.92	0.000576	8.00	21506.10	2200.12	0.30
Reach 4	222.83	172000.00	1127.92	1162.94	1149.43	1163.93	0.000575	7.99	21515.38	963.59	0.30
Reach 4	222.93	172000.00	1137.70	1163.08	1152.09	1164.35	0.000832	9.02	19065.74	2120.64	0.35
Reach 4	222.93	172000.00	1137.70	1163.09	1152.09	1164.36	0.000830	9.02	19074.64	945.95	0.35
Reach 4	223.02	172000.00	1140.00	1163.58	1154.21	1164.79	0.000938	8.84	19450.79	1526.63	0.37
Reach 4	223.02	172000.00	1140.00	1163.58	1154.21	1164.80	0.000937	8.84	19460.27	1093.00	0.37
Reach 4	223.08	172000.00	1146.30	1163.07	1163.07	1167.91	0.008376	17.64	9747.96	1001.37	1.00
Reach 4	223.08	172000.00	1146.30	1163.07	1163.07	1167.91	0.008376	17.64	9747.96	1001.37	1.00

Profile Output Table - Standard Table 2

Reach	River Sta	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
Reach 4	214.14	1076.99	1075.49	1.50				169000.00		1257.06
Reach 4	214.14	1077.00	1075.50	1.50				169000.00		726.84
Reach 4	214.23	1077.39	1075.93	1.46	0.39	0.00		169000.00		1126.00
Reach 4	214.23	1077.40	1075.94	1.46	0.39	0.00		169000.00		738.00
Reach 4	214.33	1077.73	1076.88	0.85	0.28	0.06		169000.00		1266.50

Reach 4	214.33	1077.74	1076.89	0.85	0.28	0.06	169000.00	899.54
Reach 4	214.42	1077.93	1077.32	0.61	0.17	0.02	169000.00	1193.48
Reach 4	214.42	1077.93	1077.33	0.61	0.17	0.02	169000.00	1041.69
Reach 4	214.52	1078.15	1077.35	0.80	0.17	0.06	169000.00	928.22
Reach 4	214.52	1078.16	1077.36	0.80	0.17	0.06	169000.00	928.22
Reach 4	214.61	1078.56	1077.25	1.32	0.26	0.15	169000.00	792.44
Reach 4	214.61	1078.57	1077.25	1.32	0.26	0.15	169000.00	792.44
Reach 4	214.71	1079.15	1077.48	1.67	0.48	0.11	169000.00	901.57
Reach 4	214.71	1079.15	1077.48	1.67	0.48	0.11	169000.00	901.57
Reach 4	214.78	1079.56	1078.06	1.50	0.40	0.02	169000.00	1054.44
Reach 4	214.78	1079.57	1078.07	1.50	0.40	0.02	169000.00	1054.44
Reach 4	214.785	Bridge						
Reach 4	214.79	1079.83	1078.39	1.44	0.04	0.02	169000.00	1056.41
Reach 4	214.79	1079.83	1078.40	1.44	0.04	0.02	169000.00	1056.41
Reach 4	214.9	1081.52	1078.13	3.39	1.11	0.59	169000.00	934.49
Reach 4	214.9	1081.53	1078.14	3.39	1.11	0.58	169000.00	810.50
Reach 4	214.99	1083.17	1079.91	3.25	1.63	0.01	169000.00	727.58
Reach 4	214.99	1083.17	1079.92	3.25	1.63	0.01	169000.00	727.58
Reach 4	215.09	1084.77	1081.09	3.67	1.47	0.13	169000.00	619.02
Reach 4	215.09	1084.77	1081.10	3.67	1.47	0.13	169000.00	619.02
Reach 4	215.18	1086.91	1081.87	5.04	1.73	0.41	169000.00	686.90
Reach 4	215.18	1086.91	1081.87	5.04	1.73	0.41	169000.00	593.90
Reach 4	215.27	1088.10	1086.84	1.26	0.82	0.38	169000.00	3991.40
Reach 4	215.27	1088.11	1086.85	1.26	0.82	0.38	169000.00	943.30
Reach 4	215.36	1088.49	1087.34	1.15	0.38	0.01	169000.00	3559.77
Reach 4	215.36	1088.50	1087.35	1.15	0.38	0.01	169000.00	919.00
Reach 4	215.46	1088.97	1087.61	1.37	0.42	0.06	169000.00	916.86
Reach 4	215.46	1088.98	1087.61	1.37	0.42	0.06	169000.00	916.85
Reach 4	215.56	1089.55	1087.99	1.56	0.51	0.06	169000.00	907.87
Reach 4	215.56	1089.55	1087.99	1.56	0.51	0.06	169000.00	907.88
Reach 4	215.65	1090.46	1088.27	2.19	0.73	0.19	169000.00	890.00
Reach 4	215.65	1090.47	1088.28	2.19	0.73	0.19	169000.00	890.00
Reach 4	215.75	1092.56	1088.44	4.11	1.52	0.58	169000.00	854.81
Reach 4	215.75	1092.56	1088.45	4.11	1.51	0.58	169000.00	854.81
Reach 4	215.81	1093.71	1090.81	2.90	1.04	0.12	169000.00	860.84
Reach 4	215.81	1093.71	1090.81	2.90	1.04	0.12	169000.00	860.84
Reach 4	215.815	Bridge						

Reach 4	215.82	1094.37	1091.84	2.53	0.08	0.04		169000.00	860.86
Reach 4	215.82	1094.37	1091.85	2.52	0.08	0.04		169000.00	860.86
Reach 4	215.84	1094.94	1091.71	3.23	0.36	0.21		169000.00	870.81
Reach 4	215.84	1094.94	1091.72	3.23	0.36	0.21		169000.00	870.81
Reach 4	215.94	1097.08	1093.70	3.38	2.09	0.04		169000.00	983.97
Reach 4	215.94	1097.08	1093.70	3.37	2.09	0.04		169000.00	906.67
Reach 4	216.04	1098.22	1096.93	1.29	0.94	0.21		169000.00	1448.65
Reach 4	216.04	1098.22	1096.93	1.29	0.94	0.21		169000.00	1069.84
Reach 4	216.13	1098.73	1097.54	1.19	0.50	0.01		169000.00	2129.80
Reach 4	216.13	1098.73	1097.54	1.19	0.50	0.01		169000.00	1113.68
Reach 4	216.23	1099.28	1097.99	1.30	0.52	0.03		169000.00	1738.50
Reach 4	216.23	1099.28	1097.99	1.30	0.52	0.03		169000.00	1083.71
Reach 4	216.33	1099.99	1098.35	1.63	0.60	0.10		169000.00	1473.62
Reach 4	216.33	1099.99	1098.36	1.63	0.60	0.10		169000.00	1026.33
Reach 4	216.42	1100.93	1098.86	2.08	0.81	0.13	0.04	168999.95	1034.14
Reach 4	216.42	1100.93	1098.86	2.08	0.81	0.13		169000.00	946.84
Reach 4	216.49	1101.15	1098.53	2.62	0.05	0.16		169000.00	949.03
Reach 4	216.49	1101.15	1098.53	2.62	0.05	0.16		169000.00	949.02
Reach 4	216.505	Bridge							
Reach 4	216.52	1102.27	1100.20	2.07	0.06	0.04		169000.00	999.71
Reach 4	216.52	1102.27	1100.20	2.07	0.06	0.04		169000.00	999.72
Reach 4	216.62	1103.15	1101.44	1.72	0.85	0.03		169000.00	1054.35
Reach 4	216.62	1103.15	1101.44	1.72	0.85	0.03		169000.00	951.16
Reach 4	216.72	1103.80	1102.29	1.52	0.63	0.02		169000.00	897.91
Reach 4	216.72	1103.80	1102.29	1.52	0.63	0.02		169000.00	897.91
Reach 4	216.81	1104.41	1102.78	1.64	0.57	0.04		169000.00	1747.47
Reach 4	216.81	1104.41	1102.77	1.64	0.57	0.04		169000.00	895.20
Reach 4	216.91	1105.17	1103.31	1.87	0.69	0.07		169000.00	1820.47
Reach 4	216.91	1105.17	1103.30	1.87	0.69	0.07		169000.00	904.44
Reach 4	217.00	1105.90	1104.25	1.65	0.71	0.02		169000.00	1667.39
Reach 4	217.00	1105.90	1104.25	1.65	0.71	0.02		169000.00	905.09
Reach 4	217.10	1106.55	1104.84	1.71	0.63	0.02		169000.00	1512.06
Reach 4	217.10	1106.55	1104.83	1.71	0.63	0.02		169000.00	909.80
Reach 4	217.19	1107.84	1105.11	2.73	0.99	0.31		169000.00	1366.69
Reach 4	217.19	1107.84	1105.11	2.73	0.99	0.31		169000.00	949.31
Reach 4	217.29	1109.25	1107.06	2.19	1.36	0.05		169000.00	1216.42
Reach 4	217.29	1109.25	1107.06	2.19	1.36	0.05		169000.00	998.99

Reach 4	217.38	1110.33	1108.36	1.97	1.05	0.02	169000.00	1099.53
Reach 4	217.38	1110.33	1108.36	1.97	1.05	0.02	169000.00	1034.46
Reach 4	217.48	1111.32	1109.42	1.89	0.98	0.01	169000.00	1523.56
Reach 4	217.48	1111.31	1109.42	1.89	0.98	0.01	169000.00	1045.77
Reach 4	217.57	1112.33	1110.29	2.04	0.97	0.04	169000.00	1041.01
Reach 4	217.57	1112.33	1110.29	2.04	0.97	0.04	169000.00	1041.00
Reach 4	217.66	1113.39	1111.41	1.97	1.05	0.01	169000.00	1096.23
Reach 4	217.66	1113.39	1111.41	1.97	1.05	0.01	169000.00	1020.69
Reach 4	217.76	1115.14	1111.71	3.43	1.31	0.44	169000.00	823.68
Reach 4	217.76	1115.14	1111.71	3.43	1.31	0.44	169000.00	823.68
Reach 4	217.86	1116.48	1114.82	1.66	1.17	0.18	169000.00	1206.90
Reach 4	217.86	1116.48	1114.82	1.66	1.17	0.18	169000.00	1043.82
Reach 4	217.95	1117.24	1115.56	1.68	0.76	0.01	169000.00	1042.14
Reach 4	217.95	1117.24	1115.56	1.68	0.76	0.01	169000.00	1042.14
Reach 4	218.04	1118.20	1116.27	1.93	0.88	0.07	169000.00	1038.69
Reach 4	218.04	1118.20	1116.27	1.93	0.88	0.07	169000.00	1038.69
Reach 4	218.14	1119.21	1117.25	1.96	1.00	0.01	169000.00	1392.06
Reach 4	218.14	1119.21	1117.25	1.96	1.00	0.01	169000.00	1032.39
Reach 4	218.24	1120.30	1118.20	2.10	1.05	0.04	169000.00	1209.33
Reach 4	218.24	1120.29	1118.20	2.10	1.05	0.04	169000.00	1034.85
Reach 4	218.33	1121.29	1119.49	1.81	0.97	0.03	169000.00	1051.45
Reach 4	218.33	1121.29	1119.49	1.81	0.97	0.03	169000.00	1051.45
Reach 4	218.42	1122.48	1120.20	2.28	1.05	0.14	169000.00	1630.02
Reach 4	218.42	1122.48	1120.20	2.28	1.05	0.14	169000.00	1007.80
Reach 4	218.52	1123.62	1121.59	2.03	1.11	0.03	169000.00	2019.27
Reach 4	218.52	1123.62	1121.59	2.03	1.11	0.02	169000.00	1008.12
Reach 4	218.61	1124.63	1122.61	2.02	1.01	0.00	169000.00	3020.79
Reach 4	218.61	1124.63	1122.61	2.02	1.01	0.00	169000.00	994.24
Reach 4	218.71	1125.63	1123.63	2.00	1.00	0.00	169000.00	3165.42
Reach 4	218.71	1125.63	1123.63	2.00	1.00	0.00	169000.00	986.76
Reach 4	218.80	1126.50	1124.77	1.73	0.84	0.03	169000.00	2479.19
Reach 4	218.80	1126.50	1124.77	1.73	0.84	0.03	169000.00	1011.73
Reach 4	218.96	1128.02	1126.03	1.99	1.44	0.08	169000.00	1096.74
Reach 4	218.96	1128.02	1126.03	1.99	1.44	0.08	169000.00	1020.44
Reach 4	218.965	Bridge						
Reach 4	218.97	1128.50	1126.74	1.76	0.02	0.03	169000.00	1056.96
Reach 4	218.97	1128.50	1126.74	1.76	0.02	0.03	169000.00	1009.80

Reach 4	219.01	1129.03	1126.36	2.67	0.25	0.27	169000.00	1022.15
Reach 4	219.01	1129.03	1126.36	2.67	0.25	0.27	169000.00	1022.15
Reach 4	219.02	Bridge						
Reach 4	219.03	1129.94	1127.80	2.15	0.09	0.04	169000.00	1026.67
Reach 4	219.03	1129.94	1127.79	2.15	0.09	0.04	169000.00	1026.66
Reach 4	219.14	1131.11	1129.20	1.91	1.14	0.02	169000.00	2551.49
Reach 4	219.14	1131.11	1129.20	1.91	1.14	0.02	169000.00	1023.27
Reach 4	219.24	1132.12	1130.16	1.96	0.99	0.01	169000.00	2682.75
Reach 4	219.24	1132.12	1130.16	1.96	0.99	0.01	169000.00	1032.44
Reach 4	219.33	1133.03	1131.10	1.94	0.92	0.00	169000.00	2726.06
Reach 4	219.33	1133.03	1131.10	1.94	0.92	0.00	169000.00	1024.85
Reach 4	219.42	1133.94	1132.00	1.94	0.90	0.00	169000.00	2400.89
Reach 4	219.42	1133.94	1132.00	1.94	0.90	0.00	169000.00	1010.17
Reach 4	219.51	1134.90	1132.93	1.97	0.95	0.01	169000.00	1910.40
Reach 4	219.51	1134.90	1132.93	1.97	0.95	0.01	169000.00	1006.15
Reach 4	219.61	1135.93	1133.86	2.07	1.00	0.03	169000.00	2912.62
Reach 4	219.61	1135.93	1133.86	2.07	1.00	0.03	169000.00	988.76
Reach 4	219.70	1137.22	1134.63	2.59	1.14	0.16	169000.00	2045.78
Reach 4	219.70	1137.22	1134.63	2.59	1.14	0.16	169000.00	945.15
Reach 4	219.79	1138.69	1135.96	2.73	1.43	0.04	169000.00	2039.42
Reach 4	219.79	1138.69	1135.96	2.73	1.43	0.04	169000.00	931.90
Reach 4	219.88	1140.11	1137.44	2.67	1.42	0.01	169000.00	2003.65
Reach 4	219.88	1140.11	1137.44	2.67	1.42	0.01	169000.00	918.51
Reach 4	220.03	1142.32	1139.74	2.59	2.20	0.01	169000.00	906.62
Reach 4	220.03	1142.32	1139.73	2.59	2.20	0.01	169000.00	906.62
Reach 4	220.05	Bridge						
Reach 4	220.06	1142.99	1140.72	2.27	0.00	0.02	169000.00	909.54
Reach 4	220.06	1142.99	1140.72	2.27	0.00	0.02	169000.00	909.53
Reach 4	220.16	1144.14	1141.74	2.40	1.11	0.04	169000.00	1469.89
Reach 4	220.16	1144.14	1141.74	2.40	1.11	0.04	169000.00	912.67
Reach 4	220.25	1145.23	1143.14	2.09	1.05	0.03	169000.00	1743.60
Reach 4	220.25	1145.23	1143.14	2.09	1.05	0.03	169000.00	919.65
Reach 4	220.35	1146.10	1144.24	1.86	0.86	0.02	169000.00	1375.54
Reach 4	220.35	1146.10	1144.24	1.86	0.86	0.02	169000.00	915.58
Reach 4	220.45	1146.99	1144.97	2.01	0.84	0.05	169000.00	1293.58
Reach 4	220.45	1146.99	1144.97	2.01	0.84	0.05	169000.00	908.82

Reach 4	220.54	1147.86	1145.84	2.03	0.87	0.00	169000.00	1107.01
Reach 4	220.54	1147.86	1145.84	2.03	0.87	0.00	169000.00	915.24
Reach 4	220.63	1148.75	1146.74	2.01	0.88	0.00	169000.00	981.94
Reach 4	220.63	1148.75	1146.74	2.01	0.88	0.00	169000.00	903.29
Reach 4	220.73	1149.62	1147.59	2.03	0.87	0.01	169000.00	1018.38
Reach 4	220.73	1149.62	1147.59	2.03	0.87	0.01	169000.00	884.55
Reach 4	220.735	1149.92	1148.38	1.54	0.25	0.05	169000.00	906.00
Reach 4	220.735	1149.92	1148.38	1.54	0.25	0.05	169000.00	906.00
Reach 4	220.74	1149.95	1148.42	1.53	0.03	0.00	169000.00	906.00
Reach 4	220.74	1149.95	1148.42	1.53	0.03	0.00	169000.00	906.00
Reach 4	220.75	1150.16	1147.99	2.17	0.02	0.19	169000.00	906.00
Reach 4	220.75	1150.16	1147.99	2.17	0.02	0.19	169000.00	906.00
Reach 4	220.752	Bridge						
Reach 4	220.755	1150.71	1148.62	2.08			169000.00	906.00
Reach 4	220.755	1150.71	1148.62	2.08			169000.00	906.00
Reach 4	220.756	1150.78	1149.39	1.38	0.00	0.07	169000.00	906.00
Reach 4	220.756	1150.78	1149.39	1.38	0.00	0.07	169000.00	906.00
Reach 4	220.82	1150.99	1149.14	1.85	0.07	0.14	169000.00	1177.32
Reach 4	220.82	1150.99	1149.14	1.85	0.07	0.14	169000.00	868.33
Reach 4	220.92	1151.76	1149.88	1.88	0.76	0.01	169000.00	1140.72
Reach 4	220.92	1151.76	1149.88	1.88	0.76	0.01	169000.00	863.27
Reach 4	221.02	1152.45	1150.78	1.67	0.68	0.02	169000.00	1182.09
Reach 4	221.02	1152.45	1150.78	1.67	0.68	0.02	169000.00	869.89
Reach 4	221.05	1152.65	1151.12	1.53	0.18	0.01	169000.00	1262.73
Reach 4	221.05	1152.65	1151.12	1.53	0.18	0.01	169000.00	814.05
Reach 4	221.055	Bridge						
Reach 4	221.06	1152.84	1151.37	1.47	0.04	0.02	169000.00	1260.04
Reach 4	221.06	1152.84	1151.37	1.47	0.04	0.02	169000.00	828.94
Reach 4	221.19	1153.47	1151.99	1.48	0.63	0.00	169000.00	1097.93
Reach 4	221.19	1153.47	1151.99	1.48	0.63	0.00	169000.00	873.37
Reach 4	221.195	Bridge						
Reach 4	221.2	1153.70	1152.27	1.43	0.03	0.03	169000.00	1174.15
Reach 4	221.2	1153.70	1152.27	1.43	0.03	0.03	169000.00	878.26
Reach 4	221.24	1153.91	1152.41	1.49	0.19	0.02	169000.00	1169.84
Reach 4	221.24	1153.91	1152.41	1.49	0.19	0.02	169000.00	898.86
Reach 4	221.25	Bridge						

Reach 4	221.26	1154.18	1152.69	1.49	0.04	0.03	169000.00	1212.63
Reach 4	221.26	1154.18	1152.69	1.49	0.04	0.03	169000.00	881.94
Reach 4	221.31	1154.82	1152.48	2.34	0.39	0.26	172000.00	1181.89
Reach 4	221.31	1154.83	1152.48	2.34	0.39	0.26	172000.00	933.69
Reach 4	221.40	1155.98	1153.69	2.29	1.15	0.01	172000.00	1061.37
Reach 4	221.40	1155.98	1153.70	2.29	1.15	0.01	172000.00	949.21
Reach 4	221.50	1157.02	1154.62	2.40	1.00	0.03	172000.00	1332.48
Reach 4	221.50	1157.02	1154.62	2.39	1.00	0.03	172000.00	928.87
Reach 4	221.61	1157.98	1155.71	2.27	0.95	0.01	172000.00	1387.75
Reach 4	221.61	1157.98	1155.71	2.27	0.95	0.01	172000.00	926.34
Reach 4	221.70	1158.71	1156.76	1.95	0.70	0.03	172000.00	1465.94
Reach 4	221.70	1158.71	1156.76	1.95	0.70	0.03	172000.00	940.02
Reach 4	221.80	1159.36	1157.41	1.96	0.65	0.00	172000.00	1214.37
Reach 4	221.80	1159.36	1157.41	1.96	0.65	0.00	172000.00	935.84
Reach 4	221.89	1160.00	1158.07	1.93	0.63	0.00	172000.00	1150.91
Reach 4	221.89	1160.00	1158.07	1.93	0.63	0.00	172000.00	986.37
Reach 4	221.99	1160.63	1158.97	1.65	0.60	0.03	172000.00	1183.17
Reach 4	221.99	1160.63	1158.97	1.65	0.60	0.03	172000.00	1012.24
Reach 4	222.08	1161.02	1159.88	1.14	0.34	0.05	172000.00	1230.50
Reach 4	222.08	1161.02	1159.88	1.14	0.34	0.05	172000.00	1038.85
Reach 4	222.085	Bridge						
Reach 4	222.09	1161.21	1160.09	1.12	0.02	0.01	172000.00	1233.23
Reach 4	222.09	1161.21	1160.09	1.12	0.02	0.01	172000.00	1040.76
Reach 4	222.17	1161.54	1160.17	1.37	0.25	0.07	172000.00	1225.15
Reach 4	222.17	1161.54	1160.17	1.37	0.25	0.07	172000.00	1009.69
Reach 4	222.27	1161.93	1160.62	1.30	0.38	0.01	172000.00	1212.82
Reach 4	222.27	1161.93	1160.62	1.30	0.38	0.01	172000.00	1077.08
Reach 4	222.36	1162.28	1161.24	1.05	0.33	0.03	172000.00	1412.66
Reach 4	222.36	1162.28	1161.24	1.05	0.33	0.03	172000.00	1182.42
Reach 4	222.45	1162.55	1161.83	0.72	0.24	0.03	172000.00	1641.51
Reach 4	222.45	1162.55	1161.83	0.72	0.24	0.03	172000.00	1387.37
Reach 4	222.55	1162.80	1161.98	0.83	0.22	0.03	172000.00	1816.03
Reach 4	222.55	1162.81	1161.98	0.83	0.22	0.03	172000.00	1270.18
Reach 4	222.65	1163.17	1162.11	1.05	0.30	0.07	172000.00	2079.47
Reach 4	222.65	1163.18	1162.12	1.05	0.30	0.07	172000.00	1079.34
Reach 4	222.66	1163.36	1162.14	1.22	0.14	0.05	172000.00	968.00
Reach 4	222.66	1163.37	1162.15	1.22	0.15	0.05	172000.00	968.00

Reach 4	222.67	1163.44	1161.99	1.46	0.01	0.07	172000.00	968.00
Reach 4	222.67	1163.45	1162.00	1.45	0.01	0.07	172000.00	968.00
Reach 4	222.68	Bridge						
Reach 4	222.69	1163.51	1162.07	1.44			172000.00	968.00
Reach 4	222.69	1163.52	1162.08	1.44			172000.00	968.00
Reach 4	222.695	1163.51	1162.07	1.44	0.00	0.00	172000.00	968.00
Reach 4	222.695	1163.52	1162.08	1.44	0.00	0.00	172000.00	968.00
Reach 4	222.70	1163.54	1162.35	1.19	0.00	0.02	172000.00	968.00
Reach 4	222.70	1163.55	1162.36	1.19	0.00	0.02	172000.00	968.00
Reach 4	222.74	1163.62	1162.62	1.00	0.06	0.02	172000.00	2044.20
Reach 4	222.74	1163.63	1162.63	1.00	0.06	0.02	172000.00	1038.31
Reach 4	222.83	1163.92	1162.93	0.99	0.30	0.00	172000.00	2200.12
Reach 4	222.83	1163.93	1162.94	0.99	0.30	0.00	172000.00	963.59
Reach 4	222.93	1164.35	1163.08	1.26	0.34	0.08	172000.00	2120.64
Reach 4	222.93	1164.36	1163.09	1.26	0.34	0.08	172000.00	945.95
Reach 4	223.02	1164.79	1163.58	1.21	0.44	0.00	172000.00	1526.63
Reach 4	223.02	1164.80	1163.58	1.21	0.44	0.00	172000.00	1093.00
Reach 4	223.08	1167.91	1163.07	4.83	0.57	1.09	172000.00	1001.37
Reach 4	223.08	1167.91	1163.07	4.83	0.57	1.09	172000.00	1001.37

Profile Output Table - Encroachment 3

Reach	River Sta	Top Wdth Act (ft)	Area (sq ft)	Vel Total (ft/s)	W.S. Elev (ft)	Base WS (ft)	Prof Delta WS (ft)
Reach 4	214.14	726.84	17247.72	9.84	1075.49	1075.49	
Reach 4	214.14	726.84	17178.94	9.84	1075.50	1075.49	0.01
Reach 4	214.23	737.99	17744.84	9.71	1075.93	1075.93	
Reach 4	214.23	738.00	17413.27	9.71	1075.94	1075.93	0.01
Reach 4	214.33	899.54	23370.01	7.40	1076.88	1076.88	
Reach 4	214.33	899.54	22830.94	7.40	1076.89	1076.88	0.01
Reach 4	214.42	1041.69	27156.79	6.27	1077.32	1077.32	
Reach 4	214.42	1041.69	26975.11	6.27	1077.33	1077.32	0.01
Reach 4	214.52	928.22	23492.53	7.19	1077.35	1077.35	
Reach 4	214.52	928.22	23499.67	7.19	1077.36	1077.35	0.01
Reach 4	214.61	792.44	18346.45	9.21	1077.25	1077.25	
Reach 4	214.61	792.44	18352.64	9.21	1077.25	1077.25	0.01
Reach 4	214.71	901.57	16287.19	10.38	1077.48	1077.48	
Reach 4	214.71	901.57	16294.01	10.37	1077.48	1077.48	0.01
Reach 4	214.78	1054.44	17192.07	9.83	1078.06	1078.06	
Reach 4	214.78	1054.44	17199.27	9.83	1078.07	1078.06	0.01
Reach 4	214.785 BR D	1015.56	16472.73	10.26	1078.01	1078.01	
Reach 4	214.785 BR D	1015.60	16479.79	10.25	1078.02	1078.01	0.01
Reach 4	214.785 BR U	1016.55	16656.43	10.15	1078.17	1078.17	
Reach 4	214.785 BR U	1015.88	16663.08	10.14	1078.18	1078.17	0.01
Reach 4	214.79	1056.41	17557.55	9.63	1078.39	1078.39	
Reach 4	214.79	1056.41	17564.39	9.62	1078.40	1078.39	0.01
Reach 4	214.9	810.50	11457.03	14.78	1078.13	1078.13	
Reach 4	214.9	810.50	11439.94	14.77	1078.14	1078.13	0.01
Reach 4	214.99	727.58	11672.67	14.48	1079.91	1079.91	
Reach 4	214.99	727.58	11674.45	14.48	1079.92	1079.91	0.00
Reach 4	215.09	619.02	10986.08	15.38	1081.09	1081.09	
Reach 4	215.09	619.02	10987.06	15.38	1081.10	1081.09	0.00
Reach 4	215.18	593.90	9585.73	18.01	1081.87	1081.87	
Reach 4	215.18	593.90	9382.77	18.01	1081.87	1081.87	0.00
Reach 4	215.27	943.30	24307.47	9.02	1086.84	1086.84	
Reach 4	215.27	943.30	18740.87	9.02	1086.85	1086.84	0.00
Reach 4	215.36	919.00	21118.73	8.61	1087.34	1087.34	

Reach 4	215.36	919.00	19629.43	8.61	1087.35	1087.34	0.01
Reach 4	215.46	916.86	18009.56	9.38	1087.61	1087.61	
Reach 4	215.46	916.85	18015.04	9.38	1087.61	1087.61	0.01
Reach 4	215.56	907.87	16859.61	10.02	1087.99	1087.99	
Reach 4	215.56	907.88	16864.71	10.02	1087.99	1087.99	0.01
Reach 4	215.65	890.00	14232.62	11.87	1088.27	1088.27	
Reach 4	215.65	890.00	14237.18	11.87	1088.28	1088.27	0.01
Reach 4	215.75	854.81	10385.16	16.27	1088.44	1088.44	
Reach 4	215.75	854.81	10389.02	16.27	1088.45	1088.44	0.00
Reach 4	215.81	860.84	12363.67	13.67	1090.81	1090.81	
Reach 4	215.81	860.84	12364.51	13.67	1090.81	1090.81	0.00
Reach 4	215.815 BR D	827.84	11791.49	14.33	1090.71	1090.71	
Reach 4	215.815 BR D	827.84	11792.30	14.33	1090.71	1090.71	0.00
Reach 4	215.815 BR U	827.85	12274.94	13.77	1091.30	1091.30	
Reach 4	215.815 BR U	827.85	12281.21	13.76	1091.30	1091.30	0.01
Reach 4	215.82	860.86	13249.11	12.76	1091.84	1091.84	
Reach 4	215.82	860.86	13254.68	12.75	1091.85	1091.84	0.01
Reach 4	215.84	870.81	11719.46	14.42	1091.71	1091.71	
Reach 4	215.84	870.81	11725.41	14.41	1091.72	1091.71	0.01
Reach 4	215.94	906.67	11554.85	14.74	1093.70	1093.70	
Reach 4	215.94	906.67	11464.57	14.74	1093.70	1093.70	0.00
Reach 4	216.04	1069.83	19363.15	9.13	1096.93	1096.93	
Reach 4	216.04	1069.84	18517.14	9.13	1096.93	1096.93	0.00
Reach 4	216.13	1113.68	20958.01	8.75	1097.54	1097.54	
Reach 4	216.13	1113.68	19304.79	8.75	1097.54	1097.54	0.00
Reach 4	216.23	1083.71	19708.01	9.13	1097.99	1097.99	
Reach 4	216.23	1083.71	18503.28	9.13	1097.99	1097.99	0.00
Reach 4	216.33	1026.33	16896.88	10.25	1098.35	1098.35	
Reach 4	216.33	1026.33	16490.95	10.25	1098.36	1098.35	0.00
Reach 4	216.42	956.04	14635.06	11.56	1098.86	1098.86	
Reach 4	216.42	946.84	14614.20	11.56	1098.86	1098.86	0.00
Reach 4	216.49	949.03	13010.51	12.99	1098.53	1098.53	
Reach 4	216.49	949.02	13011.78	12.99	1098.53	1098.53	0.00
Reach 4	216.505 BR D	899.64	12267.22	13.78	1098.38	1098.38	
Reach 4	216.505 BR D	899.71	12268.43	13.78	1098.38	1098.38	0.00
Reach 4	216.505 BR U	955.95	13544.36	12.48	1099.75	1099.75	
Reach 4	216.505 BR U	955.95	13545.18	12.48	1099.75	1099.75	0.00

Reach 4	216.52	999.71	14652.61	11.53	1100.20	1100.20	
Reach 4	216.52	999.72	14653.22	11.53	1100.20	1100.20	0.00
Reach 4	216.62	951.32	16261.33	10.52	1101.44	1101.44	
Reach 4	216.62	951.16	16066.40	10.52	1101.44	1101.44	0.00
Reach 4	216.72	897.91	17099.27	9.88	1102.29	1102.29	
Reach 4	216.72	897.91	17098.18	9.88	1102.29	1102.29	0.00
Reach 4	216.81	895.21	54659.97	10.27	1102.78	1102.78	
Reach 4	216.81	895.20	16454.13	10.27	1102.77	1102.78	0.00
Reach 4	216.91	904.45	58401.64	10.97	1103.31	1103.31	
Reach 4	216.91	904.44	15407.28	10.97	1103.30	1103.31	0.00
Reach 4	217.00	905.09	51459.11	10.32	1104.25	1104.25	
Reach 4	217.00	905.09	16375.79	10.32	1104.25	1104.25	0.00
Reach 4	217.10	909.81	42181.37	10.50	1104.84	1104.84	
Reach 4	217.10	909.80	16092.72	10.50	1104.83	1104.84	0.00
Reach 4	217.19	949.31	27561.17	13.26	1105.11	1105.11	
Reach 4	217.19	949.31	12740.54	13.26	1105.11	1105.11	0.00
Reach 4	217.29	999.00	17729.38	11.87	1107.06	1107.06	
Reach 4	217.29	998.99	14234.06	11.87	1107.06	1107.06	0.00
Reach 4	217.38	1034.47	15260.15	11.25	1108.36	1108.36	
Reach 4	217.38	1034.46	15018.44	11.25	1108.36	1108.36	0.00
Reach 4	217.48	1045.77	19742.83	11.04	1109.42	1109.42	
Reach 4	217.48	1045.77	15311.27	11.04	1109.42	1109.42	0.00
Reach 4	217.57	1041.01	14759.05	11.45	1110.29	1110.29	
Reach 4	217.57	1041.00	14758.29	11.45	1110.29	1110.29	0.00
Reach 4	217.66	1020.69	15023.02	11.27	1111.41	1111.41	
Reach 4	217.66	1020.69	14995.52	11.27	1111.41	1111.41	0.00
Reach 4	217.76	823.68	11373.31	14.86	1111.71	1111.71	
Reach 4	217.76	823.68	11373.01	14.86	1111.71	1111.71	0.00
Reach 4	217.86	1043.83	17762.10	10.35	1114.82	1114.82	
Reach 4	217.86	1043.82	16329.32	10.35	1114.82	1114.82	0.00
Reach 4	217.95	1042.14	16240.07	10.41	1115.56	1115.56	
Reach 4	217.95	1042.14	16240.07	10.41	1115.56	1115.56	0.00
Reach 4	218.04	1038.69	15159.76	11.15	1116.27	1116.27	
Reach 4	218.04	1038.69	15159.63	11.15	1116.27	1116.27	0.00
Reach 4	218.14	1032.39	15677.60	11.23	1117.25	1117.25	
Reach 4	218.14	1032.39	15052.18	11.23	1117.25	1117.25	0.00
Reach 4	218.24	1034.85	15006.16	11.62	1118.20	1118.20	
Reach 4	218.24	1034.85	14549.26	11.62	1118.20	1118.20	0.00

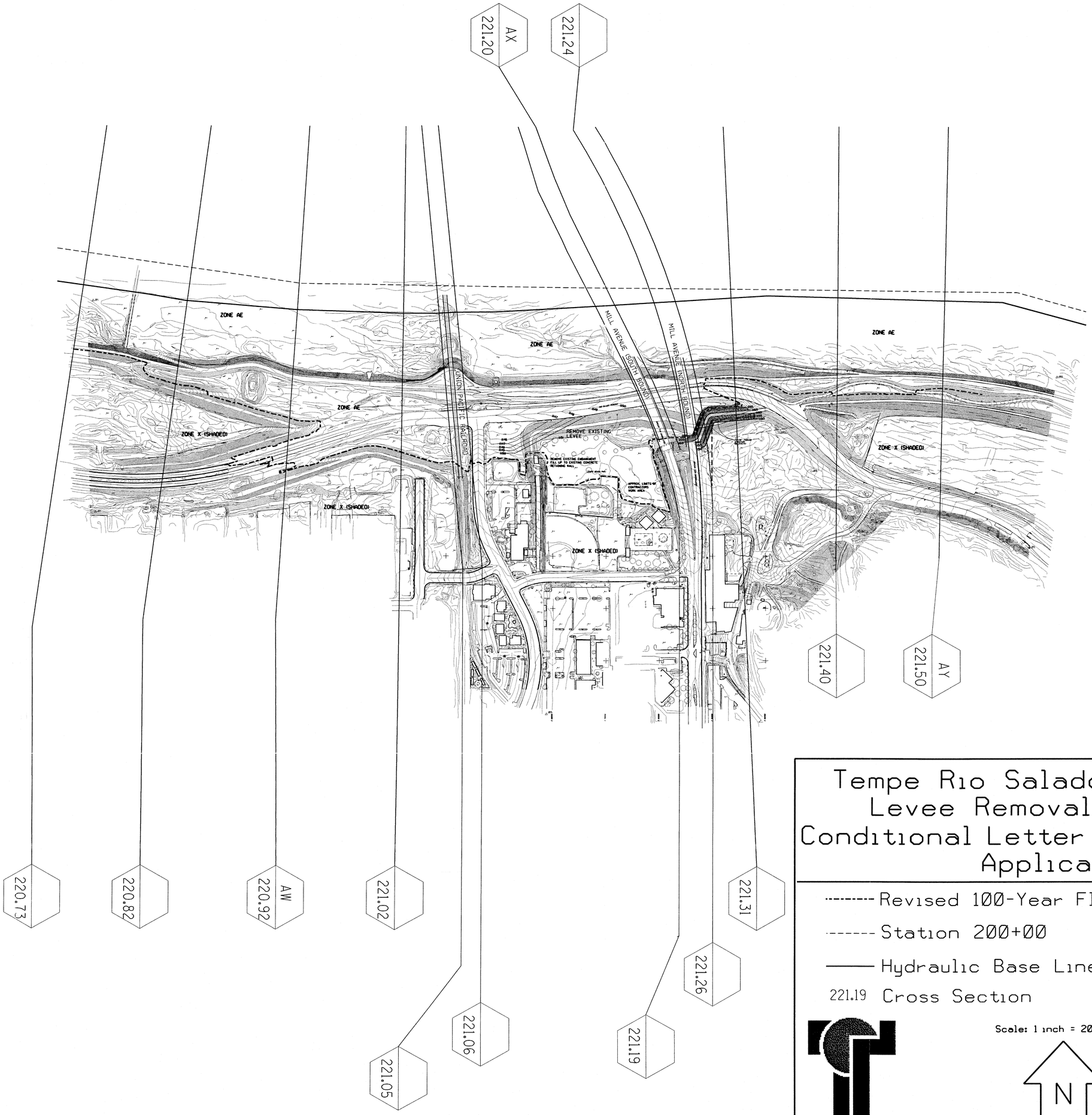
Reach 4	218.33		1051.45	15672.82	10.78	1119.49	1119.49	
Reach 4	218.33		1051.45	15672.70	10.78	1119.49	1119.49	0.00
Reach 4	218.42		1007.80	17017.32	12.11	1120.20	1120.20	
Reach 4	218.42		1007.80	13954.61	12.11	1120.20	1120.20	0.00
Reach 4	218.52		1008.12	24062.26	11.43	1121.59	1121.59	
Reach 4	218.52		1008.12	14788.33	11.43	1121.59	1121.59	0.00
Reach 4	218.61		994.32	31877.28	11.40	1122.61	1122.61	
Reach 4	218.61		994.24	14824.96	11.40	1122.61	1122.61	0.00
Reach 4	218.71		986.77	31489.75	11.35	1123.63	1123.63	
Reach 4	218.71		986.76	14889.72	11.35	1123.63	1123.63	0.00
Reach 4	218.80		1011.74	26192.89	10.55	1124.77	1124.77	
Reach 4	218.80		1011.73	16023.35	10.55	1124.77	1124.77	0.00
Reach 4	218.96		1020.45	15115.24	11.32	1126.03	1126.03	
Reach 4	218.96		1020.44	14930.15	11.32	1126.03	1126.03	0.00
Reach 4	218.965	BR D	974.29	14274.18	11.99	1125.89	1125.89	
Reach 4	218.965	BR D	974.29	14273.15	11.99	1125.88	1125.89	0.00
Reach 4	218.965	BR U	962.83	14877.87	11.39	1126.44	1126.44	
Reach 4	218.965	BR U	962.82	14877.01	11.39	1126.44	1126.44	0.00
Reach 4	218.97		1009.80	15927.84	10.65	1126.74	1126.74	
Reach 4	218.97		1009.80	15869.73	10.65	1126.74	1126.74	0.00
Reach 4	219.01		1022.15	12899.76	13.10	1126.36	1126.36	
Reach 4	219.01		1022.15	12898.88	13.10	1126.36	1126.36	0.00
Reach 4	219.02	BR D	976.61	12238.13	13.81	1126.28	1126.28	
Reach 4	219.02	BR D	976.61	12237.29	13.81	1126.28	1126.28	0.00
Reach 4	219.02	BR U	979.73	13208.41	12.79	1127.27	1127.27	
Reach 4	219.02	BR U	976.88	13204.26	12.80	1127.27	1127.27	0.00
Reach 4	219.03		1026.67	14369.09	11.76	1127.80	1127.80	
Reach 4	219.03		1026.66	14367.08	11.76	1127.79	1127.80	0.00
Reach 4	219.14		1023.28	25190.96	11.10	1129.20	1129.20	
Reach 4	219.14		1023.27	15228.51	11.10	1129.20	1129.20	0.00
Reach 4	219.24		1032.45	28923.74	11.23	1130.16	1130.16	
Reach 4	219.24		1032.44	15050.38	11.23	1130.16	1130.16	0.00
Reach 4	219.33		1024.85	30438.71	11.17	1131.10	1131.10	
Reach 4	219.33		1024.85	15130.65	11.17	1131.10	1131.10	0.00
Reach 4	219.42		1010.17	24562.27	11.18	1132.00	1132.00	
Reach 4	219.42		1010.17	15120.89	11.18	1132.00	1132.00	0.00
Reach 4	219.51		1006.16	20045.29	11.27	1132.93	1132.93	

Reach 4	219.51		1006.15	14993.11	11.27	1132.93	1132.93	0.00
Reach 4	219.61		988.76	21837.39	11.54	1133.86	1133.86	
Reach 4	219.61		988.76	14649.25	11.54	1133.86	1133.86	0.00
Reach 4	219.70		945.15	18428.70	12.91	1134.63	1134.63	
Reach 4	219.70		945.15	13091.33	12.91	1134.63	1134.63	0.00
Reach 4	219.79		931.90	16026.95	13.26	1135.96	1135.96	
Reach 4	219.79		931.90	12747.28	13.26	1135.96	1135.96	0.00
Reach 4	219.88		918.51	16226.75	13.11	1137.44	1137.44	
Reach 4	219.88		918.51	12889.52	13.11	1137.44	1137.44	0.00
Reach 4	220.03		906.62	13097.09	12.90	1139.74	1139.74	
Reach 4	220.03		906.62	13096.98	12.90	1139.73	1139.74	0.00
Reach 4	220.05	BR D	879.02	12799.20	13.20	1139.87	1139.87	
Reach 4	220.05	BR D	878.62	12798.85	13.20	1139.87	1139.87	0.00
Reach 4	220.05	BR U	880.77	13320.24	12.69	1140.46	1140.46	
Reach 4	220.05	BR U	878.62	13317.63	12.69	1140.46	1140.46	0.00
Reach 4	220.06		909.54	13992.87	12.08	1140.72	1140.72	
Reach 4	220.06		909.53	13991.64	12.08	1140.72	1140.72	0.00
Reach 4	220.16		912.67	14589.52	12.43	1141.74	1141.74	
Reach 4	220.16		912.67	13590.57	12.44	1141.74	1141.74	0.00
Reach 4	220.25		919.66	15597.48	11.59	1143.14	1143.14	
Reach 4	220.25		919.65	14576.18	11.59	1143.14	1143.14	0.00
Reach 4	220.35		915.59	16185.76	10.95	1144.24	1144.24	
Reach 4	220.35		915.58	15435.92	10.95	1144.24	1144.24	0.00
Reach 4	220.45		908.83	15901.78	11.39	1144.97	1144.97	
Reach 4	220.45		908.82	14836.49	11.39	1144.97	1144.97	0.00
Reach 4	220.54		915.24	15746.86	11.42	1145.84	1145.84	
Reach 4	220.54		915.24	14795.70	11.42	1145.84	1145.84	0.00
Reach 4	220.63		903.29	15110.65	11.37	1146.74	1146.74	
Reach 4	220.63		903.29	14856.83	11.38	1146.74	1146.74	0.00
Reach 4	220.73		884.55	15033.77	11.43	1147.59	1147.59	
Reach 4	220.73		884.55	14782.43	11.43	1147.59	1147.59	0.00
Reach 4	220.735		906.00	16994.82	9.94	1148.38	1148.38	
Reach 4	220.735		906.00	16994.49	9.94	1148.38	1148.38	0.00
Reach 4	220.74		906.00	17028.55	9.92	1148.42	1148.42	
Reach 4	220.74		906.00	17028.33	9.92	1148.42	1148.42	0.00
Reach 4	220.75		906.00	14304.64	11.81	1147.99	1147.99	
Reach 4	220.75		906.00	14304.42	11.81	1147.99	1147.99	0.00

Reach 4	220.752 BR D	871.23	12955.52	13.04	1147.52	1147.52	
Reach 4	220.752 BR D	871.23	12955.30	13.04	1147.52	1147.52	0.00
Reach 4	220.752 BR U	872.04	12995.29	13.00	1147.88	1147.88	
Reach 4	220.752 BR U	872.04	12995.08	13.00	1147.88	1147.88	0.00
Reach 4	220.755	906.00	14586.65	11.59	1148.62	1148.62	
Reach 4	220.755	906.00	14586.43	11.59	1148.62	1148.62	0.00
Reach 4	220.756	906.00	17910.45	9.44	1149.39	1149.39	
Reach 4	220.756	906.00	17910.33	9.44	1149.39	1149.39	0.00
Reach 4	220.82	868.33	15943.73	10.90	1149.14	1149.14	
Reach 4	220.82	868.33	15498.37	10.90	1149.14	1149.14	0.00
Reach 4	220.92	863.27	15668.22	10.99	1149.88	1149.88	
Reach 4	220.92	863.27	15374.24	10.99	1149.88	1149.88	0.00
Reach 4	221.02	869.89	16969.62	10.37	1150.78	1150.78	
Reach 4	221.02	869.89	16302.64	10.37	1150.78	1150.78	0.00
Reach 4	221.05	814.05	18469.20	9.94	1151.12	1151.12	
Reach 4	221.05	814.05	16999.54	9.94	1151.12	1151.12	0.00
Reach 4	221.055 BR D	768.26	17383.61	10.53	1151.02	1151.02	
Reach 4	221.055 BR D	768.26	17383.61	10.53	1151.02	1151.02	0.00
Reach 4	221.055 BR U	780.93	17596.98	10.41	1151.10	1151.10	
Reach 4	221.055 BR U	780.93	17596.98	10.41	1151.10	1151.10	0.00
Reach 4	221.06	828.94	18924.43	9.74	1151.37	1151.37	
Reach 4	221.06	828.94	17359.38	9.74	1151.37	1151.37	0.00
Reach 4	221.19	873.37	17615.32	9.75	1151.99	1151.99	
Reach 4	221.19	873.37	17327.29	9.75	1151.99	1151.99	0.00
Reach 4	221.195 BR D	819.16	16319.88	10.50	1151.86	1151.86	
Reach 4	221.195 BR D	819.16	16319.76	10.50	1151.86	1151.86	0.00
Reach 4	221.195 BR U	823.41	16409.57	10.43	1151.96	1151.96	
Reach 4	221.195 BR U	823.41	16409.45	10.43	1151.96	1151.96	0.00
Reach 4	221.2	878.26	17906.10	9.61	1152.27	1152.27	
Reach 4	221.2	878.26	17587.16	9.61	1152.27	1152.27	0.00
Reach 4	221.24	898.86	17665.11	9.81	1152.41	1152.41	
Reach 4	221.24	898.86	17226.43	9.81	1152.41	1152.41	0.00
Reach 4	221.25 BR D	828.86	16193.45	10.68	1152.25	1152.25	
Reach 4	221.25 BR D	828.86	16193.58	10.68	1152.25	1152.25	0.00
Reach 4	221.25 BR U	819.44	16144.43	10.74	1152.33	1152.33	
Reach 4	221.25 BR U	819.44	16144.55	10.74	1152.33	1152.33	0.00
Reach 4	221.26	881.94	17854.00	9.80	1152.69	1152.69	
Reach 4	221.26	881.94	17251.98	9.80	1152.69	1152.69	0.00

Reach 4	221.31	933.69	14457.19	12.28	1152.48	1152.48	
Reach 4	221.31	933.69	14009.54	12.28	1152.48	1152.48	0.00
Reach 4	221.40	949.21	14817.73	12.13	1153.69	1153.69	
Reach 4	221.40	949.21	14175.05	12.13	1153.70	1153.69	0.00
Reach 4	221.50	928.87	16952.80	12.42	1154.62	1154.62	
Reach 4	221.50	928.87	13849.68	12.42	1154.62	1154.62	0.00
Reach 4	221.61	926.34	18253.01	12.10	1155.71	1155.71	
Reach 4	221.61	926.34	14214.71	12.10	1155.71	1155.71	0.00
Reach 4	221.70	940.02	19479.38	11.22	1156.76	1156.76	
Reach 4	221.70	940.02	15328.98	11.22	1156.76	1156.76	0.00
Reach 4	221.80	935.84	16956.96	11.22	1157.41	1157.41	
Reach 4	221.80	935.84	15325.47	11.22	1157.41	1157.41	0.00
Reach 4	221.89	986.37	16175.07	11.14	1158.07	1158.07	
Reach 4	221.89	986.37	15436.00	11.14	1158.07	1158.07	0.00
Reach 4	221.99	1012.24	16810.89	10.32	1158.97	1158.97	
Reach 4	221.99	1012.24	16673.69	10.32	1158.97	1158.97	0.00
Reach 4	222.08	1038.85	20749.43	8.56	1159.88	1159.88	
Reach 4	222.08	1038.85	20088.87	8.56	1159.88	1159.88	0.00
Reach 4	222.085 BR D	990.21	19625.27	9.05	1159.81	1159.81	
Reach 4	222.085 BR D	990.21	19625.13	9.05	1159.81	1159.81	0.00
Reach 4	222.085 BR U	991.08	19674.12	9.04	1159.91	1159.91	
Reach 4	222.085 BR U	991.08	19673.98	9.04	1159.91	1159.91	0.00
Reach 4	222.09	1040.76	20948.23	8.49	1160.09	1160.09	
Reach 4	222.09	1040.76	20247.47	8.49	1160.09	1160.09	0.00
Reach 4	222.17	1009.69	18820.28	9.39	1160.17	1160.17	
Reach 4	222.17	1009.69	18318.60	9.39	1160.17	1160.17	0.00
Reach 4	222.27	1077.08	18954.88	9.16	1160.62	1160.62	
Reach 4	222.27	1077.08	18775.72	9.16	1160.62	1160.62	0.00
Reach 4	222.36	1182.42	22419.25	8.21	1161.24	1161.24	
Reach 4	222.36	1182.42	20953.62	8.21	1161.24	1161.24	0.00
Reach 4	222.45	1387.37	27237.43	6.80	1161.83	1161.83	
Reach 4	222.45	1387.37	25276.87	6.80	1161.83	1161.83	0.00
Reach 4	222.55	1270.18	31184.53	7.30	1161.98	1161.98	
Reach 4	222.55	1270.18	23559.88	7.30	1161.98	1161.98	0.00
Reach 4	222.65	1079.34	32786.21	8.24	1162.11	1162.11	
Reach 4	222.65	1079.34	20887.53	8.23	1162.12	1162.11	0.01
Reach 4	222.66	968.00	19412.44	8.86	1162.14	1162.14	

Reach 4	222.66		968.00	19423.55	8.86	1162.15	1162.14	0.01
Reach 4	222.67		968.00	17761.94	9.68	1161.99	1161.99	
Reach 4	222.67		968.00	17773.28	9.68	1162.00	1161.99	0.01
Reach 4	222.68	BR D	968.00	17230.93	9.98	1161.99	1161.99	
Reach 4	222.68	BR D	968.00	17242.28	9.98	1162.00	1161.99	0.01
Reach 4	222.68	BR U	968.00	17230.93	9.98	1161.99	1161.99	
Reach 4	222.68	BR U	968.00	17242.28	9.98	1162.00	1161.99	0.01
Reach 4	222.69		968.00	17844.89	9.64	1162.07	1162.07	
Reach 4	222.69		968.00	17855.99	9.63	1162.08	1162.07	0.01
Reach 4	222.695		968.00	17845.60	9.64	1162.07	1162.07	
Reach 4	222.695		968.00	17856.70	9.63	1162.08	1162.07	0.01
Reach 4	222.70		968.00	19612.14	8.77	1162.35	1162.35	
Reach 4	222.70		968.00	19622.66	8.77	1162.36	1162.35	0.01
Reach 4	222.74		1038.31	27749.67	8.02	1162.62	1162.62	
Reach 4	222.74		1038.31	21461.92	8.01	1162.63	1162.62	0.01
Reach 4	222.83		963.59	27757.63	8.00	1162.93	1162.93	
Reach 4	222.83		963.59	21515.38	7.99	1162.94	1162.93	0.01
Reach 4	222.93		945.96	29512.06	9.02	1163.08	1163.08	
Reach 4	222.93		945.95	19074.64	9.02	1163.09	1163.08	0.01
Reach 4	223.02		1093.00	19741.39	8.84	1163.58	1163.58	
Reach 4	223.02		1093.00	19460.27	8.84	1163.58	1163.58	0.01
Reach 4	223.08		1001.37	9747.96	17.64	1163.07	1163.07	
Reach 4	223.08		1001.37	9747.96	17.64	1163.07	1163.07	0.00



Tempe Rio Salado - South Bank Levee Removal/Realignment Conditional Letter of Map Revision Application

Revised 100-Year Floodplain Boundary

Station 200+00

Hydraulic Base Line

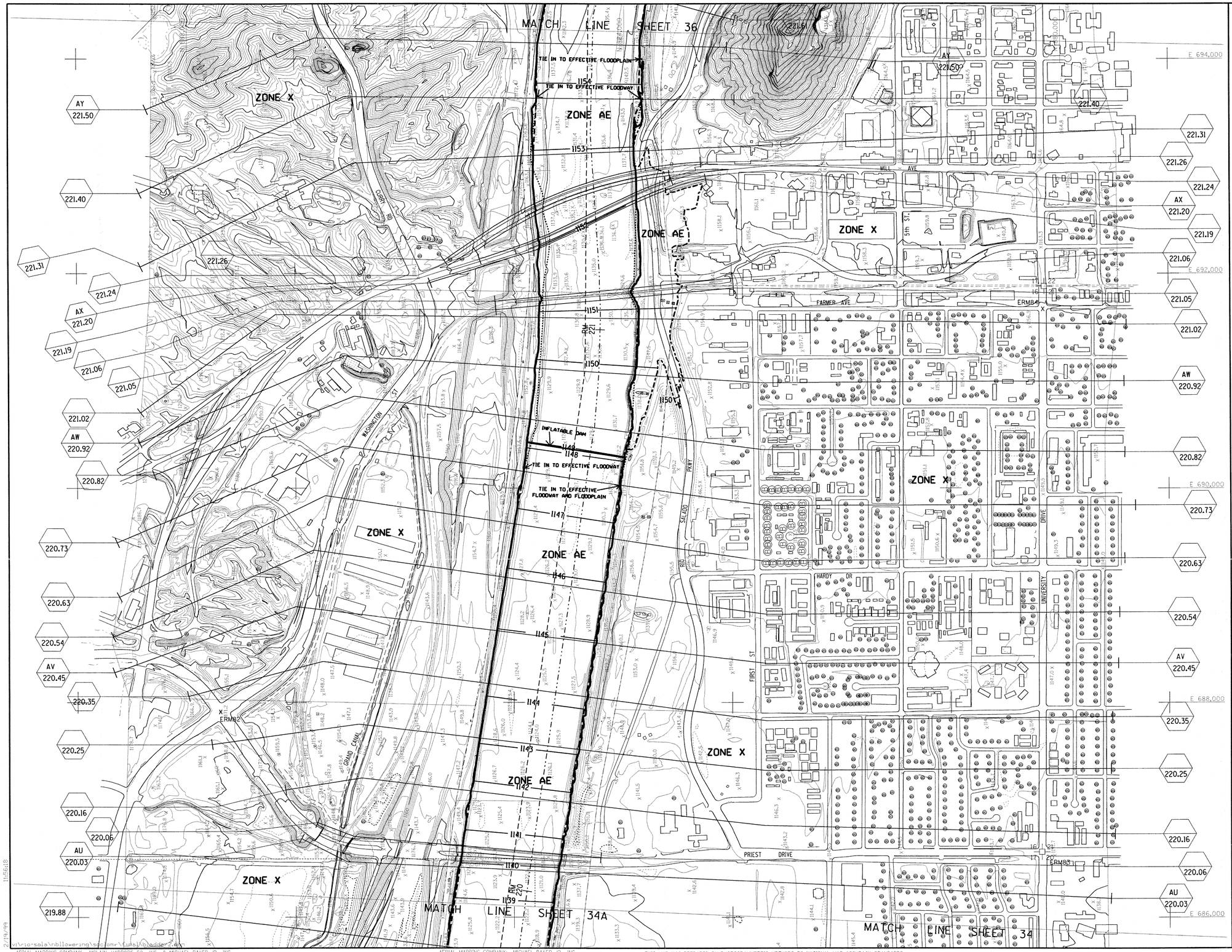
221.19 Cross Section

MAP 1 OF 4

Scale: 1 inch = 200 feet

N

Baker



CITY OF TEMPE, ARIZONA
SOUTH BANK LEVEE
REMOVAL/REALIGNMENT
CLOMR REQUEST

LEGEND

EFFECTIVE 100-YEAR FLOODPLAIN BOUNDARY	
FLOODWAY BOUNDARY	
HYDRAULIC BASE LINE WITH RIVER MILE	RM 12.0 — RM 13.0
STATION 200+00	
CROSS SECTION	A (161.1) FP=100 Yr WSE / FW=Floodway WSE A (161.1)
ELEVATION REFERENCE MARK	ERM3 X
BASE FLOOD ELEVATIONS	1221
ZONE DESIGNATIONS	ZONE AE
CORPORATE LIMITS	Corporate Limits
CONTROL POINT	144 △
APPROXIMATE SECTION CORNER	20 21 / 29 28
ZONE GUTTER	
REVISED 100-YEAR FLOODPLAIN BOUNDARY FOR CLOMR REQUEST	
REVISED FLOODWAY BOUNDARY FOR CLOMR REQUEST	

ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. #	ELEV (FT)	DESCRIPTION/LOCATION
82	1171.26	A BC in a HH in the intersection of Washington Blvd. and Priest Dr. This point is approximately 1700 feet S and 1400 feet E of the NW corner of Sec. 9, T 1 N, R 4 E of the G&SRB&M, Maricopa County, Arizona.
83	1145.44	A BC in a HH in the intersection of University Dr. and Priest Dr. This point is the NE corner of Sec. 20, T 1 N, R 4 E of the G&SRB&M, Maricopa County, Arizona.
84	1159.96	A BC in a HH for the centerline of the intersection of University Dr. and Farmer Ave. This point is located approximately 150 feet W of the NE corner of Sec. 21, T 1 N, R 4 E of the G&SRB&M, Maricopa County, Arizona.

GENERAL NOTES

1. ALL AREAS DESIGNATED AS ZONE X, ARE SHADED ZONE X.
2. THE AVERAGE CONVERSION FACTOR FROM NGVD 29 TO NAVD 88 IS +1.804ft.

INDEX MAP

N

400 0' 400 800

SCALE: 1"= 400'
CONTOUR INTERVAL = 4 FEET

MICHAEL BAKER JR INC.

	BY	DATE
DESIGN	BAC	-
DESIGN CHK.	RLD	-
PLANS	BAC	-
PLANS CHK.	RLD	-
SUBMITTED BY:		DATE:

CITY OF TEMPE, ARIZONA

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 2 OF 4

PRELIMINARY

AERIAL MAPPING COMPANY: MCLAIN, HARBORS CO., INC., & MICHAEL BAKER JR., INC.
SURVEYING COMPANY: JAYKIM ENGINEERS & GREINER ENGINEERS.
FLIGHT DATES: 13 DEC. 1991 ; 13 JAN. 1992 ; 23 JAN. 1992.

AERIAL MAPPING COMPANY: MICHAEL BAKER JR., INC.
RIVER CHANNEL ONLY: SHTS 33-40 ONLY.
FLIGHT DATE: FEB. 1997.

THIS MAP WAS PREPARED BY PHOTOGRAMMETRIC METHODS TO NATIONAL MAP ACCURACY STANDARDS 1"=400' HORIZONTAL SCALE AND 4' CONTOUR INTERVALS AND BASED ON GROUND CONTROL SURVEY USING NAD 83 HORIZONTAL DATUM. DATA PROVIDED BY JAYKIM ENGINEERS & GREINER ENGINEERS

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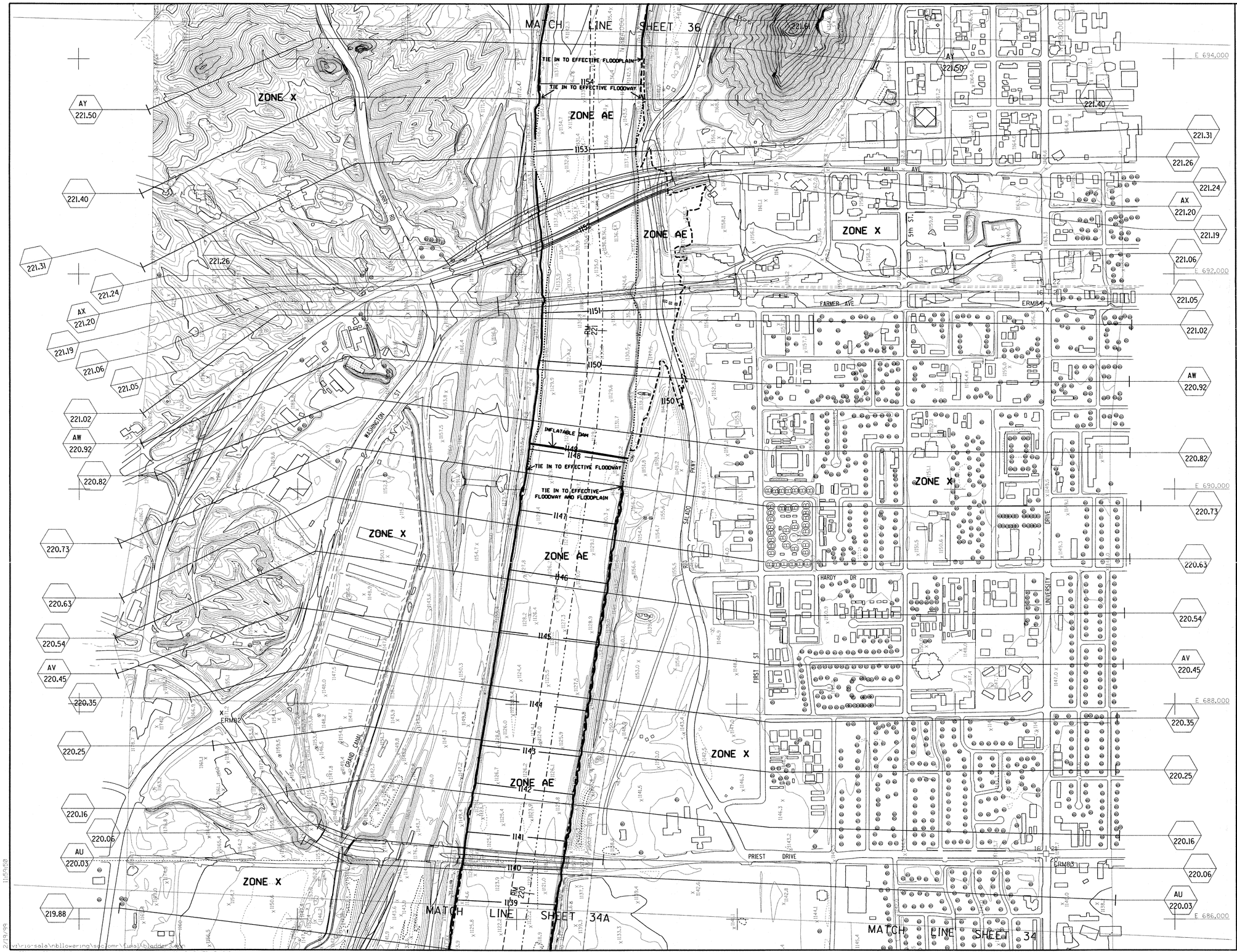
ADM.MRB REV. DEC. 10, 1991



CITY OF TEMPE, ARIZONA
SOUTH BANK LEVEE
REMOVAL/REALIGNMENT
CLOMR REQUEST

LEGEND

EFFECTIVE 100-YEAR FLOODPLAIN BOUNDARY	
FLOODWAY BOUNDARY	
HYDRAULIC BASE LINE WITH RIVER MILE	RM 12.0 — RM 13.0
STATION 200+00	
CROSS SECTION	A 161.11 FP=100 Yr WSE / FW=Floodway WSE A 161.11
ELEVATION REFERENCE MARK	ERM3 X
BASE FLOOD ELEVATIONS	1221
ZONE DESIGNATIONS	ZONE AE
CORPORATE LIMITS	Corporate Limits
CONTROL POINT	144 △
APPROXIMATE SECTION CORNER	20 21 / 29 28
ZONE GUTTER	
REVISED 100-YEAR FLOODPLAIN BOUNDARY FOR CLOMR REQUEST	
REVISED FLOODWAY BOUNDARY FOR CLOMR REQUEST	

ELEVATION REFERENCE MARKS

NOTE: ALL ELEVATIONS ARE BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929

I.D. #	ELEV (FT)	DESCRIPTION/LOCATION
82	1171.26	A BC in a HH in the intersection of Washington Blvd. and Priest Dr. This point is approximately 1700 feet S and 1400 feet E of the NW corner of Sec. 9, T 1 N, R 4 E of the G&SRB&M, Maricopa County, Arizona.
83	1145.44	A BC in a HH in the intersection of University Dr. and Priest Dr. This point is the NE corner of Sec. 20, T 1 N, R 4 E of the G&SRB&M, Maricopa County, Arizona.
84	1159.96	A BC in a HH for the centerline of the intersection of University Dr. and Farmer Ave. This point is located approximately 150 feet W of the NE corner of Sec. 21, T 1 N, R 4 E of the G&SRB&M, Maricopa County, Arizona.

GENERAL NOTES

1. ALL AREAS DESIGNATED AS ZONE X, ARE SHADED ZONE X.
2. THE AVERAGE CONVERSION FACTOR FROM NGVD 29 TO NAVD 88 IS +1.804ft.

INDEX MAP

N

400 0' 400 800

SCALE: 1"= 400'

CONTOUR INTERVAL = 4 FEET

MICHAEL BAKER JR INC.

	BY	DATE
DESIGN	BAC	-
DESIGN CHK.	RLD	-
PLANS	BAC	-
PLANS CHK.	RLD	-

SUBMITTED BY: DATE:

CITY OF TEMPE, ARIZONA

RECOMMENDED BY: DATE

APPROVED BY: DATE

CHIEF ENGINEER AND GENERAL MANAGER

SHEET 3 OF 4

ADM/MRB REV. DEC. 10, 1991

PRELIMINARY

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AERIAL MAPPING COMPANY: MCLAIN, HARBORS CO., INC. & MICHAEL BAKER JR., INC.
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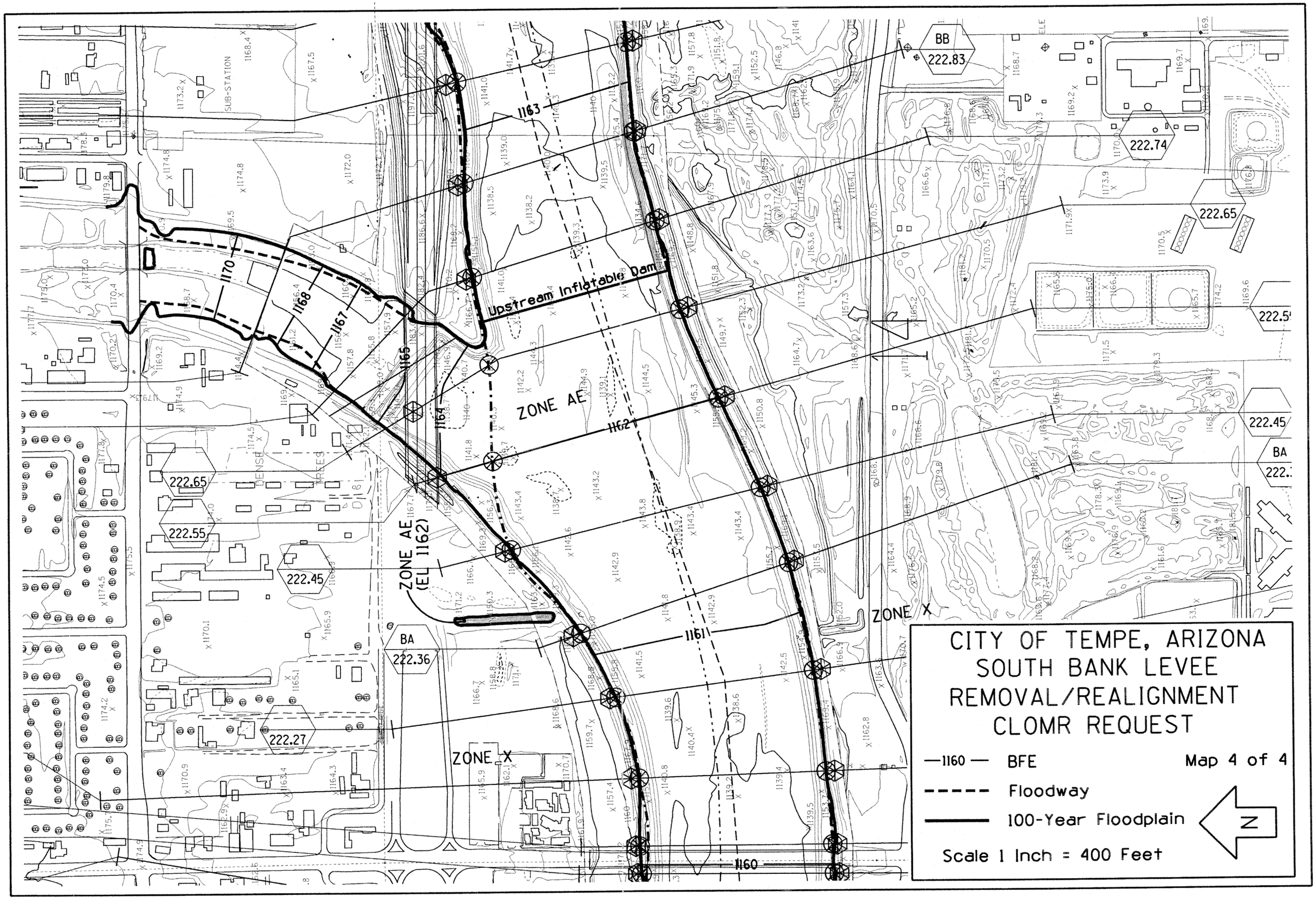
CITY OF TEMPE, ARIZONA
SOUTH BANK LEVEE
REMOVAL/REALIGNMENT
CLOMR REQUEST
—1160— BFE
Map 4 of 4
Floodway
100-Year Floodplain
Scale 1 Inch = 400 Feet
N
ZONE AE
ZONE AE (EL 1162)
ZONE X
Upstream Inflatable Dam
SUB-STATION
BB
222.83
222.74
222.65
222.55
222.45
222.36
222.27
BA
1160
1161
1162
1163
1164
1165
1167
1168
1170