BRIDGE HYDRAULICS REPORT

STATE ROUTE 153

CROSSING OF THE SALT RIVER

PHOENIX, ARIZONA

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STATE ROUTE 153

CROSSING OF THE SALT RIVER

PHOENIX, ARIZONA

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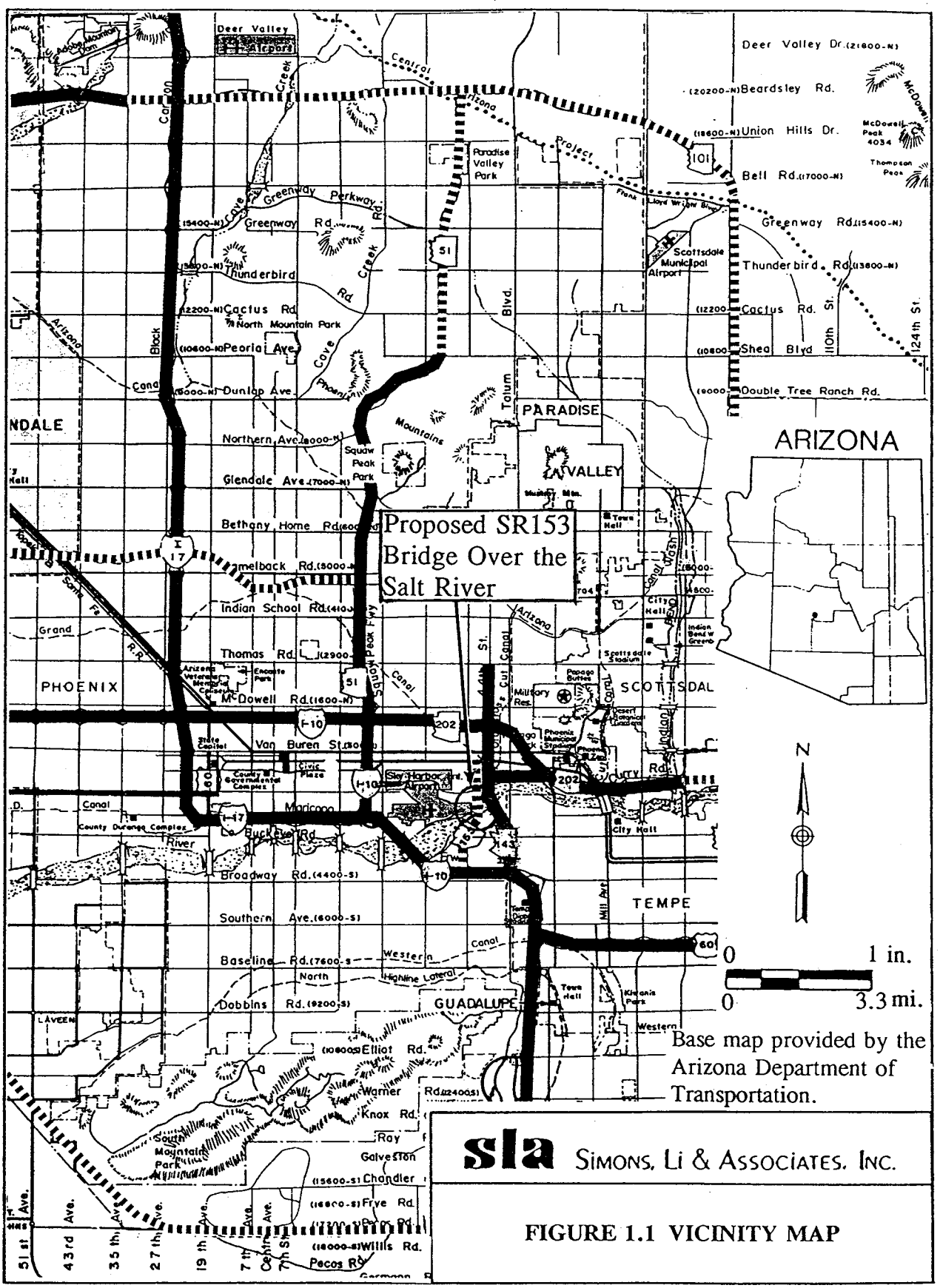
I. INTRODUCTION

The purpose of this report is to present the results, assumptions and methodologies used to conduct the hydraulic and scour analyses for the proposed State Route 153 (SR 153) bridge crossing of the Salt River.

Simons, Li & Associates, Inc. prepared this report for the Arizona Department of Transportation (ADOT) under subcontract to BRW Inc. A vicinity map showing the study reach of the Salt River and the location of the proposed bridge is provided as Figure 1.1.

A hydraulic analysis was performed to determine the effects of the proposed structure on the 100-year water-surface profile and flow velocities within the Salt River. In addition, the available freeboard was calculated for the bridge and existing bank protection under 100-year flood conditions, as well as the "Superflood."

A scour analysis quantified the total scour that can be expected to impact the bridge substructure during the 100-year flood and "Superflood." Additional analyses evaluated the impact of the proposed structure on the existing Salt River bank protection adjacent to the SR 153 crossing. Based on the results of these analyses, recommendations have been made with respect to the total scour at the bridge piers, abutments, and adjacent Salt River bank protection.



SIMONS, LI & ASSOCIATES, INC.

FIGURE 1.1 VICINITY MAP

II. HYDROLOGY

The 100-year flood peak discharge used in the Salt River hydraulic analysis is based on the value presented in the Central Arizona Water Control Study [CAWCS, (1)]. The 100-year peak discharge used for this reach of the Salt River is 215,000 cfs which matches the value used in the U.S. Army Crops of Engineers (Corps) Salt River Flood Insurance Study (2). A "Superflood" peak discharge of 289,000 cfs was used for this reach of the Salt River which is designated as the Standard Project Flood (SPF) in the CAWCS. The SPF is also the return interval which was used in the design of the Salt River Channelization (3).

A second study was performed by the Corps (4) which quantified the impact of the modified Roosevelt Dam on the discharge-frequency relationships at selected sites within the Gila River Basin. It is generally accepted that the post-Roosevelt Dam modifications will result in reduced peak flood discharges in the project reach of the Salt River. However, an operational plan for the Salt River Project reservoir system has not been finalized and the new peak flood discharges have not been accepted by all the regulatory agencies. The Corps study (4) estimates that the pre-Roosevelt 100-year and "Superflood" peak discharges will correspond to flood events greater than the 200- and 500-year peak discharges, respectively, for post-Roosevelt conditions.

The 100-year flood and "Superflood" hydrographs used in the sediment transport analyses were developed based on recorded hydrographs at Granite Reef Dam and flood volume estimates from the CAWCS. Figure 2.1 illustrates the 100-year and "Superflood" hydrographs utilized in the general scour analysis. These hydrographs are identical to the hydrographs used in the design of the Salt River Channelization (3).

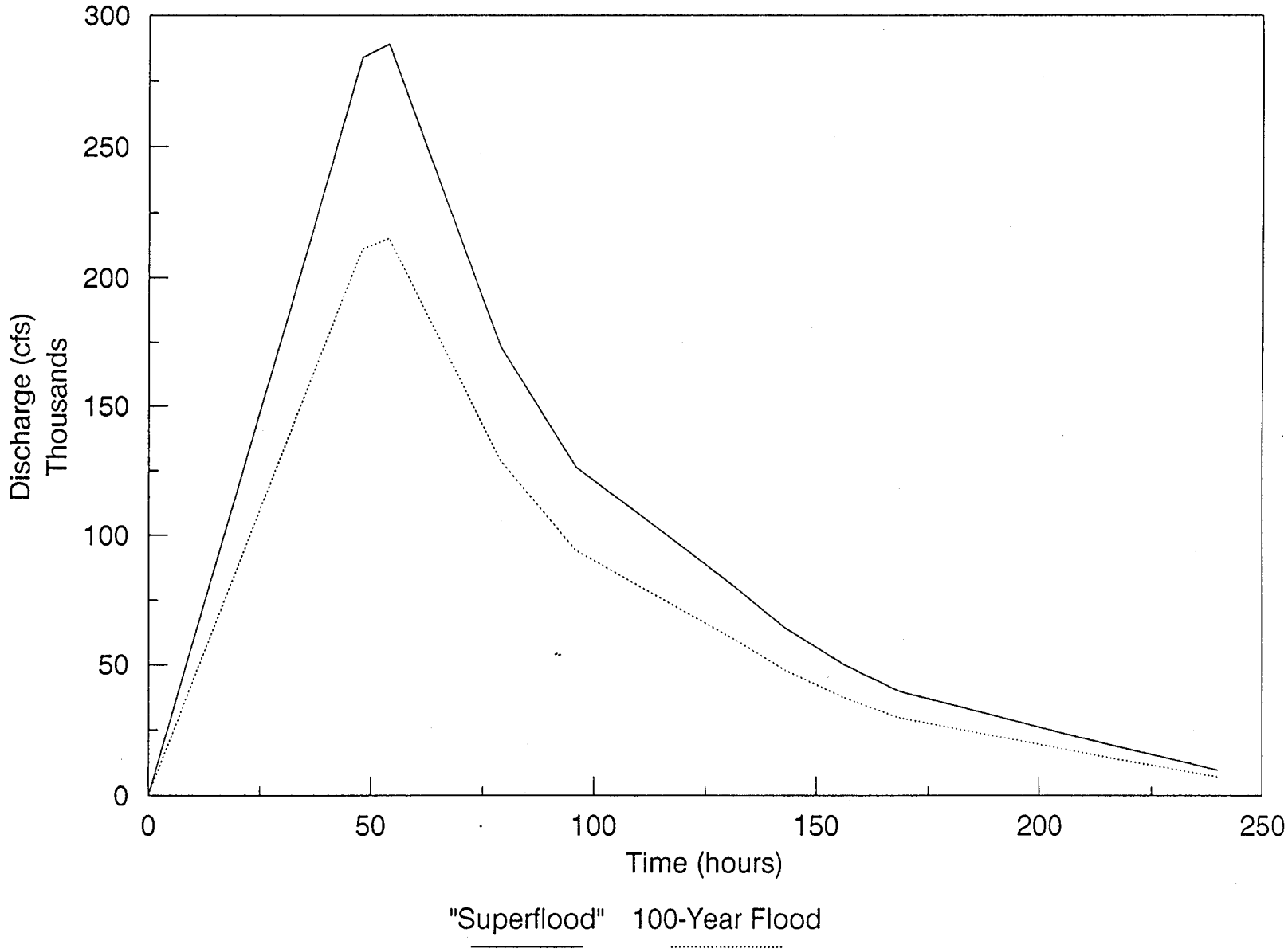


FIGURE 2.1 100-YEAR AND "SUPERFLOOD" HYDROGRAPHS FOR THE SALT RIVER

III. HYDRAULIC ANALYSIS

The U.S. Army Corps of Engineers computer program "HEC-2 Water Surface Profiles" (5) was used to calculate the hydraulic conditions of the Salt River at the project site. The HEC-2 analyses were performed from 120 feet upstream of the I-10 bridge up to the downstream side of the Priest Drive bridge. From upstream of the I-10 bridge to the downstream end of the Salt River channelization, digitized cross-sections were provided by Kenney Aerial Mapping. For the reach of the Salt River encompassing the proposed bridge site, the baseline hydraulic conditions were established using as-built construction plans for the ADOT Hohokam Expressway project (6). The as-built construction plans include the State Route 143 (SR 143) bridge and the Salt River Channelization. HEC-2 cross-sections for the channelized reach were encoded using the tabulated channel cross-section data from the as-built construction plans. The HEC-2 cross-section numbers directly correspond to the channel centerline stationing. The starting water-surface elevations for the HEC-2 analyses were based on the Corps Salt River Flood Insurance Study (2).

A roughness coefficient of 0.035 was used through the Salt River Channelization. This corresponds to the Manning's "n" value of 0.035 used for design of the Salt River Channelization (3). Expansion and contraction coefficients in the HEC-2 model were set at 0.3 and 0.1, respectively. The expansion and contraction coefficients used through the SR 153 and SR 143 bridges were 0.5 and 0.3, respectively.

The HEC-2 Special Bridge Method was used to analyze the hydraulic conditions for the proposed SR 153 and existing SR 143 structures. The bridges were modeled as two separate structures and the representative cross-section locations were projected perpendicular to the direction of the flood flows. The average of the outside-to-outside width dimension of the pier columns was used to define the effective bridge width since only the pier columns will be subjected to Salt River flows. Effective bridge widths of 109 ft. and 122 ft. were used in the hydraulic analyses for SR 153 and SR 143, respectively. Since both bridges cross the Salt River channelization on a skew, the HEC-2 cross-sections were located at the center of the farthest upstream and downstream pier columns within the channel for the respective structures. Figures 3.1 and 3.2 illustrate the cross-sections used in the HEC-2 models for SR 153 and SR 143, respectively. In addition, an intermediate cross-section was placed mid-way between the two effective bridge locations.

The proposed SR 153 bridge is approximately 1265 feet long with eight piers having four 6.5 foot diameter columns per bent. A total of 7 piers will be located in the channel. To account for debris accumulation, two feet of debris was assumed to build-up on each side of the columns; resulting in an effective pier width of 10.5 feet. Debris accumulation was assumed to extend from the water-surface to the bed of the channel. The general plan for the proposed SR 153 bridge over the Salt River is provided in Appendix A.

HEC-2 cross-section location maps are provided in Appendix B. Table 3.1 summarizes and compares the hydraulic parameters for the 100-year existing and proposed conditions. The average velocity and depth through SR 153 for the 100-year flood are approximately 12.1 feet-per-second (fps) and 19.7 feet, respectively. The 100-year water-surface elevation at SR 153 is approximately 1129.5 feet. It is estimated the proposed SR 153 structure will increase the

existing upstream water-surface elevation 0.5 feet during a 100-year flood (See Table 3.1). However, the 100-year water-surface profile equals existing conditions approximately 3900 feet upstream of the proposed bridge. Since the upstream impacted reach of the Salt River is channelized, the proposed structure will not increase upstream flooding risks.

The "Superflood" (Q = 289,000 cfs) hydraulic parameters for the proposed conditions were also determined in order to estimate local scour. Table 3.2 presents a summary of the results of the hydraulic analysis for the "Superflood". The average velocity and depth through SR 153 for a "Superflood" were estimated to be approximately 13.3 fps and 23.5 feet, respectively. The "Superflood" water-surface elevation at SR 153 is approximately 1133.2 feet. The 100-year and "Superflood" hydraulic conditions presented above were used in the local-scour computations. The HEC-2 input and output files for the existing and proposed conditions are provided in Appendix C.

Superelevated flow was considered using procedures outlined by the Corps (7). Upstream of the proposed SR 153, a 7000-foot radius curve could potentially superelevate flow along the north side of the channel. Calculations estimate the 100-year flood and "Superflood" superelevation to be approximately 0.4 feet and 0.5 feet, respectively. Since the greatest depths adjacent to the proposed SR 153 structure is in the low-flow channel along the south bank, superelevation will not significantly impact either the hydraulic or scour calculations.

Table 3.3 presents a summary of the calculated bank protection freeboard for proposed conditions during the 100-year and "Superflood" events. During a 100-year flood event, the Salt River bank protection maintains a minimum of 5.6 feet of freeboard upstream of the SR 153 bridge. During the "Superflood" event, a minimum of 1.7 feet of freeboard will be provided. Superelevation may reduce the freeboard presented in Table 3.3 along the north bank by approximately 0.5 feet.

Two structure alternatives may be bid for the construction of the SR 153 bridge over the Salt River. The first alternative utilizes AASHTO Type VI girders, and the second uses Modified AASHTO Type VI girders. The second alternative will provide the most conservative low-cord elevation for the SR 153 bridge since the Type VI Modified girder is approximately 6 inches deeper than a standard Type VI girder. The minimum low-cord elevation for the second structural alternative will be approximately 1137.9 feet at pier 8. The minimum low cord elevation will be approximately 2.2 feet above the top of the existing north levee elevation (approximately 1135.7 feet). The proposed structure will have a minimum of 7.7 feet of freeboard during a 100-year flood (includes consideration for superelevation).

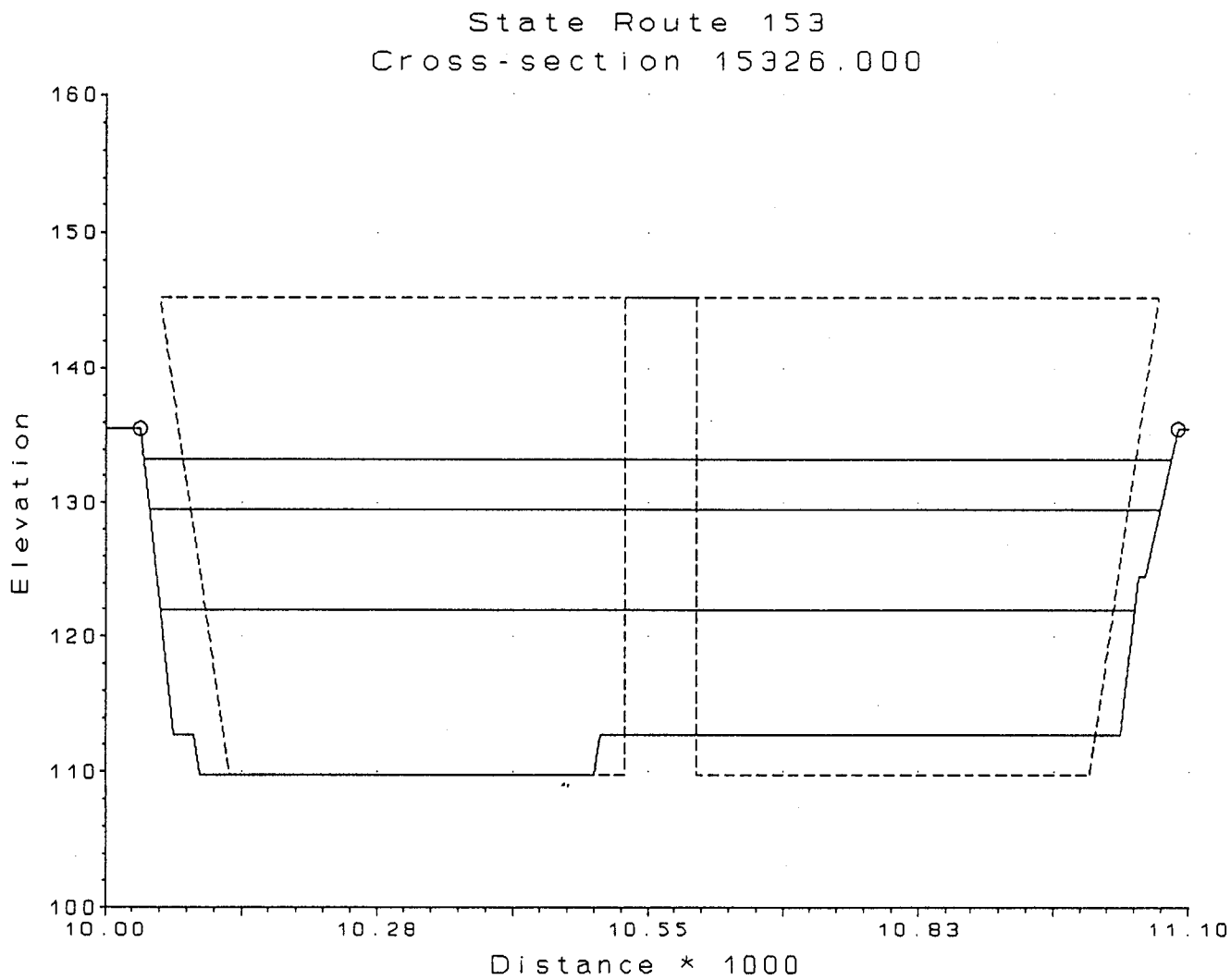


FIGURE 3.1 SR 153 HEC-2 CROSS-SECTION

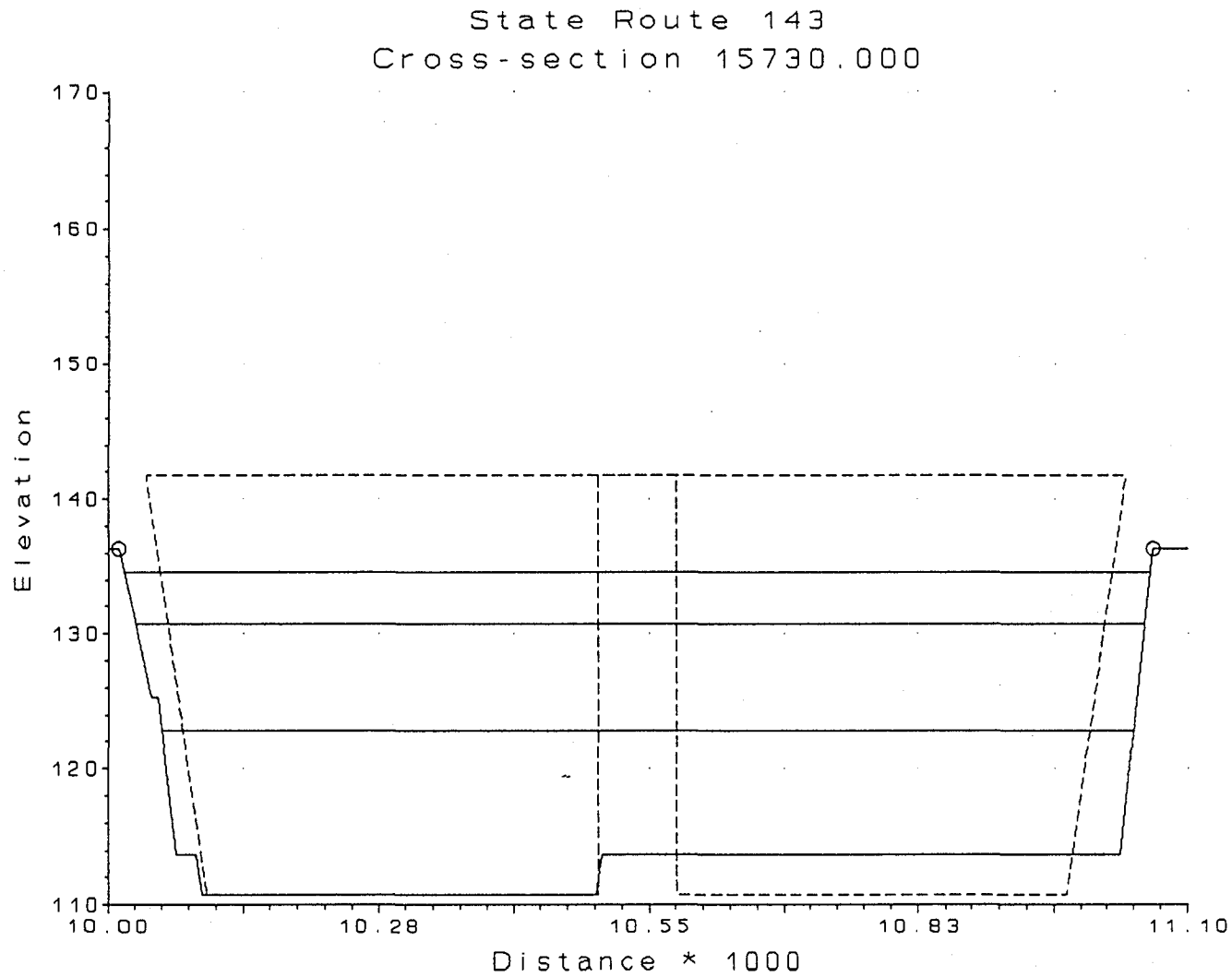


FIGURE 3.2 SR 143 HEC-2 CROSS-SECTION

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Water Resources & Civil Engineering Consultants

Table 3.1 Summary of Hydraulic Parameters for the 100-Year Flood (Q = 215,000 cfs)

HEC–2 Cross–Section	Existing Condition			Proposed Condition			Proposed – Baseline	
	WSEL (ft)	Velocity (fps)	Depth (ft)	WSEL (ft)	Velocity (fps)	Depth (ft)	WSEL (ft)	Velocity (fps)
14000	1126.6	11.9	20.1	1126.6	11.9	20.1	0.0	0.0
14200	1127.0	11.9	20.0	1127.0	11.9	20.0	0.0	0.0
14400	1127.3	12.0	19.8	1127.3	12.0	19.8	0.0	0.0
14665	1127.7	12.3	19.5	1127.7	12.3	19.5	0.0	0.0
14785	1128.0	12.2	19.6	1128.0	12.2	19.6	0.0	0.0
15000	1128.4	12.2	19.5	1128.4	12.2	19.5	0.0	0.0
15200	1128.7	12.3	19.3	1128.7	12.3	19.3	0.0	0.0
15217	1128.8	12.2	19.4	1128.8	12.2	19.4	0.0	0.0
15326	1129.0	12.4	19.3	1129.5	12.0	19.8	0.5	–0.4
15467	1129.3	12.4	19.3	1129.7	12.1	19.7	0.4	–0.3
15608	1129.6	12.3	19.3	1130.0	12.0	19.7	0.4	–0.3
15730	1130.3	12.2	19.6	1130.7	11.9	20.0	0.4	–0.3
15800	1130.5	12.1	19.7	1130.8	11.9	20.0	0.3	–0.2
16000	1130.8	12.2	19.5	1131.1	12.0	19.8	0.3	–0.2
16200	1131.3	12.1	19.6	1131.5	11.9	19.8	0.2	–0.2
16400	1131.6	12.3	19.4	1131.8	12.1	19.6	0.2	–0.2
16600	1132.0	12.3	19.3	1132.2	12.1	19.5	0.2	–0.2
16800	1132.4	12.4	19.2	1132.6	12.2	19.4	0.2	–0.2
17000	1132.8	12.4	19.2	1133.0	12.2	19.4	0.2	–0.2
17200	1133.2	12.4	19.1	1133.3	12.3	19.2	0.1	–0.1
17400	1133.6	12.5	19.0	1133.7	12.4	19.1	0.1	–0.1
17600	1133.9	12.6	18.9	1134.1	12.5	19.1	0.2	–0.1
17800	1134.3	12.7	18.8	1134.5	12.6	19.0	0.2	–0.1
18000	1134.8	12.8	18.8	1134.9	12.7	18.9	0.1	–0.1
18200	1135.2	12.9	18.7	1135.3	12.8	18.8	0.1	–0.1
18400	1135.7	12.7	18.8	1135.8	12.6	18.9	0.1	–0.1
18600	1136.1	13.0	18.7	1136.2	12.9	18.8	0.1	–0.1
18800	1136.5	13.2	18.6	1136.6	13.1	18.7	0.1	–0.1
19000	1136.9	13.2	18.6	1137.0	13.1	18.7	0.1	–0.1
19200	1137.4	13.3	18.6	1137.4	13.3	18.6	0.0	0.0
19400	1137.8	13.5	18.5	1137.9	13.5	18.6	0.1	0.0
19600	1138.3	13.6	18.5	1138.3	13.6	18.5	0.0	0.0
19800	1138.8	13.7	18.6	1138.8	13.6	18.6	0.0	–0.1
20000	1139.3	13.8	18.6	1139.3	13.8	18.6	0.0	0.0
20200	1139.7	14.0	18.5	1139.8	14.0	18.6	0.1	0.0
20400	1140.3	13.9	18.7	1140.3	13.9	18.7	0.0	0.0
20600	1140.8	14.2	18.7	1140.8	14.2	18.7	0.0	0.0
20782	1141.3	14.1	18.8	1141.3	14.1	18.8	0.0	0.0
20800	1141.4	14.1	18.8	1141.4	14.1	18.8	0.0	0.0
21000	1141.9	13.9	19.1	1142.0	13.9	19.1	0.1	0.0

NOTES: The SR 153 bridge model is at HEC–2 cross–section 15326.
The SR 143 bridge model is at HEC–2 cross–section 15730.

Table 3.2 Summary of Hydraulic Parameters for the "Superflood" (Q = 289,000 cfs)

HEC–2 Cross–Section	WSEL (ft)	Velocity (fps)	Depth (ft)
14000	1130.2	13.3	23.7
14200	1130.6	13.2	23.6
14400	1130.9	13.4	23.4
14665	1131.3	13.7	23.1
14785	1131.6	13.5	23.2
15000	1132.0	13.5	23.1
15200	1132.3	13.6	22.9
15217	1132.4	13.5	23.0
15326	1133.2	13.3	23.5
15467	1133.5	13.3	23.5
15608	1133.7	13.3	23.4
15730	1134.5	13.1	23.8
15800	1134.7	13.1	23.9
16000	1135.0	13.1	23.7
16200	1135.4	13.0	23.7
16400	1135.6	13.3	23.4
16600	1136.0	13.3	23.3
16800	1136.3	13.4	23.1
17000	1136.7	13.4	23.1
17200	1137.0	13.5	22.9
17400	1137.4	13.6	22.8
17600	1137.7	13.8	22.7
17800	1138.1	13.9	22.6
18000	1138.5	14.0	22.5
18200	1138.8	14.2	22.3
18400	1139.3	14.0	22.4
18600	1139.6	14.3	22.2
18800	1140.0	14.5	22.1
19000	1140.5	14.6	22.2
19200	1140.9	14.7	22.1
19400	1141.3	14.9	22.0
19600	1141.7	15.1	21.9
19800	1142.2	15.2	22.0
20000	1142.6	15.4	21.9
20200	1143.1	15.6	21.9
20400	1143.6	15.6	22.0
20600	1144.1	15.8	22.0
20782	1144.6	15.7	22.1
20800	1144.7	15.7	22.2
21000	1145.2	15.7	22.4

NOTES: The SR 153 bridge model is at HEC–2 cross–section 15326.
The SR 143 bridge model is at HEC–2 cross–section 15730.

Table 3.3 Summary of Bank Protection Freeboard

HEC–2 Cross–Section	100–YEAR WSEL (ft)	Superflood WSEL (ft)	Left Bank Elev. (ft)	Right Bank Elev. (ft)	100–Year Freeboard		Superflood Freeboard	
					Left Bank (ft)	Right Bank (ft)	Left Bank (ft)	Right Bank (ft)
14000	1126.6	1130.2	1130.0	1132.6	3.4	6.0	–0.2	2.4
14200	1127.0	1130.6	1133.0	1133.0	6.0	6.0	2.4	2.4
14400	1127.3	1130.9	1133.5	1133.5	6.2	6.2	2.6	2.6
14665	1127.7	1131.3	1134.1	1134.1	6.4	6.4	2.8	2.8
14785	1128.0	1131.6	1134.3	1134.3	6.3	6.3	2.7	2.7
15000	1128.4	1132.0	1134.7	1134.7	6.3	6.3	2.7	2.7
15200	1128.7	1132.3	1135.2	1135.2	6.5	6.5	2.9	2.9
15217	1128.8	1132.4	1135.2	1135.2	6.4	6.4	2.8	2.8
15326	1129.5	1133.2	1135.5	1135.5	6.0	6.0	2.3	2.3
15467	1129.7	1133.5	1135.7	1135.7	6.0	6.0	2.2	2.2
15608	1130.0	1133.7	1136.0	1136.0	6.0	6.0	2.3	2.3
15730	1130.7	1134.5	1136.3	1136.3	5.6	5.6	1.8	1.8
15800	1130.8	1134.7	1136.4	1136.4	5.6	5.6	1.7	1.7
16000	1131.1	1135.0	1136.9	1136.9	5.8	5.8	1.9	1.9
16200	1131.5	1135.4	1137.3	1137.3	5.8	5.8	1.9	1.9
16400	1131.8	1135.6	1137.7	1138.3	5.9	6.5	2.1	2.7
16600	1132.2	1136.0	1138.1	1138.7	5.9	6.5	2.1	2.7
16800	1132.6	1136.3	1138.6	1139.2	6.0	6.6	2.3	2.9
17000	1133.0	1136.7	1139.0	1139.6	6.0	6.6	2.3	2.9
17200	1133.3	1137.0	1139.4	1140.0	6.1	6.7	2.4	3.0
17400	1133.7	1137.4	1139.8	1140.4	6.1	6.7	2.4	3.0
17600	1134.1	1137.7	1140.3	1140.9	6.2	6.8	2.6	3.2
17800	1134.5	1138.1	1140.7	1141.3	6.2	6.8	2.6	3.2
18000	1134.9	1138.5	1141.0	1141.7	6.1	6.8	2.5	3.2
18200	1135.3	1138.8	1141.5	1142.1	6.2	6.8	2.7	3.3
18400	1135.8	1139.3	1142.0	1142.6	6.2	6.8	2.7	3.3
18600	1136.2	1139.6	1142.4	1143.0	6.2	6.8	2.8	3.4
18800	1136.6	1140.0	1142.8	1143.4	6.2	6.8	2.8	3.4
19000	1137.0	1140.5	1143.2	1143.8	6.2	6.8	2.7	3.3
19200	1137.4	1140.9	1143.7	1144.3	6.3	6.9	2.8	3.4
19400	1137.9	1141.3	1144.1	1144.7	6.2	6.8	2.8	3.4
19600	1138.3	1141.7	1144.5	1145.1	6.2	6.8	2.8	3.4
19800	1138.8	1142.2	1145.0	1145.6	6.2	6.8	2.8	3.4
20000	1139.3	1142.6	1145.6	1145.6	6.3	6.3	3.0	3.0
20200	1139.8	1143.1	1146.1	1146.1	6.3	6.3	3.0	3.0
20400	1140.3	1143.6	1146.6	1146.6	6.3	6.3	3.0	3.0
20600	1140.8	1144.1	1147.1	1147.1	6.3	6.3	3.0	3.0
20782	1141.3	1144.6	1147.7	1147.7	6.4	6.4	3.1	3.1
20800	1141.4	1144.7	1147.7	1147.7	6.3	6.3	3.0	3.0
21000	1142.0	1145.2	1148.2	1148.2	6.2	6.2	3.0	3.0

NOTES: The SR 153 bridge model is at HEC–2 cross–section 15326.
The SR 143 bridge model is at HEC–2 cross–section 15730.

IV. BRIDGE SCOUR ANALYSIS

This section presents the procedures, methodology, assumptions, and results of the scour analyses for the proposed SR 153 bridge crossing of the Salt River. Several scour components were considered in determining the total scour potential at the proposed bridge site during the design floods. The total scour at SR 153 was determined by adding the bed-form trough depths, the general scour, local scour, and long-term scour components. A 30% safety factor was applied to the bed-form, general, and local scour components to account for non-uniform flow distributions that are typical of alluvial channels.

Scour depths were predicted for the 100-year design flood. As part of this analysis, scour depths were also predicted for the "Superflood" in order to help ensure that the proposed foundations will not fail due to scour during this larger event. The supporting detailed scour calculations described below are provided in Appendix D.

4.1 Long-Term Scour

Long-term degradation was computed using the concept of equilibrium slope (8). The equilibrium slope calculations were performed for the design of the Salt River Channelization (3). Using a stable slope of 0.00136 ft/ft and Grade-Control Structure No. 2 as the pivot point, the long-term degradation was estimated to be 0.9 feet at SR 153.

4.2 Low-Flow Incisement

The Salt River Channelization was constructed with a 400 foot wide and 3 foot deep meandering low-flow channel. Since a low-flow channel already exists within the Salt River Channelization, an additional scour component for low-flow incisement was not considered necessary. However, the total scour elevation was computed from the invert of the low-flow channel which inherently considers low-flow incisement.

4.3 General Scour

General scour refers to the vertical lowering of the channel bed over relatively short time periods (e.g., the scour in a given reach after passage of a single flood event). General scour was computed from the QUASED (a quasi-dynamic sediment routing computer program developed by Simons, Li & Associates, Inc.) analyses performed for the design of the Salt River Channelization (3). The QUASED analyses predicted 1.8 feet and 2.4 feet of general scour for the 100-year and "Superflood" events, respectively.

4.4 Bed-Form Scour

The bed-form scour component was estimated by calculating both dune and antidune height. Dune height was calculated using a relationship developed by Allen (9). Antidune height was calculated using a relationship based upon work by Kennedy (10). The actual type of bed form present in the design reach is a function of the flow regime. Since the flow regime will change with the fluctuating discharges of the flood hydrograph, both types of bed-forms could be present

at different locations within the design reach during the same flood event. Accordingly, the maximum bed-form scour depth calculated for the design hydraulic conditions at SR 153 was used as the design bed-form scour depth in the design reach. The bed-form scour depth was estimated to be 2.0 feet and 2.4 feet for the 100-year and "Superflood" events, respectively.

4.5 Local Scour

Local scour at the bridge piers was analyzed for both the 100-year and "Superflood" design hydraulic conditions. The pier scour calculations were performed using the C.S.U. Equation (11). Debris accumulation at the piers was accounted for by adding four feet to the 6.5 foot diameter columns. Additionally, a correction factor for "square-nose" piers was applied to account for the "shape effects" of debris accumulation. The results of the pier scour analyses predicts pier scour of 21.6 feet for the 100-year flood, and 23.1 feet for the "Superflood".

4.6 Total Pier Scour

The total scour that can be expected at the proposed SR 153 bridge piers was determined by first adding all the calculated scour components, and then applying a factor of safety. The factor of safety equals 30% of the sum of the general scour, bed-form scour, and pier scour components. This safety factor is included to account for the non-uniform flow distribution that is typical of alluvial channels. A summary of these values is provided in Table 4.1. Table 4.2 presents pier scour elevations for the SR 153 bridge over the Salt River.

Table 4.1 Pier Scour Depths at the SR 153 Bridge

Design Flood Event	Long-term Degradation (ft)	General Scour (ft)	Bed-Form Scour (ft)	Pier Scour (ft)	Factor of Safety (ft)	Total Pier Scour (ft)
100-Year	0.9	1.8	2.0	21.6	7.6	33.9
"Superflood"	0.9	2.4	2.4	23.1	8.4	37.2

Table 4.2 SR 153 Pier Scour Elevations

Design Flood Event	Design Invert Elev. (ft)	Total Pier Scour (ft)	Pier Scour Elev. (ft)
100-Year	1109.7	33.9	1075.8
"Superflood"	1109.7	37.2	1072.5

toe elev.

As indicated in Tables 4.1 and 4.2, the total pier scour depth is approximately 34 feet for the 100-year event and 37 feet for the "Superflood". The total pier scour depth provided in Tables 4.1 and 4.2 for the "Superflood" event does not include additional scour depth should the downstream grade control structures fail. For the design of the SR 143 structure and the previous design of the SR 153 structure, ADOT policy required that the design must assume that the downstream grade-control structures had failed for the "Superflood" event. With this

assumption, an additional 5 feet of scour was included for each of the two downstream grade-control structures. This would increase the total "Superflood" scour depth to approximately 47 feet, and lower the minimum scour elevation to 1062.5 feet.

4.7 Abutment Scour

Classical abutment scour is the result of a change in local flow direction/velocity and increased flow turbulence caused either by (1) the abutment projecting into the flow of a watercourse; (2) overbank flow being intercepted and forced back into the channel by the abutment embankment; or by (3) a combination of these conditions.

Abutment scour is not applicable for the 100-year design condition because of the Salt River Channelization. No projecting abutments exist, and no overbank flow will be locally forced through the proposed bridge opening.

For the "Superflood" event, all bank protection, approach embankments, and downstream grade-control structure are assumed to have failed. With these assumptions, the abutment substructure will behave like a pier and will experience the same flow conditions as a pier. Therefore, the abutment scour depth will equal the total pier scour depth for the "Superflood". The abutment scour depth recommended for the "Superflood" condition is approximately 47 feet.

4.8 Other Scour Considerations

The proposed SR 153 will impact the existing bank protection as the result of the "zone of influence" of the proposed bridge piers. Since the bridge is aligned along a long sweeping curve, two of the proposed bridge piers (piers 1 and 7) are unavoidably located in close proximity to the toe of the existing bank protection. Figure 4.1 illustrates the impact of the "zone-of-influence" on the adjacent Salt River bank protection. Based on the 100-year and "Superflood" total pier scour depths and the location of the piers in relationship to bank protection, it is recommended the toe of the bank protection be lowered to prevent undermining of the bank protection. The pier scour "zone-of-influence" also impacts the existing 48-inch diameter sanitary sewer which crosses the proposed alignment. Based on the information available, the "zone-of-influence" encompasses the full length of the sanitary sewer line within the Salt River channel.

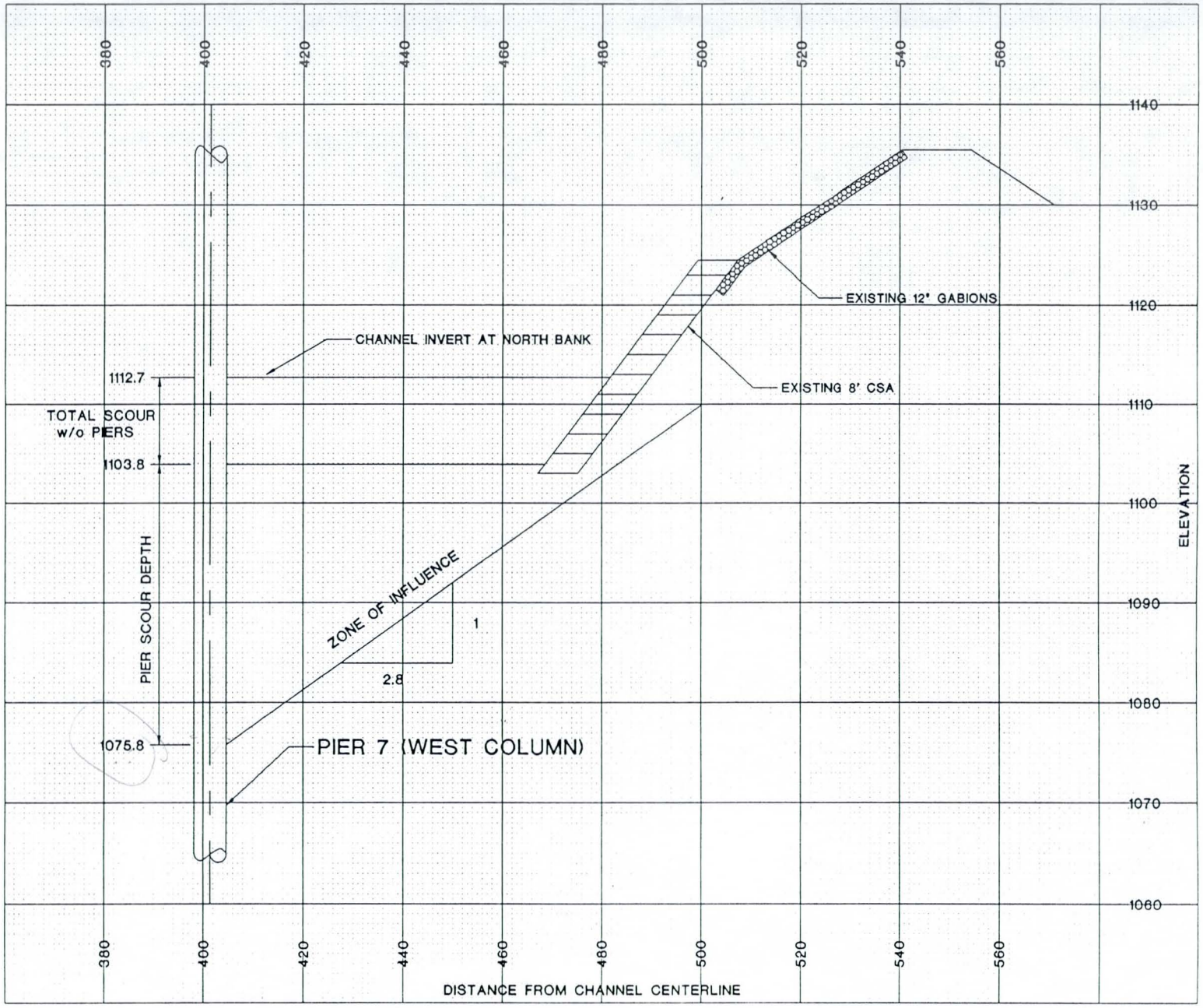


FIGURE 4.1 PIER SCOUR "ZONE-OF-INFLUENCE"

Simons, Li & Associates, Inc.
Water Resources & Civil Engineering Consultants

V. SUMMARY

Existing and design condition hydraulic models of the Salt River were developed for both the 100-year flood and "Superflood" events. The results presented in this report illustrate the hydraulic effects of the proposed SR 153 bridge on the Salt River. The hydraulic analysis indicates: (1) the proposed SR 153 structure has relatively insignificant impacts on the hydraulic conditions of the Salt River; and (2) more than adequate freeboard will be available for the existing bank protection and proposed structure during the 100-year event.

The bridge scour analyses consisted of estimating the various scour components associated with the SR 153 bridge crossing of the Salt River. The analysis quantified long-term degradation, general scour, bed-form scour, and local scour. A total pier scour depth of 33.9 feet for the 100-year flood (including a safety factor), and 47.2 feet for the "Superflood" (including a safety factor), is recommended for design of the SR 153 bridge. The 100-year and "Superflood" scour elevations are 1075.8 feet and 1062.5 feet, respectively.

Abutment scour is not applicable for the 100-year event because of the existing Salt River Channelization. The pier scour and abutment scour for the "Superflood" both consider the ADOT policy that all bank protection, grade-controls, and approach embankments have failed. Therefore, the abutment scour depth recommended for the "Superflood" condition is 47.2 feet at a corresponding elevation of 1062.5 feet.

Sections of the existing bank protection adjacent to the proposed SR 153 bridge will be within the "zone-of-influence" of the local pier scour (piers 1 and 7). Therefore, it is recommended the toe-down depths of the bank protection be increased in the vicinity of the bridge crossing to prevent undermining.

VI. REFERENCES

1. U.S. Army Corps of Engineers, Los Angeles District, "Gila River and Tributaries, Central Arizona Water Control Study, Hydrology Report", May, 1982.

2. U.S. Army Corps of Engineers, Los Angeles District, "Salt River Flood Insurance Study, Agua Fria River to Country Club Drive, Maricopa County, Arizona," 1983-84.

3. Simons, Li & Associates, Inc., "Concept Hydraulic Design, Salt River Channelization, East Papago Freeway," Submitted to Daniel, Mann, Johnson, & Mendenhall, May 1988, Revised February, 1989.

4. U.S. Army Corps of Engineers, Los Angeles District, "Study for Flood Control Alternatives to Cliff Dam," October 1988.

5. U.S. Army Corps of Engineers, Hydrologic Engineering Center, "HEC-2 Water Surface Profiles," Computer Program and Users Manual, September 1990.

6. State of Arizona, Department of Transportation, Construction Drawings, "Hohokam (University - Sky Harbor)," Project No. RAM 600-3-511, As-Built July, 1993.

7. U.S. Army Corps of Engineers, "Hydraulic Design of Flood Control Channels," Engineer Manual EM 1110-2-1601, July 1, 1991.

8. U.S. Department of the Interior, Bureau of Reclamation, Computing Degradation and Local Scour, Technical Guideline, January, 1984.

9. Simons, D.B. and F. Senturk, Sediment Transport Technology, Water Resources Publications, Fort Collins, Colorado, 1977.

10. Simons, Li & Associates, Inc., "Design Manual for Engineering Analysis of Fluvial Systems," Prepared for the Arizona Department of Water Resources, March 1985.

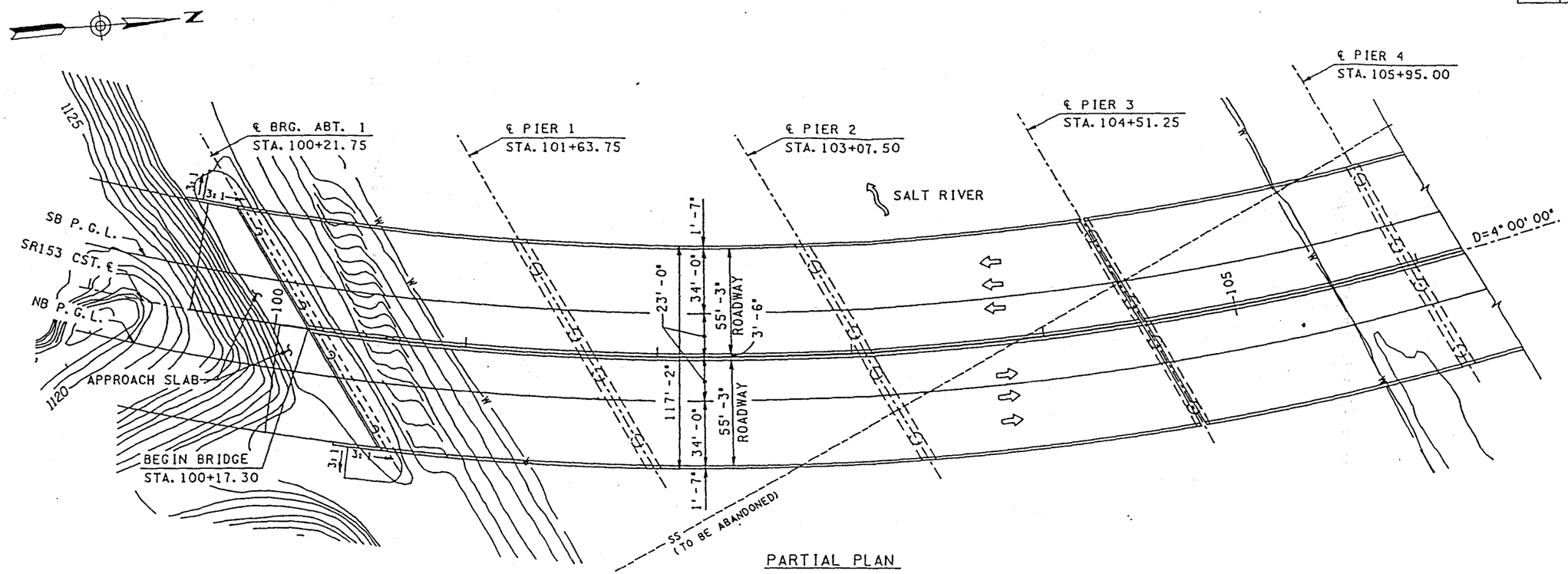
11. Federal Highway Administration, "Evaluating Scour at Bridges, Second Edition" Hydraulic Engineering Circular No. 18, Publication No. FHWA-IP-90-017, Revised April, 1993.

APPENDIX A

PROPOSED BRIDGE PLANS FOR SR 153

AASHTO STANDARD TYPE VI GIRDER ALTERNATE

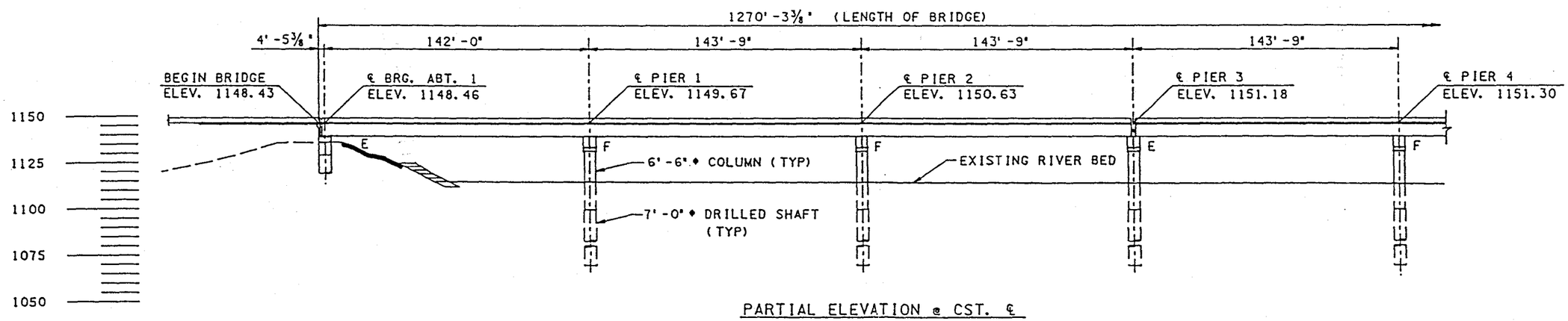
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	NDP-920-S (001)	184	343	
		153 MA 3			



PARTIAL PLAN

SCALE: 1" = 30'-0"

NEW 9 SPAN PRECAST PRESTRESSED CONCRETE GIRDER BRIDGE AASHTO STD. TYPE VI



PARTIAL ELEVATION @ CST. ℄

SCALE: 1" = 30'-0"

NOTES:

1. STATIONS AND DIMENSIONS ON CST. ℄.
2. ELEVATIONS ON P.G.L. OFFSET NORMAL TO CST. ℄ @ PIERS OR ABUTMENTS.

		DATE
DESIGN	DMH	8/93
DRAWN	AJM/CW	8/93
CHECKED	CLM	12/93

TY-LIN INTERNATIONAL
Civil and Structural Engineers

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

STA 100 +
SALT RIVER BRIDGE NB & SB
PLAN AND ELEVATION 1

SR153 | ROUTE | MILEPOST | STRUCTURE NO.

LOCATION: UNIVERSITY DR. TO SKY HARBOR

NOT FOR CONSTRUCTION

DWG. NO. S-2.3

TRACS NO. H 3315 01C

OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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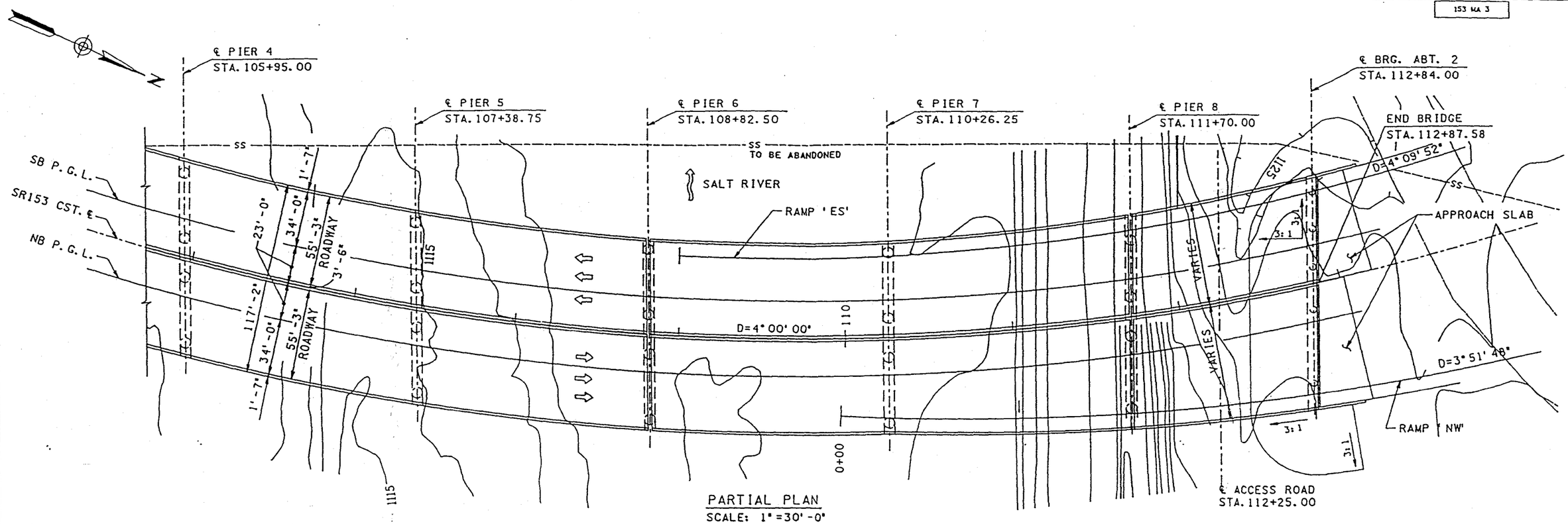
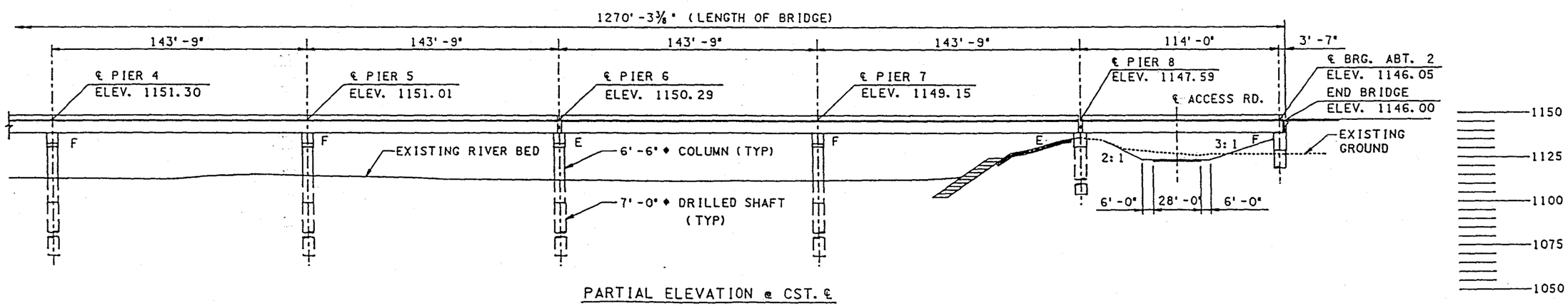
153 MA 3



PARTIAL PLAN

SCALE: 1" = 30'-0"

NEW 9 SPAN PRECAST PRESTRESSED CONCRETE GIRDER BRIDGE AASHTO STD. TYPE VI



PARTIAL ELEVATION @ CST. ℄

SCALE: 1" = 30'-0"

NOTES:

1. STATIONS AND DIMENSIONS ON CST. ℄.
2. ELEVATIONS ON P.G.L. OFFSET NORMAL TO CST. ℄ @ PIERS OR ABUTMENTS.

		DATE
DESIGN	DNH	8/93
DRAWN	AJM/CW	8/93
CHECKED	CLM	12/93

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Civil and Structural Engineers

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

STA 100 +
SALT RIVER BRIDGE NB & SB
PLAN AND ELEVATION 2

LOCATION: UNIVERSITY DR. TO SKY HARBOR

NOT FOR CONSTRUCTION

SR153 (ROUTE) | MILEPOST | STRUCTURE NO.

DWG. NO. S-24

TRACS NO. H 3315 01C

OF

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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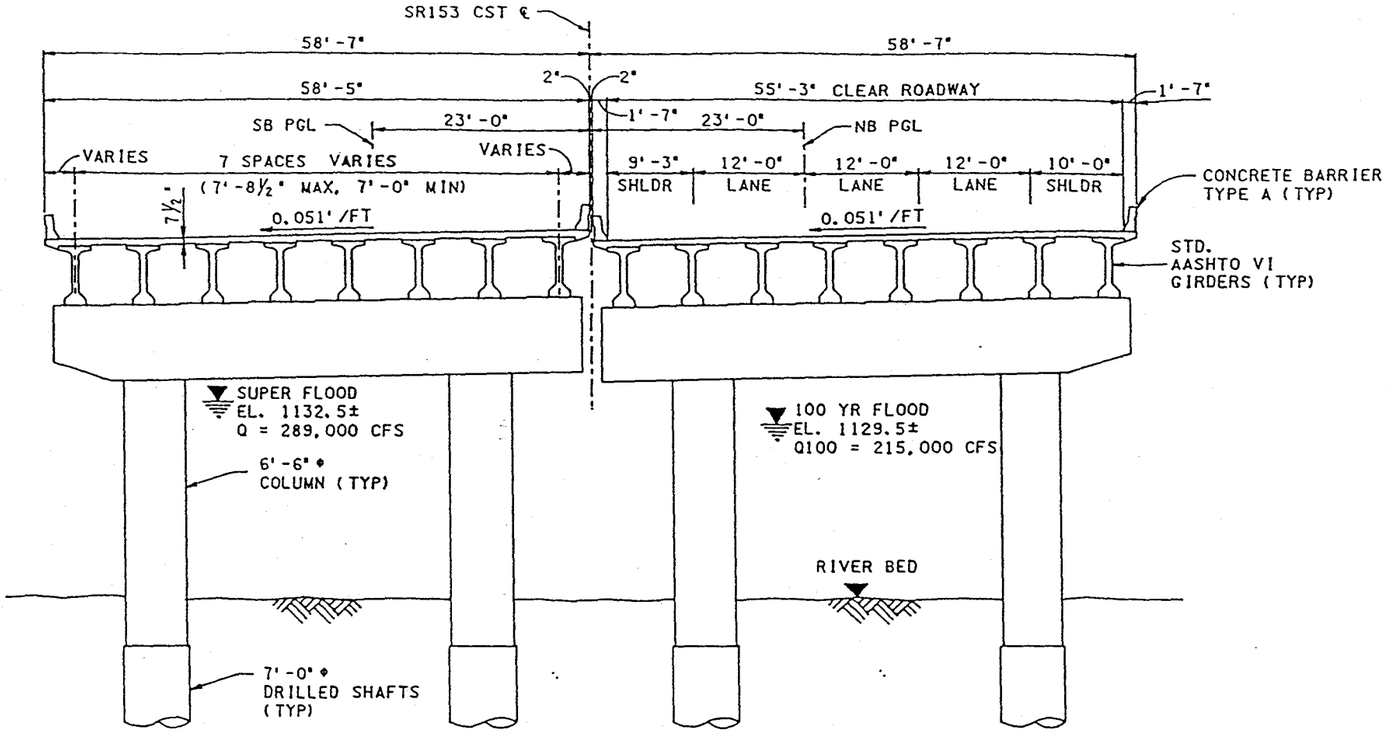
		153 MA 3			



TYPICAL SECTION (STA. 100+17.30 TO STA. 108+82.50)
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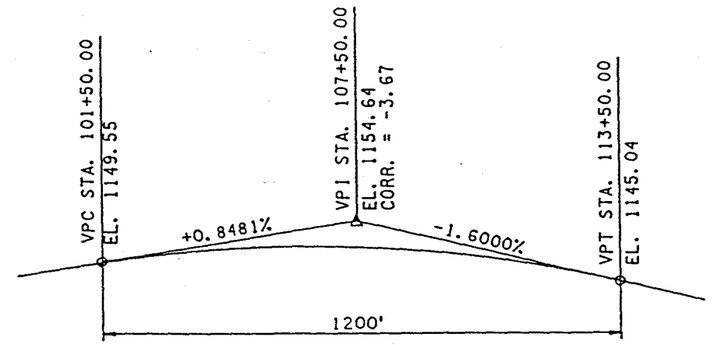

SR153 PROFILE

APPROXIMATE QUANTITIES:

ITEM	STRUC. EXCAV.	STRUC. BACKFILL	CLASS "S" CONCRETE			DRILLED SHAFTS		BEARINGS PADS		DECK JT ASSEMBLY		VERT RESTRAIN		TYPE VI AASHTO GIRDERS	PVC CONDUITS		REINF STEEL
			f'c=3,000	f'c=3,500	f'c=4,500	4'-0"Φ	7'-0"Φ	FIXED	EXPAN	STRIP SEAL	COMP SEAL	FIXED	EXPAN		1½"Φ	2"Φ	
UNIT	CY	CY	CY	CY	CY	L.FT	L.FT	EA	EA	L.FT	L.FT	EA	EA	EACH	L.FT	L.FT	LBS
ABUTMENT 1	278.0	4,805.0	498.7	—	—	80	449	—	16	143	—	—	28	—			79,235
ABUTMENT 2	369.0	6,081.0	634.2	—	—	40	405	14	—	—	137	24	—	—			70,830
PIERS	0	0	—	871.4	1,953.3	—	2,505	162	96	356	—	142	168	—			668,235
SUPERSTRUCTURE	—	—	—	—	5,514.4	—	—	—	—	—	—	—	—	144			1,231,580
BRIDGE BARRIER	—	—	512.8	—	—	—	—	—	—	—	—	—	—	—			46,830
APPROACH SLAB	—	—	264.6	—	—	—	—	—	—	—	—	—	—	—			40,785
TOTAL	647.0	10,886.0	1,910.3	871.4	7,467.7	120	3,359	176	112	499	137	166	196	144			2,137,495
AS BUILT TOTAL																	

		DATE
DESIGN	DHH	8/93
DRAWN	CW	8/93
CHECKED	CLM	1/94

TYLIN INTERNATIONAL
Civil and Structural Engineers

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

STA 100+
SALT RIVER BRIDGE NB & SB
TYPICAL SECTION & QUANTITIES

SR153 (DRIVE) | (HEIGHT) | (STRUCTURE NO.)
LOCATION: UNIVERSITY DR. TO SKY HARBOR

NOT FOR CONSTRUCTION

DWG. NO. S-2.2

TRACS NO. H3315 01C

___ OF ___

90KQUSLDGN 01/06/94

AASHTO TYPE VI MODIFIED GIRDER ALTERNATE

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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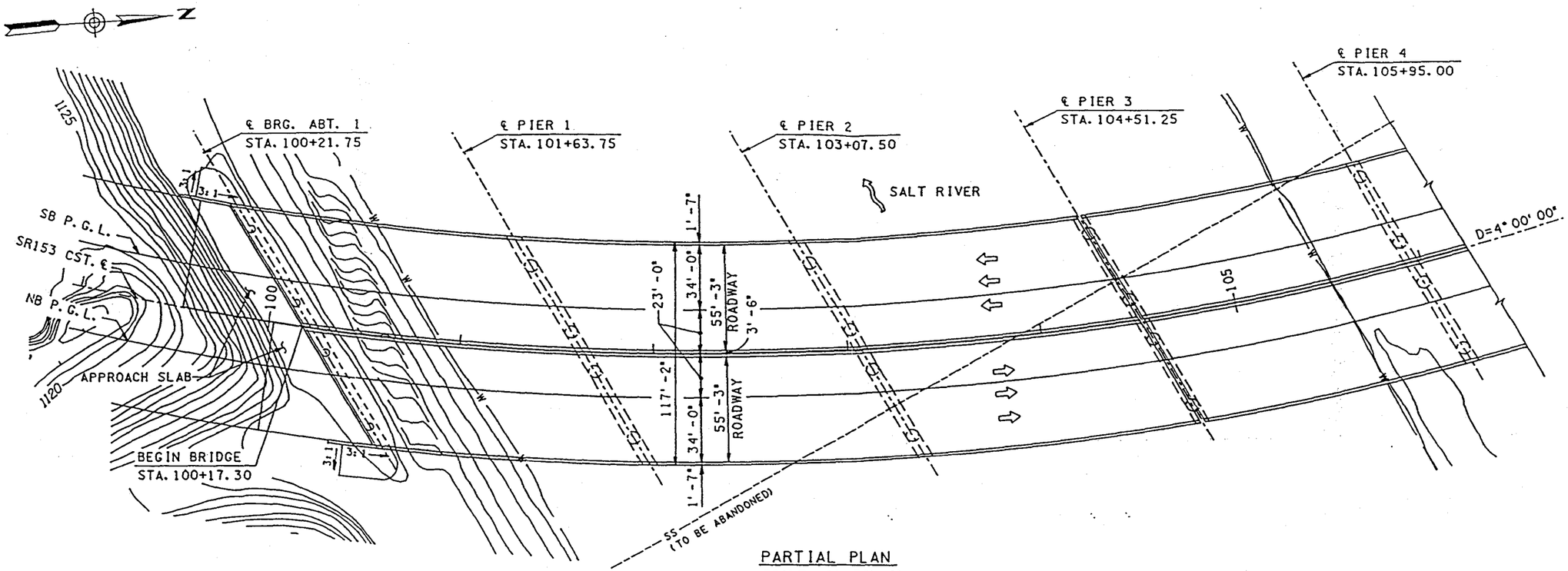
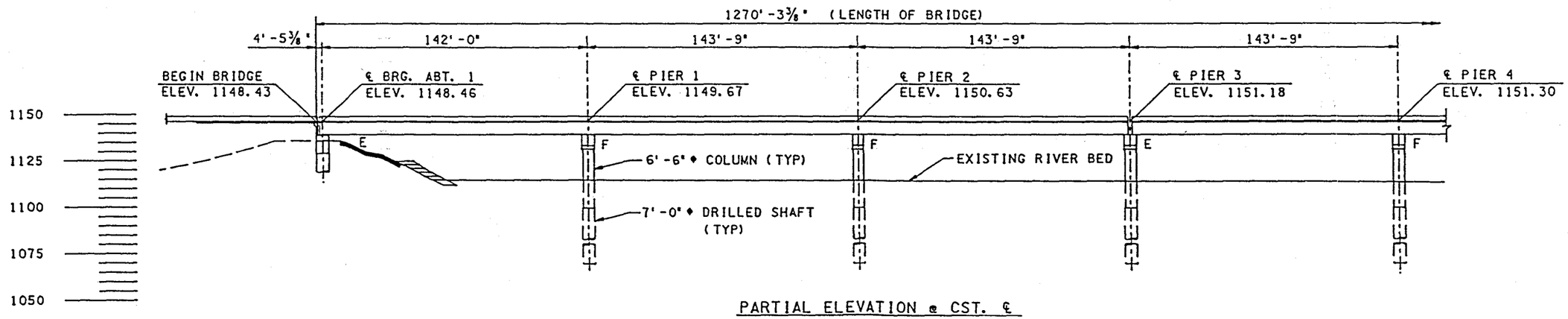
153 MA 3



PARTIAL PLAN
SCALE: 1" = 30'-0"

NEW 9 SPAN PRECAST PRESTRESSED CONCRETE
GIRDER BRIDGE AASHTO STD. TYPE VI



PARTIAL ELEVATION @ CST. ℄
SCALE: 1" = 30'-0"

NOTES:
1. STATIONS AND DIMENSIONS ON CST. ℄.
2. ELEVATIONS ON P.G.L. OFFSET NORMAL TO CST. ℄ @ PIERS OR ABUTMENTS.

		DATE
DESIGN	DNH	8/93
DRAWN	AJM/CW	8/93
CHECKED	CLM	12/93

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Civil and Structural Engineers

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

STA 100 +
SALT RIVER BRIDGE NB & SB
PLAN AND ELEVATION 1

SR153 | ROUTE | MILEPOST | STRUCTURE NO.

LOCATION
UNIVERSITY DR. TO SKY HARBOR

NOT FOR CONSTRUCTION

DWG. NO. S-2.4

TRACS NO. H 3315 010

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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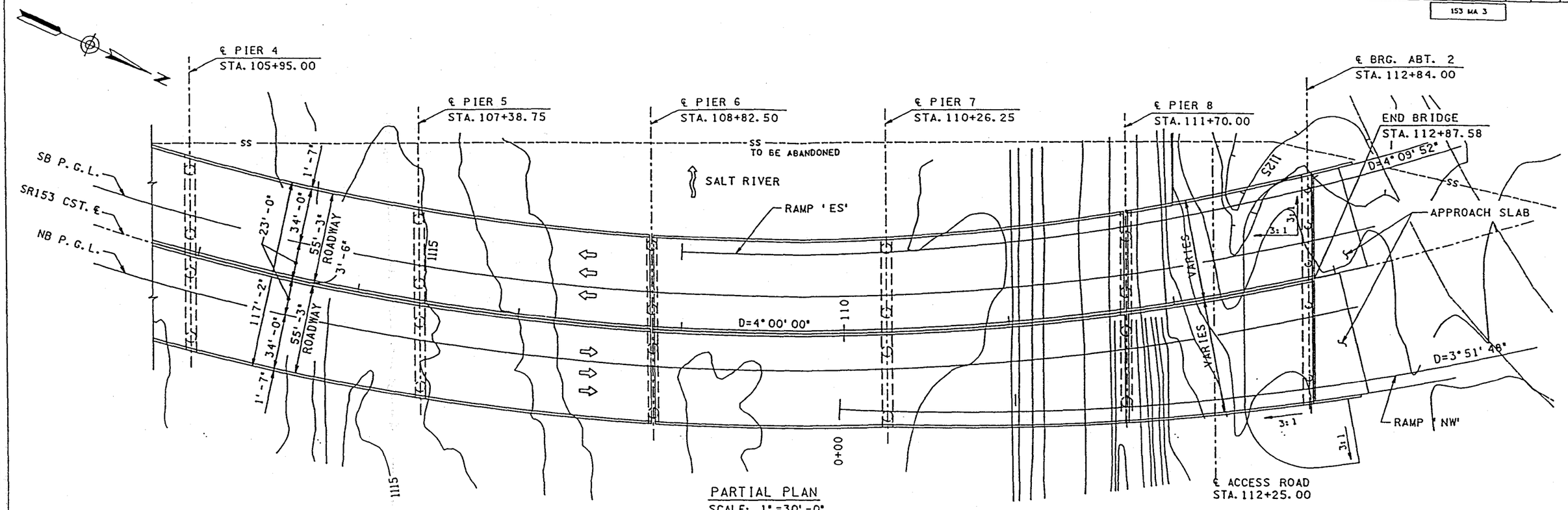
153 MA 3



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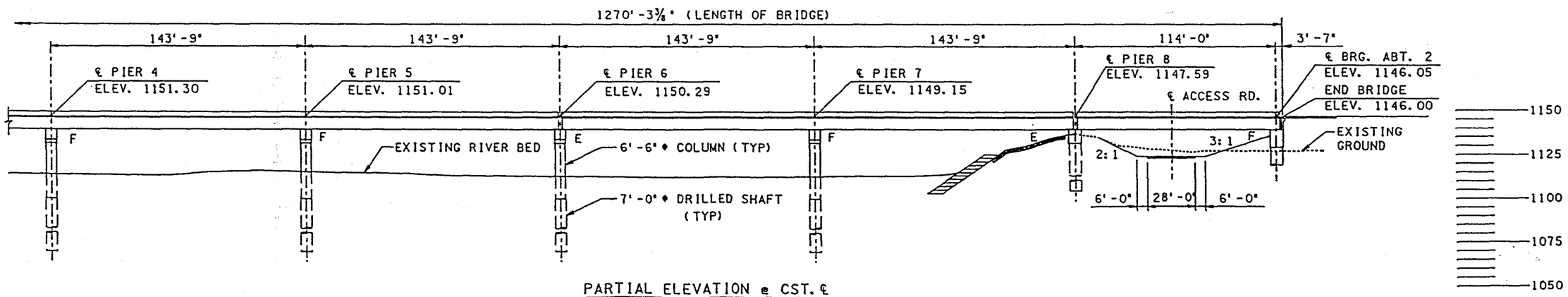
NEW 9 SPAN PRECAST PRESTRESSED CONCRETE GIRDER BRIDGE AASHTO STD. TYPE VI



PARTIAL ELEVATION @ CST. ℄
SCALE: 1" = 30'-0"

NOTES:
1. STATIONS AND DIMENSIONS ON CST. ℄.
2. ELEVATIONS ON P.G.L. OFFSET NORMAL TO CST. ℄ @ PIERS OR ABUTMENTS.

		DATE
DESIGN	DNH	8/93
DRAWN	AJM/CW	8/93
DESIGNED	CLM	12/93

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Civil and Structural Engineers

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

STA 100 +
SALT RIVER BRIDGE NB & SB
PLAN AND ELEVATION 2

SR153 (ROUTE) | (MILEPOST) | (STRUCTURE NO.)

LOCATION: UNIVERSITY DR. TO SKY HARBOR

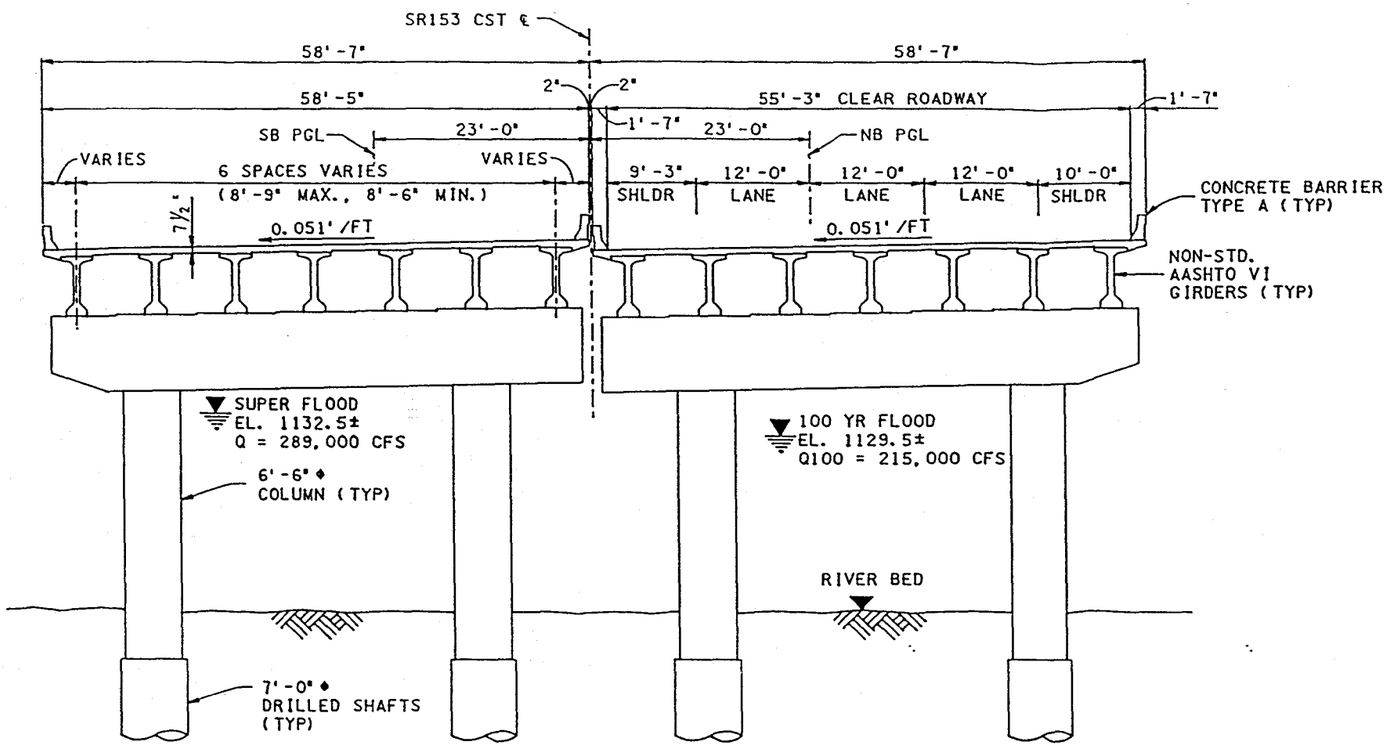
NOT FOR CONSTRUCTION

DWG. NO. S-2A

TRACS NO. H 3315 010

F.A.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	HDP-920-5(001)	228	343	

153 MA 3



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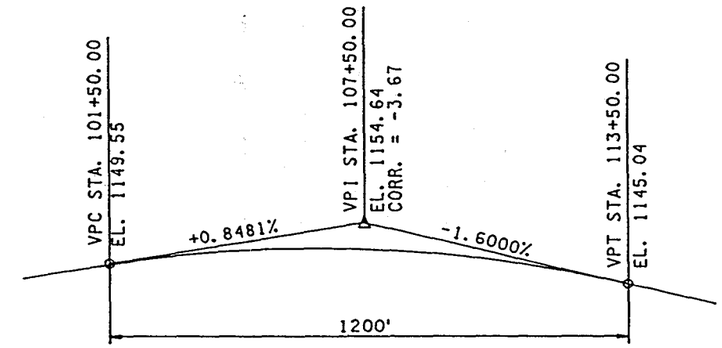


SR153 PROFILE

APPROXIMATE QUANTITIES:

ITEM	STRUC. EXCAV.	STRUC. BACKFILL	CLASS "S" CONCRETE			DRILLED SHAFTS		BEARINGS PADS		DECK JT ASSEMBLY		VERT RESTRAIN		TYPE VI AASHTO GIRDERS	PVC CONDUITS		REINF STEEL
			f'c=3,000	f'c=3,500	f'c=4,500	4'-0"♦	7'-0"♦	FIXED	EXPAN	STRIP SEAL	COMP SEAL	FIXED	EXPAN		1½"♦	2"♦	
UNIT	CY	CY	CY	CY	CY	L.FT	L.FT	EA	EA	L.FT	L.FT	EA	EA	EA	L.FT	L.FT	LBS
ABUTMENT 1	278.0	4,805.0	474.3	—	—	80	449	—	14	143	—	—	24	—			79,235
ABUTMENT 2	369.0	6,081.0	610.8	—	—	40	405	12	—	—	137	20	—	—			70,830
PIERS	0	0	—	848.3	1,953.3	—	2,505	142	84	356	—	122	144	—			663,955
SUPERSTRUCTURE	—	—	—	—	5,984.0	—	—	—	—	—	—	—	—	126			1,309,005
BRIDGE BARRIER	—	—	512.8	—	—	—	—	—	—	—	—	—	—	—			46,830
APPROACH SLAB	—	—	264.6	—	—	—	—	—	—	—	—	—	—	—			40,785
TOTAL	647.0	10,886.0	1,862.5	848.3	7,937.3	120	3,359	154	98	499	137	142	168	126			2,210,640
AS BUILT TOTAL																	

		DATE
DESIGN	DNH	8/93
DRAWN	CW	8/93
CHECKED	CLM	8/93

TY·LIN INTERNATIONAL
Civil and Structural Engineers

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURE SECTION

STA 100+
SALT RIVER BRIDGE NB & SB
TYPICAL SECTION & QUANTITIES

SR153 (ROUTE) | (MILEPOST) | (STRUCTURE NO.)

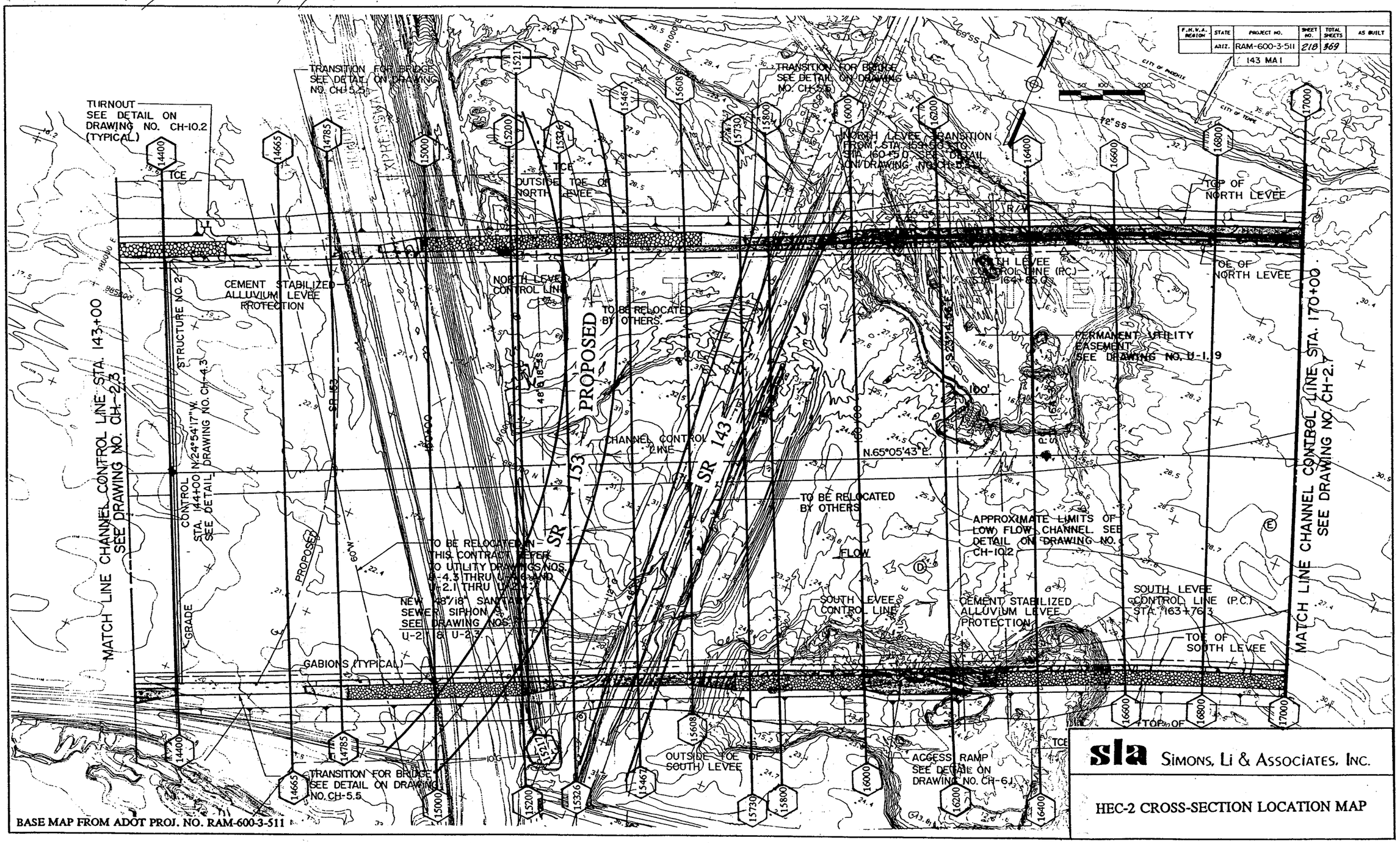
LOCATION: UNIVERSITY DR. TO SKY HARBOR

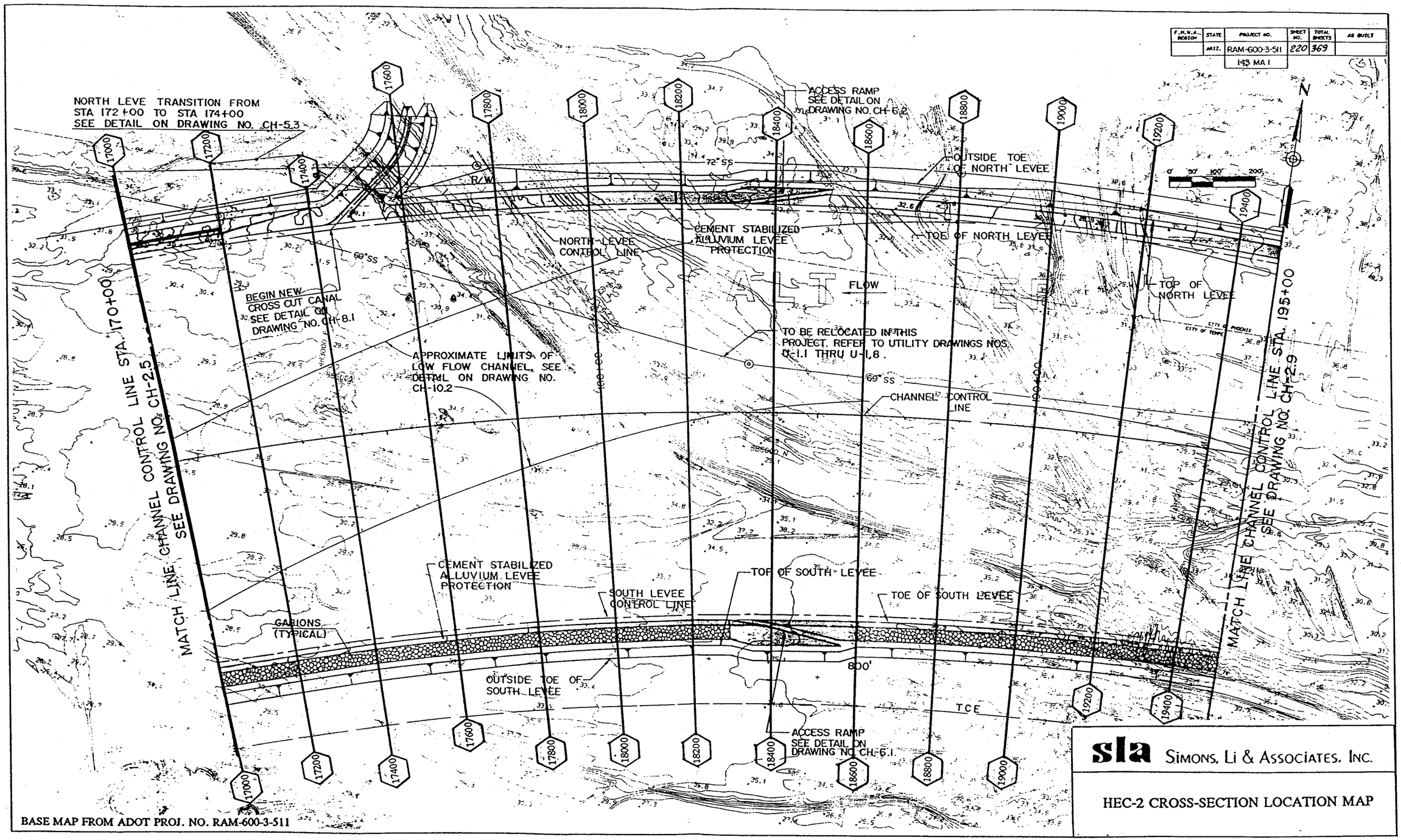
NOT FOR CONSTRUCTION

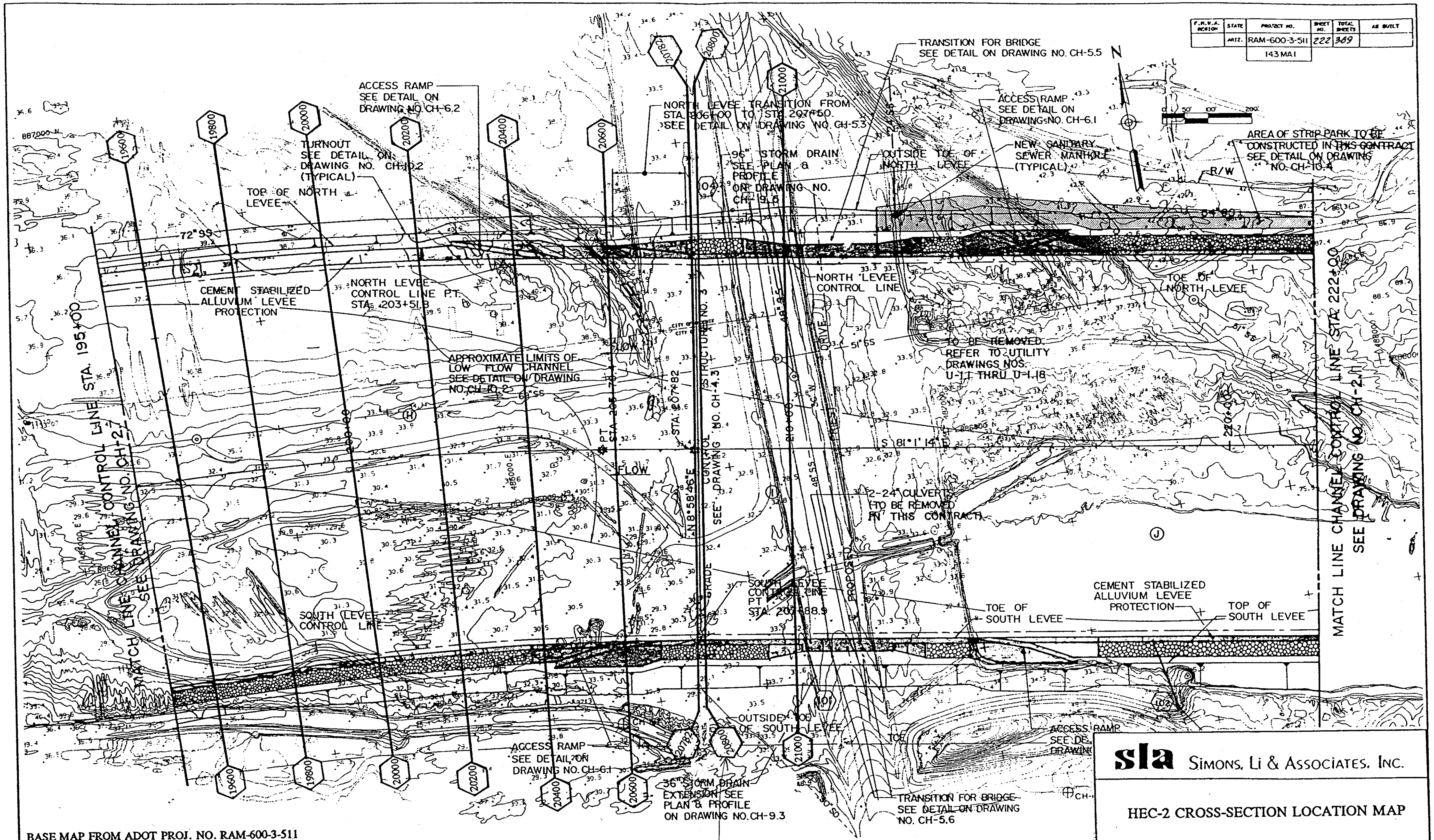
DWG. NO. S-2.47

APPENDIX B

HEC2 CROSS-SECTION LOCATION MAPS


F.H.W.A. REGION
STATE
PROJECT NO.
SHEET NO.
TOTAL SHEETS
AS BUILT
ARIZ.
RAM-600-3-511
218
369
143 MA1
TRANSITION FOR BRIDGE SEE DETAIL ON DRAWING NO. CH-5.5
TURNOUT SEE DETAIL ON DRAWING NO. CH-10.2 (TYPICAL)
TCE
OUTSIDE TOE OF NORTH LEVEE
NORTH LEVEE TRANSITION FROM STA. 159+00 TO STA. 160+50 SEE DETAIL ON DRAWING NO. CH-6.4
TOP OF NORTH LEVEE
CEMENT STABILIZED ALLUVIUM LEVEE PROTECTION
NORTH LEVEE CONTROL LINE
TO BE RELOCATED BY OTHERS
NORTH LEVEE CONTROL LINE (P.C.) STA. 164+85.0
TOE OF NORTH LEVEE
PERMANENT UTILITY EASEMENT SEE DRAWING NO. U-1.9
PROPOSED
SR 143
SR 153
CHANNEL CONTROL LINE
N.65°05'43"E.
MATCH LINE CHANNEL CONTROL LINE SEE DRAWING NO. CH-2.3
STRUCTURE NO. 2
CONTROL STA. 144+00 SEE DETAIL
N.24°54'17"W. DRAWING NO. CH-4.3
GRADE
TO BE RELOCATED BY OTHERS
TO BE RELOCATED IN THIS CONTRACT REFER TO UTILITY DRAWINGS NOS. U-4.3 THRU U-4.6 AND U-2.1 THRU U-2.4
NEW 48"/18" SANITARY SEWER SIPHON SEE DRAWING NOS. U-2.1 & U-2.3
APPROXIMATE LIMITS OF LOW FLOW CHANNEL SEE DETAIL ON DRAWING NO. CH-10.2
FLOW
SOUTH LEVEE CONTROL LINE
CEMENT STABILIZED ALLUVIUM LEVEE PROTECTION
SOUTH LEVEE CONTROL LINE (P.C.) STA. 163+76.3
TOE OF SOUTH LEVEE
MATCH LINE CHANNEL CONTROL LINE SEE DRAWING NO. CH-2.7
GABIONS (TYPICAL)
TRANSITION FOR BRIDGE SEE DETAIL ON DRAWING NO. CH-5.5
OUTSIDE TOE OF SOUTH LEVEE
ACCESS RAMP SEE DETAIL ON DRAWING NO. CH-6.1
TOP OF
TCE
72" SS
69" SS
CITY OF PHOENIX
CITY OF TEMPE
14400
14665
14785
15000
15200
15217
15326
15467
15608
15730
15800
16000
16200
16400
16600
16800
17000
BASE MAP FROM ADOT PROJ. NO. RAM-600-3-511
sla SIMONS, LI & ASSOCIATES, INC.
HEC-2 CROSS-SECTION LOCATION MAP


F.H.W.A. REGION
STATE
PROJECT NO.
SHEET NO.
TOTAL SHEETS
AS BUILT
ARIZ.
RAM-600-3-511
143 MA 1
220
369
NORTH LEVE TRANSITION FROM STA 172+00 TO STA 174+00 SEE DETAIL ON DRAWING NO. CH-5.3
ACCESS RAMP SEE DETAIL ON DRAWING NO. CH-6.2
OUTSIDE TOE OF NORTH LEVEE
72" SS
R/W
CEMENT STABILIZED ALLUVIUM LEVEE PROTECTION
NORTH LEVEE CONTROL LINE
TOE OF NORTH LEVEE
FLOW
TOP OF NORTH LEVEE
BEGIN NEW CROSS CUT CANAL SEE DETAIL ON DRAWING NO. CH-8.1
TO BE RELOCATED IN THIS PROJECT. REFER TO UTILITY DRAWINGS NOS. U-1.1 THRU U-1.8.
APPROXIMATE LIMITS OF LOW FLOW CHANNEL, SEE DETAIL ON DRAWING NO. CH-10.2
69" SS
CHANNEL CONTROL LINE
MATCH LINE CHANNEL CONTROL LINE STA. 170+00 SEE DRAWING NO. CH-2.5
MATCH LINE CHANNEL CONTROL LINE STA. 195+00 SEE DRAWING NO. CH-2.9
CEMENT STABILIZED ALLUVIUM LEVEE PROTECTION
TOE OF SOUTH LEVEE
SOUTH LEVEE CONTROL LINE
TOE OF SOUTH LEVEE
GABIONS (TYPICAL)
800'
OUTSIDE TOE OF SOUTH LEVEE
TCE
ACCESS RAMP SEE DETAIL ON DRAWING NO. CH-6.1
17000
17200
17400
17600
17800
18000
18200
18400
18600
18800
19000
19200
19400
N
0' 50' 100' 200'
CITY OF PHOENIX
CITY OF TEMPE
BASE MAP FROM ADOT PROJ. NO. RAM-600-3-511
sla SIMONS, LI & ASSOCIATES, INC.
HEC-2 CROSS-SECTION LOCATION MAP



GRADE CONTROL STRUCTURE

APPENDIX C

HEC-2 INPUT/OUTPUT FILES

EXISTING CONDITIONS

```
*******************************************
*  HEC-2 WATER SURFACE PROFILES           *
*                                         *
*  Version   4.6.2;  May 1991             *
*                                         *
*  RUN DATE    18JAN94    TIME   13:46:40 *
*******************************************
```

```
*************************************
*  U.S. ARMY CORPS OF ENGINEERS
*  HYDROLOGIC ENGINEERING CENTER
*  609 SECOND STREET, SUITE D
*  DAVIS, CALIFORNIA 95616-4687
*          (916) 756-1104
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
```

THIS RUN EXECUTED 18JAN94 13:46:40

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************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
************************************
```

STA. 100+35 BEGINNING OF CHANNELIZATION PROJECT

STA. 111+00 BEGINNING OF LOW FLOW CHANNEL.
STA. 116+00 BEGINNING OF NORTH LEVEE.
STA. 142+00 BEGINNING OF SOUTH LEVEE.
STA. 144+00 GRADE CONTROL STRUCTURE NO. 2

STA. 153+26 (NEW ALIGNMENT OF SR 153)

STA. 157+30 (EXISTING SR 143 BRIDGE)
SR 143 SPECIAL BRIDGE MODEL, GR PTS. FROM CHANNELIZATION PLANS (DMJM 1989)
BRIDGE DESIGN BY MKE, 8 PIERS WITH 6 FT. DIA. COLUMNS (1988) (ASBLT 1993)
INCLUDES CONSIDERATION FOR 4 FT. DEBRIS BUILDUP ON EA. PIER

STA. 207+82 GRADE CONTROL STRUCTURE NO. 3

STA. 210+00 END OF HEC-2 MODEL, JUST BEFORE PRIEST DRIVE BRIDGE

T1 SIMONS, LI & ASSOCIATES, INC. - TEMPE, ARIZONA
T2 EXISTING CONDITIONS PRIOR TO SR 153 BRIDGE
T3 FILE: SR153E.DAT 93,000 CFS 10-YEAR DISCHARGE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	.00068	0	0	93000	99	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1	0	-1	0	0	0	-1	0	0	0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38	43	1	2	3	26	8	4	5	67
68	69	100	105						

J5 LPRNT NUMSEC ********REQUESTED SECTION NUMBERS********

-10 14000

J6	IHLEQ	ICOPY	SUBDIV	STRTDS	RMILE
	1				

```
NC     .050      .050      .035       .3       .5
X1     2412        16      8820    10540        0         0         0
X3       10                        8892                  10540
GR    121.5      8820       105     8900      100      8970        93      9000        93      9050
GR      100      9070     101.5     9290      100      9450        95      9630        85      9680
GR       82      9880        81     9940       81     10300       100     10500       123     10540
GR      123     10541
  JUST UPSTREAM OF I-10 BRIDGE

NC                                   .1       .3
X1     2735     36.00   9542.80 10452.20      290       370       323       .00       .00       .00
GR   102.80   9436.20     99.30  9480.50    98.30   9542.80     90.10   9568.80     81.10   9598.10
GR    80.80   9622.50     83.50  9629.90    83.10   9670.50     82.80   9733.20     81.40   9753.00
GR    82.00   9796.00     82.60  9821.00    82.20   9862.00     78.70   9873.60     78.80   9922.70
GR    84.10   9950.70     84.80  9979.60    84.80  10000.00     83.40  10047.20     82.20  10079.70
GR    82.30  10159.50     81.20 10201.50    80.00  10217.50     82.70  10242.90     81.50  10257.50
GR    80.90  10305.10     80.20 10362.50    80.20  10385.20     87.70  10413.80     98.80  10452.20
GR    98.30  10499.50     98.00 10530.00    99.60  10575.10    102.30  10633.20    104.80  10673.90
GR   106.10  10719.20

X1     2835     38.00   9516.90 10448.30      100       100       100       .00       .00       .00
GR   109.50   9482.50    109.20  9516.90    91.80   9570.20     81.30   9602.70     81.20   9648.20
GR    82.00   9683.70     83.90  9699.60    83.30   9718.80     81.70   9728.20     81.00   9781.30
GR    83.70   9797.30     83.10  9850.60    81.70   9876.90     78.30   9898.30     78.80   9955.70
GR    85.00   9983.70     85.60 10000.00    85.70  10045.70     84.20  10076.30     80.90  10090.30
GR    80.90  10136.40     80.60 10194.30    81.80  10203.50     81.70  10255.80     81.50  10294.90
GR    80.50  10339.90     79.90 10368.60    82.30  10392.80     91.20  10422.30     99.70  10448.30
GR   100.00  10469.30     99.40 10497.90    98.90  10530.40     99.90  10575.00    101.50  10611.30
GR   102.90  10650.10    105.10 10703.60   105.80  10769.30

X1     2935     37.00   9524.00 10447.50      100       100       100       .00       .00       .00
GR   109.60   9490.80    109.80  9524.00    93.30   9566.70     81.30   9600.30     80.80   9624.50
GR    81.70   9634.00     82.20  9700.10    83.70   9715.10     82.10   9761.10     83.90   9771.60
GR    84.10   9823.20     82.80  9897.50    82.00   9924.90     82.90   9935.70     83.20   9968.20
GR    85.30  10000.00     84.60 10019.70    81.90  10029.20     81.60  10072.60     82.60  10086.50
GR    81.50  10111.20     80.50 10156.90    80.70  10202.50     81.70  10212.60     81.70  10230.10
GR    81.00  10298.20     81.10 10334.30    80.60  10381.70     89.30  10413.20     99.90  10447.50
GR   100.60  10485.80     99.60 10516.80    99.80  10567.80    101.40  10598.70    103.40  10646.10
GR   105.60  10697.60    107.00 10766.50

X1     3035     38.00   9521.50 10452.80      100       100       100       .00       .00       .00
GR   110.10   9494.30    109.80  9521.50    96.80   9553.20     81.00   9595.40     80.20   9617.60
GR    81.90   9652.80     82.30  9710.40    83.90   9770.70     83.20   9842.90     81.70   9858.40
GR    80.60   9920.30     81.30  9957.20    82.80   9969.90     83.40   9990.60     82.80  10000.00
GR    83.00  10021.50     82.30 10033.40    81.80  10077.20     83.90  10091.50     81.80  10106.40
GR    80.70  10134.20     80.10 10206.00    80.60  10247.80     80.50  10271.60     82.10  10280.10
GR    80.90  10321.20     80.00 10360.20    79.20  10375.20     81.40  10392.60     87.50  10413.10
GR    87.90  10422.00    100.40 10452.80   100.50  10487.40    101.10  10554.20    101.60  10607.10
GR   103.80  10649.00    105.70 10707.20   111.30  10730.60
```

X1	3135	38.00	9520.50	10545.90	100	100	100	.00	.00	.00
GR	110.30	9493.30	110.40	9520.50	93.80	9565.70	80.80	9599.10	81.20	9660.30
GR	82.90	9709.40	83.60	9757.90	82.70	9795.90	83.10	9830.30	81.80	9873.20
GR	79.60	9913.00	79.60	9924.80	82.80	9940.80	82.00	9967.00	82.60	10000.00
GR	83.20	10040.30	82.80	10085.10	81.50	10096.80	80.90	10126.00	83.10	10140.00
GR	83.10	10165.40	81.00	10189.50	80.80	10235.80	80.20	10263.20	81.70	10301.10
GR	81.40	10360.80	80.70	10381.20	79.50	10417.20	79.50	10443.10	87.50	10475.90
GR	87.60	10482.70	93.60	10504.40	102.10	10545.90	102.60	10596.30	103.60	10652.00
GR	104.70	10722.30	105.80	10752.80	106.50	10788.00				
X1	3235	39.00	9520.10	10841.30	100	100	100	.00	.00	.00
GR	111.00	9496.50	111.20	9520.10	97.50	9554.00	81.30	9600.10	82.00	9669.10
GR	82.90	9696.80	84.10	9721.60	83.80	9759.10	82.20	9774.10	82.20	9794.10
GR	83.70	9805.50	85.90	9850.50	86.90	9884.50	83.10	9898.70	82.30	9909.00
GR	82.50	9943.50	83.00	10000.00	82.30	10048.60	81.70	10104.00	80.70	10150.60
GR	80.50	10227.10	80.70	10288.20	81.30	10311.20	81.20	10352.30	79.10	10364.20
GR	78.70	10377.00	79.60	10396.70	83.30	10414.20	82.90	10433.40	81.50	10458.50
GR	82.20	10510.00	83.70	10579.30	85.20	10624.50	87.60	10662.20	90.10	10691.80
GR	92.80	10730.70	99.40	10775.70	103.50	10806.30	106.40	10841.30		
X1	3335	42.00	9517.90	10856.30	100	100	100	.00	.00	.00
GR	111.60	9495.60	111.10	9517.90	91.80	9569.00	81.90	9600.70	82.60	9687.50
GR	84.20	9715.20	85.40	9750.30	83.50	9776.50	85.40	9831.00	86.40	9861.80
GR	83.80	9871.50	82.90	9895.40	83.30	9946.70	82.60	10000.00	81.80	10033.70
GR	82.60	10041.20	81.80	10051.70	81.40	10106.90	82.30	10151.00	80.30	10173.50
GR	82.80	10179.40	82.40	10218.10	82.20	10285.60	81.40	10346.30	81.10	10379.50
GR	82.10	10402.90	81.80	10411.60	83.60	10421.20	83.60	10438.50	81.60	10450.20
GR	83.60	10463.80	82.50	10480.80	84.90	10497.50	80.50	10529.20	80.20	10579.90
GR	79.30	10665.90	78.50	10733.50	78.70	10754.00	81.30	10783.30	87.90	10811.50
GR	95.90	10828.60	105.70	10856.30						
X1	3435	35.00	9519.20	10906.40	100	100	100	.00	.00	.00
GR	111.20	9490.50	110.80	9519.20	94.20	9564.70	83.10	9596.90	82.60	9615.90
GR	83.40	9622.80	83.10	9704.00	83.40	9792.90	81.80	9842.30	81.20	9912.80
GR	81.80	9933.80	81.50	9983.80	82.70	10000.00	82.80	10026.80	81.80	10094.40
GR	81.10	10124.90	83.00	10148.40	81.40	10201.70	81.00	10249.10	81.60	10271.10
GR	82.30	10318.50	81.20	10366.00	82.30	10385.40	83.50	10430.20	84.90	10488.50
GR	86.20	10525.50	84.80	10605.10	81.40	10631.50	79.50	10706.50	77.20	10804.50
GR	81.00	10816.80	81.30	10847.80	89.10	10867.20	101.90	10885.70	103.50	10906.40
X1	3535	43.00	9514.20	11040.30	100	100	100	.00	.00	.00
GR	111.50	9486.40	111.30	9514.20	91.70	9568.90	83.40	9594.60	83.70	9656.00
GR	81.50	9704.90	80.40	9784.40	80.90	9848.40	81.10	9927.80	80.80	10000.00
GR	81.30	10028.80	81.20	10103.60	81.20	10171.70	80.70	10192.00	81.90	10213.20
GR	82.80	10251.80	83.00	10269.50	81.90	10272.70	81.70	10379.10	83.00	10426.80
GR	84.70	10437.50	85.80	10464.30	87.50	10505.20	87.10	10537.00	86.70	10588.50
GR	85.90	10625.00	83.90	10652.70	78.70	10671.70	78.00	10681.30	80.90	10701.80
GR	82.90	10719.30	80.60	10751.70	78.50	10801.50	78.30	10818.50	93.10	10855.80
GR	98.60	10873.20	99.10	10905.60	98.00	10918.50	99.10	10935.70	99.70	10964.70
GR	101.10	10996.60	102.90	11016.10	104.80	11040.30				

X1	3635	42.00	9511.90	11079.80	100	100	100	.00	.00	.00
GR	111.60	9484.70	111.60	9511.90	95.40	9559.00	83.70	9593.50	83.50	9613.50
GR	84.30	9621.30	84.10	9645.70	82.20	9678.30	81.50	9731.40	80.50	9786.30
GR	80.70	9860.10	81.30	9904.10	80.30	9960.80	80.70	10000.00	81.10	10060.60
GR	81.90	10141.00	82.80	10174.80	82.80	10220.00	82.10	10273.70	81.80	10365.20
GR	83.50	10383.40	84.80	10437.10	86.60	10455.20	87.50	10497.70	87.50	10555.40
GR	86.30	10626.90	86.60	10688.10	85.20	10739.10	79.70	10755.30	77.20	10766.40
GR	76.70	10826.80	79.80	10844.70	92.60	10868.70	87.30	10883.80	91.90	10905.30
GR	95.00	10924.40	97.40	10950.70	99.10	10981.90	101.50	10993.90	103.00	11020.40
GR	102.50	11047.50	106.10	11079.80						
X1	3735	36.00	9509.80	11148.00	100	100	100	.00	.00	.00
GR	112.10	9479.30	112.60	9509.80	95.00	9561.20	84.40	9594.80	84.40	9608.70
GR	85.20	9628.40	83.50	9647.70	82.00	9681.90	81.10	9756.90	81.50	9848.70
GR	80.90	9920.10	81.10	10000.00	81.80	10069.70	82.30	10151.10	81.90	10246.10
GR	81.60	10362.10	84.50	10379.30	84.50	10412.50	87.80	10427.60	87.30	10490.80
GR	87.80	10530.00	88.20	10575.50	87.10	10651.00	85.80	10711.20	83.80	10752.10
GR	81.30	10786.20	79.20	10799.00	77.40	10829.20	78.40	10902.00	85.10	10926.90
GR	92.80	10965.70	98.10	11006.50	103.40	11054.20	104.80	11098.40	106.30	11126.80
GR	109.20	11148.00								
X1	3935	38.00	9507.90	11142.80	200	200	200	.00	.00	.00
GR	113.30	9467.80	113.00	9507.90	94.40	9556.20	86.70	9580.20	86.00	9628.80
GR	83.80	9640.70	83.50	9661.10	84.10	9678.90	84.10	9721.90	83.50	9767.80
GR	83.20	9836.70	82.30	9882.10	82.10	9941.90	81.90	10000.00	81.80	10067.80
GR	82.60	10109.80	82.40	10161.60	82.30	10209.10	81.60	10342.80	87.50	10370.90
GR	87.90	10437.60	87.40	10524.00	86.70	10597.30	86.80	10680.90	85.80	10700.70
GR	82.60	10728.20	80.80	10764.20	80.40	10807.60	79.90	10876.30	81.00	10909.00
GR	89.20	10942.00	86.90	10959.00	77.20	10990.30	76.50	11029.50	77.10	11071.30
GR	79.40	11083.00	97.30	11112.80	112.50	11142.80				
X1	4035	37.00	9498.90	11099.80	100	100	100	.00	.00	.00
GR	113.80	9470.30	113.50	9498.90	99.70	9537.50	86.60	9572.20	86.50	9620.00
GR	84.00	9639.30	83.80	9684.60	83.50	9770.00	83.60	9831.80	82.70	9915.60
GR	81.70	10000.00	81.50	10049.40	81.70	10113.50	82.40	10179.00	82.80	10236.30
GR	81.70	10272.30	81.60	10330.20	85.00	10344.50	89.40	10368.00	90.40	10401.30
GR	88.10	10437.30	87.20	10492.60	85.30	10537.10	85.70	10594.40	85.30	10638.50
GR	84.00	10678.40	80.70	10728.50	81.20	10753.10	81.50	10806.60	82.50	10830.60
GR	80.90	10880.30	78.30	10900.80	77.90	10945.40	78.10	11009.10	80.00	11025.70
GR	94.30	11061.90	113.50	11099.80						
X1	4135	46.00	9498.60	11054.40	100	100	100	.00	.00	.00
GR	113.70	9467.50	113.50	9498.60	97.90	9534.80	86.80	9558.30	87.10	9610.10
GR	83.40	9635.30	81.80	9666.10	82.70	9711.80	82.40	9770.00	82.50	9832.00
GR	83.20	9863.30	82.40	9917.40	82.30	9943.80	82.90	9962.60	83.10	10000.00
GR	82.10	10051.70	81.10	10111.30	81.50	10174.00	81.60	10201.40	83.30	10220.40
GR	83.00	10259.20	82.00	10297.80	82.00	10326.30	88.80	10359.90	90.20	10404.20
GR	90.00	10433.30	86.60	10457.40	84.70	10487.00	83.10	10522.30	82.70	10585.20
GR	81.50	10606.90	81.10	10684.20	81.00	10712.40	81.90	10742.80	81.80	10764.30
GR	81.00	10775.90	80.20	10812.00	76.20	10822.00	75.90	10913.60	77.60	10919.20
GR	75.50	10937.10	75.50	10978.30	78.00	10988.60	99.10	11020.60	111.80	11042.10
GR	114.90	11054.40								

X1	4235	42.00	9495.00	11009.20	100	100	100	.00	.00	.00
GR	113.70	9468.90	113.70	9495.00	95.30	9531.70	87.20	9552.10	87.70	9603.10
GR	82.80	9631.40	81.70	9653.30	82.30	9687.40	82.10	9721.30	81.40	9770.40
GR	82.20	9819.40	83.20	9883.80	83.80	9938.50	83.10	10000.00	82.30	10022.30
GR	82.60	10086.10	81.80	10117.70	82.50	10173.90	82.50	10239.20	82.20	10327.00
GR	84.50	10342.40	88.70	10361.40	89.80	10387.20	88.90	10424.90	83.50	10442.70
GR	82.00	10485.30	87.90	10516.80	88.20	10534.20	82.80	10570.20	82.10	10639.00
GR	81.20	10700.40	79.70	10737.20	83.60	10747.40	86.30	10763.90	85.10	10783.30
GR	76.40	10819.60	75.50	10881.60	75.60	10945.30	91.20	10972.00	115.10	11009.20
GR	113.60	11017.10	115.90	11026.00						
X1	4335	50.00	9489.30	10962.20	100	100	100	.00	.00	.00
GR	114.10	9467.50	114.00	9489.30	96.40	9525.40	87.80	9543.00	88.10	9562.20
GR	88.90	9592.50	84.20	9622.50	82.00	9638.40	82.60	9685.10	82.10	9714.90
GR	81.80	9753.10	82.30	9798.60	83.80	9814.70	83.30	9870.50	83.30	9916.90
GR	83.10	9973.50	82.80	10000.00	82.80	10073.30	82.90	10134.30	82.40	10230.50
GR	82.30	10283.40	82.80	10288.90	82.80	10329.00	85.60	10337.00	90.20	10356.30
GR	88.50	10399.00	86.30	10423.80	83.40	10431.70	82.80	10450.00	83.90	10472.80
GR	90.00	10491.30	90.70	10519.00	89.80	10557.20	86.30	10573.30	83.70	10592.10
GR	83.30	10626.30	83.00	10678.80	88.70	10703.00	86.00	10722.80	81.10	10739.60
GR	79.00	10777.60	79.30	10797.90	81.00	10808.10	96.00	10835.60	105.10	10856.60
GR	106.10	10884.30	105.30	10910.90	113.00	10935.20	115.50	10962.20	115.70	10981.50
X1	4435	45.00	9486.30	10792.30	100	100	100	.00	.00	.00
GR	114.50	9462.40	114.50	9486.30	97.70	9519.80	88.90	9537.30	88.00	9559.50
GR	89.00	9590.40	83.90	9624.50	82.10	9640.90	81.90	9686.30	81.00	9741.10
GR	81.10	9766.20	81.90	9789.00	83.70	9809.60	84.40	9825.80	83.40	9869.20
GR	83.60	9939.10	83.00	10000.00	83.10	10064.70	83.20	10122.50	83.00	10212.00
GR	82.90	10259.00	83.50	10296.30	85.10	10326.30	84.90	10338.10	83.30	10347.50
GR	82.80	10378.80	84.70	10386.90	84.60	10421.00	87.90	10435.50	89.00	10472.50
GR	89.60	10540.10	91.90	10556.10	94.20	10572.00	91.90	10582.70	93.50	10633.10
GR	92.10	10645.60	94.10	10677.70	105.50	10699.90	106.20	10711.10	104.90	10715.70
GR	106.80	10747.50	110.10	10792.30	110.20	10831.40	110.70	10873.70	114.70	10886.40
X1	4535	41.00	9485.20	10750.20	100	100	100	.00	.00	.00
GR	114.70	9457.70	114.50	9485.20	97.70	9518.90	88.70	9538.30	89.50	9588.50
GR	81.90	9635.40	81.20	9665.60	81.50	9731.90	82.10	9796.50	83.70	9814.50
GR	83.60	9887.80	83.10	9950.30	83.40	10000.00	83.80	10051.70	83.60	10136.40
GR	83.30	10219.90	83.30	10278.60	83.90	10317.00	89.80	10346.50	90.80	10392.50
GR	84.00	10417.50	83.70	10431.50	87.60	10445.40	87.80	10474.20	82.80	10489.70
GR	82.60	10523.80	88.90	10549.20	90.40	10573.30	98.50	10597.60	92.80	10613.80
GR	95.30	10634.60	98.90	10655.50	102.80	10688.20	107.90	10703.80	109.10	10738.60
GR	112.90	10750.20	111.60	10761.60	110.60	10782.90	113.00	10800.80	114.10	10808.80
GR	114.40	10842.20								
X1	4635	39.00	9482.00	10754.80	100	100	100	.00	.00	.00
GR	115.10	9458.30	114.90	9482.00	98.80	9512.90	89.00	9534.70	89.10	9547.00
GR	90.00	9551.50	90.30	9589.90	82.80	9628.40	81.20	9643.60	81.10	9732.70
GR	82.30	9782.60	83.50	9815.50	83.60	9855.00	83.40	9922.50	83.70	10000.00
GR	83.60	10039.60	84.10	10111.40	84.20	10183.90	84.00	10238.50	83.70	10271.20
GR	84.00	10311.00	90.10	10346.10	90.20	10399.20	89.70	10435.30	84.20	10464.60
GR	84.40	10508.20	89.00	10533.20	94.30	10591.80	84.00	10617.00	84.70	10637.80
GR	84.60	10668.50	91.10	10688.00	90.40	10703.70	108.30	10732.70	114.50	10754.80

GR	111.80	10762.70	112.20	10789.60	115.80	10814.10	116.50	10836.40		
X1	4735	24.00	9481.30	10467.60	100	100	100	.00	.00	.00
GR	115.20	9456.10	114.90	9481.30	98.50	9512.60	89.80	9528.70	90.70	9585.10
GR	83.30	9627.00	81.90	9655.00	82.10	9716.30	82.20	9778.20	83.70	9837.20
GR	83.60	9906.60	83.50	9961.20	83.90	10000.00	84.30	10054.80	83.40	10115.00
GR	83.50	10158.50	84.50	10210.00	83.80	10295.00	85.00	10311.40	90.40	10341.90
GR	90.90	10382.40	93.80	10399.40	111.30	10431.10	113.80	10467.60		
X1	4835	24.00	9478.50	10446.20	100	100	100	.00	.00	.00
GR	115.00	9450.40	115.20	9478.50	100.20	9508.90	90.60	9529.60	90.70	9584.80
GR	83.50	9623.50	83.40	9664.70	83.20	9749.90	82.60	9788.60	83.20	9844.70
GR	83.70	9874.00	83.90	9917.30	83.80	10000.00	83.80	10056.90	84.50	10099.00
GR	83.70	10171.60	83.60	10238.10	84.20	10305.00	89.00	10326.70	90.60	10339.90
GR	90.50	10389.80	105.10	10421.10	116.00	10446.20	116.80	10480.50		
X1	4935	28.00	9476.00	10456.60	100	100	100	.00	.00	.00
GR	115.30	9445.60	115.50	9476.00	102.40	9502.70	90.80	9526.00	90.40	9583.30
GR	84.30	9618.30	84.20	9642.50	85.10	9655.50	84.00	9701.60	83.50	9764.00
GR	82.80	9799.90	84.00	9879.20	84.00	9932.40	84.40	10000.00	84.40	10063.40
GR	84.30	10140.80	83.50	10229.20	83.70	10299.40	86.00	10314.30	90.90	10337.50
GR	91.30	10390.70	103.30	10413.50	115.10	10439.20	115.80	10456.60	114.90	10478.00
GR	116.70	10482.70	118.20	10504.00	118.40	10527.20				
X1	5035	29.00	9474.60	10436.30	100	100	100	.00	.00	.00
GR	115.80	9450.70	115.60	9474.60	101.10	9502.70	91.60	9523.90	91.10	9538.20
GR	92.20	9544.00	91.00	9579.80	85.20	9616.00	84.50	9678.90	83.80	9769.40
GR	83.00	9831.40	83.40	9868.20	84.10	9939.70	84.20	9977.20	84.10	10000.00
GR	84.70	10061.10	84.40	10135.90	83.50	10228.80	83.00	10257.20	84.50	10294.90
GR	91.50	10333.60	92.30	10361.90	92.40	10385.40	104.30	10410.90	114.90	10436.30
GR	115.70	10463.00	114.60	10473.20	121.90	10485.20	123.20	10528.30		
X1	5135	28.00	9472.00	10435.20	100	100	100	.00	.00	.00
GR	115.90	9444.20	115.80	9472.00	99.80	9504.00	91.40	9521.90	91.00	9576.70
GR	85.20	9613.50	84.00	9657.30	85.10	9738.20	84.30	9798.70	83.10	9837.30
GR	84.20	9903.70	84.40	9971.00	84.10	10000.00	84.20	10054.80	84.80	10098.20
GR	84.50	10183.50	83.20	10195.50	83.30	10236.50	84.30	10267.80	84.80	10297.40
GR	92.60	10331.60	92.90	10380.70	102.80	10404.10	115.80	10435.20	115.90	10465.10
GR	114.30	10471.10	117.50	10481.20	118.10	10547.00				
X1	5235	27.00	9469.90	10429.50	100	100	100	.00	.00	.00
GR	115.50	9444.50	115.30	9469.90	101.30	9498.60	92.00	9518.10	91.80	9565.80
GR	85.80	9603.90	85.60	9669.10	84.90	9720.30	85.10	9758.60	83.50	9823.70
GR	83.90	9868.00	85.00	9943.00	84.50	9968.20	84.40	10000.00	84.60	10064.00
GR	85.10	10129.30	84.10	10179.20	83.10	10244.70	81.90	10268.70	84.70	10281.60
GR	85.40	10291.80	89.70	10310.60	92.80	10332.90	92.50	10381.10	102.20	10399.60
GR	115.30	10429.50	115.80	10461.50						
X1	5335	27.00	9463.60	10435.00	100	100	100	.00	.00	.00
GR	115.40	9435.00	115.20	9463.60	100.40	9493.80	92.00	9513.40	92.20	9559.70
GR	86.60	9603.00	86.50	9624.80	87.00	9692.00	85.30	9718.80	85.10	9782.80
GR	83.90	9834.50	84.40	9856.20	84.20	9924.30	84.40	9970.10	84.50	10000.00
GR	84.90	10043.40	85.00	10141.80	84.40	10190.20	83.10	10238.40	81.30	10276.10
GR	85.70	10287.30	90.60	10310.70	92.60	10330.00	92.30	10377.70	106.40	10403.80

GR	114.70	10423.60	116.10	10435.00						
X1	5435	28.00	9457.20	10421.70	100	100	100	.00	.00	.00
GR	116.20	9433.70	115.80	9457.20	101.00	9486.00	92.70	9502.90	91.90	9551.90
GR	86.90	9594.80	87.90	9651.50	89.40	9658.60	88.10	9671.50	86.10	9686.00
GR	86.00	9701.00	85.40	9767.90	84.20	9816.70	84.80	9836.10	84.80	9907.80
GR	84.90	9968.80	84.90	10000.00	85.50	10075.30	84.70	10191.10	81.50	10236.80
GR	80.60	10260.50	85.10	10274.50	86.50	10287.10	90.40	10308.10	92.40	10325.60
GR	92.60	10375.90	105.60	10400.20	115.60	10421.70				
X1	5535	35.00	9445.50	10417.30	100	100	100	.00	.00	.00
GR	116.50	9415.60	115.70	9445.50	101.20	9475.30	92.60	9492.80	92.90	9510.50
GR	92.40	9542.00	87.50	9575.80	87.50	9606.70	86.50	9618.30	86.20	9656.30
GR	85.70	9709.40	84.70	9779.60	85.10	9799.80	85.40	9855.70	85.40	9915.70
GR	84.50	9966.00	85.20	10000.00	85.80	10019.50	85.50	10048.30	86.20	10054.40
GR	86.30	10081.30	85.60	10127.20	84.70	10181.00	81.30	10208.00	80.50	10222.80
GR	86.00	10236.50	86.70	10253.70	85.70	10281.80	90.00	10301.10	91.60	10315.60
GR	93.60	10325.20	93.00	10369.90	104.70	10393.10	114.70	10417.30	114.80	10446.10
X1	5635	31.00	9434.80	10414.90	100	100	100	.00	.00	.00
GR	115.90	9407.00	115.70	9434.80	102.40	9463.20	93.10	9481.20	92.20	9526.50
GR	87.80	9567.80	86.40	9604.20	87.70	9644.00	87.80	9680.20	85.80	9727.50
GR	86.20	9742.50	86.10	9801.50	85.80	9851.30	86.30	9892.70	84.40	9958.10
GR	85.60	10000.00	86.10	10053.60	85.40	10116.10	84.30	10150.30	83.20	10167.50
GR	83.50	10196.00	85.80	10212.20	86.50	10254.30	87.00	10283.40	91.80	10302.90
GR	93.50	10319.40	93.20	10355.10	98.60	10374.00	113.10	10404.60	114.70	10414.90
GR	115.10	10446.80								
X1	5735	33.00	9426.60	10410.00	100	100	100	.00	.00	.00
GR	115.60	9401.60	115.40	9426.60	101.60	9456.20	93.10	9472.30	92.70	9521.50
GR	88.10	9557.90	87.40	9623.30	87.00	9644.10	87.60	9659.40	87.40	9730.80
GR	85.70	9756.60	87.00	9769.50	87.90	9794.40	87.30	9865.60	86.00	9934.30
GR	85.40	9968.70	86.10	9985.80	85.90	10000.00	86.30	10030.50	85.20	10036.90
GR	85.70	10046.00	85.90	10096.40	85.50	10129.30	83.70	10146.00	85.10	10157.20
GR	86.20	10211.80	87.00	10282.40	91.00	10294.90	93.70	10312.50	93.70	10360.50
GR	107.00	10387.40	114.80	10410.00	115.10	10444.00				
X1	5835	31.00	9417.70	10409.60	100	100	100	.00	.00	.00
GR	115.30	9392.40	115.30	9417.70	100.40	9449.00	93.40	9464.40	92.90	9512.20
GR	88.40	9553.00	88.60	9588.20	88.00	9634.40	86.10	9648.50	87.40	9666.20
GR	87.70	9713.30	88.10	9774.10	88.50	9858.00	88.20	9891.20	86.90	9904.40
GR	86.10	9944.50	87.30	9948.80	86.40	10000.00	86.00	10033.20	84.90	10040.60
GR	85.60	10049.70	85.20	10074.40	85.80	10103.00	86.70	10161.50	87.20	10224.50
GR	87.40	10285.00	90.80	10300.30	92.80	10313.80	93.70	10361.00	106.50	10385.20
GR	116.60	10409.60								
X1	5935	29.00	9410.80	10410.10	100	100	100	.00	.00	.00
GR	116.30	9384.90	115.80	9410.80	101.30	9441.20	93.80	9457.10	92.80	9516.70
GR	88.80	9547.30	87.80	9607.20	87.10	9686.00	88.10	9725.30	88.70	9785.50
GR	88.70	9844.50	88.70	9881.70	87.40	9894.20	87.00	9924.80	88.00	9935.70
GR	87.60	9964.10	86.70	10000.00	85.20	10041.00	85.80	10085.00	87.80	10125.20
GR	88.40	10182.70	88.50	10240.00	87.80	10295.00	91.70	10309.40	92.70	10325.00
GR	92.90	10362.20	106.10	10387.90	116.10	10410.10	116.30	10445.00		

X1	6035	31.00	9403.60	10415.20	100	100	100	.00	.00	.00
GR	116.00	9382.60	115.70	9403.60	99.70	9437.60	93.80	9450.40	94.30	9467.00
GR	94.30	9505.40	89.10	9540.10	88.30	9575.90	86.80	9584.80	87.20	9672.10
GR	87.80	9690.10	88.00	9722.60	89.10	9744.30	89.00	9807.50	89.10	9869.30
GR	87.80	9885.80	87.20	9918.60	88.30	9927.30	88.10	9954.90	87.20	10000.00
GR	85.10	10042.70	85.00	10071.10	88.00	10097.80	88.80	10135.40	88.80	10197.60
GR	88.50	10244.10	88.40	10298.10	93.30	10324.20	93.10	10365.00	103.70	10386.20
GR	116.70	10415.20								
X1	6135	31.00	9397.20	10449.80	100	100	100	.00	.00	.00
GR	115.90	9373.20	115.90	9397.20	101.40	9427.30	93.60	9443.30	94.20	9456.10
GR	94.80	9490.00	89.10	9535.80	88.20	9562.50	86.20	9571.30	87.30	9610.30
GR	88.90	9670.80	88.50	9727.60	89.40	9798.40	89.20	9860.50	87.70	9883.80
GR	87.40	9906.50	88.70	9917.40	88.30	9954.50	87.60	10000.00	85.70	10046.00
GR	85.20	10078.00	88.40	10097.70	88.90	10144.30	89.60	10210.20	89.10	10265.00
GR	88.60	10298.80	92.80	10321.90	94.00	10363.20	103.20	10386.10	115.10	10419.40
GR	116.80	10449.80								
X1	6235	31.00	9391.30	10421.50	100	100	100	.00	.00	.00
GR	116.30	9367.10	116.00	9391.30	103.10	9418.90	94.00	9436.20	94.70	9455.60
GR	95.00	9485.30	89.40	9526.50	87.10	9537.80	86.90	9587.30	88.30	9647.60
GR	88.70	9718.80	89.40	9773.30	89.60	9857.40	87.40	9906.60	89.70	9914.40
GR	89.00	9919.00	88.30	9960.00	88.10	10000.00	86.00	10048.60	85.90	10092.80
GR	87.90	10099.30	89.00	10114.50	88.90	10171.30	88.70	10228.30	89.10	10272.70
GR	91.40	10302.00	93.90	10328.30	95.30	10370.40	105.80	10395.20	115.80	10421.50
GR	116.30	10455.00								
X1	6335	29.00	9386.30	10428.30	100	100	100	.00	.00	.00
GR	116.20	9360.00	116.10	9386.30	102.90	9413.10	94.80	9430.40	94.30	9480.10
GR	89.30	9512.60	87.80	9530.50	88.10	9569.80	88.50	9619.30	88.90	9674.10
GR	89.90	9729.00	89.50	9781.40	89.70	9820.50	88.90	9879.70	89.30	9916.00
GR	88.70	9961.80	88.60	10000.00	86.90	10038.00	86.10	10079.80	87.00	10105.00
GR	88.70	10115.40	89.00	10159.40	88.80	10215.00	89.00	10265.60	92.30	10306.00
GR	93.60	10328.30	96.00	10375.30	105.50	10398.20	116.80	10428.30		
X1	6435	31.00	9382.70	10425.70	100	100	100	.00	.00	.00
GR	116.60	9359.60	116.70	9382.70	102.40	9411.50	95.30	9426.50	95.60	9471.40
GR	89.30	9505.10	88.20	9530.50	88.40	9586.90	87.60	9602.30	88.10	9655.90
GR	89.00	9686.70	89.50	9733.50	90.20	9769.60	89.90	9789.00	90.10	9811.40
GR	89.90	9873.20	89.50	9922.40	89.00	10000.00	87.50	10045.70	87.40	10088.70
GR	89.00	10129.10	90.00	10168.30	89.70	10191.80	89.50	10229.10	89.20	10278.70
GR	91.40	10301.90	94.60	10333.20	96.70	10384.00	106.40	10402.90	116.50	10425.70
GR	117.90	10458.80								
X1	6535	30.00	9381.60	10434.90	100	100	100	.00	.00	.00
GR	116.40	9357.20	116.60	9381.60	101.70	9410.20	94.60	9425.00	94.60	9437.50
GR	95.90	9442.50	96.10	9469.00	89.90	9509.90	89.20	9543.60	88.00	9620.00
GR	89.60	9661.00	89.80	9746.50	91.70	9782.90	90.20	9814.30	89.70	9857.30
GR	89.80	9919.20	89.50	9963.50	89.20	10000.00	88.00	10040.00	87.30	10091.70
GR	88.20	10127.20	89.60	10156.50	89.40	10205.80	89.40	10273.50	90.30	10307.50
GR	94.80	10332.20	96.50	10389.50	105.40	10408.40	117.30	10434.90	118.10	10465.00

X1	6635	32.00	9379.80	10439.40	100	100	100	.00	.00	.00
GR	116.70	9358.90	116.60	9379.80	102.90	9407.30	95.40	9422.70	95.80	9472.30
GR	90.50	9514.70	89.00	9541.90	89.70	9557.70	89.80	9599.60	89.20	9655.50
GR	89.00	9702.50	89.60	9740.60	89.70	9793.40	89.10	9853.70	87.80	9882.80
GR	87.20	9922.40	88.90	9952.40	90.20	9966.00	89.50	10000.00	88.80	10044.70
GR	87.80	10079.40	87.90	10130.40	88.80	10142.40	88.80	10197.50	88.80	10252.40
GR	89.70	10263.50	91.50	10316.10	95.30	10341.20	96.20	10397.30	107.00	10418.00
GR	117.50	10439.40	117.90	10470.10						
X1	6735	31.00	9378.10	10445.30	100	100	100	.00	.00	.00
GR	117.00	9353.20	116.90	9378.10	102.20	9406.20	95.70	9422.30	96.00	9440.00
GR	96.10	9470.00	92.60	9501.90	90.10	9544.70	89.80	9594.70	89.80	9659.70
GR	90.00	9722.30	88.10	9802.40	89.60	9820.30	88.30	9864.50	86.70	9884.10
GR	86.40	9908.80	87.80	9936.80	89.90	9969.80	89.50	10000.00	88.40	10065.90
GR	88.70	10102.30	88.50	10153.30	88.90	10212.00	89.70	10262.20	90.40	10283.70
GR	91.20	10321.50	94.60	10346.90	96.30	10405.10	107.20	10423.20	117.10	10445.30
GR	117.50	10477.70								
X1	6835	36.00	9377.00	10453.80	100	100	100	.00	.00	.00
GR	116.60	9353.10	116.70	9377.00	102.00	9409.00	97.10	9422.70	96.60	9453.50
GR	96.20	9475.40	94.30	9494.20	89.60	9521.70	90.60	9545.90	90.20	9591.40
GR	89.60	9622.90	90.20	9661.50	90.00	9727.80	89.10	9784.20	87.40	9802.60
GR	87.80	9844.10	89.30	9855.40	89.80	9869.30	87.50	9883.20	87.60	9909.20
GR	88.90	9941.30	89.40	9969.40	89.80	10000.00	89.30	10041.20	89.80	10084.10
GR	89.40	10142.60	89.90	10209.30	90.20	10278.70	90.20	10314.00	91.70	10334.00
GR	95.00	10357.30	95.60	10370.40	95.70	10403.50	108.00	10430.60	117.30	10453.80
GR	117.80	10484.30								
X1	6935	32.00	9379.10	10459.20	100	100	100	.00	.00	.00
GR	117.10	9354.30	116.30	9379.10	104.50	9404.50	96.50	9425.00	97.10	9455.70
GR	97.20	9468.60	95.70	9484.90	92.10	9507.90	90.60	9526.50	89.80	9590.60
GR	88.80	9682.40	89.50	9695.50	89.10	9726.10	90.10	9754.70	90.60	9822.70
GR	89.70	9888.50	89.50	9937.30	89.70	10000.00	89.90	10047.20	90.80	10064.20
GR	90.40	10128.30	89.70	10195.30	90.30	10238.10	90.60	10287.30	90.40	10322.60
GR	91.80	10341.20	95.60	10360.50	96.40	10390.70	96.40	10410.80	108.60	10438.40
GR	117.50	10459.20	118.70	10490.00						
X1	7035	31.00	9381.30	10461.10	100	100	100	.00	.00	.00
GR	116.80	9357.40	117.00	9381.30	104.50	9407.50	96.30	9422.50	96.10	9433.90
GR	97.10	9438.10	97.60	9468.30	95.80	9489.30	95.10	9540.40	93.20	9586.10
GR	92.00	9642.00	90.50	9699.20	89.10	9728.00	90.50	9760.90	91.40	9786.40
GR	90.80	9871.60	90.00	9898.90	89.80	9955.70	89.70	10000.00	90.40	10031.10
GR	91.90	10062.50	91.10	10106.70	90.30	10158.90	90.70	10213.00	91.10	10260.00
GR	91.40	10319.00	92.00	10344.20	96.50	10366.80	96.70	10413.80	106.20	10435.60
GR	117.80	10461.10								
X1	7135	34.00	9377.60	10460.50	100	100	100	.00	.00	.00
GR	117.30	9352.70	117.40	9377.60	103.80	9404.20	96.40	9420.10	96.30	9432.20
GR	97.30	9437.10	97.50	9469.20	96.70	9486.60	96.90	9524.80	95.20	9586.90
GR	94.90	9621.30	94.70	9676.50	93.70	9738.90	90.00	9759.40	91.80	9792.10
GR	90.80	9842.30	89.80	9891.20	90.20	9908.00	89.80	9914.00	89.70	9963.30
GR	90.40	10000.00	91.50	10027.80	92.30	10074.50	91.70	10103.30	91.20	10149.70
GR	91.70	10204.80	92.60	10266.70	93.80	10324.20	94.20	10348.20	97.40	10366.60

GR	96.50	10413.20	108.20	10437.70	117.30	10460.50	118.20	10496.40		
X1	7235	29.00	9377.70	10463.80	100	100	100	.00	.00	.00
GR	117.10	9359.40	117.10	9377.70	105.20	9401.10	98.00	9418.70	98.30	9429.60
GR	97.30	9530.60	96.60	9607.30	96.40	9677.50	97.40	9723.00	97.60	9744.80
GR	92.80	9758.50	91.40	9771.30	91.10	9835.70	89.40	9892.70	89.10	9939.00
GR	89.90	9942.60	90.50	9962.80	90.30	9979.80	91.30	10000.00	92.20	10083.00
GR	91.80	10142.80	91.20	10177.80	93.60	10208.40	95.10	10247.10	96.40	10307.60
GR	97.60	10366.00	98.10	10421.50	110.10	10445.60	117.40	10463.80		
X1	7335	28.00	9382.20	10474.00	100	100	100	.00	.00	.00
GR	117.20	9360.10	117.10	9382.20	105.30	9404.60	97.60	9425.00	97.60	9485.30
GR	97.10	9567.70	96.60	9596.10	96.40	9673.10	97.40	9711.30	97.80	9743.00
GR	92.80	9760.40	91.30	9801.20	89.60	9875.10	89.20	9908.10	90.00	9911.70
GR	90.80	9959.70	91.60	9978.70	91.70	10000.00	92.20	10054.40	92.60	10106.80
GR	92.60	10161.50	96.50	10187.50	97.20	10237.40	97.40	10310.80	97.60	10383.30
GR	98.80	10427.90	107.60	10447.20	118.10	10474.00				
X1	7435	27.00	9385.90	10477.10	100	100	100	.00	.00	.00
GR	117.60	9365.80	117.60	9385.90	106.20	9409.30	97.70	9428.30	97.50	9490.50
GR	97.60	9582.60	96.70	9640.40	96.90	9689.70	97.90	9747.40	91.80	9773.70
GR	90.60	9848.20	89.40	9904.00	89.90	9916.70	91.50	9930.70	91.80	9967.00
GR	92.60	10000.00	92.30	10056.20	93.00	10112.80	92.50	10165.30	96.80	10179.60
GR	97.40	10236.00	97.80	10273.30	97.50	10341.50	97.60	10387.30	99.20	10435.50
GR	109.20	10454.80	118.00	10477.10						
X1	7535	31.00	9391.30	10481.00	100	100	100	.00	.00	.00
GR	118.20	9370.50	118.10	9391.30	105.80	9415.20	98.20	9433.80	97.60	9485.80
GR	98.10	9514.50	98.10	9581.50	97.60	9662.60	97.80	9720.90	98.10	9756.80
GR	92.30	9775.60	91.80	9792.00	90.60	9832.70	91.90	9841.50	91.20	9869.20
GR	93.30	9878.00	93.00	9897.60	90.70	9912.60	91.00	9958.70	91.90	10000.00
GR	92.30	10068.30	93.00	10116.50	93.00	10167.60	97.80	10191.60	98.20	10263.90
GR	98.20	10332.00	97.20	10360.20	97.00	10411.20	97.70	10430.00	106.80	10451.70
GR	118.10	10481.00								
X1	7635	39.00	9398.60	10485.20	100	100	100	.00	.00	.00
GR	118.10	9374.60	117.80	9398.60	106.90	9421.30	99.10	9439.10	98.30	9483.90
GR	97.80	9503.30	98.30	9544.50	98.70	9599.20	98.10	9665.00	97.10	9719.70
GR	97.90	9738.60	97.70	9759.00	93.20	9771.60	91.40	9790.30	90.60	9823.10
GR	91.70	9826.70	91.10	9862.70	92.70	9870.70	92.70	9899.80	91.70	9910.80
GR	91.50	9931.30	94.30	9948.00	94.60	9969.80	93.30	10000.00	92.70	10039.70
GR	92.80	10093.30	92.60	10166.50	98.70	10183.10	98.90	10244.80	97.80	10303.30
GR	98.20	10332.50	97.90	10359.70	97.80	10416.30	98.90	10422.00	101.00	10445.90
GR	110.80	10463.30	117.90	10485.20	118.40	10498.00	118.50	10513.10		
X1	7735	40.00	9404.60	10484.70	100	100	100	.00	.00	.00
GR	118.20	9377.00	117.70	9404.60	106.40	9426.90	99.40	9443.40	99.10	9475.30
GR	98.70	9498.90	98.80	9526.40	98.60	9585.60	97.70	9655.90	97.50	9747.90
GR	98.60	9756.70	97.30	9766.00	92.70	9778.60	90.70	9808.50	92.30	9820.70
GR	92.40	9831.10	90.90	9846.20	91.40	9870.90	92.20	9880.20	92.40	9898.30
GR	91.10	9906.90	92.40	9915.50	94.60	9931.20	95.20	9955.50	94.10	10000.00
GR	93.00	10043.90	92.90	10098.10	92.40	10166.10	99.50	10185.10	99.30	10218.00
GR	99.20	10249.60	99.50	10263.30	98.40	10296.70	98.30	10333.40	98.50	10356.00
GR	98.10	10394.80	98.80	10431.00	100.50	10448.60	111.40	10468.70	118.40	10484.70

X1	7835	39.00	9407.30	10484.70	100	100	100	.00	.00	.00
GR	118.10	9379.90	117.60	9407.30	107.90	9428.30	99.70	9446.10	99.50	9507.50
GR	99.10	9554.80	98.40	9604.20	97.90	9652.40	97.80	9684.10	98.20	9716.00
GR	98.40	9747.80	99.90	9757.80	93.80	9772.90	92.20	9780.50	91.00	9810.80
GR	91.90	9816.90	91.90	9835.90	91.00	9840.90	92.10	9852.20	92.90	9871.90
GR	92.00	9883.00	92.00	9896.20	94.50	9913.90	95.50	9936.50	95.90	9968.10
GR	94.90	10000.00	94.10	10035.10	93.40	10064.00	93.40	10163.90	100.20	10186.00
GR	100.70	10218.50	100.40	10268.80	99.70	10343.50	99.20	10386.50	99.50	10430.80
GR	100.70	10448.30	109.70	10464.50	119.70	10484.70	120.10	10502.70		
X1	7935	35.00	9411.60	10487.40	100	100	100	.00	.00	.00
GR	118.50	9390.20	118.00	9411.60	106.40	9433.90	99.40	9452.30	99.40	9511.80
GR	99.90	9565.80	99.20	9629.60	98.60	9678.00	99.00	9735.70	100.50	9758.00
GR	94.70	9771.00	94.20	9781.20	92.20	9791.00	92.40	9803.90	91.50	9809.60
GR	91.30	9836.30	93.50	9844.00	92.40	9894.90	94.70	9905.70	96.70	9937.90
GR	96.10	9971.80	95.20	10000.00	93.60	10068.00	93.50	10163.60	95.70	10174.70
GR	101.30	10190.30	101.60	10234.00	101.20	10287.70	101.40	10345.90	99.70	10400.70
GR	100.00	10415.70	100.50	10449.50	111.00	10469.50	119.60	10487.40	119.80	10503.50
X1	8035	35.00	9416.70	10492.30	100	100	100	.00	.00	.00
GR	118.40	9393.30	117.90	9416.70	107.80	9435.20	99.70	9453.30	99.70	9508.30
GR	99.80	9554.90	99.30	9635.50	100.00	9646.80	100.20	9703.70	98.80	9725.70
GR	100.30	9740.10	99.70	9755.70	94.40	9771.80	93.50	9789.50	92.10	9795.50
GR	91.80	9826.00	93.30	9836.60	93.40	9860.10	92.70	9873.00	92.70	9896.00
GR	96.10	9920.70	96.80	9946.40	96.20	9975.20	95.40	10000.00	93.50	10063.90
GR	93.80	10103.90	93.70	10167.40	101.00	10194.50	101.40	10237.50	101.80	10297.20
GR	101.30	10362.50	100.50	10408.00	99.80	10452.70	111.90	10473.80	120.50	10492.30
X1	8135	36.00	9423.30	10503.20	100	100	100	.00	.00	.00
GR	118.90	9400.00	118.90	9414.40	117.60	9423.30	107.20	9442.60	99.90	9458.40
GR	99.80	9510.30	100.90	9543.00	100.40	9593.20	99.80	9637.70	99.80	9701.40
GR	100.00	9760.00	94.50	9776.70	93.80	9783.10	92.10	9788.20	91.90	9828.40
GR	92.70	9834.00	92.20	9843.60	92.80	9854.40	92.60	9879.60	95.40	9910.00
GR	96.30	9938.80	97.30	9963.60	96.30	10000.00	95.20	10027.00	94.00	10060.50
GR	93.80	10112.40	93.80	10161.80	94.70	10172.60	100.90	10197.10	101.10	10239.60
GR	101.00	10308.30	100.80	10393.90	100.80	10423.40	100.40	10452.00	110.40	10476.10
GR	120.70	10503.20								
X1	8235	31.00	9423.90	10500.70	100	100	100	.00	.00	.00
GR	120.20	9402.70	119.60	9423.90	108.20	9448.50	100.30	9466.40	100.30	9518.40
GR	100.40	9579.30	100.30	9648.50	100.10	9732.90	100.80	9762.00	94.60	9780.90
GR	94.40	9797.20	92.70	9803.30	92.30	9844.80	93.20	9852.40	93.10	9871.40
GR	94.70	9903.30	96.00	9922.80	96.70	9956.10	96.30	10000.00	95.20	10036.70
GR	93.80	10077.00	93.70	10138.60	94.10	10179.40	100.10	10198.40	101.50	10220.30
GR	101.40	10277.80	101.00	10362.60	101.10	10455.30	112.20	10481.00	119.70	10500.70
GR	119.80	10521.20								
X1	8335	35.00	9427.30	10501.80	100	100	100	.00	.00	.00
GR	120.30	9410.00	119.80	9427.30	108.60	9451.60	100.70	9469.00	100.40	9495.30
GR	101.30	9503.40	101.50	9538.60	100.60	9591.40	100.50	9642.20	100.70	9678.50
GR	101.40	9702.10	100.60	9745.90	98.80	9775.10	94.90	9786.70	95.30	9798.70
GR	92.80	9809.70	92.30	9850.00	93.40	9859.60	94.60	9888.90	96.20	9933.40
GR	96.90	9963.10	96.50	10000.00	95.70	10040.50	93.80	10091.10	93.80	10135.20

GR	94.10	10181.00	100.90	10200.70	101.60	10248.70	101.10	10291.20	101.20	10351.50
GR	101.40	10415.60	101.90	10454.20	110.10	10475.30	119.70	10501.80	120.20	10523.60
X1	8435	31.00	9432.50	10512.30	100	100	100	.00	.00	.00
GR	120.50	9413.70	120.20	9432.50	109.00	9457.40	100.80	9473.70	100.60	9493.30
GR	101.30	9503.50	102.30	9537.60	102.10	9555.60	100.60	9576.10	100.80	9638.30
GR	100.30	9725.30	100.30	9774.70	95.80	9787.20	93.40	9808.40	92.50	9849.60
GR	94.30	9868.50	95.40	9895.70	96.20	9937.90	96.60	10000.00	95.90	10041.30
GR	94.10	10099.30	94.00	10178.70	94.80	10187.10	101.60	10212.70	101.30	10270.30
GR	101.00	10314.80	101.30	10369.20	102.20	10434.50	102.10	10469.80	112.00	10493.10
GR	120.40	10512.30								
X1	8535	31.00	9439.90	10515.10	100	100	100	.00	.00	.00
GR	121.20	9417.90	120.30	9439.90	109.70	9462.10	101.20	9478.10	101.40	9515.70
GR	101.50	9558.70	101.30	9621.10	100.70	9682.30	100.60	9754.80	99.60	9774.60
GR	96.20	9785.80	93.10	9812.90	93.00	9853.00	95.20	9881.80	96.30	9933.50
GR	96.50	9978.10	96.40	10000.00	95.90	10042.00	94.50	10090.10	94.20	10138.20
GR	94.10	10186.10	95.60	10194.70	101.70	10215.10	101.60	10277.80	101.90	10345.50
GR	102.20	10444.40	101.40	10459.30	101.20	10474.60	110.80	10493.80	120.00	10515.10
GR	120.50	10538.40								
X1	8635	33.00	9441.90	10523.80	100	100	100	.00	.00	.00
GR	122.20	9419.00	120.80	9441.90	110.20	9465.80	101.60	9482.50	101.80	9537.50
GR	101.80	9608.30	101.40	9664.30	101.00	9722.10	99.90	9777.30	95.70	9790.70
GR	94.20	9798.40	93.80	9821.40	94.40	9849.30	95.60	9870.90	95.70	9913.20
GR	96.20	9941.40	96.60	9977.40	96.40	10000.00	95.30	10051.90	94.40	10114.00
GR	94.40	10182.40	97.60	10197.80	101.90	10212.80	101.80	10299.90	101.40	10323.60
GR	102.40	10380.90	103.00	10414.60	102.80	10442.90	101.80	10462.80	101.50	10485.20
GR	111.90	10502.80	120.80	10523.80	120.90	10555.10				
X1	8735	30.00	9448.90	10511.10	100	100	100	.00	.00	.00
GR	122.00	9400.20	121.10	9448.90	110.30	9468.60	102.20	9484.80	102.20	9541.80
GR	102.10	9626.30	101.50	9704.50	100.80	9769.40	99.80	9782.20	97.20	9792.90
GR	97.00	9798.50	94.90	9803.50	94.40	9825.10	94.50	9846.80	95.70	9864.90
GR	95.80	9928.50	96.50	9969.40	96.00	10000.00	95.50	10051.40	94.60	10096.40
GR	94.70	10189.00	102.10	10209.70	102.50	10256.40	102.80	10342.50	102.20	10381.80
GR	102.00	10438.20	102.60	10458.80	110.40	10481.80	120.90	10511.10	121.30	10533.80
X1	8835	28.00	9447.30	10417.60	100	100	100	.00	.00	.00
GR	121.90	9431.00	121.70	9447.30	117.70	9458.50	103.10	9489.20	103.10	9565.30
GR	102.60	9645.20	102.00	9718.00	100.60	9784.40	98.40	9792.80	98.20	9806.40
GR	95.80	9808.90	95.10	9830.90	95.40	9857.30	96.20	9879.00	96.10	9932.50
GR	95.90	10000.00	95.60	10043.90	95.00	10085.20	94.80	10185.30	97.70	10198.00
GR	102.90	10211.60	103.40	10240.00	103.40	10282.30	102.10	10341.10	102.30	10363.10
GR	112.20	10389.30	120.80	10417.60	121.50	10441.70				

PHOENIX SKYHARBOR I.L.S.

X1	8935	24.00	9450.70	10337.10	100	100	100	.00	.00	.00
GR	121.30	9435.30	121.30	9450.70	111.80	9474.10	104.20	9490.10	103.90	9554.10
GR	103.40	9619.00	102.90	9696.90	102.20	9760.60	100.80	9785.80	97.40	9796.90
GR	97.10	9829.90	95.60	9832.40	95.70	9861.20	96.40	9874.40	96.40	9945.70
GR	96.00	10000.00	95.80	10048.70	95.40	10116.40	95.80	10191.30	103.50	10211.80
GR	103.30	10251.30	103.20	10297.10	114.00	10320.40	121.00	10337.10		

X1	9035	26.00	9456.80	10323.40	100	100	100	.00	.00	.00
GR	121.30	9437.90	120.70	9456.80	111.40	9475.30	104.90	9488.70	105.10	9531.30
GR	104.90	9582.80	104.40	9629.30	103.90	9701.90	104.40	9733.70	102.30	9759.40
GR	101.80	9785.80	97.30	9799.70	97.50	9847.30	97.20	9876.90	96.70	9912.50
GR	96.70	9962.30	96.90	10000.00	96.80	10055.00	96.10	10159.20	96.10	10191.50
GR	97.50	10201.60	103.00	10218.10	102.80	10283.10	112.00	10302.10	121.10	10323.40
GR	121.20	10347.40								
X1	9135	27.00	9457.10	10377.20	100	100	100	.00	.00	.00
GR	121.20	9440.30	120.90	9457.10	112.60	9473.60	106.00	9487.20	105.80	9544.00
GR	105.30	9596.70	105.00	9672.80	104.00	9723.40	103.40	9782.50	97.90	9797.50
GR	97.80	9848.10	97.30	9854.90	97.40	9909.20	97.40	9959.80	97.40	10000.00
GR	97.20	10053.70	96.30	10140.70	96.60	10153.20	96.10	10195.60	101.50	10207.80
GR	101.70	10235.80	103.00	10276.40	103.30	10292.00	102.40	10332.60	111.50	10350.90
GR	121.70	10377.20	121.80	10395.00						
X1	9235	31.00	9455.10	10426.20	100	100	100	.00	.00	.00
GR	121.50	9436.20	120.90	9455.10	107.30	9484.00	107.00	9506.30	106.30	9535.90
GR	105.60	9602.10	104.90	9657.20	104.60	9714.90	104.10	9741.00	103.40	9780.10
GR	98.70	9791.60	98.20	9824.70	97.60	9844.10	98.10	9909.10	96.80	9932.50
GR	96.50	9965.80	96.60	10000.00	96.50	10045.00	96.50	10116.50	96.90	10139.60
GR	97.60	10168.80	97.00	10195.60	101.10	10210.60	101.70	10232.60	103.00	10254.70
GR	103.00	10285.00	103.10	10344.00	103.10	10384.30	112.70	10404.40	121.90	10426.20
GR	122.20	10446.10								
X1	9335	30.00	9454.20	10486.90	100	100	100	.00	.00	.00
GR	122.50	9435.70	121.60	9454.20	113.00	9471.00	106.00	9485.00	105.60	9552.20
GR	104.90	9628.40	104.60	9691.00	104.20	9775.10	97.40	9794.40	97.10	9813.80
GR	97.50	9854.90	98.30	9887.80	97.90	9912.80	96.80	9942.50	95.80	9968.20
GR	95.80	10000.00	95.90	10072.00	96.70	10103.30	97.50	10144.70	97.60	10195.60
GR	102.70	10208.40	102.10	10234.70	102.60	10275.80	103.10	10316.00	103.90	10379.80
GR	103.30	10404.90	102.90	10439.70	113.60	10460.70	122.70	10486.90	122.80	10505.70
X1	9435	36.00	9451.60	10529.20	100	100	100	.00	.00	.00
GR	122.40	9429.90	121.50	9451.60	112.50	9471.80	105.10	9485.40	104.80	9540.00
GR	104.50	9601.30	104.10	9657.70	104.60	9687.70	104.40	9725.70	104.60	9774.90
GR	97.80	9790.80	96.70	9803.30	97.10	9826.40	97.60	9842.30	97.80	9903.30
GR	97.40	9925.30	96.10	9948.90	95.30	9967.00	95.30	10000.00	95.40	10046.80
GR	96.40	10076.00	97.30	10109.60	97.70	10188.70	103.10	10204.70	102.50	10236.20
GR	102.70	10267.00	103.20	10284.50	103.40	10318.80	103.90	10358.10	104.50	10371.90
GR	104.00	10448.80	103.20	10472.50	103.40	10487.90	112.50	10504.70	122.60	10529.20
GR	123.00	10548.00								
X1	9535	33.00	9450.10	10529.90	100	100	100	.00	.00	.00
GR	122.10	9429.10	121.70	9450.10	112.10	9470.20	104.30	9485.80	104.00	9533.70
GR	104.30	9608.90	105.60	9635.20	104.20	9659.60	104.20	9707.50	103.90	9734.60
GR	104.60	9744.80	104.70	9772.40	97.40	9798.40	97.40	9841.70	97.90	9879.40
GR	96.90	9923.30	95.40	9968.10	94.80	10000.00	95.30	10023.80	96.70	10061.00
GR	97.50	10111.60	97.70	10178.50	103.10	10194.80	103.10	10231.80	102.50	10255.00
GR	103.30	10290.60	103.20	10320.70	103.30	10337.90	104.50	10367.80	104.20	10430.50
GR	103.50	10485.50	111.80	10503.70	122.60	10529.90				

X1	9635	36.00	9447.80	10525.50	100	100	100	.00	.00	.00
GR	122.10	9426.60	121.80	9447.80	111.70	9469.60	103.90	9486.90	104.00	9538.00
GR	103.60	9587.20	104.40	9627.90	104.80	9684.50	104.40	9714.00	104.90	9736.40
GR	104.70	9771.20	96.20	9788.80	95.70	9832.10	97.70	9851.80	97.80	9887.10
GR	95.80	9941.00	95.50	9970.80	95.50	10000.00	95.70	10021.70	96.50	10046.90
GR	97.50	10095.50	97.60	10141.20	97.80	10176.80	104.30	10192.50	104.40	10219.50
GR	102.60	10246.80	102.80	10286.70	103.10	10318.60	103.90	10324.60	104.60	10386.00
GR	105.00	10459.00	103.90	10466.30	104.20	10481.90	113.70	10504.20	122.60	10525.50
GR	122.80	10548.00								
X1	9735	37.00	9448.30	10527.30	100	100	100	0	.00	.00
GR	122.50	9426.40	121.50	9448.30	112.40	9468.50	103.80	9486.40	103.40	9560.30
GR	103.40	9586.00	104.20	9600.40	104.30	9638.60	105.00	9649.00	104.30	9729.30
GR	103.60	9767.10	101.40	9779.00	97.50	9788.40	95.60	9803.10	95.20	9821.20
GR	97.50	9830.40	97.90	9852.00	97.30	9884.70	96.30	9933.10	95.50	9953.20
GR	95.30	9978.40	95.90	10000.00	96.70	10040.50	97.50	10108.30	98.00	10177.10
GR	103.50	10194.30	103.60	10229.80	102.80	10245.50	102.60	10292.70	103.10	10334.00
GR	104.00	10351.80	104.50	10405.30	105.10	10472.10	106.80	10490.70	114.60	10509.70
GR	122.60	10527.30	122.70	10548.60						
X1	9835	33.00	9447.90	10527.00	100	100	100	.00	.00	.00
GR	122.80	9426.70	122.40	9447.90	113.20	9467.90	103.40	9488.80	103.60	9533.70
GR	103.60	9599.40	104.40	9625.70	103.70	9650.10	103.30	9701.60	104.50	9711.50
GR	103.50	9744.80	103.30	9774.90	97.10	9796.70	96.20	9820.00	95.40	9852.20
GR	97.80	9864.50	97.30	9912.50	96.00	9947.60	95.80	9972.20	96.60	10000.00
GR	97.30	10035.80	97.80	10109.40	98.90	10186.70	104.20	10203.20	104.20	10228.00
GR	103.10	10247.20	102.50	10287.10	104.00	10350.30	104.70	10422.70	104.90	10465.70
GR	106.50	10489.90	116.60	10510.70	123.20	10527.00				
X1	9935	29.00	9451.20	10526.30	100	100	100	.00	.00	.00
GR	123.10	9427.20	122.40	9451.20	103.80	9489.90	103.40	9524.50	104.60	9570.90
GR	103.90	9629.90	104.30	9681.20	104.10	9737.00	103.70	9776.50	99.40	9791.10
GR	97.50	9824.80	96.90	9893.10	96.80	9964.60	97.20	10000.00	97.60	10055.70
GR	98.30	10118.20	98.70	10168.50	99.30	10185.00	104.10	10196.30	104.50	10209.40
GR	103.50	10251.80	102.60	10287.90	102.90	10323.20	104.00	10353.30	104.40	10419.80
GR	105.10	10454.90	106.70	10486.40	116.00	10508.50	123.30	10526.30		

BEGIN CHANNELIZATION

X1	10035	11	10020.	11105.	100	100	100			
GR	122.50	10000.	122.00	10020.	105.00	10056.	104.00	10340.	100.00	10356.
GR	97.20	10540.	100.00	10750.	105.00	10770.	105.00	11050.	123.00	11105.
GR	123.00	11150.								
X1	10200	11	10025.	11100.	165	165	165			
GR	122.00	10000.	123.00	10025.	105.00	10065.	104.00	10355.	100.00	10365.
GR	98.10	10548.	100.00	10758.	105.00	10775.	105.00	11060.	123.00	11100.
GR	123.00	11150.								

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X1    10400      11    10035.   11103.     200      200      200
GR   122.00   10000.   122.00   10035.   105.00   10070.   105.00   10353.   100.00   10385.
GR    98.10   10548.   100.00   10758.   105.00   10775.   105.00   11060.   123.00   11103.
GR   123.00   11140.

X1    10600      11    10025.   11100.     200      200      200
GR   123.00   10000.   123.00   10025.   105.00   10068.   105.00   10362.   100.00   10392.
GR    98.50   10544.   100.00   10760.   105.00   10775.   106.00   11050.   124.00   11100.
GR   124.00   11130.

X1    10800      11    10030.   11100.     200      200      200
GR   123.00   10000.   123.00   10030.   105.00   10067.   106.00   10380.   100.00   10400.
GR    99.00   10540.   101.00   10780.   106.00   10800.   107.00   11060.   124.00   11100.
GR   124.00   11145.

X1    11000      11    10022.   11095.     200      200      200
GR   123.00   10000.   123.00   10022.   105.00   10065.   106.00   10392.   101.00   10418.
GR    99.50   10538.   101.00   10810.   106.00   10830.   107.00   11060.   124.00   11095.
GR   125.00   11195.

X1    11200      12    10030.   11100.     200      200      200
GR   123.00   10000.   123.00   10030.   106.00   10064.   106.00   10413.   100.00   10425.
GR   100.00   10538.   100.00   10815.   103.00   10821.   106.00   10875.   107.00   11055.
GR   126.00   11100.   126.00   11160.

X1    11400      11    10030.   11113.     200      200      200
GR   124.00   10000.   124.00   10030.   107.00   10064.   103.40   10405.   100.40   10411.
GR   100.40   10810.   103.40   10816.   108.00   10925.   108.00   11060.   126.00   11113.
GR   128.00   11195.
  BEGIN NORTH LEVEE

X1    11600      12    10030.   11122.     200      200      200
GR   124.00   10000.   124.00   10030.   108.00   10065.   103.90   10399.   100.90   10405.
GR   100.90   10805.   103.90   10811.   103.90   11060.   116.50   11080.   116.50   11089.
GR   127.50   11122.   127.50   11133.

X1    11800      12    10035.   11130.     200      200      200
GR   125.50   10000.   125.00   10035.   110.00   10075.   104.40   10386.   101.40   10392.
GR   101.40   10792.   104.40   10798.   104.40   11071.   116.90   11089.   116.90   11097.
GR   127.90   11130.   127.90   11141.

X1    12000      12    10035.   11130.     200      200      200
GR   127.60   10000.   127.00   10035.   110.00   10070.   104.80   10364.   101.80   10370.
GR   101.80   10770.   104.80   10776.   104.80   11070.   117.40   11089.   117.40   11097.
GR   128.40   11130.   128.40   11140.

X1    12100      12    10035.   11125.     100      100      100
GR   127.80   10000.   127.00   10035.   110.50   10070.   105.10   10347.   102.10   10353.
GR   102.10   10753.   105.10   10759.   105.10   11065.   117.60   11084.   117.60   11092.
GR   128.60   11125.   128.60   11136.
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X1    12200      12    10032.    11123.      100      100      100
GR   128.00   10000.   126.00   10032.   110.00   10082.   105.30   10334.   102.30   10340.
GR   102.30   10740.   105.30   10746.   105.30   11063.   117.80   11082.   117.80   11090.
GR   128.80   11123.   128.80   11134.

X1    12400      12    10047.    11109.      200      200      200
GR   129.30   10000.   129.00   10047.   111.00   10085.   105.80   10308.   102.80   10314.
GR   102.80   10714.   105.80   10720.   105.80   11049.   118.20   11068.   118.20   11076.
GR   129.20   11109.   129.20   11119.

X1    12600      14    10033.    11097.      200      200      200
GR   130.00   10000.   130.00   10033.   118.60   10078.   118.60   10086.   106.20   10105.
GR   106.20   10281.   103.20   10287.   103.20   10687.   106.20   10693.   106.20   11038.
GR   118.60   11056.   118.60   11064.   129.60   11097.   129.60   11108.

X1    12800      14    10055.    11130.      200      200      200
GR   130.40   10000.   131.00   10055.   119.10   10108.   119.10   10116.   106.70   10135.
GR   106.70   10284.   103.70   10290.   103.70   10690.   106.70   10696.   106.70   11071.
GR   119.10   11089.   119.10   11097.   130.00   11130.   130.00   11141.

X1    13000      14    10059.    11115.      200      200      200
GR   132.00   10000.   131.00   10059.   119.40   10087.   119.40   10095.   107.20   10113.
GR   107.20   10244.   104.20   10250.   104.20   10650.   107.20   10656.   107.20   11055.
GR   119.50   11074.   119.50   11082.   130.50   11115.   130.50   11126.

X1    13200      14    10040.    11092.      200      200      200
GR   131.00   10000.   130.00   10040.   119.90   10064.   119.90   10072.   107.70   10090.
GR   107.70   10194.   104.70   10200.   104.70   10600.   107.70   10606.   107.70   11032.
GR   119.90   11051.   119.90   11059.   130.90   11092.   130.90   11102.

X1    13400      14    10040.    11092.      200      200      200
GR   131.00   10000.   130.00   10040.   120.30   10064.   120.30   10072.   108.10   10090.
GR   108.10   10172.   105.10   10178.   105.10   10578.   108.10   10584.   108.10   11032.
GR   120.30   11051.   120.30   11059.   131.30   11092.   131.30   11102.

X1    13600      14    10042.    11087.      200      200      200
GR   132.00   10000.   130.00   10042.   120.80   10067.   120.80   10075.   108.60   10093.
GR   108.60   10144.   105.60   10150.   105.60   10550.   108.60   10556.   108.60   11027.
GR   120.80   11046.   120.80   11054.   131.80   11087.   131.80   11097.

X1    13800      14    10035.    11081.      200      200      200
GR   132.50   10000.   130.00   10035.   121.20   10055.   121.20   10063.   109.10   10081.
GR   109.10   10114.   106.10   10120.   106.10   10520.   109.10   10526.   109.10   11022.
GR   121.20   11040.   121.20   11048.   132.20   11081.   132.20   11092.

X1    14000      14    10033.    11085.      200      200      200
GR   132.00   10000.   130.00   10033.   121.60   10049.   121.60   10057.   109.50   10075.
GR   109.50   10096.   106.50   10102.   106.50   10502.   109.50   10508.   109.50   11026.
GR   121.60   11044.   121.60   11052.   132.60   11085.   132.60   11096.
  BEGIN SOUTH LEVEE
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X1    14200       14    10011.    11093.      200       200       200
GR   133.00    10000.   133.00    10011.   122.00    10044.    122.00    10052.    110.00    10070.
GR   110.00    10091.   107.00    10097.   107.00    10497.    110.00    10503.    110.00    11034.
GR   122.00    11052.   122.00    11060.   133.00    11093.    133.00    11104.
  GRADE CONTROL STRUCTURE NO.2

X1    14400       13    10027.    11093.      200       200       200
GR   133.50    10000.   133.50    10027.   133.50    10035.    110.50    10070.    110.50    10086.
GR   107.50    10092.   107.50    10492.   110.50    10498.    110.50    11034.    122.50    11052.
GR   122.50    11060.   133.50    11093.   133.50    11104.

X1    14665       10    10036.    11068.      265       265       265
GR   134.10    10000.   134.10    10036.   111.20    10070.    111.20    10092.    108.20    10098.
GR   108.20    10498.   111.20    10504.   111.20    11034.    134.10    11068.    134.10    11103.

X1    14785       12    10011.    11068.      120       120       120
GR   134.30    10000.   134.30    10011.   123.30    10044.    123.30    10052.    111.40    10070.
GR   111.40    10092.   108.40    10098.   108.40    10498.    111.40    10504.    111.40    11034.
GR   134.30    11068.   134.30    11103.

X1    15000       14    10011.    11091.      215       215       215
GR   134.70    10000.   134.70    10011.   123.70    10044.    123.70    10052.    111.90    10070.
GR   111.90    10091.   108.90    10097.   108.90    10497.    111.90    10503.    111.90    11033.
GR   123.70    11050.   123.70    11058.   134.70    11091.    134.70    11102.

X1    15200       14    10011.    11091.      200       200       200
GR   135.20    10000.   135.20    10011.   124.20    10044.    124.20    10052.    112.40    10070.
GR   112.40    10091.   109.40    10097.   109.40    10497.    112.40    10503.    112.40    11033.
GR   124.20    11050.   124.20    11058.   135.20    11091.    135.20    11102.

X1    15217       13   10014.1   11091.6       17        17        17
GR    135.2    10000     135.2   10014.1     112.4   10069.5     112.4     10090     109.4     10096
GR    109.4    10496     112.4     10502     112.4   10551.2     112.4   11032.9     124.2   11050.6
GR    124.2  11058.6     135.2   11091.6     135.2   11102.4
   S.R. 153 ALIGNMENT

X1    15326       13   10035.3   11091.6       109       109       109
GR    135.5    10000     135.5   10035.3     112.7   10069.5     112.7     10090     109.7     10096
GR    109.7    10496     112.7     10502     112.7   10551.2     112.7   11032.9     124.5   11050.6
GR    124.5  11058.6     135.5   11091.6     135.5   11102.4

X1    15467       13   10035.3   11091.4       141       141       141
GR    135.7    10000     135.7   10035.3     113.0   10069.5     113.0     10090       110     10096
GR      110    10496     113.0     10502     113.0   10551.1     113.0   11032.7     124.7   11050.4
GR    124.7  11058.4     135.7   11091.4     135.7   11102.2

NC                          .3        .5
X1    15608       11   10035.3     11091       141       141       141
GR    136.0    10000     136.0   10035.3     113.3   10069.4     113.3     10090     110.3     10096
GR    110.3    10496     113.3     10502     113.3   10550.9     113.3   11032.4     136.0     11091
GR    136.0  11101.8
   S.R. 143 BRIDGE
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SB	1.05	1.56	2.6	0	875	80	26567	2	110.7	110.3
X1	15730	13	10010.8	11065.9	122	122	122			
X2			1	141.7	148.7					
GR	136.3	10000	136.3	10010.8	125.3	10043.8	125.3	10051.8	113.7	10069.2
GR	113.7	10090	110.7	10096	110.7	10496	113.7	10502	113.7	10550.6
GR	113.7	11032.0	136.3	11065.9	136.3	11101.2				
X1	15800	13	10010.8	11065.9	70	70	70			
GR	136.4	10000	136.4	10010.8	125.4	10043.8	125.4	10051.8	113.8	10069.2
GR	113.8	10090	110.8	10096	110.8	10496	113.8	10502	113.8	10550.6
GR	113.8	11032	136.4	11065.9	136.4	11101.2				
NC				.1	.3					
X1	16000	16	10011.	11084.	200	200	200			
GR	136.90	10000.	136.90	10011.	125.90	10044.	125.90	10052.	114.30	10078.
GR	114.30	10089.	111.30	10095.	111.30	10495.	114.30	10501.	114.30	11032.
GR	125.90	11050.	125.90	11058.	122.90	11062.	122.90	11063.	136.90	11084.
GR	136.90	11098.								
X1	16200	15	10020.	11096.	200	200	200			
GR	137.30	10000.	137.30	10012.	137.30	10020.	114.70	10081.	114.70	10109.
GR	111.70	10115.	111.70	10515.	114.70	10521.	114.70	11043.	126.30	11061.
GR	126.30	11069.	123.30	11073.	123.30	11074.	137.30	11096.	137.30	11109.
X1	16400	16	10011.	11083.	200	200	200			
GR	137.70	10000.	137.70	10011.	126.70	10044.	126.70	10052.	115.20	10069.
GR	115.20	10102.	112.20	10108.	112.20	10508.	115.20	10514.	115.20	11031.
GR	126.70	11049.	126.70	11057.	123.70	11061.	123.70	11062.	138.30	11083.
GR	138.30	11098.								
X1	16600	16	10011.	11085.	200	200	200			
GR	138.10	10000.	138.10	10011.	127.10	10043.	127.10	10051.	115.70	10069.
GR	115.70	10124.	112.70	10130.	112.70	10530.	115.70	10536.	115.70	11033.
GR	127.10	11050.	127.10	11058.	124.10	11063.	124.10	11064.	138.70	11085.
GR	138.70	11099.								
X1	16800	16	10010.	11087.	200	200	200			
GR	138.60	10000.	138.60	10010.	127.60	10043.	127.60	10051.	116.20	10069.
GR	116.20	10157.	113.20	10163.	113.20	10563.	116.20	10569.	116.20	11035.
GR	127.60	11052.	127.60	11060.	124.60	11065.	124.60	11066.	139.20	11087.
GR	139.20	11101.								
X1	17000	16	10011.	11089.	200	200	200			
GR	139.00	10000.	139.00	10011.	128.00	10044.	128.00	10052.	116.60	10069.
GR	116.60	10205.	113.60	10211.	113.60	10611.	116.60	10617.	116.60	11037.
GR	128.00	11054.	128.00	11062.	125.00	11067.	125.00	11068.	139.60	11089.
GR	139.60	11103.								

X1	17200	16	10011.	11089.	200	200	200			
GR	139.40	10000.	139.40	10011.	128.40	10044.	128.40	10052.	117.10	10069.
GR	117.10	10263.	114.10	10269.	114.10	10669.	117.10	10675.	117.10	11037.
GR	128.40	11054.	128.40	11062.	125.40	11067.	125.40	11068.	140.00	11089.
GR	140.00	11103.								
X1	17400	12	10010.	11088.	200	200	200			
GR	139.80	10000.	139.80	10010.	128.80	10043.	128.80	10051.	117.60	10068.
GR	117.60	10322.	114.60	10328.	114.60	10728.	117.60	10734.	117.60	11036.
GR	140.40	11088.	140.40	11102.						
X1	17600	12	10011.	11070.	200	200	200			
GR	140.30	10000.	140.30	10011.	129.30	10044.	129.30	10052.	118.00	10069.
GR	118.00	10382.	115.00	10388.	115.00	10788.	118.00	10794.	118.00	11035.
GR	140.90	11070.	140.90	11084.						
X1	17800	12	10011.	11067.	200	200	200			
GR	140.70	10000.	140.70	10011.	129.70	10044.	129.70	10052.	118.50	10068.
GR	118.50	10431.	115.50	10437.	115.50	10837.	118.50	10843.	118.50	11033.
GR	141.30	11067.	141.30	11081.						
X1	18000	12	10011.	11065.	200	200	200			
GR	141.00	10000.	141.00	10011.	130.10	10044.	130.10	10052.	119.00	10069.
GR	119.00	10485.	116.00	10491.	116.00	10891.	119.00	10897.	119.00	11031.
GR	141.70	11065.	141.70	11079.						
X1	18200	12	10011.	11061.	200	200	200			
GR	141.50	10000.	141.50	10011.	130.50	10044.	130.50	10052.	119.50	10069.
GR	119.50	10528.	116.50	10534.	116.50	10934.	119.50	10940.	119.50	11027.
GR	142.10	11061.	142.10	11075.						
X1	18400	10	10015.	11080.	200	200	200			
GR	142.00	10000.	142.00	10015.	119.90	10077.	119.90	10567.	116.90	10573.
GR	116.90	10973.	119.90	10979.	119.90	11032.	142.60	11080.	142.60	11090.
X1	18600	10	10018.	11050.	200	200	200			
GR	142.40	10000.	142.40	10018.	120.40	10067.	120.40	10576.	117.40	10582.
GR	117.40	10982.	120.40	10988.	120.40	11016.	143.00	11050.	143.00	11063.
X1	18800	12	10011.	11046.	200	200	200			
GR	142.80	10000.	142.80	10011.	131.80	10044.	131.80	10052.	120.90	10069.
GR	120.90	10587.	117.90	10593.	117.90	10993.	120.90	10999.	120.90	11012.
GR	143.40	11046.	143.40	11060.						
X1	19000	12	10011.	11039.	200	200	200			
GR	143.20	10000.	143.20	10011.	132.20	10044.	132.20	10052.	121.30	10069.
GR	121.30	10586.	118.30	10592.	118.30	10992.	121.30	10998.	121.30	11005.
GR	143.80	11039.	143.80	11053.						

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X1    19200      12    10011.    11031.      200       200       200
GR   143.70   10000.   143.70    10011.   132.70    10044.    132.70   10052.    121.80   10068.
GR   121.80   10574.   118.80    10580.   118.80    10980.    121.80   10986.    121.80   10998.
GR   144.30   11031.   144.30    11045.

X1    19400      12    10011.    11023.      200       200       200
GR   144.10   10000.   144.10    10011.   133.10    10044.    133.10   10052.    122.30   10068.
GR   122.30   10555.   119.30    10561.   119.30    10961.    122.30   10967.    122.30   10989.
GR   144.70   11023.   144.70    11037.

X1    19600      12    10011.    11014.      200       200       200
GR   144.50   10000.   144.50    10011.   133.50    10044.    133.50   10052.    122.80   10068.
GR   122.80   10516.   119.80    10522.   119.80    10922.    122.80   10928.    122.80   10980.
GR   145.10   11014.   145.10    11028.

X1    19800      12    10011.    11005.      200       200       200
GR   145.00   10000.   145.00    10011.   134.00    10044.    134.00   10052.    123.20   10068.
GR   123.20   10480.   120.20    10486.   120.20    10886.    123.20   10892.    123.20   10972.
GR   145.60   11005.   145.60    11019.

X1    20000      12    10010.    10994.      200       200       200
GR   145.60   10000.   145.60    10010.   134.60    10043.    134.60   10051.    123.70   10068.
GR   123.70   10435.   120.70    10441.   120.70    10841.    123.70   10847.    123.70   10961.
GR   145.60   10994.   145.60    11008.

X1    20200      12    10011.    10987.      200       200       200
GR   146.10   10000.   146.10    10011.   135.10    10044.    135.10   10052.    124.20   10068.
GR   124.20   10382.   121.20    10388.   121.20    10788.    124.20   10794.    124.20   10951.
GR   146.10   10987.   146.10    11000.

X1    20400      10    10020.    10987.      200       200       200
GR   146.60   10000.   146.60    10020.   124.60    10066.    124.60   10325.    121.60   10331.
GR   121.60   10731.   124.60    10737.   124.60    10938.    146.60   10987.    146.60   11000.

X1    20600      12    10010.    10965.      200       200       200
GR   147.10   10000.   147.10    10010.   136.10    10043.    136.10   10051.    125.10   10068.
GR   125.10   10276.   122.10    10282.   122.10    10682.    125.10   10688.    125.10   10932.
GR   147.10   10965.   147.10    10979.
  GRADE CONTROL STRUCTURE NO. 3 (NOT CONSTRUCTED DUE TO BEDROCK)

X1    20782      14    10012.    10988.      182       182       182
GR   147.67   10000.   147.67    10012.   136.66    10045.    136.66   10053.    125.56   10069.
GR   125.56   10230.   122.50    10236.   122.50    10636.    125.56   10642.    125.56   10931.
GR   136.66   10947.   136.66    10955.   147.67    10988.    147.67   10999.

X1    20800      14    10012.    10988.       18        18        18
GR   147.70   10000.   147.70    10012.   136.69    10045.    136.69   10053.    125.59   10069.
GR   125.59   10230.   122.53    10236.   122.53    10636.    125.59   10642.    125.59   10931.
GR   136.69   10947.   136.69    10955.   147.70    10988.    147.70   10999.
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X1    21000        10     10032.     10964.       200       200       200
GR   148.20     10000.     148.20     10032.    125.94     10069.    125.94     10190.     122.86     10196.
GR   122.86     10596.     125.94     10602.    125.94     10931.    148.20     10964.     148.20     10999.
  PRIEST BRIDGE WOULD BE AT STA. 21162
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IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

*SECNO 14000.000

14000.000	12.67	119.17	114.85	.00	120.38	1.21	.37	.00	130.00
93000.0	.0	93000.0	.0	.0	10553.0	.0	3629.2	280.8	132.60
.47	.00	8.81	.00	.000	.035	.000	.000	106.50	10060.62
.001829	200.	200.	200.	2	14	0	.00	979.77	11040.38

*SECNO 14200.000

14200.000	12.54	119.54	115.31	.00	120.75	1.21	.37	.00	133.00
93000.0	.0	93000.0	.0	.0	10549.6	.0	3677.7	285.4	133.00
.48	.00	8.82	.00	.000	.035	.000	.000	107.00	10055.69
.001862	200.	200.	200.	0	14	0	.00	992.62	11048.31

*SECNO 14400.000

14400.000	12.40	119.90	115.81	.00	121.13	1.24	.38	.01	133.50
93000.0	.0	93000.0	.0	.0	10420.5	.0	3725.8	289.9	133.50
.48	.00	8.92	.00	.000	.035	.000	.000	107.50	10055.68
.001940	200.	200.	200.	0	14	0	.00	992.43	11048.11

*SECNO 14665.000

14665.000	12.19	120.39	116.52	.00	121.68	1.29	.53	.02	134.10
93000.0	.0	93000.0	.0	.0	10213.7	.0	3788.6	296.0	134.10
.49	.00	9.11	.00	.000	.035	.000	.000	108.20	10056.34
.002071	265.	265.	265.	0	14	0	.00	991.32	11047.66

*SECNO 14785.000

14785.000	12.25	120.65	116.70	.00	121.93	1.28	.25	.00	134.30
93000.0	.0	93000.0	.0	.0	10255.3	.0	3816.8	298.7	134.30
.50	.00	9.07	.00	.000	.035	.000	.000	108.40	10056.02
.002044	120.	120.	120.	1	19	0	.00	991.70	11047.72

*SECNO 15000.000

15000.000	12.18	121.08	117.20	.00	122.38	1.29	.44	.00	134.70
93000.0	.0	93000.0	.0	.0	10197.2	.0	3867.3	303.6	134.70
.50	.00	9.12	.00	.000	.035	.000	.000	108.90	10055.98
.002079	215.	215.	215.	0	19	0	.00	990.27	11046.25

*SECNO 15200.000

15200.000	12.09	121.49	117.70	.00	122.81	1.32	.42	.01	135.20
93000.0	.0	93000.0	.0	.0	10101.1	.0	3913.9	308.1	135.20
.51	.00	9.21	.00	.000	.035	.000	.000	109.40	10056.12
.002145	200.	200.	200.	0	19	0	.00	989.98	11046.11

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 15217.000

15217.000	12.15	121.55	117.70	.00	122.84	1.29	.04	.00	135.20
93000.0	.0	93000.0	.0	.0	10202.0	.0	3917.8	308.5	135.20
.51	.00	9.12	.00	.000	.035	.000	.000	109.40	10047.26
.002098	17.	17.	17.	2	19	0	.00	999.38	11046.63

*SECNO 15326.000

15326.000	12.06	121.76	118.00	.00	123.09	1.32	.23	.01	135.50
93000.0	.0	93000.0	.0	.0	10073.0	.0	3943.2	311.0	135.50
.51	.00	9.23	.00	.000	.035	.000	.000	109.70	10055.90
.002166	109.	109.	109.	2	19	0	.00	990.59	11046.50

*SECNO 15467.000

15467.000	12.07	122.07	118.30	.00	123.39	1.32	.31	.00	135.70
93000.0	.0	93000.0	.0	.0	10072.6	.0	3975.8	314.2	135.70
.52	.00	9.23	.00	.000	.035	.000	.000	110.00	10055.84
.002166	141.	141.	141.	0	19	0	.00	990.57	11046.41

CCHV= .300 CEHV= .500

*SECNO 15608.000

15608.000	12.10	122.40	118.60	.00	123.70	1.30	.30	.01	136.00
93000.0	.0	93000.0	.0	.0	10148.2	.0	4008.5	317.4	136.00
.52	.00	9.16	.00	.000	.035	.000	.000	110.30	10055.73
.002137	141.	141.	141.	2	19	0	.00	1000.15	11055.89

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	80.00	26567.00	2.00	110.70	110.30

*SECNO 15730.000

CLASS A LOW FLOW

3420 BRIDGE W.S.= 122.27 BRIDGE VELOCITY= 9.65 CALCULATED CHANNEL AREA= 9469.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	124.10	.38	0.	93000.	26567.	26567.	141.70	148.70	0.

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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

 15730.000     12.07     122.77       .00        .00     124.10       1.32       .39        .00      136.30
  93000.0        .0    93000.0        .0        .0     10077.9        .0     4036.8      320.2      136.30
      .52       .00       9.23       .00       .000       .035      .000       .000     110.70    10055.59
  .002161      122.       122.      122.         0          0         0        .00     990.02    11045.61

*SECNO 15800.000
 15800.000     12.15     122.95     119.10       .00     124.25       1.30       .15        .01      136.40
  93000.0        .0    93000.0        .0        .0     10151.5        .0     4053.1      321.8      136.40
      .53       .00       9.16       .00       .000       .035      .000       .000     110.80    10055.48
  .002110       70.        70.       70.         2         19         0        .00     990.25    11045.72

CCHV=     .100 CEHV=     .300
*SECNO 16000.000

3265 DIVIDED FLOW

 16000.000     12.05     123.35     119.63       .00     124.69       1.34       .43        .01      136.90
  93000.0        .0    93000.0        .0        .0     10012.3        .0     4099.4      326.4      136.90
      .53       .00       9.29       .00       .000       .035      .000       .000     111.30    10057.71
  .002209      200.       200.      200.         2         19         0        .00     990.63    11063.68

*SECNO 16200.000

3265 DIVIDED FLOW

 16200.000     12.14     123.84     120.00       .00     125.13       1.29       .43        .00      137.30
  93000.0        .0    93000.0        .0        .0     10186.5        .0     4145.8      330.9      137.30
      .54       .00       9.13       .00       .000       .035      .000       .000     111.70    10056.34
  .002120      200.       200.      200.         2         19         0        .00    1003.40    11074.84

*SECNO 16400.000

3265 DIVIDED FLOW

 16400.000     12.04     124.24     120.51       .00     125.57       1.33       .43        .01      137.70
  93000.0        .0    93000.0        .0        .0     10042.1        .0     4192.2      335.5      138.30
      .54       .00       9.26       .00       .000       .035      .000       .000     112.20    10055.63
  .002193      200.       200.      200.         2         19         0        .00     992.02    11062.78
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 16600.000

3265 DIVIDED FLOW

16600.000	11.98	124.68	121.00	.00	126.02	1.34	.44	.00	138.10
93000.0	.0	93000.0	.0	.0	9993.3	.0	4238.2	340.1	138.70
.55	.00	9.31	.00	.000	.035	.000	.000	112.70	10054.83
.002236	200.	200.	200.	0	19	0	.00	994.33	11064.83

*SECNO 16800.000

3265 DIVIDED FLOW

16800.000	11.92	125.12	121.49	.00	126.47	1.35	.45	.00	138.60
93000.0	.0	93000.0	.0	.0	9956.9	.0	4284.0	344.7	139.20
.56	.00	9.34	.00	.000	.035	.000	.000	113.20	10054.92
.002268	200.	200.	200.	0	19	0	.00	996.00	11066.75

*SECNO 17000.000

3265 DIVIDED FLOW

17000.000	11.99	125.59	121.89	.00	126.92	1.33	.45	.00	139.00
93000.0	.0	93000.0	.0	.0	10045.3	.0	4329.9	349.2	139.60
.56	.00	9.26	.00	.000	.035	.000	.000	113.60	10055.59
.002208	200.	200.	200.	2	19	0	.00	997.67	11068.85

*SECNO 17200.000

3265 DIVIDED FLOW

17200.000	11.93	126.03	122.39	.00	127.37	1.35	.45	.00	139.40
93000.0	.0	93000.0	.0	.0	9988.4	.0	4375.9	353.8	140.00
.57	.00	9.31	.00	.000	.035	.000	.000	114.10	10055.56
.002250	200.	200.	200.	1	19	0	.00	997.86	11068.91

*SECNO 17400.000

17400.000	11.88	126.48	122.89	.00	127.83	1.35	.45	.00	139.80
93000.0	.0	93000.0	.0	.0	9957.8	.0	4421.7	358.4	140.40
.57	.00	9.34	.00	.000	.035	.000	.000	114.60	10054.53
.002281	200.	200.	200.	0	19	0	.00	1001.71	11056.24

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
*SECNO 17600.000									
17600.000	11.93	126.93	123.29	.00	128.28	1.35	.45	.00	140.30
93000.0	.0	93000.0	.0	.0	9964.3	.0	4467.4	363.0	140.90
.58	.00	9.33	.00	.000	.035	.000	.000	115.00	10055.57
.002253	200.	200.	200.	0	19	0	.00	993.08	11048.65
*SECNO 17800.000									
17800.000	11.87	127.37	123.80	.00	128.74	1.37	.45	.01	140.70
93000.0	.0	93000.0	.0	.0	9901.9	.0	4513.0	367.5	141.30
.59	.00	9.39	.00	.000	.035	.000	.000	115.50	10055.31
.002295	200.	200.	200.	1	19	0	.00	990.93	11046.24
*SECNO 18000.000									
18000.000	11.82	127.82	124.31	.00	129.21	1.39	.46	.01	141.00
93000.0	.0	93000.0	.0	.0	9829.2	.0	4558.3	372.1	141.70
.59	.00	9.46	.00	.000	.035	.000	.000	116.00	10055.48
.002344	200.	200.	200.	0	19	0	.00	988.75	11044.22
*SECNO 18200.000									
18200.000	11.78	128.28	124.82	.00	129.69	1.41	.47	.01	141.50
93000.0	.0	93000.0	.0	.0	9754.1	.0	4603.3	376.6	142.10
.60	.00	9.53	.00	.000	.035	.000	.000	116.50	10055.42
.002392	200.	200.	200.	0	19	0	.00	984.80	11040.22
*SECNO 18400.000									
18400.000	11.90	128.80	125.22	.00	130.17	1.37	.47	.00	142.00
93000.0	.0	93000.0	.0	.0	9913.4	.0	4648.4	381.2	142.60
.60	.00	9.38	.00	.000	.035	.000	.000	116.90	10052.03
.002304	200.	200.	200.	2	19	0	.00	998.79	11050.82
*SECNO 18600.000									
18600.000	11.84	129.24	125.75	.00	130.65	1.41	.47	.01	142.40
93000.0	.0	93000.0	.0	.0	9750.6	.0	4693.6	385.7	143.00
.61	.00	9.54	.00	.000	.035	.000	.000	117.40	10047.32
.002384	200.	200.	200.	2	19	0	.00	981.98	11029.30

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18800.000

18800.000	11.80	129.70	126.27	.00	131.14	1.44	.48	.01	142.80
93000.0	.0	93000.0	.0	.0	9641.3	.0	4738.1	390.2	143.40
.62	.00	9.65	.00	.000	.035	.000	.000	117.90	10055.27
.002437	200.	200.	200.	0	19	0	.00	970.04	11025.31

*SECNO 19000.000

19000.000	11.88	130.18	126.69	.00	131.63	1.44	.48	.00	143.20
93000.0	.0	93000.0	.0	.0	9649.9	.0	4782.4	394.6	143.80
.62	.00	9.64	.00	.000	.035	.000	.000	118.30	10055.15
.002408	200.	200.	200.	0	19	0	.00	963.27	11018.42

*SECNO 19200.000

19200.000	11.85	130.65	127.21	.00	132.12	1.46	.49	.01	143.70
93000.0	.0	93000.0	.0	.0	9574.7	.0	4826.5	399.0	144.30
.63	.00	9.71	.00	.000	.035	.000	.000	118.80	10054.99
.002447	200.	200.	200.	1	19	0	.00	956.00	11011.00

*SECNO 19400.000

19400.000	11.83	131.13	127.74	.00	132.62	1.50	.50	.01	144.10
93000.0	.0	93000.0	.0	.0	9470.6	.0	4870.2	403.4	144.70
.63	.00	9.82	.00	.000	.035	.000	.000	119.30	10054.91
.002508	200.	200.	200.	1	19	0	.00	947.50	11002.41

*SECNO 19600.000

19600.000	11.81	131.61	128.28	.00	133.14	1.53	.51	.01	144.50
93000.0	.0	93000.0	.0	.0	9381.4	.0	4913.5	407.7	145.10
.64	.00	9.91	.00	.000	.035	.000	.000	119.80	10054.81
.002556	200.	200.	200.	0	19	0	.00	938.64	10993.45

*SECNO 19800.000

19800.000	11.93	132.13	128.70	.00	133.65	1.52	.51	.00	145.00
93000.0	.0	93000.0	.0	.0	9398.7	.0	4956.6	412.0	145.60
.64	.00	9.89	.00	.000	.035	.000	.000	120.20	10054.79
.002511	200.	200.	200.	0	19	0	.00	930.35	10985.14

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 20000.000

20000.000	11.91	132.61	129.24	.00	134.16	1.55	.51	.01	145.60
93000.0	.0	93000.0	.0	.0	9296.6	.0	4999.5	416.3	145.60
.65	.00	10.00	.00	.000	.035	.000	.000	120.70	10054.10
.002567	200.	200.	200.	2	19	0	.00	920.32	10974.43

*SECNO 20200.000

20200.000	11.91	133.11	129.78	.00	134.69	1.58	.52	.01	146.10
93000.0	.0	93000.0	.0	.0	9216.3	.0	5042.0	420.5	146.10
.65	.00	10.09	.00	.000	.035	.000	.000	121.20	10054.91
.002606	200.	200.	200.	0	19	0	.00	910.75	10965.66

*SECNO 20400.000

20400.000	12.05	133.65	130.22	.00	135.21	1.56	.51	.00	146.60
93000.0	.0	93000.0	.0	.0	9285.0	.0	5084.5	424.7	146.60
.66	.00	10.02	.00	.000	.035	.000	.000	121.60	10047.08
.002538	200.	200.	200.	2	19	0	.00	911.07	10958.15

*SECNO 20600.000

20600.000	12.03	134.13	130.75	.00	135.73	1.61	.51	.01	147.10
93000.0	.0	93000.0	.0	.0	9142.4	.0	5126.8	428.8	147.10
.67	.00	10.17	.00	.000	.035	.000	.000	122.10	10054.05
.002602	200.	200.	200.	2	19	0	.00	891.49	10945.54

*SECNO 20782.000

20782.000	12.10	134.60	131.19	.00	136.21	1.60	.47	.00	147.67
93000.0	.0	93000.0	.0	.0	9149.0	.0	5165.0	432.5	147.67
.67	.00	10.17	.00	.000	.035	.000	.000	122.50	10055.98
.002584	182.	182.	182.	0	19	0	.00	888.05	10944.02

*SECNO 20800.000

20800.000	12.13	134.66	131.22	.00	136.25	1.60	.05	.00	147.70
93000.0	.0	93000.0	.0	.0	9169.7	.0	5168.8	432.9	147.70
.67	.00	10.14	.00	.000	.035	.000	.000	122.53	10055.94
.002565	18.	18.	18.	0	19	0	.00	888.12	10944.06

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 21000.000

21000.000	12.37	135.23	131.56	.00	136.75	1.52	.49	.01	148.20
93000.0	.0	93000.0	.0	.0	9398.1	.0	5211.4	437.0	148.20
.68	.00	9.90	.00	.000	.035	.000	.000	122.86	10053.55
.002373	200.	200.	200.	2	19	0	.00	891.23	10944.78

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T1      SIMONS, LI & ASSOCIATES, INC. - TEMPE, ARIZONA
T2      EXISTING CONDITIONS PRIOR TO SR 153 BRIDGE
T3      FILE: SR153E.DAT        215,000 CFS 100-YEAR DISCHARGE

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       0        0         0         0    .00068         0         0    215000      108         0

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       2        0        -1         0         0         0        -1         0         0         0


IHLEQ = 1.  THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF
PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH.  SEE DOCUMENTATION FOR
DETAILS.
*SECNO 14000.000
 14000.000     20.08    126.58    119.80       .00    128.80      2.22       .36       .00    130.00
  215000.0        .0  215000.0        .0        .0   17999.5        .0    5763.2     293.4    132.60
       .32       .00     11.94       .00      .000      .035      .000      .000    106.50  10039.51
   .001764      200.      200.      200.         2        14         0       .00   1027.43  11066.94


*SECNO 14200.000
 14200.000     19.97    126.97    120.21       .00    129.15      2.19       .35       .00    133.00
  215000.0        .0  215000.0        .0        .0   18121.8        .0    5846.1     298.2    133.00
       .33       .00     11.86       .00      .000      .035      .000      .000    107.00  10029.10
   .001764      200.      200.      200.         2        14         0       .00   1045.80  11074.90


*SECNO 14400.000
 14400.000     19.78    127.28    120.71       .00    129.53      2.25       .36       .02    133.50
  215000.0        .0  215000.0        .0        .0   17876.2        .0    5928.8     302.9    133.50
       .33       .00     12.03       .00      .000      .035      .000      .000    107.50  10044.46
   .001810      200.      200.      200.         2        14         0       .00   1029.88  11074.34


*SECNO 14665.000
 14665.000     19.51    127.71    121.41       .00    130.04      2.33       .49       .03    134.10
  215000.0        .0  215000.0        .0        .0   17538.9        .0    6036.5     309.2    134.10
       .34       .00     12.26       .00      .000      .035      .000      .000    108.20  10045.49
   .001889      265.      265.      265.         2        14         0       .00   1013.03  11058.51


*SECNO 14785.000
 14785.000     19.57    127.97    121.62       .00    130.27      2.30       .23       .00    134.30
  215000.0        .0  215000.0        .0        .0   17657.9        .0    6085.0     312.0    134.30
       .34       .00     12.18       .00      .000      .035      .000      .000    108.40  10029.99
   .001883      120.      120.      120.         2        14         0       .00   1028.62  11058.60
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 15000.000

15000.000	19.47	128.37	122.12	.00	130.69	2.32	.41	.00	134.70
215000.0	.0	215000.0	.0	.0	17595.8	.0	6172.0	317.1	134.70
.35	.00	12.22	.00	.000	.035	.000	.000	108.90	10029.97
.001936	215.	215.	215.	0	14	0	.00	1042.06	11072.03

*SECNO 15200.000

15200.000	19.34	128.74	122.63	.00	131.09	2.35	.39	.01	135.20
215000.0	.0	215000.0	.0	.0	17458.9	.0	6252.4	321.9	135.20
.35	.00	12.31	.00	.000	.035	.000	.000	109.40	10030.36
.001985	200.	200.	200.	1	14	0	.00	1041.27	11071.64

*SECNO 15217.000

15217.000	19.42	128.82	122.59	.00	131.13	2.31	.03	.00	135.20
215000.0	.0	215000.0	.0	.0	17616.1	.0	6259.3	322.3	135.20
.35	.00	12.20	.00	.000	.035	.000	.000	109.40	10029.61
.001928	17.	17.	17.	2	19	0	.00	1042.84	11072.45

*SECNO 15326.000

15326.000	19.28	128.98	122.92	.00	131.36	2.38	.21	.02	135.50
215000.0	.0	215000.0	.0	.0	17350.8	.0	6303.0	324.9	135.50
.35	.00	12.39	.00	.000	.035	.000	.000	109.70	10045.08
.001992	109.	109.	109.	2	14	0	.00	1026.96	11072.04

*SECNO 15467.000

15467.000	19.26	129.26	123.20	.00	131.65	2.39	.28	.00	135.70
215000.0	.0	215000.0	.0	.0	17327.1	.0	6359.2	328.2	135.70
.36	.00	12.41	.00	.000	.035	.000	.000	110.00	10045.01
.002001	141.	141.	141.	0	19	0	.00	1027.06	11072.07

CCHV= .300 CEHV= .500

*SECNO 15608.000

15608.000	19.27	129.57	123.49	.00	131.94	2.36	.28	.01	136.00
215000.0	.0	215000.0	.0	.0	17429.8	.0	6415.4	331.5	136.00
.36	.00	12.34	.00	.000	.035	.000	.000	110.30	10044.95
.001965	141.	141.	141.	2	19	0	.00	1029.46	11074.41

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	80.00	26567.00	2.00	110.70	110.30

*SECNO 15730.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 129.06 BRIDGE VELOCITY= 13.92 CALCULATED CHANNEL AREA= 15274.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	132.60	.74	0.	215000.	26567.	26567.	141.70	148.70	0.

15730.000	19.61	130.31	.00	.00	132.60	2.30	.67	.00	136.30
215000.0	.0	215000.0	.0	.0	17681.4	.0	6464.6	334.4	136.30
.36	.00	12.16	.00	.000	.035	.000	.000	110.70	10028.77
.001873	122.	122.	122.	0	0	0	.00	1028.14	11056.91

*SECNO 15800.000

15800.000	19.65	130.45	124.02	.00	132.74	2.29	.13	.00	136.40
215000.0	.0	215000.0	.0	.0	17716.7	.0	6493.0	336.0	136.40
.36	.00	12.14	.00	.000	.035	.000	.000	110.80	10028.67
.001861	70.	70.	70.	0	14	0	.00	1028.29	11056.96

CCHV= .100 CEHV= .300
*SECNO 16000.000

16000.000	19.52	130.82	124.59	.00	133.12	2.30	.38	.01	136.90
215000.0	.0	215000.0	.0	.0	17650.3	.0	6574.2	340.8	136.90
.37	.00	12.18	.00	.000	.035	.000	.000	111.30	10029.23
.001929	200.	200.	200.	0	14	0	.00	1045.66	11074.89

*SECNO 16200.000

16200.000	19.55	131.25	124.93	.00	133.51	2.26	.38	.00	137.30
215000.0	.0	215000.0	.0	.0	17822.5	.0	6655.6	345.6	137.30
.37	.00	12.06	.00	.000	.035	.000	.000	111.70	10036.34
.001877	200.	200.	200.	2	14	0	.00	1050.15	11086.49

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 16400.000

16400.000	19.38	131.58	125.45	.00	133.91	2.33	.38	.02	137.70
215000.0	.0	215000.0	.0	.0	17539.9	.0	6736.8	350.4	138.30
.38	.00	12.26	.00	.000	.035	.000	.000	112.20	10029.36
.001968	200.	200.	200.	2	14	0	.00	1043.98	11073.33

*SECNO 16600.000

16600.000	19.26	131.96	125.94	.00	134.32	2.35	.40	.01	138.10
215000.0	.0	215000.0	.0	.0	17463.6	.0	6817.2	355.2	138.70
.38	.00	12.31	.00	.000	.035	.000	.000	112.70	10028.85
.002002	200.	200.	200.	0	14	0	.00	1046.46	11075.31

*SECNO 16800.000

16800.000	19.15	132.35	126.39	.00	134.73	2.37	.40	.01	138.60
215000.0	.0	215000.0	.0	.0	17387.3	.0	6897.2	360.0	139.20
.39	.00	12.37	.00	.000	.035	.000	.000	113.20	10028.72
.002037	200.	200.	200.	0	19	0	.00	1048.44	11077.16

*SECNO 17000.000

17000.000	19.16	132.76	126.78	.00	135.13	2.37	.41	.00	139.00
215000.0	.0	215000.0	.0	.0	17405.2	.0	6977.1	364.8	139.60
.39	.00	12.35	.00	.000	.035	.000	.000	113.60	10029.73
.002032	200.	200.	200.	0	19	0	.00	1049.43	11079.16

*SECNO 17200.000

17200.000	19.06	133.16	127.27	.00	135.55	2.39	.41	.01	139.40
215000.0	.0	215000.0	.0	.0	17316.0	.0	7056.8	369.7	140.00
.40	.00	12.42	.00	.000	.035	.000	.000	114.10	10029.70
.002067	200.	200.	200.	1	19	0	.00	1049.46	11079.17

*SECNO 17400.000

17400.000	18.95	133.55	127.75	.00	135.98	2.42	.42	.01	139.80
215000.0	.0	215000.0	.0	.0	17206.2	.0	7136.0	374.5	140.40
.40	.00	12.50	.00	.000	.035	.000	.000	114.60	10028.72
.002087	200.	200.	200.	1	19	0	.00	1043.68	11072.40

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 17600.000

17600.000	18.94	133.94	128.18	.00	136.41	2.47	.42	.01	140.30
215000.0	.0	215000.0	.0	.0	17056.5	.0	7214.7	379.2	140.90
.40	.00	12.61	.00	.000	.035	.000	.000	115.00	10030.07
.002114	200.	200.	200.	2	19	0	.00	1029.29	11059.37

*SECNO 17800.000

17800.000	18.84	134.34	128.68	.00	136.85	2.50	.43	.01	140.70
215000.0	.0	215000.0	.0	.0	16938.4	.0	7292.7	383.9	141.30
.41	.00	12.69	.00	.000	.035	.000	.000	115.50	10030.04
.002157	200.	200.	200.	1	19	0	.00	1026.60	11056.64

*SECNO 18000.000

18000.000	18.75	134.75	129.20	.00	137.29	2.54	.44	.01	141.00
215000.0	.0	215000.0	.0	.0	16812.9	.0	7370.2	388.7	141.70
.41	.00	12.79	.00	.000	.035	.000	.000	116.00	10029.88
.002205	200.	200.	200.	1	19	0	.00	1024.73	11054.61

*SECNO 18200.000

18200.000	18.67	135.17	129.72	.00	137.76	2.59	.45	.01	141.50
215000.0	.0	215000.0	.0	.0	16655.0	.0	7447.0	393.4	142.10
.42	.00	12.91	.00	.000	.035	.000	.000	116.50	10030.00
.002263	200.	200.	200.	2	19	0	.00	1020.57	11050.57

*SECNO 18400.000

18400.000	18.80	135.70	130.13	.00	138.21	2.51	.44	.01	142.00
215000.0	.0	215000.0	.0	.0	16920.9	.0	7524.1	398.1	142.60
.42	.00	12.71	.00	.000	.035	.000	.000	116.90	10032.67
.002173	200.	200.	200.	2	19	0	.00	1032.73	11065.41

*SECNO 18600.000

18600.000	18.66	136.06	130.69	.00	138.69	2.62	.44	.04	142.40
215000.0	.0	215000.0	.0	.0	16539.5	.0	7600.9	402.7	143.00
.43	.00	13.00	.00	.000	.035	.000	.000	117.40	10032.12
.002274	200.	200.	200.	2	19	0	.00	1007.45	11039.56

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18800.000

18800.000	18.58	136.48	131.23	.00	139.17	2.69	.46	.02	142.80
215000.0	.0	215000.0	.0	.0	16336.6	.0	7676.4	407.4	143.40
.43	.00	13.16	.00	.000	.035	.000	.000	117.90	10029.96
.002366	200.	200.	200.	2	19	0	.00	1005.59	11035.54

*SECNO 19000.000

19000.000	18.64	136.94	131.68	.00	139.65	2.70	.47	.00	143.20
215000.0	.0	215000.0	.0	.0	16291.4	.0	7751.3	412.0	143.80
.43	.00	13.20	.00	.000	.035	.000	.000	118.30	10029.77
.002367	200.	200.	200.	0	19	0	.00	998.88	11028.64

*SECNO 19200.000

19200.000	18.58	137.38	132.23	.00	140.14	2.76	.48	.02	143.70
215000.0	.0	215000.0	.0	.0	16120.3	.0	7825.7	416.5	144.30
.44	.00	13.34	.00	.000	.035	.000	.000	118.80	10029.95
.002427	200.	200.	200.	2	19	0	.00	990.90	11020.85

*SECNO 19400.000

19400.000	18.53	137.83	132.84	.00	140.66	2.83	.49	.02	144.10
215000.0	.0	215000.0	.0	.0	15937.6	.0	7899.3	421.1	144.70
.44	.00	13.49	.00	.000	.035	.000	.000	119.30	10029.81
.002493	200.	200.	200.	2	15	0	.00	982.76	11012.57

*SECNO 19600.000

19600.000	18.49	138.29	133.41	.00	141.18	2.89	.50	.02	144.50
215000.0	.0	215000.0	.0	.0	15763.5	.0	7972.1	425.6	145.10
.45	.00	13.64	.00	.000	.035	.000	.000	119.80	10029.63
.002555	200.	200.	200.	2	15	0	.00	973.99	11003.62

*SECNO 19800.000

19800.000	18.59	138.79	133.86	.00	141.69	2.90	.51	.00	145.00
215000.0	.0	215000.0	.0	.0	15731.5	.0	8044.4	430.0	145.60
.45	.00	13.67	.00	.000	.035	.000	.000	120.20	10029.61
.002543	200.	200.	200.	0	15	0	.00	965.36	10994.98

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 20000.000

20000.000	18.56	139.26	134.44	.00	142.23	2.97	.52	.02	145.60
215000.0	.0	215000.0	.0	.0	15533.6	.0	8116.2	434.4	145.60
.45	.00	13.84	.00	.000	.035	.000	.000	120.70	10029.03
.002616	200.	200.	200.	2	15	0	.00	955.41	10984.44

*SECNO 20200.000

20200.000	18.54	139.74	135.02	.00	142.78	3.04	.53	.02	146.10
215000.0	.0	215000.0	.0	.0	15369.9	.0	8187.1	438.8	146.10
.46	.00	13.99	.00	.000	.035	.000	.000	121.20	10030.08
.002676	200.	200.	200.	2	15	0	.00	946.47	10976.55

*SECNO 20400.000

20400.000	18.70	140.30	135.45	.00	143.31	3.01	.53	.00	146.60
215000.0	.0	215000.0	.0	.0	15439.6	.0	8257.8	443.1	146.60
.46	.00	13.93	.00	.000	.035	.000	.000	121.60	10033.17
.002606	200.	200.	200.	2	15	0	.00	939.79	10972.97

*SECNO 20600.000

20600.000	18.66	140.76	136.07	.00	143.87	3.12	.53	.03	147.10
215000.0	.0	215000.0	.0	.0	15171.0	.0	8328.1	447.4	147.10
.47	.00	14.17	.00	.000	.035	.000	.000	122.10	10029.03
.002718	200.	200.	200.	2	15	0	.00	926.45	10955.48

*SECNO 20782.000

20782.000	18.79	141.29	136.53	.00	144.37	3.08	.49	.00	147.67
215000.0	.0	215000.0	.0	.0	15268.5	.0	8391.7	451.3	147.67
.47	.00	14.08	.00	.000	.035	.000	.000	122.50	10031.11
.002703	182.	182.	182.	2	15	0	.00	937.77	10968.89

*SECNO 20800.000

20800.000	18.82	141.35	136.57	.00	144.42	3.07	.05	.00	147.70
215000.0	.0	215000.0	.0	.0	15286.0	.0	8398.0	451.7	147.70
.47	.00	14.07	.00	.000	.035	.000	.000	122.53	10031.06
.002693	18.	18.	18.	0	15	0	.00	937.88	10968.94

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 21000.000

21000.000	19.08	141.94	136.85	.00	144.95	3.01	.52	.01	148.20
215000.0	.0	215000.0	.0	.0	15442.6	.0	8468.6	455.9	148.20
.47	.00	13.92	.00	.000	.035	.000	.000	122.86	10042.41
.002513	200.	200.	200.	2	15	0	.00	912.31	10954.72

T1 SIMONS, LI & ASSOCIATES, INC. - TEMPE, ARIZONA
T2 EXISTING CONDITIONS PRIOR TO SR 153 BRIDGE
T3 FILE: SR153E.DAT 289,000 CFS SPF DISCHARGE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	.00068	0	0	289000	110	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3	0	-1	0	0	0	-1	0	0	0

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

*SECNO 14000.000

14000.000	23.68	130.18	122.37	.00	132.93	2.75	.35	.01	130.00
289000.0	.1	288999.9	.0	.3	21732.0	.0	6843.1	302.0	132.60
.28	.25	13.30	.00	.050	.035	.000	.000	106.50	10029.98
.001741	200.	200.	200.	2	14	0	.00	1047.76	11077.75

*SECNO 14200.000

14200.000	23.59	130.59	122.76	.00	133.28	2.69	.35	.01	133.00
289000.0	.0	289000.0	.0	.0	21950.7	.0	6943.4	306.9	133.00
.29	.00	13.17	.00	.000	.035	.000	.000	107.00	10018.23
.001731	200.	200.	200.	2	14	0	.00	1067.54	11085.77

*SECNO 14400.000

14400.000	23.38	130.88	123.23	.00	133.66	2.78	.35	.03	133.50
289000.0	.0	289000.0	.0	.0	21613.0	.0	7043.4	311.7	133.50
.29	.00	13.37	.00	.000	.035	.000	.000	107.50	10038.98
.001777	200.	200.	200.	2	14	0	.00	1046.16	11085.14

*SECNO 14665.000

14665.000	23.08	131.28	123.90	.00	134.17	2.89	.48	.03	134.10
289000.0	.0	289000.0	.0	.0	21174.8	.0	7173.6	318.0	134.10
.30	.00	13.65	.00	.000	.035	.000	.000	108.20	10040.19
.001852	265.	265.	265.	2	14	0	.00	1023.63	11063.81

*SECNO 14785.000

14785.000	23.16	131.56	124.14	.00	134.40	2.84	.22	.01	134.30
289000.0	.0	289000.0	.0	.0	21382.2	.0	7232.2	320.9	134.30
.30	.00	13.52	.00	.000	.035	.000	.000	108.40	10019.21
.001839	120.	120.	120.	2	14	0	.00	1044.73	11063.94

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 15000.000

15000.000	23.06	131.96	124.68	.00	134.80	2.84	.40	.00	134.70
289000.0	.0	289000.0	.0	.0	21368.8	.0	7337.7	326.1	134.70
.31	.00	13.52	.00	.000	.035	.000	.000	108.90	10019.22
.001884	215.	215.	215.	0	14	0	.00	1063.56	11082.78

*SECNO 15200.000

15200.000	22.92	132.32	125.18	.00	135.19	2.88	.38	.01	135.20
289000.0	.0	289000.0	.0	.0	21224.9	.0	7435.5	331.0	135.20
.31	.00	13.62	.00	.000	.035	.000	.000	109.40	10019.62
.001925	200.	200.	200.	1	14	0	.00	1062.75	11082.38

*SECNO 15217.000

15217.000	22.99	132.39	125.10	.00	135.23	2.84	.03	.00	135.20
289000.0	.0	289000.0	.0	.0	21381.4	.0	7443.8	331.4	135.20
.31	.00	13.52	.00	.000	.035	.000	.000	109.40	10020.92
.001875	17.	17.	17.	2	19	0	.00	1062.26	11083.18

*SECNO 15326.000

15326.000	22.83	132.53	125.44	.00	135.47	2.93	.21	.03	135.50
289000.0	.0	289000.0	.0	.0	21029.5	.0	7496.8	334.0	135.50
.31	.00	13.74	.00	.000	.035	.000	.000	109.70	10039.75
.001939	109.	109.	109.	2	14	0	.00	1042.96	11082.70

*SECNO 15467.000

15467.000	22.80	132.80	125.72	.00	135.74	2.94	.27	.00	135.70
289000.0	.0	289000.0	.0	.0	20998.3	.0	7564.9	337.4	135.70
.31	.00	13.76	.00	.000	.035	.000	.000	110.00	10039.66
.001948	141.	141.	141.	0	19	0	.00	1043.05	11082.71

CCHV= .300 CEHV= .500

*SECNO 15608.000

15608.000	22.81	133.11	125.96	.00	136.02	2.91	.27	.01	136.00
289000.0	.0	289000.0	.0	.0	21097.2	.0	7633.0	340.8	136.00
.32	.00	13.70	.00	.000	.035	.000	.000	110.30	10039.64
.001918	141.	141.	141.	2	19	0	.00	1043.90	11083.54

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	80.00	26567.00	2.00	110.70	110.30

*SECNO 15730.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 132.35 BRIDGE VELOCITY= 15.77 CALCULATED CHANNEL AREA= 18149.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	136.83	.93	0.	289000.	26567.	26567.	141.70	148.70	0.

15730.000	23.34	134.04	.00	.00	136.83	2.79	.81	.00	136.30
289000.0	.0	289000.0	.0	.0	21547.4	.0	7692.7	343.7	136.30
.32	.00	13.41	.00	.000	.035	.000	.000	110.70	10017.58
.001793	122.	122.	122.	0	0	0	.00	1044.92	11062.51

*SECNO 15800.000

15800.000	23.37	134.17	126.54	.00	136.96	2.79	.13	.00	136.40
289000.0	.0	289000.0	.0	.0	21578.6	.0	7727.4	345.4	136.40
.32	.00	13.39	.00	.000	.035	.000	.000	110.80	10017.50
.001784	70.	70.	70.	0	14	0	.00	1045.06	11062.55

CCHV= .100 CEHV= .300
*SECNO 16000.000

16000.000	23.23	134.53	127.14	.00	137.32	2.79	.36	.00	136.90
289000.0	.0	289000.0	.0	.0	21557.5	.0	7826.4	350.2	136.90
.33	.00	13.41	.00	.000	.035	.000	.000	111.30	10018.10
.001831	200.	200.	200.	0	14	0	.00	1062.34	11080.45

*SECNO 16200.000

16200.000	23.24	134.94	127.43	.00	137.69	2.75	.36	.00	137.30
289000.0	.0	289000.0	.0	.0	21732.6	.0	7925.8	355.1	137.30
.33	.00	13.30	.00	.000	.035	.000	.000	111.70	10026.36
.001789	200.	200.	200.	2	14	0	.00	1065.93	11092.30

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 16400.000

16400.000	23.05	135.25	127.99	.00	138.08	2.83	.37	.03	137.70
289000.0	.0	289000.0	.0	.0	21399.7	.0	8024.8	360.0	138.30
.33	.00	13.50	.00	.000	.035	.000	.000	112.20	10018.35
.001874	200.	200.	200.	2	14	0	.00	1060.26	11078.61

*SECNO 16600.000

16600.000	22.91	135.61	128.48	.00	138.47	2.86	.38	.01	138.10
289000.0	.0	289000.0	.0	.0	21312.6	.0	8122.8	364.9	138.70
.34	.00	13.56	.00	.000	.035	.000	.000	112.70	10018.23
.001904	200.	200.	200.	0	14	0	.00	1062.33	11080.56

*SECNO 16800.000

16800.000	22.78	135.98	128.93	.00	138.86	2.88	.38	.01	138.60
289000.0	.0	289000.0	.0	.0	21214.6	.0	8220.5	369.7	139.20
.34	.00	13.62	.00	.000	.035	.000	.000	113.20	10017.85
.001938	200.	200.	200.	1	19	0	.00	1064.52	11082.37

*SECNO 17000.000

17000.000	22.76	136.36	129.32	.00	139.25	2.88	.39	.00	139.00
289000.0	.0	289000.0	.0	.0	21216.3	.0	8317.9	374.6	139.60
.35	.00	13.62	.00	.000	.035	.000	.000	113.60	10018.92
.001940	200.	200.	200.	0	19	0	.00	1065.42	11084.34

*SECNO 17200.000

17200.000	22.63	136.73	129.82	.00	139.65	2.91	.39	.01	139.40
289000.0	.0	289000.0	.0	.0	21100.3	.0	8415.0	379.5	140.00
.35	.00	13.70	.00	.000	.035	.000	.000	114.10	10018.97
.001976	200.	200.	200.	1	19	0	.00	1065.35	11084.32

*SECNO 17400.000

17400.000	22.50	137.10	130.26	.00	140.06	2.96	.40	.01	139.80
289000.0	.0	289000.0	.0	.0	20933.9	.0	8511.5	384.4	140.40
.35	.00	13.81	.00	.000	.035	.000	.000	114.60	10018.10
.002012	200.	200.	200.	2	19	0	.00	1062.38	11080.47

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 17600.000

17600.000	22.46	137.46	130.70	.00	140.49	3.02	.41	.02	140.30
289000.0	.0	289000.0	.0	.0	20705.8	.0	8607.1	389.2	140.90
.36	.00	13.96	.00	.000	.035	.000	.000	115.00	10019.52
.002047	200.	200.	200.	2	19	0	.00	1045.22	11064.74

*SECNO 17800.000

17800.000	22.34	137.84	131.21	.00	140.91	3.07	.41	.01	140.70
289000.0	.0	289000.0	.0	.0	20545.3	.0	8701.8	394.0	141.30
.36	.00	14.07	.00	.000	.035	.000	.000	115.50	10019.58
.002093	200.	200.	200.	2	19	0	.00	1042.26	11061.84

*SECNO 18000.000

18000.000	22.23	138.23	131.73	.00	141.35	3.12	.42	.01	141.00
289000.0	.0	289000.0	.0	.0	20394.1	.0	8795.8	398.8	141.70
.37	.00	14.17	.00	.000	.035	.000	.000	116.00	10019.38
.002139	200.	200.	200.	2	19	0	.00	1040.43	11059.81

*SECNO 18200.000

18200.000	22.13	138.63	132.26	.00	141.80	3.17	.43	.02	141.50
289000.0	.0	289000.0	.0	.0	20211.2	.0	8889.0	403.6	142.10
.37	.00	14.30	.00	.000	.035	.000	.000	116.50	10019.62
.002192	200.	200.	200.	2	19	0	.00	1036.15	11055.77

*SECNO 18400.000

18400.000	22.26	139.16	132.61	.00	142.24	3.08	.43	.01	142.00
289000.0	.0	289000.0	.0	.0	20526.4	.0	8982.5	408.4	142.60
.37	.00	14.08	.00	.000	.035	.000	.000	116.90	10022.96
.002111	200.	200.	200.	2	19	0	.00	1049.77	11072.73

*SECNO 18600.000

18600.000	22.08	139.48	133.19	.00	142.72	3.24	.43	.05	142.40
289000.0	.0	289000.0	.0	.0	20006.4	.0	9075.6	413.1	143.00
.38	.00	14.45	.00	.000	.035	.000	.000	117.40	10024.50
.002221	200.	200.	200.	2	19	0	.00	1020.21	11044.71

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18800.000

18800.000	21.98	139.88	133.79	.00	143.20	3.31	.45	.02	142.80
289000.0	.0	289000.0	.0	.0	19784.9	.0	9166.9	417.8	143.40
.38	.00	14.61	.00	.000	.035	.000	.000	117.90	10019.75
.002308	200.	200.	200.	2	19	0	.00	1020.94	11040.69

*SECNO 19000.000

19000.000	22.03	140.33	134.30	.00	143.67	3.34	.46	.01	143.20
289000.0	.0	289000.0	.0	.0	19705.6	.0	9257.6	422.5	143.80
.39	.00	14.67	.00	.000	.035	.000	.000	118.30	10019.59
.002319	200.	200.	200.	0	15	0	.00	1014.18	11033.77

*SECNO 19200.000

19200.000	21.94	140.74	134.86	.00	144.16	3.42	.47	.02	143.70
289000.0	.0	289000.0	.0	.0	19475.2	.0	9347.5	427.1	144.30
.39	.00	14.84	.00	.000	.035	.000	.000	118.80	10019.87
.002387	200.	200.	200.	2	15	0	.00	1005.91	11025.78

*SECNO 19400.000

19400.000	21.87	141.17	135.42	.00	144.67	3.50	.48	.02	144.10
289000.0	.0	289000.0	.0	.0	19244.6	.0	9436.4	431.7	144.70
.39	.00	15.02	.00	.000	.035	.000	.000	119.30	10019.79
.002456	200.	200.	200.	2	15	0	.00	997.85	11017.64

*SECNO 19600.000

19600.000	21.81	141.61	135.99	.00	145.19	3.58	.50	.02	144.50
289000.0	.0	289000.0	.0	.0	19020.7	.0	9524.3	436.3	145.10
.40	.00	15.19	.00	.000	.035	.000	.000	119.80	10019.67
.002524	200.	200.	200.	2	15	0	.00	989.01	11008.68

*SECNO 19800.000

19800.000	21.90	142.10	136.46	.00	145.71	3.61	.51	.01	145.00
289000.0	.0	289000.0	.0	.0	18947.7	.0	9611.4	440.8	145.60
.40	.00	15.25	.00	.000	.035	.000	.000	120.20	10019.69
.002527	200.	200.	200.	1	15	0	.00	980.15	10999.85

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 20000.000

20000.000	21.84	142.54	137.05	.00	146.25	3.71	.51	.03	145.60
289000.0	.0	289000.0	.0	.0	18694.8	.0	9697.8	445.3	145.60
.40	.00	15.46	.00	.000	.035	.000	.000	120.70	10019.18
.002607	200.	200.	200.	2	15	0	.00	970.21	10989.39

*SECNO 20200.000

20200.000	21.81	143.01	137.64	.00	146.80	3.79	.53	.03	146.10
289000.0	.0	289000.0	.0	.0	18488.0	.0	9783.2	449.7	146.10
.41	.00	15.63	.00	.000	.035	.000	.000	121.20	10020.27
.002673	200.	200.	200.	2	15	0	.00	961.65	10981.92

*SECNO 20400.000

20400.000	21.95	143.55	138.07	.00	147.33	3.79	.53	.00	146.60
289000.0	.0	289000.0	.0	.0	18510.1	.0	9868.1	454.1	146.60
.41	.00	15.61	.00	.000	.035	.000	.000	121.60	10026.39
.002628	200.	200.	200.	1	15	0	.00	953.79	10980.19

*SECNO 20600.000

20600.000	21.89	143.99	138.72	.00	147.91	3.92	.54	.04	147.10
289000.0	.0	289000.0	.0	.0	18193.4	.0	9952.4	458.5	147.10
.41	.00	15.88	.00	.000	.035	.000	.000	122.10	10019.32
.002742	200.	200.	200.	2	15	0	.00	941.02	10960.34

*SECNO 20782.000

20782.000	22.08	144.58	139.21	.00	148.41	3.84	.50	.01	147.67
289000.0	.0	289000.0	.0	.0	18379.3	.0	10028.8	462.4	147.67
.42	.00	15.72	.00	.000	.035	.000	.000	122.50	10021.27
.002709	182.	182.	182.	2	15	0	.00	957.45	10978.73

*SECNO 20800.000

20800.000	22.10	144.63	139.25	.00	148.46	3.83	.05	.00	147.70
289000.0	.0	289000.0	.0	.0	18397.3	.0	10036.4	462.8	147.70
.42	.00	15.71	.00	.000	.035	.000	.000	122.53	10021.22
.002701	18.	18.	18.	0	15	0	.00	957.56	10978.78

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 21000.000

21000.000	22.31	145.17	139.51	.00	148.99	3.83	.53	.00	148.20
289000.0	.0	289000.0	.0	.0	18411.3	.0	10120.9	467.1	148.20
.42	.00	15.70	.00	.000	.035	.000	.000	122.86	10037.03
.002571	200.	200.	200.	0	15	0	.00	922.48	10959.51

THIS RUN EXECUTED 18JAN94 13:47:33

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HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FILE: SR153E.DAT

SUMMARY PRINTOUT

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
14000.000	93000.00	119.17	114.85	120.38	8.81	12.67	979.77	18.29	1.23	.47	10.83
14000.000	215000.00	126.58	119.80	128.80	11.94	20.08	1027.43	17.64	1.93	.50	23.03
14000.000	289000.00	130.18	122.37	132.93	13.30	23.68	1047.76	17.41	2.26	.51	30.06
14200.000	93000.00	119.54	115.31	120.75	8.82	12.54	992.62	18.62	1.24	.48	10.89
14200.000	215000.00	126.97	120.21	129.15	11.86	19.97	1045.80	17.64	1.91	.50	22.63
14200.000	289000.00	130.59	122.76	133.28	13.17	23.59	1067.54	17.31	2.22	.51	29.24
14400.000	93000.00	119.90	115.81	121.13	8.92	12.40	992.43	19.40	1.27	.49	11.34
14400.000	215000.00	127.28	120.71	129.53	12.03	19.78	1029.88	18.10	1.96	.51	23.58
14400.000	289000.00	130.88	123.23	133.66	13.37	23.38	1046.16	17.77	2.29	.52	30.64
14665.000	93000.00	120.39	116.52	121.68	9.11	12.19	991.32	20.71	1.33	.50	12.12
14665.000	215000.00	127.71	121.41	130.04	12.26	19.51	1013.03	18.89	2.04	.52	25.02
14665.000	289000.00	131.28	123.90	134.17	13.65	23.08	1023.63	18.52	2.39	.53	32.63
14785.000	93000.00	120.65	116.70	121.93	9.07	12.25	991.70	20.44	1.32	.50	11.96
14785.000	215000.00	127.97	121.62	130.27	12.18	19.57	1028.62	18.83	2.02	.52	24.56
14785.000	289000.00	131.56	124.14	134.40	13.52	23.16	1044.73	18.39	2.35	.53	31.74
15000.000	93000.00	121.08	117.20	122.38	9.12	12.18	990.27	20.79	1.34	.50	12.18
15000.000	215000.00	128.37	122.12	130.69	12.22	19.47	1042.06	19.36	2.04	.52	24.93
15000.000	289000.00	131.96	124.68	134.80	13.52	23.06	1063.56	18.84	2.36	.53	31.94
15200.000	93000.00	121.49	117.70	122.81	9.21	12.09	989.98	21.45	1.37	.51	12.57
15200.000	215000.00	128.74	122.63	131.09	12.31	19.34	1041.27	19.85	2.08	.53	25.58
15200.000	289000.00	132.32	125.18	135.19	13.62	22.92	1062.75	19.25	2.40	.54	32.66
15217.000	93000.00	121.55	117.70	122.84	9.12	12.15	999.38	20.98	1.34	.50	12.18
15217.000	215000.00	128.82	122.59	131.13	12.20	19.42	1042.84	19.28	2.03	.52	24.80
15217.000	289000.00	132.39	125.10	135.23	13.52	22.99	1062.26	18.75	2.35	.53	31.82

Ex.

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
15326.000	93000.00	121.76	118.00	123.09	9.23	12.06	990.59	21.66	1.37	.51	12.69
15326.000	215000.00	128.98	122.92	131.36	12.39	19.28	1026.96	19.92	2.10	.53	26.02
15326.000	289000.00	132.53	125.44	135.47	13.74	22.83	1042.96	19.39	2.44	.54	33.52
15467.000	93000.00	122.07	118.30	123.39	9.23	12.07	990.57	21.66	1.37	.51	12.69
15467.000	215000.00	129.26	123.20	131.65	12.41	19.26	1027.06	20.01	2.11	.53	26.14
15467.000	289000.00	132.80	125.72	135.74	13.76	22.80	1043.05	19.48	2.45	.54	33.69
15608.000	93000.00	122.40	118.60	123.70	9.16	12.10	1000.15	21.37	1.35	.51	12.40
15608.000	215000.00	129.57	123.49	131.94	12.34	19.27	1029.46	19.65	2.08	.53	25.61
15608.000	289000.00	133.11	125.96	136.02	13.70	22.81	1043.90	19.18	2.42	.54	33.13
15730.000	93000.00	122.77	.00	124.10	9.23	12.07	990.02	21.61	1.37	.51	12.67
15730.000	215000.00	130.31	.00	132.60	12.16	19.61	1028.14	18.73	2.01	.52	24.44
15730.000	289000.00	134.04	.00	136.83	13.41	23.34	1044.92	17.93	2.31	.52	30.94
15800.000	93000.00	122.95	119.10	124.25	9.16	12.15	990.25	21.10	1.35	.50	12.37
15800.000	215000.00	130.45	124.02	132.74	12.14	19.65	1028.29	18.61	2.00	.52	24.28
15800.000	289000.00	134.17	126.54	136.96	13.39	23.37	1045.06	17.84	2.30	.52	30.79
16000.000	93000.00	123.35	119.63	124.69	9.29	12.05	990.63	22.09	1.37	.52	12.74
16000.000	215000.00	130.82	124.59	133.12	12.18	19.52	1045.66	19.29	2.03	.52	24.74
16000.000	289000.00	134.53	127.14	137.32	13.41	23.23	1062.34	18.31	2.32	.52	31.08
16200.000	93000.00	123.84	120.00	125.13	9.13	12.14	1003.40	21.20	1.32	.51	12.08
16200.000	215000.00	131.25	124.93	133.51	12.06	19.55	1050.15	18.77	1.99	.52	23.98
16200.000	289000.00	134.94	127.43	137.69	13.30	23.24	1065.93	17.89	2.28	.52	30.27
16400.000	93000.00	124.24	120.51	125.57	9.26	12.04	992.02	21.93	1.36	.52	12.64
16400.000	215000.00	131.58	125.45	133.91	12.26	19.38	1043.98	19.68	2.06	.53	25.29
16400.000	289000.00	135.25	127.99	138.08	13.50	23.05	1060.26	18.74	2.36	.53	31.87
16600.000	93000.00	124.68	121.00	126.02	9.31	11.98	994.33	22.36	1.38	.52	12.85
16600.000	215000.00	131.96	125.94	134.32	12.31	19.26	1046.46	20.02	2.09	.53	25.67
16600.000	289000.00	135.61	128.48	138.47	13.56	22.91	1062.33	19.04	2.38	.53	32.32
16800.000	93000.00	125.12	121.49	126.47	9.34	11.92	996.00	22.68	1.39	.52	13.01
16800.000	215000.00	132.35	126.39	134.73	12.37	19.15	1048.44	20.37	2.11	.54	26.06
16800.000	289000.00	135.98	128.93	138.86	13.62	22.78	1064.52	19.38	2.41	.54	32.84
17000.000	93000.00	125.59	121.89	126.92	9.26	11.99	997.67	22.08	1.37	.52	12.64
17000.000	215000.00	132.76	126.78	135.13	12.35	19.16	1049.43	20.32	2.10	.53	25.98
17000.000	289000.00	136.36	129.32	139.25	13.62	22.76	1065.42	19.40	2.41	.54	32.84
17200.000	93000.00	126.03	122.39	127.37	9.31	11.93	997.86	22.50	1.38	.52	12.89
17200.000	215000.00	133.16	127.27	135.55	12.42	19.06	1049.46	20.67	2.13	.54	26.43
17200.000	289000.00	136.73	129.82	139.65	13.70	22.63	1065.35	19.76	2.44	.54	33.44
17400.000	93000.00	126.48	122.89	127.83	9.34	11.88	1001.71	22.81	1.42	.52	13.22
17400.000	215000.00	133.55	127.75	135.98	12.50	18.95	1043.68	20.87	2.15	.54	26.83
17400.000	289000.00	137.10	130.26	140.06	13.81	22.50	1062.38	20.12	2.47	.55	34.15

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
17600.000	93000.00	126.93	123.29	128.28	9.33	11.93	993.08	22.53	1.41	.52	13.17
17600.000	215000.00	133.94	128.18	136.41	12.61	18.94	1029.29	21.14	2.19	.55	27.55
17600.000	289000.00	137.46	130.70	140.49	13.96	22.46	1045.22	20.47	2.53	.55	35.31
17800.000	93000.00	127.37	123.80	128.74	9.39	11.87	990.93	22.95	1.43	.52	13.44
17800.000	215000.00	134.34	128.68	136.85	12.69	18.84	1026.60	21.57	2.22	.55	28.18
17800.000	289000.00	137.84	131.21	140.91	14.07	22.34	1042.26	20.93	2.57	.56	36.22
18000.000	93000.00	127.82	124.31	129.21	9.46	11.82	988.75	23.44	1.45	.53	13.76
18000.000	215000.00	134.75	129.20	137.29	12.79	18.75	1024.73	22.05	2.26	.56	28.86
18000.000	289000.00	138.23	131.73	141.35	14.17	22.23	1040.43	21.39	2.62	.56	37.08
18200.000	93000.00	128.28	124.82	129.69	9.53	11.78	984.80	23.92	1.48	.53	14.09
18200.000	215000.00	135.17	129.72	137.76	12.91	18.67	1020.57	22.63	2.30	.56	29.74
18200.000	289000.00	138.63	132.26	141.80	14.30	22.13	1036.15	21.92	2.67	.57	38.16
18400.000	93000.00	128.80	125.22	130.17	9.38	11.90	998.79	23.04	1.43	.52	13.38
18400.000	215000.00	135.70	130.13	138.21	12.71	18.80	1032.73	21.73	2.22	.55	28.23
18400.000	289000.00	139.16	132.61	142.24	14.08	22.26	1049.77	21.11	2.58	.56	36.27
18600.000	93000.00	129.24	125.75	130.65	9.54	11.84	981.98	23.84	1.48	.53	14.09
18600.000	215000.00	136.06	130.69	138.69	13.00	18.66	1007.45	22.74	2.33	.57	30.29
18600.000	289000.00	139.48	133.19	142.72	14.45	22.08	1020.21	22.21	2.72	.57	39.26
18800.000	93000.00	129.70	126.27	131.14	9.65	11.80	970.04	24.37	1.51	.54	14.58
18800.000	215000.00	136.48	131.23	139.17	13.16	18.58	1005.59	23.66	2.40	.58	31.57
18800.000	289000.00	139.88	133.79	143.20	14.61	21.98	1020.94	23.08	2.79	.58	40.77
19000.000	93000.00	130.18	126.69	131.63	9.64	11.88	963.27	24.08	1.51	.54	14.50
19000.000	215000.00	136.94	131.68	139.65	13.20	18.64	998.88	23.67	2.41	.58	31.79
19000.000	289000.00	140.33	134.30	143.67	14.67	22.03	1014.18	23.19	2.81	.59	41.23
19200.000	93000.00	130.65	127.21	132.12	9.71	11.85	956.00	24.47	1.53	.54	14.86
19200.000	215000.00	137.38	132.23	140.14	13.34	18.58	990.90	24.27	2.46	.58	32.86
19200.000	289000.00	140.74	134.86	144.16	14.84	21.94	1005.91	23.87	2.88	.59	42.79
19400.000	93000.00	131.13	127.74	132.62	9.82	11.83	947.50	25.08	1.56	.55	15.36
19400.000	215000.00	137.83	132.84	140.66	13.49	18.53	982.76	24.93	2.52	.59	34.03
19400.000	289000.00	141.17	135.42	144.67	15.02	21.87	997.85	24.56	2.96	.60	44.39
19600.000	93000.00	131.61	128.28	133.14	9.91	11.81	938.64	25.56	1.59	.55	15.80
19600.000	215000.00	138.29	133.41	141.18	13.64	18.49	973.99	25.55	2.58	.60	35.19
19600.000	289000.00	141.61	135.99	145.19	15.19	21.81	989.01	25.24	3.03	.61	46.02
19800.000	93000.00	132.13	128.70	133.65	9.89	11.93	930.35	25.11	1.58	.55	15.66
19800.000	215000.00	138.79	133.86	141.69	13.67	18.59	965.36	25.43	2.59	.60	35.34
19800.000	289000.00	142.10	136.46	145.71	15.25	21.90	980.15	25.27	3.05	.61	46.50
20000.000	93000.00	132.61	129.24	134.16	10.00	11.91	920.32	25.67	1.62	.55	16.18
20000.000	215000.00	139.26	134.44	142.23	13.84	18.56	955.41	26.16	2.65	.60	36.73
20000.000	289000.00	142.54	137.05	146.25	15.46	21.84	970.21	26.07	3.13	.62	48.45

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
20200.000	93000.00	133.11	129.78	134.69	10.09	11.91	910.75	26.06	1.65	.56	16.60
20200.000	215000.00	139.74	135.02	142.78	13.99	18.54	946.47	26.76	2.71	.61	37.93
20200.000	289000.00	143.01	137.64	146.80	15.63	21.81	961.65	26.73	3.21	.63	50.12
20400.000	93000.00	133.65	130.22	135.21	10.02	12.05	911.07	25.38	1.61	.55	16.17
20400.000	215000.00	140.30	135.45	143.31	13.93	18.70	939.79	26.06	2.67	.61	37.20
20400.000	289000.00	143.55	138.07	147.33	15.61	21.95	953.79	26.28	3.18	.62	49.69
20600.000	93000.00	134.13	130.75	135.73	10.17	12.03	891.49	26.02	1.67	.56	16.94
20600.000	215000.00	140.76	136.07	143.87	14.17	18.66	926.45	27.18	2.78	.62	39.36
20600.000	289000.00	143.99	138.72	147.91	15.88	21.89	941.02	27.42	3.31	.64	52.54
20782.000	93000.00	134.60	131.19	136.21	10.17	12.10	888.05	25.84	1.66	.56	16.89
20782.000	215000.00	141.29	136.53	144.37	14.08	18.79	937.77	27.03	2.75	.61	38.67
20782.000	289000.00	144.58	139.21	148.41	15.72	22.08	957.45	27.09	3.24	.63	51.02
20800.000	93000.00	134.66	131.22	136.25	10.14	12.13	888.12	25.65	1.65	.56	16.76
20800.000	215000.00	141.35	136.57	144.42	14.07	18.82	937.88	26.93	2.74	.61	38.52
20800.000	289000.00	144.63	139.25	148.46	15.71	22.10	957.56	27.01	3.24	.63	50.86
21000.000	93000.00	135.23	131.56	136.75	9.90	12.37	891.23	23.73	1.56	.54	15.45
21000.000	215000.00	141.94	136.85	144.95	13.92	19.08	912.31	25.13	2.65	.60	36.95
21000.000	289000.00	145.17	139.51	148.99	15.70	22.31	922.48	25.71	3.20	.62	50.26

FILE: SR153E.DAT

SUMMARY PRINTOUT TABLE 100

SECNO	EGLWC	ELLC	EGPRS	ELTRD	QPR	QWEIR	CLASS	H3	DEPTH	CWSEL	VCH	EG
15730.000	124.10	141.70	.00	148.70	93000.00	.00	1.00	.38	12.07	122.77	9.23	124.[illegible]
15730.000	132.60	141.70	.00	148.70	215000.00	.00	1.00	.74	19.61	130.31	12.16	132.[illegible]
15730.000	136.83	141.70	.00	148.70	289000.00	.00	1.00	.93	23.34	134.04	13.41	136.[illegible]

FILE: SR153E.DAT

SUMMARY PRINTOUT TABLE 105

SECNO	CWSEL	HL	OLOSS	TOPWID	QLOB	QCH	QROB
15467.000	122.07	.31	.00	990.57	.00	93000.00	.00
15467.000	129.26	.28	.00	1027.06	.00	215000.00	.00
15467.000	132.80	.27	.00	1043.05	.00	289000.00	.00
15608.000	122.40	.30	.01	1000.15	.00	93000.01	.00
15608.000	129.57	.28	.01	1029.46	.00	215000.00	.00
15608.000	133.11	.27	.01	1043.90	.00	289000.00	.00
15730.000	122.77	.39	.00	990.02	.00	93000.00	.00
15730.000	130.31	.67	.00	1028.14	.00	215000.00	.00
15730.000	134.04	.81	.00	1044.92	.00	289000.00	.00
15800.000	122.95	.15	.01	990.25	.00	93000.00	.00
15800.000	130.45	.13	.00	1028.29	.00	215000.00	.00
15800.000	134.17	.13	.00	1045.06	.00	289000.00	.00

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 2735.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

PROPOSED CONDITIONS

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*******************************************
*  HEC-2 WATER SURFACE PROFILES           *
*                                         *
*  Version   4.6.2;  May 1991             *
*                                         *
*  RUN DATE    18JAN94    TIME   13:43:53 *
*******************************************
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************************************
*  U.S. ARMY CORPS OF ENGINEERS
*  HYDROLOGIC ENGINEERING CENTER
*  609 SECOND STREET, SUITE D
*  DAVIS, CALIFORNIA 95616-4687
*          (916) 756-1104
************************************
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X     X  XXXXXXX   XXXXX             XXXXX
X     X  X        X     X           X     X
X     X  X        X                       X
XXXXXXX  XXXX     X         XXXXX    XXXXX
X     X  X        X                 X
X     X  X        X     X           X
X     X  XXXXXXX   XXXXX            XXXXXXX
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THIS RUN EXECUTED 18JAN94 13:43:53

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************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
************************************
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STA. 100+35 BEGINNING OF CHANNELIZATION PROJECT

STA. 111+00 BEGINNING OF LOW FLOW CHANNEL.
STA. 116+00 BEGINNING OF NORTH LEVEE.
STA. 142+00 BEGINNING OF SOUTH LEVEE.
STA. 144+00 GRADE CONTROL STRUCTURE NO. 2

STA. 153+26 (NEW ALIGNMENT OF SR 153)
SR 153 SPECIAL BRIDGE MODEL, GR PTS. FROM CHANNELIZATION PLANS (DMJM 1989)
7 - 6.0 FT. DIA. PIERS (PER TYLIN PLANS DATED 12/93)
INCLUDES CONSIDERATION FOR 4 FT. DEBRIS BUILDUP ON EA. PIER

STA. 157+30 (EXISTING SR 143 BRIDGE)
SR 143 SPECIAL BRIDGE MODEL, GR PTS. FROM CHANNELIZATION PLANS (DMJM 1989)
BRIDGE DESIGN BY MKE, 8 PIERS WITH 6 FT. DIA. COLUMNS (1988) (ASBLT 1993)
INCLUDES CONSIDERATION FOR 4 FT. DEBRIS BUILDUP ON EA. PIER

STA. 207+82 GRADE CONTROL STRUCTURE NO. 3

STA. 210+00 END OF HEC-2 MODEL, JUST BEFORE PRIEST DRIVE BRIDGE

T1 SIMONS, LI & ASSOCIATES, INC. - TEMPE, ARIZONA
T2 SR 153 OVER THE SALT RIVER (1-13-94)
T3 FILE: SR153.DAT 93,000 CFS 10-YEAR DISCHARGE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	.00068	0	0	93000	99	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1	0	-1	0	0	0	-1	0	0	0

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38	43	1	2	3	26	8	4	5	67
68	69	100	105						

J5 LPRNT NUMSEC ********REQUESTED SECTION NUMBERS********

-10 14000

```
J6  IHLEQ     ICOPY     SUBDIV    STRTDS    RMILE

     1


NC     .050      .050      .035       .3        .5
X1     2412        16      8820    10540         0         0         0
X3       10                        8892                  10540
GR    121.5      8820       105     8900       100      8970        93      9000        93      9050
GR      100      9070     101.5     9290       100      9450        95      9630        85      9680
GR       82      9880        81     9940        81     10300       100     10500       123     10540
GR      123     10541
  JUST UPSTREAM OF I-10 BRIDGE

NC                                    .1        .3
X1     2735     36.00   9542.80 10452.20       290       370       323       .00       .00       .00
GR   102.80   9436.20     99.30  9480.50     98.30   9542.80     90.10   9568.80     81.10   9598.10
GR    80.80   9622.50     83.50  9629.90     83.10   9670.50     82.80   9733.20     81.40   9753.00
GR    82.00   9796.00     82.60  9821.00     82.20   9862.00     78.70   9873.60     78.80   9922.70
GR    84.10   9950.70     84.80  9979.60     84.80  10000.00     83.40  10047.20     82.20  10079.70
GR    82.30  10159.50     81.20 10201.50     80.00  10217.50     82.70  10242.90     81.50  10257.50
GR    80.90  10305.10     80.20 10362.50     80.20  10385.20     87.70  10413.80     98.80  10452.20
GR    98.30  10499.50     98.00 10530.00     99.60  10575.10    102.30  10633.20    104.80  10673.90
GR   106.10  10719.20

X1     2835     38.00   9516.90 10448.30       100       100       100       .00       .00       .00
GR   109.50   9482.50    109.20  9516.90     91.80   9570.20     81.30   9602.70     81.20   9648.20
GR    82.00   9683.70     83.90  9699.60     83.30   9718.80     81.70   9728.20     81.00   9781.30
GR    83.70   9797.30     83.10  9850.60     81.70   9876.90     78.30   9898.30     78.80   9955.70
GR    85.00   9983.70     85.60 10000.00     85.70  10045.70     84.20  10076.30     80.90  10090.30
GR    80.90  10136.40     80.60 10194.30     81.80  10203.50     81.70  10255.80     81.50  10294.90
GR    80.50  10339.90     79.90 10368.60     82.30  10392.80     91.20  10422.30     99.70  10448.30
GR   100.00  10469.30     99.40 10497.90     98.90  10530.40     99.90  10575.00    101.50  10611.30
GR   102.90  10650.10    105.10 10703.60    105.80  10769.30

X1     2935     37.00   9524.00 10447.50       100       100       100       .00       .00       .00
GR   109.60   9490.80    109.80  9524.00     93.30   9566.70     81.30   9600.30     80.80   9624.50
GR    81.70   9634.00     82.20  9700.10     83.70   9715.10     82.10   9761.10     83.90   9771.60
GR    84.10   9823.20     82.80  9897.50     82.00   9924.90     82.90   9935.70     83.20   9968.20
GR    85.30  10000.00     84.60 10019.70     81.90  10029.20     81.60  10072.60     82.60  10086.50
GR    81.50  10111.20     80.50 10156.90     80.70  10202.50     81.70  10212.60     81.70  10230.10
GR    81.00  10298.20     81.10 10334.30     80.60  10381.70     89.30  10413.20     99.90  10447.50
GR   100.60  10485.80     99.60 10516.80     99.80  10567.80    101.40  10598.70    103.40  10646.10
GR   105.60  10697.60    107.00 10766.50

X1     3035     38.00   9521.50 10452.80       100       100       100       .00       .00       .00
GR   110.10   9494.30    109.80  9521.50     96.80   9553.20     81.00   9595.40     80.20   9617.60
GR    81.90   9652.80     82.30  9710.40     83.90   9770.70     83.20   9842.90     81.70   9858.40
GR    80.60   9920.30     81.30  9957.20     82.80   9969.90     83.40   9990.60     82.80  10000.00
GR    83.00  10021.50     82.30 10033.40     81.80  10077.20     83.90  10091.50     81.80  10106.40
GR    80.70  10134.20     80.10 10206.00     80.60  10247.80     80.50  10271.60     82.10  10280.10
GR    80.90  10321.20     80.00 10360.20     79.20  10375.20     81.40  10392.60     87.50  10413.10
GR    87.90  10422.00    100.40 10452.80    100.50  10487.40    101.10  10554.20    101.60  10607.10
GR   103.80  10649.00    105.70 10707.20    111.30  10730.60
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X1	3135	38.00	9520.50	10545.90	100	100	100	.00	.00	.00
GR	110.30	9493.30	110.40	9520.50	93.80	9565.70	80.80	9599.10	81.20	9660.30
GR	82.90	9709.40	83.60	9757.90	82.70	9795.90	83.10	9830.30	81.80	9873.20
GR	79.60	9913.00	79.60	9924.80	82.80	9940.80	82.00	9967.00	82.60	10000.00
GR	83.20	10040.30	82.80	10085.10	81.50	10096.80	80.90	10126.00	83.10	10140.00
GR	83.10	10165.40	81.00	10189.50	80.80	10235.80	80.20	10263.20	81.70	10301.10
GR	81.40	10360.80	80.70	10381.20	79.50	10417.20	79.50	10443.10	87.50	10475.90
GR	87.60	10482.70	93.60	10504.40	102.10	10545.90	102.60	10596.30	103.60	10652.00
GR	104.70	10722.30	105.80	10752.80	106.50	10788.00				
X1	3235	39.00	9520.10	10841.30	100	100	100	.00	.00	.00
GR	111.00	9496.50	111.20	9520.10	97.50	9554.00	81.30	9600.10	82.00	9669.10
GR	82.90	9696.80	84.10	9721.60	83.80	9759.10	82.20	9774.10	82.20	9794.10
GR	83.70	9805.50	85.90	9850.50	86.90	9884.50	83.10	9898.70	82.30	9909.00
GR	82.50	9943.50	83.00	10000.00	82.30	10048.60	81.70	10104.00	80.70	10150.60
GR	80.50	10227.10	80.70	10288.20	81.30	10311.20	81.20	10352.30	79.10	10364.20
GR	78.70	10377.00	79.60	10396.70	83.30	10414.20	82.90	10433.40	81.50	10458.50
GR	82.20	10510.00	83.70	10579.30	85.20	10624.50	87.60	10662.20	90.10	10691.80
GR	92.80	10730.70	99.40	10775.70	103.50	10806.30	106.40	10841.30		
X1	3335	42.00	9517.90	10856.30	100	100	100	.00	.00	.00
GR	111.60	9495.60	111.10	9517.90	91.80	9569.00	81.90	9600.70	82.60	9687.50
GR	84.20	9715.20	85.40	9750.30	83.50	9776.50	85.40	9831.00	86.40	9861.80
GR	83.80	9871.50	82.90	9895.40	83.30	9946.70	82.60	10000.00	81.80	10033.70
GR	82.60	10041.20	81.80	10051.70	81.40	10106.90	82.30	10151.00	80.30	10173.50
GR	82.80	10179.40	82.40	10218.10	82.20	10285.60	81.40	10346.30	81.10	10379.50
GR	82.10	10402.90	81.80	10411.60	83.60	10421.20	83.60	10438.50	81.60	10450.20
GR	83.60	10463.80	82.50	10480.80	84.90	10497.50	80.50	10529.20	80.20	10579.90
GR	79.30	10665.90	78.50	10733.50	78.70	10754.00	81.30	10783.30	87.90	10811.50
GR	95.90	10828.60	105.70	10856.30						
X1	3435	35.00	9519.20	10906.40	100	100	100	.00	.00	.00
GR	111.20	9490.50	110.80	9519.20	94.20	9564.70	83.10	9596.90	82.60	9615.90
GR	83.40	9622.80	83.10	9704.00	83.40	9792.90	81.80	9842.30	81.20	9912.80
GR	81.80	9933.80	81.50	9983.80	82.70	10000.00	82.80	10026.80	81.80	10094.40
GR	81.10	10124.90	83.00	10148.40	81.40	10201.70	81.00	10249.10	81.60	10271.10
GR	82.30	10318.50	81.20	10366.00	82.30	10385.40	83.50	10430.20	84.90	10488.50
GR	86.20	10525.50	84.80	10605.10	81.40	10631.50	79.50	10706.50	77.20	10804.50
GR	81.00	10816.80	81.30	10847.80	89.10	10867.20	101.90	10885.70	103.50	10906.40
X1	3535	43.00	9514.20	11040.30	100	100	100	.00	.00	.00
GR	111.50	9486.40	111.30	9514.20	91.70	9568.90	83.40	9594.60	83.70	9656.00
GR	81.50	9704.90	80.40	9784.40	80.90	9848.40	81.10	9927.80	80.80	10000.00
GR	81.30	10028.80	81.20	10103.60	81.20	10171.70	80.70	10192.00	81.90	10213.20
GR	82.80	10251.80	83.00	10269.50	81.90	10272.70	81.70	10379.10	83.00	10426.80
GR	84.70	10437.50	85.80	10464.30	87.50	10505.20	87.10	10537.00	86.70	10588.50
GR	85.90	10625.00	83.90	10652.70	78.70	10671.70	78.00	10681.30	80.90	10701.80
GR	82.90	10719.30	80.60	10751.70	78.50	10801.50	78.30	10818.50	93.10	10855.80
GR	98.60	10873.20	99.10	10905.60	98.00	10918.50	99.10	10935.70	99.70	10964.70
GR	101.10	10996.60	102.90	11016.10	104.80	11040.30				

X1	3635	42.00	9511.90	11079.80	100	100	100	.00	.00	.00
GR	111.60	9484.70	111.60	9511.90	95.40	9559.00	83.70	9593.50	83.50	9613.50
GR	84.30	9621.30	84.10	9645.70	82.20	9678.30	81.50	9731.40	80.50	9786.30
GR	80.70	9860.10	81.30	9904.10	80.30	9960.80	80.70	10000.00	81.10	10060.60
GR	81.90	10141.00	82.80	10174.80	82.80	10220.00	82.10	10273.70	81.80	10365.20
GR	83.50	10383.40	84.80	10437.10	86.60	10455.20	87.50	10497.70	87.50	10555.40
GR	86.30	10626.90	86.60	10688.10	85.20	10739.10	79.70	10755.30	77.20	10766.40
GR	76.70	10826.80	79.80	10844.70	92.60	10868.70	87.30	10883.80	91.90	10905.30
GR	95.00	10924.40	97.40	10950.70	99.10	10981.90	101.50	10993.90	103.00	11020.40
GR	102.50	11047.50	106.10	11079.80						
X1	3735	36.00	9509.80	11148.00	100	100	100	.00	.00	.00
GR	112.10	9479.30	112.60	9509.80	95.00	9561.20	84.40	9594.80	84.40	9608.70
GR	85.20	9628.40	83.50	9647.70	82.00	9681.90	81.10	9756.90	81.50	9848.70
GR	80.90	9920.10	81.10	10000.00	81.80	10069.70	82.30	10151.10	81.90	10246.10
GR	81.60	10362.10	84.50	10379.30	84.50	10412.50	87.80	10427.60	87.30	10490.80
GR	87.80	10530.00	88.20	10575.50	87.10	10651.00	85.80	10711.20	83.80	10752.10
GR	81.30	10786.20	79.20	10799.00	77.40	10829.20	78.40	10902.00	85.10	10926.90
GR	92.80	10965.70	98.10	11006.50	103.40	11054.20	104.80	11098.40	106.30	11126.80
GR	109.20	11148.00								
X1	3935	38.00	9507.90	11142.80	200	200	200	.00	.00	.00
GR	113.30	9467.80	113.00	9507.90	94.40	9556.20	86.70	9580.20	86.00	9628.80
GR	83.80	9640.70	83.50	9661.10	84.10	9678.90	84.10	9721.90	83.50	9767.80
GR	83.20	9836.70	82.30	9882.10	82.10	9941.90	81.90	10000.00	81.80	10067.80
GR	82.60	10109.80	82.40	10161.60	82.30	10209.10	81.60	10342.80	87.50	10370.90
GR	87.90	10437.60	87.40	10524.00	86.70	10597.30	86.80	10680.90	85.80	10700.70
GR	82.60	10728.20	80.80	10764.20	80.40	10807.60	79.90	10876.30	81.00	10909.00
GR	89.20	10942.00	86.90	10959.00	77.20	10990.30	76.50	11029.50	77.10	11071.30
GR	79.40	11083.00	97.30	11112.80	112.50	11142.80				
X1	4035	37.00	9498.90	11099.80	100	100	100	.00	.00	.00
GR	113.80	9470.30	113.50	9498.90	99.70	9537.50	86.60	9572.20	86.50	9620.00
GR	84.00	9639.30	83.80	9684.60	83.50	9770.00	83.60	9831.80	82.70	9915.60
GR	81.70	10000.00	81.50	10049.40	81.70	10113.50	82.40	10179.00	82.80	10236.30
GR	81.70	10272.30	81.60	10330.20	85.00	10344.50	89.40	10368.00	90.40	10401.30
GR	88.10	10437.30	87.20	10492.60	85.30	10537.10	85.70	10594.40	85.30	10638.50
GR	84.00	10678.40	80.70	10728.50	81.20	10753.10	81.50	10806.60	82.50	10830.60
GR	80.90	10880.30	78.30	10900.80	77.90	10945.40	78.10	11009.10	80.00	11025.70
GR	94.30	11061.90	113.50	11099.80						
X1	4135	46.00	9498.60	11054.40	100	100	100	.00	.00	.00
GR	113.70	9467.50	113.50	9498.60	97.90	9534.80	86.80	9558.30	87.10	9610.10
GR	83.40	9635.30	81.80	9666.10	82.70	9711.80	82.40	9770.00	82.50	9832.00
GR	83.20	9863.30	82.40	9917.40	82.30	9943.80	82.90	9962.60	83.10	10000.00
GR	82.10	10051.70	81.10	10111.30	81.50	10174.00	81.60	10201.40	83.30	10220.40
GR	83.00	10259.20	82.00	10297.80	82.00	10326.30	88.80	10359.90	90.20	10404.20
GR	90.00	10433.30	86.60	10457.40	84.70	10487.00	83.10	10522.30	82.70	10585.20
GR	81.50	10606.90	81.10	10684.20	81.00	10712.40	81.90	10742.80	81.80	10764.30
GR	81.00	10775.90	80.20	10812.00	76.20	10822.00	75.90	10913.60	77.60	10919.20
GR	75.50	10937.10	75.50	10978.30	78.00	10988.60	99.10	11020.60	111.80	11042.10
GR	114.90	11054.40								

X1	4235	42.00	9495.00	11009.20	100	100	100	.00	.00	.00
GR	113.70	9468.90	113.70	9495.00	95.30	9531.70	87.20	9552.10	87.70	9603.10
GR	82.80	9631.40	81.70	9653.30	82.30	9687.40	82.10	9721.30	81.40	9770.40
GR	82.20	9819.40	83.20	9883.80	83.80	9938.50	83.10	10000.00	82.30	10022.30
GR	82.60	10086.10	81.80	10117.70	82.50	10173.90	82.50	10239.20	82.20	10327.00
GR	84.50	10342.40	88.70	10361.40	89.80	10387.20	88.90	10424.90	83.50	10442.70
GR	82.00	10485.30	87.90	10516.80	88.20	10534.20	82.80	10570.20	82.10	10639.00
GR	81.20	10700.40	79.70	10737.20	83.60	10747.40	86.30	10763.90	85.10	10783.30
GR	76.40	10819.60	75.50	10881.60	75.60	10945.30	91.20	10972.00	115.10	11009.20
GR	113.60	11017.10	115.90	11026.00						
X1	4335	50.00	9489.30	10962.20	100	100	100	.00	.00	.00
GR	114.10	9467.50	114.00	9489.30	96.40	9525.40	87.80	9543.00	88.10	9562.20
GR	88.90	9592.50	84.20	9622.50	82.00	9638.40	82.60	9685.10	82.10	9714.90
GR	81.80	9753.10	82.30	9798.60	83.80	9814.70	83.30	9870.50	83.30	9916.90
GR	83.10	9973.50	82.80	10000.00	82.80	10073.30	82.90	10134.30	82.40	10230.50
GR	82.30	10283.40	82.80	10288.90	82.80	10329.00	85.60	10337.00	90.20	10356.30
GR	88.50	10399.00	86.30	10423.80	83.40	10431.70	82.80	10450.00	83.90	10472.80
GR	90.00	10491.30	90.70	10519.00	89.80	10557.20	86.30	10573.30	83.70	10592.10
GR	83.30	10626.30	83.00	10678.80	88.70	10703.00	86.00	10722.80	81.10	10739.60
GR	79.00	10777.60	79.30	10797.90	81.00	10808.10	96.00	10835.60	105.10	10856.60
GR	106.10	10884.30	105.30	10910.90	113.00	10935.20	115.50	10962.20	115.70	10981.50
X1	4435	45.00	9486.30	10792.30	100	100	100	.00	.00	.00
GR	114.50	9462.40	114.50	9486.30	97.70	9519.80	88.90	9537.30	88.00	9559.50
GR	89.00	9590.40	83.90	9624.50	82.10	9640.90	81.90	9686.30	81.00	9741.10
GR	81.10	9766.20	81.90	9789.00	83.70	9809.60	84.40	9825.80	83.40	9869.20
GR	83.60	9939.10	83.00	10000.00	83.10	10064.70	83.20	10122.50	83.00	10212.00
GR	82.90	10259.00	83.50	10296.30	85.10	10326.30	84.90	10338.10	83.30	10347.50
GR	82.80	10378.80	84.70	10386.90	84.60	10421.00	87.90	10435.50	89.00	10472.50
GR	89.60	10540.10	91.90	10556.10	94.20	10572.00	91.90	10582.70	93.50	10633.10
GR	92.10	10645.60	94.10	10677.70	105.50	10699.90	106.20	10711.10	104.90	10715.70
GR	106.80	10747.50	110.10	10792.30	110.20	10831.40	110.70	10873.70	114.70	10886.40
X1	4535	41.00	9485.20	10750.20	100	100	100	.00	.00	.00
GR	114.70	9457.70	114.50	9485.20	97.70	9518.90	88.70	9538.30	89.50	9588.50
GR	81.90	9635.40	81.20	9665.60	81.50	9731.90	82.10	9796.50	83.70	9814.50
GR	83.60	9887.80	83.10	9950.30	83.40	10000.00	83.80	10051.70	83.60	10136.40
GR	83.30	10219.90	83.30	10278.60	83.90	10317.00	89.80	10346.50	90.80	10392.50
GR	84.00	10417.50	83.70	10431.50	87.60	10445.40	87.80	10474.20	82.80	10489.70
GR	82.60	10523.80	88.90	10549.20	90.40	10573.30	98.50	10597.60	92.80	10613.80
GR	95.30	10634.60	98.90	10655.50	102.80	10688.20	107.90	10703.80	109.10	10738.60
GR	112.90	10750.20	111.60	10761.60	110.60	10782.90	113.00	10800.80	114.10	10808.80
GR	114.40	10842.20								
X1	4635	39.00	9482.00	10754.80	100	100	100	.00	.00	.00
GR	115.10	9458.30	114.90	9482.00	98.80	9512.90	89.00	9534.70	89.10	9547.00
GR	90.00	9551.50	90.30	9589.90	82.80	9628.40	81.20	9643.60	81.10	9732.70
GR	82.30	9782.60	83.50	9815.50	83.60	9855.00	83.40	9922.50	83.70	10000.00
GR	83.60	10039.60	84.10	10111.40	84.20	10183.90	84.00	10238.50	83.70	10271.20
GR	84.00	10311.00	90.10	10346.10	90.20	10399.20	89.70	10435.30	84.20	10464.60
GR	84.40	10508.20	89.00	10533.20	94.30	10591.80	84.00	10617.00	84.70	10637.80
GR	84.60	10668.50	91.10	10688.00	90.40	10703.70	108.30	10732.70	114.50	10754.80

GR	111.80	10762.70	112.20	10789.60	115.80	10814.10	116.50	10836.40		
X1	4735	24.00	9481.30	10467.60	100	100	100	.00	.00	.00
GR	115.20	9456.10	114.90	9481.30	98.50	9512.60	89.80	9528.70	90.70	9585.10
GR	83.30	9627.00	81.90	9655.00	82.10	9716.30	82.20	9778.20	83.70	9837.20
GR	83.60	9906.60	83.50	9961.20	83.90	10000.00	84.30	10054.80	83.40	10115.00
GR	83.50	10158.50	84.50	10210.00	83.80	10295.00	85.00	10311.40	90.40	10341.90
GR	90.90	10382.40	93.80	10399.40	111.30	10431.10	113.80	10467.60		
X1	4835	24.00	9478.50	10446.20	100	100	100	.00	.00	.00
GR	115.00	9450.40	115.20	9478.50	100.20	9508.90	90.60	9529.60	90.70	9584.80
GR	83.50	9623.50	83.40	9664.70	83.20	9749.90	82.60	9788.60	83.20	9844.70
GR	83.70	9874.00	83.90	9917.30	83.80	10000.00	83.80	10056.90	84.50	10099.00
GR	83.70	10171.60	83.60	10238.10	84.20	10305.00	89.00	10326.70	90.60	10339.90
GR	90.50	10389.80	105.10	10421.10	116.00	10446.20	116.80	10480.50		
X1	4935	28.00	9476.00	10456.60	100	100	100	.00	.00	.00
GR	115.30	9445.60	115.50	9476.00	102.40	9502.70	90.80	9526.00	90.40	9583.30
GR	84.30	9618.30	84.20	9642.50	85.10	9655.50	84.00	9701.60	83.50	9764.00
GR	82.80	9799.90	84.00	9879.20	84.00	9932.40	84.40	10000.00	84.40	10063.40
GR	84.30	10140.80	83.50	10229.20	83.70	10299.40	86.00	10314.30	90.90	10337.50
GR	91.30	10390.70	103.30	10413.50	115.10	10439.20	115.80	10456.60	114.90	10478.00
GR	116.70	10482.70	118.20	10504.00	118.40	10527.20				
X1	5035	29.00	9474.60	10436.30	100	100	100	.00	.00	.00
GR	115.80	9450.70	115.60	9474.60	101.10	9502.70	91.60	9523.90	91.10	9538.20
GR	92.20	9544.00	91.00	9579.80	85.20	9616.00	84.50	9678.90	83.80	9769.40
GR	83.00	9831.40	83.40	9868.20	84.10	9939.70	84.20	9977.20	84.10	10000.00
GR	84.70	10061.10	84.40	10135.90	83.50	10228.80	83.00	10257.20	84.50	10294.90
GR	91.50	10333.60	92.30	10361.90	92.40	10385.40	104.30	10410.90	114.90	10436.30
GR	115.70	10463.00	114.60	10473.20	121.90	10485.20	123.20	10528.30		
X1	5135	28.00	9472.00	10435.20	100	100	100	.00	.00	.00
GR	115.90	9444.20	115.80	9472.00	99.80	9504.00	91.40	9521.90	91.00	9576.70
GR	85.20	9613.50	84.00	9657.30	85.10	9738.20	84.30	9798.70	83.10	9837.30
GR	84.20	9903.70	84.40	9971.00	84.10	10000.00	84.20	10054.80	84.80	10098.20
GR	84.50	10183.50	83.20	10195.50	83.30	10236.50	84.30	10267.80	84.80	10297.40
GR	92.60	10331.60	92.90	10380.70	102.80	10404.10	115.80	10435.20	115.90	10465.10
GR	114.30	10471.10	117.50	10481.20	118.10	10547.00				
X1	5235	27.00	9469.90	10429.50	100	100	100	.00	.00	.00
GR	115.50	9444.50	115.30	9469.90	101.30	9498.60	92.00	9518.10	91.80	9565.80
GR	85.80	9603.90	85.60	9669.10	84.90	9720.30	85.10	9758.60	83.50	9823.70
GR	83.90	9868.00	85.00	9943.00	84.50	9968.20	84.40	10000.00	84.60	10064.00
GR	85.10	10129.30	84.10	10179.20	83.10	10244.70	81.90	10268.70	84.70	10281.60
GR	85.40	10291.80	89.70	10310.60	92.80	10332.90	92.50	10381.10	102.20	10399.60
GR	115.30	10429.50	115.80	10461.50						
X1	5335	27.00	9463.60	10435.00	100	100	100	.00	.00	.00
GR	115.40	9435.00	115.20	9463.60	100.40	9493.80	92.00	9513.40	92.20	9559.70
GR	86.60	9603.00	86.50	9624.80	87.00	9692.00	85.30	9718.80	85.10	9782.80
GR	83.90	9834.50	84.40	9856.20	84.20	9924.30	84.40	9970.10	84.50	10000.00
GR	84.90	10043.40	85.00	10141.80	84.40	10190.20	83.10	10238.40	81.30	10276.10
GR	85.70	10287.30	90.60	10310.70	92.60	10330.00	92.30	10377.70	106.40	10403.80

GR	114.70	10423.60	116.10	10435.00						
X1	5435	28.00	9457.20	10421.70	100	100	100	.00	.00	.00
GR	116.20	9433.70	115.80	9457.20	101.00	9486.00	92.70	9502.90	91.90	9551.90
GR	86.90	9594.80	87.90	9651.50	89.40	9658.60	88.10	9671.50	86.10	9686.00
GR	86.00	9701.00	85.40	9767.90	84.20	9816.70	84.80	9836.10	84.80	9907.80
GR	84.90	9968.80	84.90	10000.00	85.50	10075.30	84.70	10191.10	81.50	10236.80
GR	80.60	10260.50	85.10	10274.50	86.50	10287.10	90.40	10308.10	92.40	10325.60
GR	92.60	10375.90	105.60	10400.20	115.60	10421.70				
X1	5535	35.00	9445.50	10417.30	100	100	100	.00	.00	.00
GR	116.50	9415.60	115.70	9445.50	101.20	9475.30	92.60	9492.80	92.90	9510.50
GR	92.40	9542.00	87.50	9575.80	87.50	9606.70	86.50	9618.30	86.20	9656.30
GR	85.70	9709.40	84.70	9779.60	85.10	9799.80	85.40	9855.70	85.40	9915.70
GR	84.50	9966.00	85.20	10000.00	85.80	10019.50	85.50	10048.30	86.20	10054.40
GR	86.30	10081.30	85.60	10127.20	84.70	10181.00	81.30	10208.00	80.50	10222.80
GR	86.00	10236.50	86.70	10253.70	85.70	10281.80	90.00	10301.10	91.60	10315.60
GR	93.60	10325.20	93.00	10369.90	104.70	10393.10	114.70	10417.30	114.80	10446.10
X1	5635	31.00	9434.80	10414.90	100	100	100	.00	.00	.00
GR	115.90	9407.00	115.70	9434.80	102.40	9463.20	93.10	9481.20	92.20	9526.50
GR	87.80	9567.80	86.40	9604.20	87.70	9644.00	87.80	9680.20	85.80	9727.50
GR	86.20	9742.50	86.10	9801.50	85.80	9851.30	86.30	9892.70	84.40	9958.10
GR	85.60	10000.00	86.10	10053.60	85.40	10116.10	84.30	10150.30	83.20	10167.50
GR	83.50	10196.00	85.80	10212.20	86.50	10254.30	87.00	10283.40	91.80	10302.90
GR	93.50	10319.40	93.20	10355.10	98.60	10374.00	113.10	10404.60	114.70	10414.90
GR	115.10	10446.80								
X1	5735	33.00	9426.60	10410.00	100	100	100	.00	.00	.00
GR	115.60	9401.60	115.40	9426.60	101.60	9456.20	93.10	9472.30	92.70	9521.50
GR	88.10	9557.90	87.40	9623.30	87.00	9644.10	87.60	9659.40	87.40	9730.80
GR	85.70	9756.60	87.00	9769.50	87.90	9794.40	87.30	9865.60	86.00	9934.30
GR	85.40	9968.70	86.10	9985.80	85.90	10000.00	86.30	10030.50	85.20	10036.90
GR	85.70	10046.00	85.90	10096.40	85.50	10129.30	83.70	10146.00	85.10	10157.20
GR	86.20	10211.80	87.00	10282.40	91.00	10294.90	93.70	10312.50	93.70	10360.50
GR	107.00	10387.40	114.80	10410.00	115.10	10444.00				
X1	5835	31.00	9417.70	10409.60	100	100	100	.00	.00	.00
GR	115.30	9392.40	115.30	9417.70	100.40	9449.00	93.40	9464.40	92.90	9512.20
GR	88.40	9553.00	88.60	9588.20	88.00	9634.40	86.10	9648.50	87.40	9666.20
GR	87.70	9713.30	88.10	9774.10	88.50	9858.00	88.20	9891.20	86.90	9904.40
GR	86.10	9944.50	87.30	9948.80	86.40	10000.00	86.00	10033.20	84.90	10040.60
GR	85.60	10049.70	85.20	10074.40	85.80	10103.00	86.70	10161.50	87.20	10224.50
GR	87.40	10285.00	90.80	10300.30	92.80	10313.80	93.70	10361.00	106.50	10385.20
GR	116.60	10409.60								
X1	5935	29.00	9410.80	10410.10	100	100	100	.00	.00	.00
GR	116.30	9384.90	115.80	9410.80	101.30	9441.20	93.80	9457.10	92.80	9516.70
GR	88.80	9547.30	87.80	9607.20	87.10	9686.00	88.10	9725.30	88.70	9785.50
GR	88.70	9844.50	88.70	9881.70	87.40	9894.20	87.00	9924.80	88.00	9935.70
GR	87.60	9964.10	86.70	10000.00	85.20	10041.00	85.80	10085.00	87.80	10125.20
GR	88.40	10182.70	88.50	10240.00	87.80	10295.00	91.70	10309.40	92.70	10325.00
GR	92.90	10362.20	106.10	10387.90	116.10	10410.10	116.30	10445.00		

X1	6035	31.00	9403.60	10415.20	100	100	100	.00	.00	.00
GR	116.00	9382.60	115.70	9403.60	99.70	9437.60	93.80	9450.40	94.30	9467.00
GR	94.30	9505.40	89.10	9540.10	88.30	9575.90	86.80	9584.80	87.20	9672.10
GR	87.80	9690.10	88.00	9722.60	89.10	9744.30	89.00	9807.50	89.10	9869.30
GR	87.80	9885.80	87.20	9918.60	88.30	9927.30	88.10	9954.90	87.20	10000.00
GR	85.10	10042.70	85.00	10071.10	88.00	10097.80	88.80	10135.40	88.80	10197.60
GR	88.50	10244.10	88.40	10298.10	93.30	10324.20	93.10	10365.00	103.70	10386.20
GR	116.70	10415.20								
X1	6135	31.00	9397.20	10449.80	100	100	100	.00	.00	.00
GR	115.90	9373.20	115.90	9397.20	101.40	9427.30	93.60	9443.30	94.20	9456.10
GR	94.80	9490.00	89.10	9535.80	88.20	9562.50	86.20	9571.30	87.30	9610.30
GR	88.90	9670.80	88.50	9727.60	89.40	9798.40	89.20	9860.50	87.70	9883.80
GR	87.40	9906.50	88.70	9917.40	88.30	9954.50	87.60	10000.00	85.70	10046.00
GR	85.20	10078.00	88.40	10097.70	88.90	10144.30	89.60	10210.20	89.10	10265.00
GR	88.60	10298.80	92.80	10321.90	94.00	10363.20	103.20	10386.10	115.10	10419.40
GR	116.80	10449.80								
X1	6235	31.00	9391.30	10421.50	100	100	100	.00	.00	.00
GR	116.30	9367.10	116.00	9391.30	103.10	9418.90	94.00	9436.20	94.70	9455.60
GR	95.00	9485.30	89.40	9526.50	87.10	9537.80	86.90	9587.30	88.30	9647.60
GR	88.70	9718.80	89.40	9773.30	89.60	9857.40	87.40	9906.60	89.70	9914.40
GR	89.00	9919.00	88.30	9960.00	88.10	10000.00	86.00	10048.60	85.90	10092.80
GR	87.90	10099.30	89.00	10114.50	88.90	10171.30	88.70	10228.30	89.10	10272.70
GR	91.40	10302.00	93.90	10328.30	95.30	10370.40	105.80	10395.20	115.80	10421.50
GR	116.30	10455.00								
X1	6335	29.00	9386.30	10428.30	100	100	100	.00	.00	.00
GR	116.20	9360.00	116.10	9386.30	102.90	9413.10	94.80	9430.40	94.30	9480.10
GR	89.30	9512.60	87.80	9530.50	88.10	9569.80	88.50	9619.30	88.90	9674.10
GR	89.90	9729.00	89.50	9781.40	89.70	9820.50	88.90	9879.70	89.30	9916.00
GR	88.70	9961.80	88.60	10000.00	86.90	10038.00	86.10	10079.80	87.00	10105.00
GR	88.70	10115.40	89.00	10159.40	88.80	10215.00	89.00	10265.60	92.30	10306.00
GR	93.60	10328.30	96.00	10375.30	105.50	10398.20	116.80	10428.30		
X1	6435	31.00	9382.70	10425.70	100	100	100	.00	.00	.00
GR	116.60	9359.60	116.70	9382.70	102.40	9411.50	95.30	9426.50	95.60	9471.40
GR	89.30	9505.10	88.20	9530.50	88.40	9586.90	87.60	9602.30	88.10	9655.90
GR	89.00	9686.70	89.50	9733.50	90.20	9769.60	89.90	9789.00	90.10	9811.40
GR	89.90	9873.20	89.50	9922.40	89.00	10000.00	87.50	10045.70	87.40	10088.70
GR	89.00	10129.10	90.00	10168.30	89.70	10191.80	89.50	10229.10	89.20	10278.70
GR	91.40	10301.90	94.60	10333.20	96.70	10384.00	106.40	10402.90	116.50	10425.70
GR	117.90	10458.80								
X1	6535	30.00	9381.60	10434.90	100	100	100	.00	.00	.00
GR	116.40	9357.20	116.60	9381.60	101.70	9410.20	94.60	9425.00	94.60	9437.50
GR	95.90	9442.50	96.10	9469.00	89.90	9509.90	89.20	9543.60	88.00	9620.00
GR	89.60	9661.00	89.80	9746.50	91.70	9782.90	90.20	9814.30	89.70	9857.30
GR	89.80	9919.20	89.50	9963.50	89.20	10000.00	88.00	10040.00	87.30	10091.70
GR	88.20	10127.20	89.60	10156.50	89.40	10205.80	89.40	10273.50	90.30	10307.50
GR	94.80	10332.20	96.50	10389.50	105.40	10408.40	117.30	10434.90	118.10	10465.00

X1	6635	32.00	9379.80	10439.40	100	100	100	.00	.00	.00
GR	116.70	9358.90	116.60	9379.80	102.90	9407.30	95.40	9422.70	95.80	9472.30
GR	90.50	9514.70	89.00	9541.90	89.70	9557.70	89.80	9599.60	89.20	9655.50
GR	89.00	9702.50	89.60	9740.60	89.70	9793.40	89.10	9853.70	87.80	9882.80
GR	87.20	9922.40	88.90	9952.40	90.20	9966.00	89.50	10000.00	88.80	10044.70
GR	87.80	10079.40	87.90	10130.40	88.80	10142.40	88.80	10197.50	88.80	10252.40
GR	89.70	10263.50	91.50	10316.10	95.30	10341.20	96.20	10397.30	107.00	10418.00
GR	117.50	10439.40	117.90	10470.10						
X1	6735	31.00	9378.10	10445.30	100	100	100	.00	.00	.00
GR	117.00	9353.20	116.90	9378.10	102.20	9406.20	95.70	9422.30	96.00	9440.00
GR	96.10	9470.00	92.60	9501.90	90.10	9544.70	89.80	9594.70	89.80	9659.70
GR	90.00	9722.30	88.10	9802.40	89.60	9820.30	88.30	9864.50	86.70	9884.10
GR	86.40	9908.80	87.80	9936.80	89.90	9969.80	89.50	10000.00	88.40	10065.90
GR	88.70	10102.30	88.50	10153.30	88.90	10212.00	89.70	10262.20	90.40	10283.70
GR	91.20	10321.50	94.60	10346.90	96.30	10405.10	107.20	10423.20	117.10	10445.30
GR	117.50	10477.70								
X1	6835	36.00	9377.00	10453.80	100	100	100	.00	.00	.00
GR	116.60	9353.10	116.70	9377.00	102.00	9409.00	97.10	9422.70	96.60	9453.50
GR	96.20	9475.40	94.30	9494.20	89.60	9521.70	90.60	9545.90	90.20	9591.40
GR	89.60	9622.90	90.20	9661.50	90.00	9727.80	89.10	9784.20	87.40	9802.60
GR	87.80	9844.10	89.30	9855.40	89.80	9869.30	87.50	9883.20	87.60	9909.20
GR	88.90	9941.30	89.40	9969.40	89.80	10000.00	89.30	10041.20	89.80	10084.10
GR	89.40	10142.60	89.90	10209.30	90.20	10278.70	90.20	10314.00	91.70	10334.00
GR	95.00	10357.30	95.60	10370.40	95.70	10403.50	108.00	10430.60	117.30	10453.80
GR	117.80	10484.30								
X1	6935	32.00	9379.10	10459.20	100	100	100	.00	.00	.00
GR	117.10	9354.30	116.30	9379.10	104.50	9404.50	96.50	9425.00	97.10	9455.70
GR	97.20	9468.60	95.70	9484.90	92.10	9507.90	90.60	9526.50	89.80	9590.60
GR	88.80	9682.40	89.50	9695.50	89.10	9726.10	90.10	9754.70	90.60	9822.70
GR	89.70	9888.50	89.50	9937.30	89.70	10000.00	89.90	10047.20	90.80	10064.20
GR	90.40	10128.30	89.70	10195.30	90.30	10238.10	90.60	10287.30	90.40	10322.60
GR	91.80	10341.20	95.60	10360.50	96.40	10390.70	96.40	10410.80	108.60	10438.40
GR	117.50	10459.20	118.70	10490.00						
X1	7035	31.00	9381.30	10461.10	100	100	100	.00	.00	.00
GR	116.80	9357.40	117.00	9381.30	104.50	9407.50	96.30	9422.50	96.10	9433.90
GR	97.10	9438.10	97.60	9468.30	95.80	9489.30	95.10	9540.40	93.20	9586.10
GR	92.00	9642.00	90.50	9699.20	89.10	9728.00	90.50	9760.90	91.40	9786.40
GR	90.80	9871.60	90.00	9898.90	89.80	9955.70	89.70	10000.00	90.40	10031.10
GR	91.90	10062.50	91.10	10106.70	90.30	10158.90	90.70	10213.00	91.10	10260.00
GR	91.40	10319.00	92.00	10344.20	96.50	10366.80	96.70	10413.80	106.20	10435.60
GR	117.80	10461.10								
X1	7135	34.00	9377.60	10460.50	100	100	100	.00	.00	.00
GR	117.30	9352.70	117.40	9377.60	103.80	9404.20	96.40	9420.10	96.30	9432.20
GR	97.30	9437.10	97.50	9469.20	96.70	9486.60	96.90	9524.80	95.20	9586.90
GR	94.90	9621.30	94.70	9676.50	93.70	9738.90	90.00	9759.40	91.80	9792.10
GR	90.80	9842.30	89.80	9891.20	90.20	9908.00	89.80	9914.00	89.70	9963.30
GR	90.40	10000.00	91.50	10027.80	92.30	10074.50	91.70	10103.30	91.20	10149.70
GR	91.70	10204.80	92.60	10266.70	93.80	10324.20	94.20	10348.20	97.40	10366.60

GR	96.50	10413.20	108.20	10437.70	117.30	10460.50	118.20	10496.40		
X1	7235	29.00	9377.70	10463.80	100	100	100	.00	.00	.00
GR	117.10	9359.40	117.10	9377.70	105.20	9401.10	98.00	9418.70	98.30	9429.60
GR	97.30	9530.60	96.60	9607.30	96.40	9677.50	97.40	9723.00	97.60	9744.80
GR	92.80	9758.50	91.40	9771.30	91.10	9835.70	89.40	9892.70	89.10	9939.00
GR	89.90	9942.60	90.50	9962.80	90.30	9979.80	91.30	10000.00	92.20	10083.00
GR	91.80	10142.80	91.20	10177.80	93.60	10208.40	95.10	10247.10	96.40	10307.60
GR	97.60	10366.00	98.10	10421.50	110.10	10445.60	117.40	10463.80		
X1	7335	28.00	9382.20	10474.00	100	100	100	.00	.00	.00
GR	117.20	9360.10	117.10	9382.20	105.30	9404.60	97.60	9425.00	97.60	9485.30
GR	97.10	9567.70	96.60	9596.10	96.40	9673.10	97.40	9711.30	97.80	9743.00
GR	92.80	9760.40	91.30	9801.20	89.60	9875.10	89.20	9908.10	90.00	9911.70
GR	90.80	9959.70	91.60	9978.70	91.70	10000.00	92.20	10054.40	92.60	10106.80
GR	92.60	10161.50	96.50	10187.50	97.20	10237.40	97.40	10310.80	97.60	10383.30
GR	98.80	10427.90	107.60	10447.20	118.10	10474.00				
X1	7435	27.00	9385.90	10477.10	100	100	100	.00	.00	.00
GR	117.60	9365.80	117.60	9385.90	106.20	9409.30	97.70	9428.30	97.50	9490.50
GR	97.60	9582.60	96.70	9640.40	96.90	9689.70	97.90	9747.40	91.80	9773.70
GR	90.60	9848.20	89.40	9904.00	89.90	9916.70	91.50	9930.70	91.80	9967.00
GR	92.60	10000.00	92.30	10056.20	93.00	10112.80	92.50	10165.30	96.80	10179.60
GR	97.40	10236.00	97.80	10273.30	97.50	10341.50	97.60	10387.30	99.20	10435.50
GR	109.20	10454.80	118.00	10477.10						
X1	7535	31.00	9391.30	10481.00	100	100	100	.00	.00	.00
GR	118.20	9370.50	118.10	9391.30	105.80	9415.20	98.20	9433.80	97.60	9485.80
GR	98.10	9514.50	98.10	9581.50	97.60	9662.60	97.80	9720.90	98.10	9756.80
GR	92.30	9775.60	91.80	9792.00	90.60	9832.70	91.90	9841.50	91.20	9869.20
GR	93.30	9878.00	93.00	9897.60	90.70	9912.60	91.00	9958.70	91.90	10000.00
GR	92.30	10068.30	93.00	10116.50	93.00	10167.60	97.80	10191.60	98.20	10263.90
GR	98.20	10332.00	97.20	10360.20	97.00	10411.20	97.70	10430.00	106.80	10451.70
GR	118.10	10481.00								
X1	7635	39.00	9398.60	10485.20	100	100	100	.00	.00	.00
GR	118.10	9374.60	117.80	9398.60	106.90	9421.30	99.10	9439.10	98.30	9483.90
GR	97.80	9503.30	98.30	9544.50	98.70	9599.20	98.10	9665.00	97.10	9719.70
GR	97.90	9738.60	97.70	9759.00	93.20	9771.60	91.40	9790.30	90.60	9823.10
GR	91.70	9826.70	91.10	9862.70	92.70	9870.70	92.70	9899.80	91.70	9910.80
GR	91.50	9931.30	94.30	9948.00	94.60	9969.80	93.30	10000.00	92.70	10039.70
GR	92.80	10093.30	92.60	10166.50	98.70	10183.10	98.90	10244.80	97.80	10303.30
GR	98.20	10332.50	97.90	10359.70	97.80	10416.30	98.90	10422.00	101.00	10445.90
GR	110.80	10463.30	117.90	10485.20	118.40	10498.00	118.50	10513.10		
X1	7735	40.00	9404.60	10484.70	100	100	100	.00	.00	.00
GR	118.20	9377.00	117.70	9404.60	106.40	9426.90	99.40	9443.40	99.10	9475.30
GR	98.70	9498.90	98.80	9526.40	98.60	9585.60	97.70	9655.90	97.50	9747.90
GR	98.60	9756.70	97.30	9766.00	92.70	9778.60	90.70	9808.50	92.30	9820.70
GR	92.40	9831.10	90.90	9846.20	91.40	9870.90	92.20	9880.20	92.40	9898.30
GR	91.10	9906.90	92.40	9915.50	94.60	9931.20	95.20	9955.50	94.10	10000.00
GR	93.00	10043.90	92.90	10098.10	92.40	10166.10	99.50	10185.10	99.30	10218.00
GR	99.20	10249.60	99.50	10263.30	98.40	10296.70	98.30	10333.40	98.50	10356.00
GR	98.10	10394.80	98.80	10431.00	100.50	10448.60	111.40	10468.70	118.40	10484.70

X1	7835	39.00	9407.30	10484.70	100	100	100	.00	.00	.00
GR	118.10	9379.90	117.60	9407.30	107.90	9428.30	99.70	9446.10	99.50	9507.50
GR	99.10	9554.80	98.40	9604.20	97.90	9652.40	97.80	9684.10	98.20	9716.00
GR	98.40	9747.80	99.90	9757.80	93.80	9772.90	92.20	9780.50	91.00	9810.80
GR	91.90	9816.90	91.90	9835.90	91.00	9840.90	92.10	9852.20	92.90	9871.90
GR	92.00	9883.00	92.00	9896.20	94.50	9913.90	95.50	9936.50	95.90	9968.10
GR	94.90	10000.00	94.10	10035.10	93.40	10064.00	93.40	10163.90	100.20	10186.00
GR	100.70	10218.50	100.40	10268.80	99.70	10343.50	99.20	10386.50	99.50	10430.80
GR	100.70	10448.30	109.70	10464.50	119.70	10484.70	120.10	10502.70		
X1	7935	35.00	9411.60	10487.40	100	100	100	.00	.00	.00
GR	118.50	9390.20	118.00	9411.60	106.40	9433.90	99.40	9452.30	99.40	9511.80
GR	99.90	9565.80	99.20	9629.60	98.60	9678.00	99.00	9735.70	100.50	9758.00
GR	94.70	9771.00	94.20	9781.20	92.20	9791.00	92.40	9803.90	91.50	9809.60
GR	91.30	9836.30	93.50	9844.00	92.40	9894.90	94.70	9905.70	96.70	9937.90
GR	96.10	9971.80	95.20	10000.00	93.60	10068.00	93.50	10163.60	95.70	10174.70
GR	101.30	10190.30	101.60	10234.00	101.20	10287.70	101.40	10345.90	99.70	10400.70
GR	100.00	10415.70	100.50	10449.50	111.00	10469.50	119.60	10487.40	119.80	10503.50
X1	8035	35.00	9416.70	10492.30	100	100	100	.00	.00	.00
GR	118.40	9393.30	117.90	9416.70	107.80	9435.20	99.70	9453.30	99.70	9508.30
GR	99.80	9554.90	99.30	9635.50	100.00	9646.80	100.20	9703.70	98.80	9725.70
GR	100.30	9740.10	99.70	9755.70	94.40	9771.80	93.50	9789.50	92.10	9795.50
GR	91.80	9826.00	93.30	9836.60	93.40	9860.10	92.70	9873.00	92.70	9896.00
GR	96.10	9920.70	96.80	9946.40	96.20	9975.20	95.40	10000.00	93.50	10063.90
GR	93.80	10103.90	93.70	10167.40	101.00	10194.50	101.40	10237.50	101.80	10297.20
GR	101.30	10362.50	100.50	10408.00	99.80	10452.70	111.90	10473.80	120.50	10492.30
X1	8135	36.00	9423.30	10503.20	100	100	100	.00	.00	.00
GR	118.90	9400.00	118.90	9414.40	117.60	9423.30	107.20	9442.60	99.90	9458.40
GR	99.80	9510.30	100.90	9543.00	100.40	9593.20	99.80	9637.70	99.80	9701.40
GR	100.00	9760.00	94.50	9776.70	93.80	9783.10	92.10	9788.20	91.90	9828.40
GR	92.70	9834.00	92.20	9843.60	92.80	9854.40	92.60	9879.60	95.40	9910.00
GR	96.30	9938.80	97.30	9963.60	96.30	10000.00	95.20	10027.00	94.00	10060.50
GR	93.80	10112.40	93.80	10161.80	94.70	10172.60	100.90	10197.10	101.10	10239.60
GR	101.00	10308.30	100.80	10393.90	100.80	10423.40	100.40	10452.00	110.40	10476.10
GR	120.70	10503.20								
X1	8235	31.00	9423.90	10500.70	100	100	100	.00	.00	.00
GR	120.20	9402.70	119.60	9423.90	108.20	9448.50	100.30	9466.40	100.30	9518.40
GR	100.40	9579.30	100.30	9648.50	100.10	9732.90	100.80	9762.00	94.60	9780.90
GR	94.40	9797.20	92.70	9803.30	92.30	9844.80	93.20	9852.40	93.10	9871.40
GR	94.70	9903.30	96.00	9922.80	96.70	9956.10	96.30	10000.00	95.20	10036.70
GR	93.80	10077.00	93.70	10138.60	94.10	10179.40	100.10	10198.40	101.50	10220.30
GR	101.40	10277.80	101.00	10362.60	101.10	10455.30	112.20	10481.00	119.70	10500.70
GR	119.80	10521.20								
X1	8335	35.00	9427.30	10501.80	100	100	100	.00	.00	.00
GR	120.30	9410.00	119.80	9427.30	108.60	9451.60	100.70	9469.00	100.40	9495.30
GR	101.30	9503.40	101.50	9538.60	100.60	9591.40	100.50	9642.20	100.70	9678.50
GR	101.40	9702.10	100.60	9745.90	98.80	9775.10	94.90	9786.70	95.30	9798.70
GR	92.80	9809.70	92.30	9850.00	93.40	9859.60	94.60	9888.90	96.20	9933.40
GR	96.90	9963.10	96.50	10000.00	95.70	10040.50	93.80	10091.10	93.80	10135.20

GR	94.10	10181.00	100.90	10200.70	101.60	10248.70	101.10	10291.20	101.20	10351.50
GR	101.40	10415.60	101.90	10454.20	110.10	10475.30	119.70	10501.80	120.20	10523.60
X1	8435	31.00	9432.50	10512.30	100	100	100	.00	.00	.00
GR	120.50	9413.70	120.20	9432.50	109.00	9457.40	100.80	9473.70	100.60	9493.30
GR	101.30	9503.50	102.30	9537.60	102.10	9555.60	100.60	9576.10	100.80	9638.30
GR	100.30	9725.30	100.30	9774.70	95.80	9787.20	93.40	9808.40	92.50	9849.60
GR	94.30	9868.50	95.40	9895.70	96.20	9937.90	96.60	10000.00	95.90	10041.30
GR	94.10	10099.30	94.00	10178.70	94.80	10187.10	101.60	10212.70	101.30	10270.30
GR	101.00	10314.80	101.30	10369.20	102.20	10434.50	102.10	10469.80	112.00	10493.10
GR	120.40	10512.30								
X1	8535	31.00	9439.90	10515.10	100	100	100	.00	.00	.00
GR	121.20	9417.90	120.30	9439.90	109.70	9462.10	101.20	9478.10	101.40	9515.70
GR	101.50	9558.70	101.30	9621.10	100.70	9682.30	100.60	9754.80	99.60	9774.60
GR	96.20	9785.80	93.10	9812.90	93.00	9853.00	95.20	9881.80	96.30	9933.50
GR	96.50	9978.10	96.40	10000.00	95.90	10042.00	94.50	10090.10	94.20	10138.20
GR	94.10	10186.10	95.60	10194.70	101.70	10215.10	101.60	10277.80	101.90	10345.50
GR	102.20	10444.40	101.40	10459.30	101.20	10474.60	110.80	10493.80	120.00	10515.10
GR	120.50	10538.40								
X1	8635	33.00	9441.90	10523.80	100	100	100	.00	.00	.00
GR	122.20	9419.00	120.80	9441.90	110.20	9465.80	101.60	9482.50	101.80	9537.50
GR	101.80	9608.30	101.40	9664.30	101.00	9722.10	99.90	9777.30	95.70	9790.70
GR	94.20	9798.40	93.80	9821.40	94.40	9849.30	95.60	9870.90	95.70	9913.20
GR	96.20	9941.40	96.60	9977.40	96.40	10000.00	95.30	10051.90	94.40	10114.00
GR	94.40	10182.40	97.60	10197.80	101.90	10212.80	101.80	10299.90	101.40	10323.60
GR	102.40	10380.90	103.00	10414.60	102.80	10442.90	101.80	10462.80	101.50	10485.20
GR	111.90	10502.80	120.80	10523.80	120.90	10555.10				
X1	8735	30.00	9448.90	10511.10	100	100	100	.00	.00	.00
GR	122.00	9400.20	121.10	9448.90	110.30	9468.60	102.20	9484.80	102.20	9541.80
GR	102.10	9626.30	101.50	9704.50	100.80	9769.40	99.80	9782.20	97.20	9792.90
GR	97.00	9798.50	94.90	9803.50	94.40	9825.10	94.50	9846.80	95.70	9864.90
GR	95.80	9928.50	96.50	9969.40	96.00	10000.00	95.50	10051.40	94.60	10096.40
GR	94.70	10189.00	102.10	10209.70	102.50	10256.40	102.80	10342.50	102.20	10381.80
GR	102.00	10438.20	102.60	10458.80	110.40	10481.80	120.90	10511.10	121.30	10533.80
X1	8835	28.00	9447.30	10417.60	100	100	100	.00	.00	.00
GR	121.90	9431.00	121.70	9447.30	117.70	9458.50	103.10	9489.20	103.10	9565.30
GR	102.60	9645.20	102.00	9718.00	100.60	9784.40	98.40	9792.80	98.20	9806.40
GR	95.80	9808.90	95.10	9830.90	95.40	9857.30	96.20	9879.00	96.10	9932.50
GR	95.90	10000.00	95.60	10043.90	95.00	10085.20	94.80	10185.30	97.70	10198.00
GR	102.90	10211.60	103.40	10240.00	103.40	10282.30	102.10	10341.10	102.30	10363.10
GR	112.20	10389.30	120.80	10417.60	121.50	10441.70				

PHOENIX SKYHARBOR I.L.S.

X1	8935	24.00	9450.70	10337.10	100	100	100	.00	.00	.00
GR	121.30	9435.30	121.30	9450.70	111.80	9474.10	104.20	9490.10	103.90	9554.10
GR	103.40	9619.00	102.90	9696.90	102.20	9760.60	100.80	9785.80	97.40	9796.90
GR	97.10	9829.90	95.60	9832.40	95.70	9861.20	96.40	9874.40	96.40	9945.70
GR	96.00	10000.00	95.80	10048.70	95.40	10116.40	95.80	10191.30	103.50	10211.80
GR	103.30	10251.30	103.20	10297.10	114.00	10320.40	121.00	10337.10		

X1	9035	26.00	9456.80	10323.40	100	100	100	.00	.00	.00
GR	121.30	9437.90	120.70	9456.80	111.40	9475.30	104.90	9488.70	105.10	9531.30
GR	104.90	9582.80	104.40	9629.30	103.90	9701.90	104.40	9733.70	102.30	9759.40
GR	101.80	9785.80	97.30	9799.70	97.50	9847.30	97.20	9876.90	96.70	9912.50
GR	96.70	9962.30	96.90	10000.00	96.80	10055.00	96.10	10159.20	96.10	10191.50
GR	97.50	10201.60	103.00	10218.10	102.80	10283.10	112.00	10302.10	121.10	10323.40
GR	121.20	10347.40								
X1	9135	27.00	9457.10	10377.20	100	100	100	.00	.00	.00
GR	121.20	9440.30	120.90	9457.10	112.60	9473.60	106.00	9487.20	105.80	9544.00
GR	105.30	9596.70	105.00	9672.80	104.00	9723.40	103.40	9782.50	97.90	9797.50
GR	97.80	9848.10	97.30	9854.90	97.40	9909.20	97.40	9959.80	97.40	10000.00
GR	97.20	10053.70	96.30	10140.70	96.60	10153.20	96.10	10195.60	101.50	10207.80
GR	101.70	10235.80	103.00	10276.40	103.30	10292.00	102.40	10332.60	111.50	10350.90
GR	121.70	10377.20	121.80	10395.00						
X1	9235	31.00	9455.10	10426.20	100	100	100	.00	.00	.00
GR	121.50	9436.20	120.90	9455.10	107.30	9484.00	107.00	9506.30	106.30	9535.90
GR	105.60	9602.10	104.90	9657.20	104.60	9714.90	104.10	9741.00	103.40	9780.10
GR	98.70	9791.60	98.20	9824.70	97.60	9844.10	98.10	9909.10	96.80	9932.50
GR	96.50	9965.80	96.60	10000.00	96.50	10045.00	96.50	10116.50	96.90	10139.60
GR	97.60	10168.80	97.00	10195.60	101.10	10210.60	101.70	10232.60	103.00	10254.70
GR	103.00	10285.00	103.10	10344.00	103.10	10384.30	112.70	10404.40	121.90	10426.20
GR	122.20	10446.10								
X1	9335	30.00	9454.20	10486.90	100	100	100	.00	.00	.00
GR	122.50	9435.70	121.60	9454.20	113.00	9471.00	106.00	9485.00	105.60	9552.20
GR	104.90	9628.40	104.60	9691.00	104.20	9775.10	97.40	9794.40	97.10	9813.80
GR	97.50	9854.90	98.30	9887.80	97.90	9912.80	96.80	9942.50	95.80	9968.20
GR	95.80	10000.00	95.90	10072.00	96.70	10103.30	97.50	10144.70	97.60	10195.60
GR	102.70	10208.40	102.10	10234.70	102.60	10275.80	103.10	10316.00	103.90	10379.80
GR	103.30	10404.90	102.90	10439.70	113.60	10460.70	122.70	10486.90	122.80	10505.70
X1	9435	36.00	9451.60	10529.20	100	100	100	.00	.00	.00
GR	122.40	9429.90	121.50	9451.60	112.50	9471.80	105.10	9485.40	104.80	9540.00
GR	104.50	9601.30	104.10	9657.70	104.60	9687.70	104.40	9725.70	104.60	9774.90
GR	97.80	9790.80	96.70	9803.30	97.10	9826.40	97.60	9842.30	97.80	9903.30
GR	97.40	9925.30	96.10	9948.90	95.30	9967.00	95.30	10000.00	95.40	10046.80
GR	96.40	10076.00	97.30	10109.60	97.70	10188.70	103.10	10204.70	102.50	10236.20
GR	102.70	10267.00	103.20	10284.50	103.40	10318.80	103.90	10358.10	104.50	10371.90
GR	104.00	10448.80	103.20	10472.50	103.40	10487.90	112.50	10504.70	122.60	10529.20
GR	123.00	10548.00								
X1	9535	33.00	9450.10	10529.90	100	100	100	.00	.00	.00
GR	122.10	9429.10	121.70	9450.10	112.10	9470.20	104.30	9485.80	104.00	9533.70
GR	104.30	9608.90	105.60	9635.20	104.20	9659.60	104.20	9707.50	103.90	9734.60
GR	104.60	9744.80	104.70	9772.40	97.40	9798.40	97.40	9841.70	97.90	9879.40
GR	96.90	9923.30	95.40	9968.10	94.80	10000.00	95.30	10023.80	96.70	10061.00
GR	97.50	10111.60	97.70	10178.50	103.10	10194.80	103.10	10231.80	102.50	10255.00
GR	103.30	10290.60	103.20	10320.70	103.30	10337.90	104.50	10367.80	104.20	10430.50
GR	103.50	10485.50	111.80	10503.70	122.60	10529.90				

X1	9635	36.00	9447.80	10525.50	100	100	100	.00	.00	.00
GR	122.10	9426.60	121.80	9447.80	111.70	9469.60	103.90	9486.90	104.00	9538.00
GR	103.60	9587.20	104.40	9627.90	104.80	9684.50	104.40	9714.00	104.90	9736.40
GR	104.70	9771.20	96.20	9788.80	95.70	9832.10	97.70	9851.80	97.80	9887.10
GR	95.80	9941.00	95.50	9970.80	95.50	10000.00	95.70	10021.70	96.50	10046.90
GR	97.50	10095.50	97.60	10141.20	97.80	10176.80	104.30	10192.50	104.40	10219.50
GR	102.60	10246.80	102.80	10286.70	103.10	10318.60	103.90	10324.60	104.60	10386.00
GR	105.00	10459.00	103.90	10466.30	104.20	10481.90	113.70	10504.20	122.60	10525.50
GR	122.80	10548.00								
X1	9735	37.00	9448.30	10527.30	100	100	100	0	.00	.00
GR	122.50	9426.40	121.50	9448.30	112.40	9468.50	103.80	9486.40	103.40	9560.30
GR	103.40	9586.00	104.20	9600.40	104.30	9638.60	105.00	9649.00	104.30	9729.30
GR	103.60	9767.10	101.40	9779.00	97.50	9788.40	95.60	9803.10	95.20	9821.20
GR	97.50	9830.40	97.90	9852.00	97.30	9884.70	96.30	9933.10	95.50	9953.20
GR	95.30	9978.40	95.90	10000.00	96.70	10040.50	97.50	10108.30	98.00	10177.10
GR	103.50	10194.30	103.60	10229.80	102.80	10245.50	102.60	10292.70	103.10	10334.00
GR	104.00	10351.80	104.50	10405.30	105.10	10472.10	106.80	10490.70	114.60	10509.70
GR	122.60	10527.30	122.70	10548.60						
X1	9835	33.00	9447.90	10527.00	100	100	100	.00	.00	.00
GR	122.80	9426.70	122.40	9447.90	113.20	9467.90	103.40	9488.80	103.60	9533.70
GR	103.60	9599.40	104.40	9625.70	103.70	9650.10	103.30	9701.60	104.50	9711.50
GR	103.50	9744.80	103.30	9774.90	97.10	9796.70	96.20	9820.00	95.40	9852.20
GR	97.80	9864.50	97.30	9912.50	96.00	9947.60	95.80	9972.20	96.60	10000.00
GR	97.30	10035.80	97.80	10109.40	98.90	10186.70	104.20	10203.20	104.20	10228.00
GR	103.10	10247.20	102.50	10287.10	104.00	10350.30	104.70	10422.70	104.90	10465.70
GR	106.50	10489.90	116.60	10510.70	123.20	10527.00				
X1	9935	29.00	9451.20	10526.30	100	100	100	.00	.00	.00
GR	123.10	9427.20	122.40	9451.20	103.80	9489.90	103.40	9524.50	104.60	9570.90
GR	103.90	9629.90	104.30	9681.20	104.10	9737.00	103.70	9776.50	99.40	9791.10
GR	97.50	9824.80	96.90	9893.10	96.80	9964.60	97.20	10000.00	97.60	10055.70
GR	98.30	10118.20	98.70	10168.50	99.30	10185.00	104.10	10196.30	104.50	10209.40
GR	103.50	10251.80	102.60	10287.90	102.90	10323.20	104.00	10353.30	104.40	10419.80
GR	105.10	10454.90	106.70	10486.40	116.00	10508.50	123.30	10526.30		

BEGIN CHANNELIZATION

X1	10035	11	10020.	11105.	100	100	100			
GR	122.50	10000.	122.00	10020.	105.00	10056.	104.00	10340.	100.00	10356.
GR	97.20	10540.	100.00	10750.	105.00	10770.	105.00	11050.	123.00	11105.
GR	123.00	11150.								
X1	10200	11	10025.	11100.	165	165	165			
GR	122.00	10000.	123.00	10025.	105.00	10065.	104.00	10355.	100.00	10365.
GR	98.10	10548.	100.00	10758.	105.00	10775.	105.00	11060.	123.00	11100.
GR	123.00	11150.								

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X1    10400      11    10035.   11103.     200      200      200
GR   122.00   10000.   122.00   10035.  105.00   10070.   105.00   10353.   100.00   10385.
GR    98.10   10548.   100.00   10758.  105.00   10775.   105.00   11060.   123.00   11103.
GR   123.00   11140.

X1    10600      11    10025.   11100.     200      200      200
GR   123.00   10000.   123.00   10025.  105.00   10068.   105.00   10362.   100.00   10392.
GR    98.50   10544.   100.00   10760.  105.00   10775.   106.00   11050.   124.00   11100.
GR   124.00   11130.

X1    10800      11    10030.   11100.     200      200      200
GR   123.00   10000.   123.00   10030.  105.00   10067.   106.00   10380.   100.00   10400.
GR    99.00   10540.   101.00   10780.  106.00   10800.   107.00   11060.   124.00   11100.
GR   124.00   11145.

X1    11000      11    10022.   11095.     200      200      200
GR   123.00   10000.   123.00   10022.  105.00   10065.   106.00   10392.   101.00   10418.
GR    99.50   10538.   101.00   10810.  106.00   10830.   107.00   11060.   124.00   11095.
GR   125.00   11195.

X1    11200      12    10030.   11100.     200      200      200
GR   123.00   10000.   123.00   10030.  106.00   10064.   106.00   10413.   100.00   10425.
GR   100.00   10538.   100.00   10815.  103.00   10821.   106.00   10875.   107.00   11055.
GR   126.00   11100.   126.00   11160.

X1    11400      11    10030.   11113.     200      200      200
GR   124.00   10000.   124.00   10030.  107.00   10064.   103.40   10405.   100.40   10411.
GR   100.40   10810.   103.40   10816.  108.00   10925.   108.00   11060.   126.00   11113.
GR   128.00   11195.
  BEGIN NORTH LEVEE

X1    11600      12    10030.   11122.     200      200      200
GR   124.00   10000.   124.00   10030.  108.00   10065.   103.90   10399.   100.90   10405.
GR   100.90   10805.   103.90   10811.  103.90   11060.   116.50   11080.   116.50   11089.
GR   127.50   11122.   127.50   11133.

X1    11800      12    10035.   11130.     200      200      200
GR   125.50   10000.   125.00   10035.  110.00   10075.   104.40   10386.   101.40   10392.
GR   101.40   10792.   104.40   10798.  104.40   11071.   116.90   11089.   116.90   11097.
GR   127.90   11130.   127.90   11141.

X1    12000      12    10035.   11130.     200      200      200
GR   127.60   10000.   127.00   10035.  110.00   10070.   104.80   10364.   101.80   10370.
GR   101.80   10770.   104.80   10776.  104.80   11070.   117.40   11089.   117.40   11097.
GR   128.40   11130.   128.40   11140.

X1    12100      12    10035.   11125.     100      100      100
GR   127.80   10000.   127.00   10035.  110.50   10070.   105.10   10347.   102.10   10353.
GR   102.10   10753.   105.10   10759.  105.10   11065.   117.60   11084.   117.60   11092.
GR   128.60   11125.   128.60   11136.
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X1    12200      12    10032.    11123.      100       100       100
GR   128.00   10000.   126.00    10032.   110.00    10082.    105.30   10334.    102.30    10340.
GR   102.30   10740.   105.30    10746.   105.30    11063.    117.80   11082.    117.80    11090.
GR   128.80   11123.   128.80    11134.

X1    12400      12    10047.    11109.      200       200       200
GR   129.30   10000.   129.00    10047.   111.00    10085.    105.80   10308.    102.80    10314.
GR   102.80   10714.   105.80    10720.   105.80    11049.    118.20   11068.    118.20    11076.
GR   129.20   11109.   129.20    11119.

X1    12600      14    10033.    11097.      200       200       200
GR   130.00   10000.   130.00    10033.   118.60    10078.    118.60   10086.    106.20    10105.
GR   106.20   10281.   103.20    10287.   103.20    10687.    106.20   10693.    106.20    11038.
GR   118.60   11056.   118.60    11064.   129.60    11097.    129.60   11108.

X1    12800      14    10055.    11130.      200       200       200
GR   130.40   10000.   131.00    10055.   119.10    10108.    119.10   10116.    106.70    10135.
GR   106.70   10284.   103.70    10290.   103.70    10690.    106.70   10696.    106.70    11071.
GR   119.10   11089.   119.10    11097.   130.00    11130.    130.00   11141.

X1    13000      14    10059.    11115.      200       200       200
GR   132.00   10000.   131.00    10059.   119.40    10087.    119.40   10095.    107.20    10113.
GR   107.20   10244.   104.20    10250.   104.20    10650.    107.20   10656.    107.20    11055.
GR   119.50   11074.   119.50    11082.   130.50    11115.    130.50   11126.

X1    13200      14    10040.    11092.      200       200       200
GR   131.00   10000.   130.00    10040.   119.90    10064.    119.90   10072.    107.70    10090.
GR   107.70   10194.   104.70    10200.   104.70    10600.    107.70   10606.    107.70    11032.
GR   119.90   11051.   119.90    11059.   130.90    11092.    130.90   11102.

X1    13400      14    10040.    11092.      200       200       200
GR   131.00   10000.   130.00    10040.   120.30    10064.    120.30   10072.    108.10    10090.
GR   108.10   10172.   105.10    10178.   105.10    10578.    108.10   10584.    108.10    11032.
GR   120.30   11051.   120.30    11059.   131.30    11092.    131.30   11102.

X1    13600      14    10042.    11087.      200       200       200
GR   132.00   10000.   130.00    10042.   120.80    10067.    120.80   10075.    108.60    10093.
GR   108.60   10144.   105.60    10150.   105.60    10550.    108.60   10556.    108.60    11027.
GR   120.80   11046.   120.80    11054.   131.80    11087.    131.80   11097.

X1    13800      14    10035.    11081.      200       200       200
GR   132.50   10000.   130.00    10035.   121.20    10055.    121.20   10063.    109.10    10081.
GR   109.10   10114.   106.10    10120.   106.10    10520.    109.10   10526.    109.10    11022.
GR   121.20   11040.   121.20    11048.   132.20    11081.    132.20   11092.

X1    14000      14    10033.    11085.      200       200       200
GR   132.00   10000.   130.00    10033.   121.60    10049.    121.60   10057.    109.50    10075.
GR   109.50   10096.   106.50    10102.   106.50    10502.    109.50   10508.    109.50    11026.
GR   121.60   11044.   121.60    11052.   132.60    11085.    132.60   11096.
  BEGIN SOUTH LEVEE
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X1    14200        14     10011.    11093.      200       200       200
GR   133.00    10000.    133.00    10011.   122.00    10044.    122.00    10052.    110.00    10070.
GR   110.00    10091.    107.00    10097.   107.00    10497.    110.00    10503.    110.00    11034.
GR   122.00    11052.    122.00    11060.   133.00    11093.    133.00    11104.
  GRADE CONTROL STRUCTURE NO.2

X1    14400        13     10027.    11093.      200       200       200
GR   133.50    10000.    133.50    10027.   133.50    10035.    110.50    10070.    110.50    10086.
GR   107.50    10092.    107.50    10492.   110.50    10498.    110.50    11034.    122.50    11052.
GR   122.50    11060.    133.50    11093.   133.50    11104.

X1    14665        10     10036.    11068.      265       265       265
GR   134.10    10000.    134.10    10036.   111.20    10070.    111.20    10092.    108.20    10098.
GR   108.20    10498.    111.20    10504.   111.20    11034.    134.10    11068.    134.10    11103.

X1    14785        12     10011.    11068.      120       120       120
GR   134.30    10000.    134.30    10011.   123.30    10044.    123.30    10052.    111.40    10070.
GR   111.40    10092.    108.40    10098.   108.40    10498.    111.40    10504.    111.40    11034.
GR   134.30    11068.    134.30    11103.

X1    15000        14     10011.    11091.      215       215       215
GR   134.70    10000.    134.70    10011.   123.70    10044.    123.70    10052.    111.90    10070.
GR   111.90    10091.    108.90    10097.   108.90    10497.    111.90    10503.    111.90    11033.
GR   123.70    11050.    123.70    11058.   134.70    11091.    134.70    11102.

X1    15200        14     10011.    11091.      200       200       200
GR   135.20    10000.    135.20    10011.   124.20    10044.    124.20    10052.    112.40    10070.
GR   112.40    10091.    109.40    10097.   109.40    10497.    112.40    10503.    112.40    11033.
GR   124.20    11050.    124.20    11058.   135.20    11091.    135.20    11102.

NC                                     .3        .5
X1    15217        13   10014.1   11091.6        17        17        17
GR    135.2     10000     135.2   10014.1     112.4   10069.5     112.4     10090     109.4     10096
GR    109.4     10496     112.4     10502     112.4   10551.2     112.4   11032.9     124.2   11050.6
GR    124.2   11058.6     135.2   11091.6     135.2   11102.4
   S.R. 153 BRIDGE

SB     1.05      1.56       2.6         0       875      73.5     30974         2     109.7     109.4
X1    15326        13   10035.3   11091.6       109       109       109
X2                            1     145.2     152.2
GR    135.5     10000     135.5   10035.3     112.7   10069.5     112.7     10090     109.7     10096
GR    109.7     10496     112.7     10502     112.7   10551.2     112.7   11032.9     124.5   11050.6
GR    124.5   11058.6     135.5   11091.6     135.5   11102.4

X1    15467        13   10035.3   11091.4       141       141       141
GR    135.7     10000     135.7   10035.3     113.0   10069.5     113.0     10090       110     10096
GR      110     10496     113.0     10502     113.0   10551.1     113.0   11032.7     124.7   11050.4
GR    124.7   11058.4     135.7   11091.4     135.7   11102.2
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X1    15608      11    10035.3    11091      141      141      141
GR    136.0    10000     136.0  10035.3    113.3  10069.4    113.3    10090    110.3    10096
GR    110.3    10496     113.3    10502    113.3  10550.9    113.3  11032.4    136.0    11091
GR    136.0  11101.8
  S.R. 143 BRIDGE

SB     1.05     1.56       2.6        0      875       80    26567        2    110.7    110.3
X1    15730       13   10010.8  11065.9      122      122      122
X2                          1    141.7    148.7
GR    136.3    10000     136.3  10010.8    125.3  10043.8    125.3  10051.8    113.7  10069.2
GR    113.7    10090     110.7    10096    110.7    10496    113.7    10502    113.7  10550.6
GR    113.7  11032.0     136.3  11065.9    136.3  11101.2

X1    15800       13   10010.8  11065.9       70       70       70
GR    136.4    10000     136.4  10010.8    125.4  10043.8    125.4  10051.8    113.8  10069.2
GR    113.8    10090     110.8    10096    110.8    10496    113.8    10502    113.8  10550.6
GR    113.8    11032     136.4  11065.9    136.4  11101.2

NC                          .1       .3
X1    16000       16    10011.   11084.      200      200      200
GR   136.90    10000.   136.90   10011.   125.90   10044.   125.90   10052.   114.30   10078.
GR   114.30    10089.   111.30   10095.   111.30   10495.   114.30   10501.   114.30   11032.
GR   125.90    11050.   125.90   11058.   122.90   11062.   122.90   11063.   136.90   11084.
GR   136.90    11098.

X1    16200       15    10020.   11096.      200      200      200
GR   137.30    10000.   137.30   10012.   137.30   10020.   114.70   10081.   114.70   10109.
GR   111.70    10115.   111.70   10515.   114.70   10521.   114.70   11043.   126.30   11061.
GR   126.30    11069.   123.30   11073.   123.30   11074.   137.30   11096.   137.30   11109.

X1    16400       16    10011.   11083.      200      200      200
GR   137.70    10000.   137.70   10011.   126.70   10044.   126.70   10052.   115.20   10069.
GR   115.20    10102.   112.20   10108.   112.20   10508.   115.20   10514.   115.20   11031.
GR   126.70    11049.   126.70   11057.   123.70   11061.   123.70   11062.   138.30   11083.
GR   138.30    11098.

X1    16600       16    10011.   11085.      200      200      200
GR   138.10    10000.   138.10   10011.   127.10   10043.   127.10   10051.   115.70   10069.
GR   115.70    10124.   112.70   10130.   112.70   10530.   115.70   10536.   115.70   11033.
GR   127.10    11050.   127.10   11058.   124.10   11063.   124.10   11064.   138.70   11085.
GR   138.70    11099.

X1    16800       16    10010.   11087.      200      200      200
GR   138.60    10000.   138.60   10010.   127.60   10043.   127.60   10051.   116.20   10069.
GR   116.20    10157.   113.20   10163.   113.20   10563.   116.20   10569.   116.20   11035.
GR   127.60    11052.   127.60   11060.   124.60   11065.   124.60   11066.   139.20   11087.
GR   139.20    11101.
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X1	17000	16	10011.	11089.	200	200	200			
GR	139.00	10000.	139.00	10011.	128.00	10044.	128.00	10052.	116.60	10069.
GR	116.60	10205.	113.60	10211.	113.60	10611.	116.60	10617.	116.60	11037.
GR	128.00	11054.	128.00	11062.	125.00	11067.	125.00	11068.	139.60	11089.
GR	139.60	11103.								
X1	17200	16	10011.	11089.	200	200	200			
GR	139.40	10000.	139.40	10011.	128.40	10044.	128.40	10052.	117.10	10069.
GR	117.10	10263.	114.10	10269.	114.10	10669.	117.10	10675.	117.10	11037.
GR	128.40	11054.	128.40	11062.	125.40	11067.	125.40	11068.	140.00	11089.
GR	140.00	11103.								
X1	17400	12	10010.	11088.	200	200	200			
GR	139.80	10000.	139.80	10010.	128.80	10043.	128.80	10051.	117.60	10068.
GR	117.60	10322.	114.60	10328.	114.60	10728.	117.60	10734.	117.60	11036.
GR	140.40	11088.	140.40	11102.						
X1	17600	12	10011.	11070.	200	200	200			
GR	140.30	10000.	140.30	10011.	129.30	10044.	129.30	10052.	118.00	10069.
GR	118.00	10382.	115.00	10388.	115.00	10788.	118.00	10794.	118.00	11035.
GR	140.90	11070.	140.90	11084.						
X1	17800	12	10011.	11067.	200	200	200			
GR	140.70	10000.	140.70	10011.	129.70	10044.	129.70	10052.	118.50	10068.
GR	118.50	10431.	115.50	10437.	115.50	10837.	118.50	10843.	118.50	11033.
GR	141.30	11067.	141.30	11081.						
X1	18000	12	10011.	11065.	200	200	200			
GR	141.00	10000.	141.00	10011.	130.10	10044.	130.10	10052.	119.00	10069.
GR	119.00	10485.	116.00	10491.	116.00	10891.	119.00	10897.	119.00	11031.
GR	141.70	11065.	141.70	11079.						
X1	18200	12	10011.	11061.	200	200	200			
GR	141.50	10000.	141.50	10011.	130.50	10044.	130.50	10052.	119.50	10069.
GR	119.50	10528.	116.50	10534.	116.50	10934.	119.50	10940.	119.50	11027.
GR	142.10	11061.	142.10	11075.						
X1	18400	10	10015.	11080.	200	200	200			
GR	142.00	10000.	142.00	10015.	119.90	10077.	119.90	10567.	116.90	10573.
GR	116.90	10973.	119.90	10979.	119.90	11032.	142.60	11080.	142.60	11090.
X1	18600	10	10018.	11050.	200	200	200			
GR	142.40	10000.	142.40	10018.	120.40	10067.	120.40	10576.	117.40	10582.
GR	117.40	10982.	120.40	10988.	120.40	11016.	143.00	11050.	143.00	11063.
X1	18800	12	10011.	11046.	200	200	200			
GR	142.80	10000.	142.80	10011.	131.80	10044.	131.80	10052.	120.90	10069.
GR	120.90	10587.	117.90	10593.	117.90	10993.	120.90	10999.	120.90	11012.
GR	143.40	11046.	143.40	11060.						

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X1    19000      12    10011.    11039.      200       200       200
GR   143.20   10000.   143.20    10011.   132.20    10044.    132.20   10052.    121.30   10069.
GR   121.30   10586.   118.30    10592.   118.30    10992.    121.30   10998.    121.30   11005.
GR   143.80   11039.   143.80    11053.

X1    19200      12    10011.    11031.      200       200       200
GR   143.70   10000.   143.70    10011.   132.70    10044.    132.70   10052.    121.80   10068.
GR   121.80   10574.   118.80    10580.   118.80    10980.    121.80   10986.    121.80   10998.
GR   144.30   11031.   144.30    11045.

X1    19400      12    10011.    11023.      200       200       200
GR   144.10   10000.   144.10    10011.   133.10    10044.    133.10   10052.    122.30   10068.
GR   122.30   10555.   119.30    10561.   119.30    10961.    122.30   10967.    122.30   10989.
GR   144.70   11023.   144.70    11037.

X1    19600      12    10011.    11014.      200       200       200
GR   144.50   10000.   144.50    10011.   133.50    10044.    133.50   10052.    122.80   10068.
GR   122.80   10516.   119.80    10522.   119.80    10922.    122.80   10928.    122.80   10980.
GR   145.10   11014.   145.10    11028.

X1    19800      12    10011.    11005.      200       200       200
GR   145.00   10000.   145.00    10011.   134.00    10044.    134.00   10052.    123.20   10068.
GR   123.20   10480.   120.20    10486.   120.20    10886.    123.20   10892.    123.20   10972.
GR   145.60   11005.   145.60    11019.

X1    20000      12    10010.    10994.      200       200       200
GR   145.60   10000.   145.60    10010.   134.60    10043.    134.60   10051.    123.70   10068.
GR   123.70   10435.   120.70    10441.   120.70    10841.    123.70   10847.    123.70   10961.
GR   145.60   10994.   145.60    11008.

X1    20200      12    10011.    10987.      200       200       200
GR   146.10   10000.   146.10    10011.   135.10    10044.    135.10   10052.    124.20   10068.
GR   124.20   10382.   121.20    10388.   121.20    10788.    124.20   10794.    124.20   10951.
GR   146.10   10987.   146.10    11000.

X1    20400      10    10020.    10987.      200       200       200
GR   146.60   10000.   146.60    10020.   124.60    10066.    124.60   10325.    121.60   10331.
GR   121.60   10731.   124.60    10737.   124.60    10938.    146.60   10987.    146.60   11000.

X1    20600      12    10010.    10965.      200       200       200
GR   147.10   10000.   147.10    10010.   136.10    10043.    136.10   10051.    125.10   10068.
GR   125.10   10276.   122.10    10282.   122.10    10682.    125.10   10688.    125.10   10932.
GR   147.10   10965.   147.10    10979.
  GRADE CONTROL STRUCTURE NO. 3 (NOT CONSTRUCTED DUE TO BEDROCK)

X1    20782      14    10012.    10988.      182       182       182
GR   147.67   10000.   147.67    10012.   136.66    10045.    136.66   10053.    125.56   10069.
GR   125.56   10230.   122.50    10236.   122.50    10636.    125.56   10642.    125.56   10931.
GR   136.66   10947.   136.66    10955.   147.67    10988.    147.67   10999.
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X1    20800       14    10012.    10988.       18       18       18
GR   147.70    10000.   147.70    10012.   136.69    10045.   136.69    10053.   125.59    10069.
GR   125.59    10230.   122.53    10236.   122.53    10636.   125.59    10642.   125.59    10931.
GR   136.69    10947.   136.69    10955.   147.70    10988.   147.70    10999.

X1    21000       10    10032.    10964.      200      200      200
GR   148.20    10000.   148.20    10032.   125.94    10069.   125.94    10190.   122.86    10196.
GR   122.86    10596.   125.94    10602.   125.94    10931.   148.20    10964.   148.20    10999.
  PRIEST BRIDGE WOULD BE AT STA. 21162
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IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

*SECNO 14000.000

14000.000	12.67	119.17	114.85	.00	120.38	1.21	.37	.00	130.00
93000.0	.0	93000.0	.0	.0	10553.0	.0	3629.2	280.8	132.60
.47	.00	8.81	.00	.000	.035	.000	.000	106.50	10060.62
.001829	200.	200.	200.	2	14	0	.00	979.77	11040.38

*SECNO 14200.000

14200.000	12.54	119.54	115.31	.00	120.75	1.21	.37	.00	133.00
93000.0	.0	93000.0	.0	.0	10549.6	.0	3677.7	285.4	133.00
.48	.00	8.82	.00	.000	.035	.000	.000	107.00	10055.69
.001862	200.	200.	200.	0	14	0	.00	992.62	11048.31

*SECNO 14400.000

14400.000	12.40	119.90	115.81	.00	121.13	1.24	.38	.01	133.50
93000.0	.0	93000.0	.0	.0	10420.5	.0	3725.8	289.9	133.50
.48	.00	8.92	.00	.000	.035	.000	.000	107.50	10055.68
.001940	200.	200.	200.	0	14	0	.00	992.43	11048.11

*SECNO 14665.000

14665.000	12.19	120.39	116.52	.00	121.68	1.29	.53	.02	134.10
93000.0	.0	93000.0	.0	.0	10213.7	.0	3788.6	296.0	134.10
.49	.00	9.11	.00	.000	.035	.000	.000	108.20	10056.34
.002071	265.	265.	265.	0	14	0	.00	991.32	11047.66

*SECNO 14785.000

14785.000	12.25	120.65	116.70	.00	121.93	1.28	.25	.00	134.30
93000.0	.0	93000.0	.0	.0	10255.3	.0	3816.8	298.7	134.30
.50	.00	9.07	.00	.000	.035	.000	.000	108.40	10056.02
.002044	120.	120.	120.	1	19	0	.00	991.70	11047.72

*SECNO 15000.000

15000.000	12.18	121.08	117.20	.00	122.38	1.29	.44	.00	134.70
93000.0	.0	93000.0	.0	.0	10197.2	.0	3867.3	303.6	134.70
.50	.00	9.12	.00	.000	.035	.000	.000	108.90	10055.98
.002079	215.	215.	215.	0	19	0	.00	990.27	11046.25

*SECNO 15200.000

15200.000	12.09	121.49	117.70	.00	122.81	1.32	.42	.01	135.20
93000.0	.0	93000.0	.0	.0	10101.1	.0	3913.9	308.1	135.20
.51	.00	9.21	.00	.000	.035	.000	.000	109.40	10056.12
.002145	200.	200.	200.	0	19	0	.00	989.98	11046.11

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CCHV= .300 CEHV= .500

*SECNO 15217.000

15217.000	12.16	121.56	117.70	.00	122.85	1.29	.04	.01	135.20
93000.0	.0	93000.0	.0	.0	10209.7	.0	3917.8	308.5	135.20
.51	.00	9.11	.00	.000	.035	.000	.000	109.40	10047.24
.002093	17.	17.	17.	2	19	0	.00	999.41	11046.64

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	73.50	30974.00	2.00	109.70	109.40

*SECNO 15326.000

CLASS A LOW FLOW

3420 BRIDGE W.S.= 121.43 BRIDGE VELOCITY= 9.49 CALCULATED CHANNEL AREA= 9673.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	123.19	.34	0.	93000.	30974.	30974.	145.20	152.20	0.

15326.000	12.20	121.90	.00	.00	123.19	1.29	.34	.00	135.50
93000.0	.0	93000.0	.0	.0	10206.8	.0	3943.4	311.0	135.50
.51	.00	9.11	.00	.000	.035	.000	.000	109.70	10055.70
.002074	109.	109.	109.	0	0	0	.00	991.00	11046.70

*SECNO 15467.000

15467.000	12.19	122.19	118.30	.00	123.48	1.29	.29	.00	135.70
93000.0	.0	93000.0	.0	.0	10199.6	.0	3976.4	314.2	135.70
.52	.00	9.12	.00	.000	.035	.000	.000	110.00	10055.65
.002079	141.	141.	141.	0	19	0	.00	990.96	11046.61

*SECNO 15608.000

15608.000	12.20	122.50	118.60	.00	123.78	1.28	.29	.00	136.00
93000.0	.0	93000.0	.0	.0	10239.4	.0	4009.5	317.4	136.00
.52	.00	9.08	.00	.000	.035	.000	.000	110.30	10055.60
.002076	141.	141.	141.	1	19	0	.00	1000.52	11056.12

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	80.00	26567.00	2.00	110.70	110.30

*SECNO 15730.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 122.38 BRIDGE VELOCITY= 9.56 CALCULATED CHANNEL AREA= 9559.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	124.16	.36	0.	93000.	26567.	26567.	141.70	148.70	0.

15730.000	12.16	122.86	.00	.00	124.16	1.30	.38	.00	136.30
93000.0	.0	93000.0	.0	.0	10162.2	.0	4038.0	320.2	136.30
.52	.00	9.15	.00	.000	.035	.000	.000	110.70	10055.46
.002103	122.	122.	122.	0	0	0	.00	990.28	11045.74

*SECNO 15800.000

15800.000	12.22	123.02	119.10	.00	124.31	1.29	.15	.00	136.40
93000.0	.0	93000.0	.0	.0	10215.4	.0	4054.4	321.8	136.40
.53	.00	9.10	.00	.000	.035	.000	.000	110.80	10055.38
.002067	70.	70.	70.	1	19	0	.00	990.44	11045.82

CCHV= .100 CEHV= .300
*SECNO 16000.000

3265 DIVIDED FLOW

16000.000	12.12	123.42	119.63	.00	124.74	1.32	.42	.01	136.90
93000.0	.0	93000.0	.0	.0	10088.2	.0	4101.0	326.4	136.90
.53	.00	9.22	.00	.000	.035	.000	.000	111.30	10057.53
.002155	200.	200.	200.	1	19	0	.00	991.14	11063.80

*SECNO 16200.000

3265 DIVIDED FLOW

16200.000	12.19	123.89	120.00	.00	125.17	1.28	.42	.00	137.30
93000.0	.0	93000.0	.0	.0	10237.4	.0	4147.7	331.0	137.30
.54	.00	9.08	.00	.000	.035	.000	.000	111.70	10056.20
.002086	200.	200.	200.	2	19	0	.00	1003.76	11074.92

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 16400.000

3265 DIVIDED FLOW

16400.000	12.09	124.29	120.51	.00	125.61	1.32	.42	.01	137.70
93000.0	.0	93000.0	.0	.0	10085.1	.0	4194.3	335.5	138.30
.54	.00	9.22	.00	.000	.035	.000	.000	112.20	10055.57
.002163	200.	200.	200.	2	19	0	.00	992.28	11062.84

*SECNO 16600.000

3265 DIVIDED FLOW

16600.000	12.01	124.71	121.00	.00	126.05	1.33	.44	.00	138.10
93000.0	.0	93000.0	.0	.0	10030.0	.0	4240.5	340.1	138.70
.55	.00	9.27	.00	.000	.035	.000	.000	112.70	10054.77
.002210	200.	200.	200.	0	19	0	.00	994.56	11064.88

*SECNO 16800.000

3265 DIVIDED FLOW

16800.000	11.95	125.15	121.49	.00	126.50	1.35	.45	.00	138.60
93000.0	.0	93000.0	.0	.0	9987.7	.0	4286.5	344.7	139.20
.56	.00	9.31	.00	.000	.035	.000	.000	113.20	10054.87
.002246	200.	200.	200.	0	19	0	.00	996.19	11066.79

*SECNO 17000.000

3265 DIVIDED FLOW

17000.000	12.02	125.62	121.89	.00	126.94	1.32	.44	.00	139.00
93000.0	.0	93000.0	.0	.0	10069.9	.0	4332.5	349.2	139.60
.56	.00	9.24	.00	.000	.035	.000	.000	113.60	10055.55
.002190	200.	200.	200.	2	19	0	.00	997.82	11068.89

*SECNO 17200.000

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3265 DIVIDED FLOW

17200.000	11.95	126.05	122.39	.00	127.39	1.34	.44	.00	139.40
93000.0	.0	93000.0	.0	.0	10009.1	.0	4378.6	353.8	140.00
.57	.00	9.29	.00	.000	.035	.000	.000	114.10	10055.53
.002235	200.	200.	200.	1	19	0	.00	997.98	11068.94

*SECNO 17400.000

17400.000	11.89	126.49	122.89	.00	127.84	1.35	.45	.00	139.80
93000.0	.0	93000.0	.0	.0	9975.4	.0	4424.5	358.4	140.40
.57	.00	9.32	.00	.000	.035	.000	.000	114.60	10054.50
.002268	200.	200.	200.	0	19	0	.00	1001.78	11056.28

*SECNO 17600.000

17600.000	11.95	126.95	123.29	.00	128.29	1.35	.45	.00	140.30
93000.0	.0	93000.0	.0	.0	9978.8	.0	4470.3	363.0	140.90
.58	.00	9.32	.00	.000	.035	.000	.000	115.00	10055.54
.002242	200.	200.	200.	0	19	0	.00	993.12	11048.67

*SECNO 17800.000

17800.000	11.89	127.39	123.80	.00	128.75	1.37	.45	.01	140.70
93000.0	.0	93000.0	.0	.0	9913.4	.0	4516.0	367.5	141.30
.59	.00	9.38	.00	.000	.035	.000	.000	115.50	10055.30
.002286	200.	200.	200.	1	19	0	.00	990.96	11046.26

*SECNO 18000.000

18000.000	11.83	127.83	124.31	.00	129.22	1.39	.46	.01	141.00
93000.0	.0	93000.0	.0	.0	9838.8	.0	4561.3	372.1	141.70
.59	.00	9.45	.00	.000	.035	.000	.000	116.00	10055.46
.002337	200.	200.	200.	0	19	0	.00	988.77	11044.24

*SECNO 18200.000

18200.000	11.79	128.29	124.82	.00	129.70	1.41	.47	.01	141.50
93000.0	.0	93000.0	.0	.0	9762.0	.0	4606.3	376.6	142.10
.60	.00	9.53	.00	.000	.035	.000	.000	116.50	10055.41
.002386	200.	200.	200.	0	19	0	.00	984.83	11040.23

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18400.000

18400.000	11.91	128.81	125.22	.00	130.17	1.36	.47	.00	142.00
93000.0	.0	93000.0	.0	.0	9919.7	.0	4651.5	381.2	142.60
.60	.00	9.38	.00	.000	.035	.000	.000	116.90	10052.01
.002299	200.	200.	200.	2	19	0	.00	998.82	11050.83

*SECNO 18600.000

18600.000	11.84	129.24	125.75	.00	130.65	1.41	.47	.01	142.40
93000.0	.0	93000.0	.0	.0	9755.7	.0	4696.7	385.7	143.00
.61	.00	9.53	.00	.000	.035	.000	.000	117.40	10047.30
.002379	200.	200.	200.	2	19	0	.00	982.00	11029.30

*SECNO 18800.000

18800.000	11.80	129.70	126.27	.00	131.14	1.44	.48	.01	142.80
93000.0	.0	93000.0	.0	.0	9645.5	.0	4741.2	390.2	143.40
.62	.00	9.64	.00	.000	.035	.000	.000	117.90	10055.26
.002434	200.	200.	200.	0	19	0	.00	970.05	11025.31

*SECNO 19000.000

19000.000	11.89	130.19	126.69	.00	131.63	1.44	.48	.00	143.20
93000.0	.0	93000.0	.0	.0	9653.3	.0	4785.5	394.6	143.80
.62	.00	9.63	.00	.000	.035	.000	.000	118.30	10055.15
.002405	200.	200.	200.	0	19	0	.00	963.28	11018.42

*SECNO 19200.000

19200.000	11.86	130.66	127.21	.00	132.12	1.46	.48	.01	143.70
93000.0	.0	93000.0	.0	.0	9577.4	.0	4829.6	399.1	144.30
.63	.00	9.71	.00	.000	.035	.000	.000	118.80	10054.99
.002445	200.	200.	200.	1	19	0	.00	956.01	11011.00

*SECNO 19400.000

19400.000	11.83	131.13	127.74	.00	132.63	1.50	.50	.01	144.10
93000.0	.0	93000.0	.0	.0	9472.8	.0	4873.4	403.4	144.70
.63	.00	9.82	.00	.000	.035	.000	.000	119.30	10054.91
.002506	200.	200.	200.	1	19	0	.00	947.50	11002.41

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 19600.000

19600.000	11.81	131.61	128.28	.00	133.14	1.53	.51	.01	144.50
93000.0	.0	93000.0	.0	.0	9383.1	.0	4916.7	407.8	145.10
.64	.00	9.91	.00	.000	.035	.000	.000	119.80	10054.80
.002555	200.	200.	200.	0	19	0	.00	938.65	10993.45

*SECNO 19800.000

19800.000	11.93	132.13	128.70	.00	133.65	1.52	.51	.00	145.00
93000.0	.0	93000.0	.0	.0	9400.1	.0	4959.8	412.0	145.60
.64	.00	9.89	.00	.000	.035	.000	.000	120.20	10054.78
.002510	200.	200.	200.	0	19	0	.00	930.36	10985.14

*SECNO 20000.000

20000.000	11.91	132.61	129.24	.00	134.16	1.55	.51	.01	145.60
93000.0	.0	93000.0	.0	.0	9297.6	.0	5002.7	416.3	145.60
.65	.00	10.00	.00	.000	.035	.000	.000	120.70	10054.10
.002566	200.	200.	200.	2	19	0	.00	920.33	10974.43

*SECNO 20200.000

20200.000	11.91	133.11	129.78	.00	134.69	1.58	.52	.01	146.10
93000.0	.0	93000.0	.0	.0	9217.2	.0	5045.2	420.5	146.10
.65	.00	10.09	.00	.000	.035	.000	.000	121.20	10054.91
.002605	200.	200.	200.	0	19	0	.00	910.75	10965.66

*SECNO 20400.000

20400.000	12.05	133.65	130.22	.00	135.21	1.56	.51	.00	146.60
93000.0	.0	93000.0	.0	.0	9285.6	.0	5087.7	424.7	146.60
.66	.00	10.02	.00	.000	.035	.000	.000	121.60	10047.08
.002538	200.	200.	200.	2	19	0	.00	911.08	10958.15

*SECNO 20600.000

20600.000	12.03	134.13	130.75	.00	135.74	1.61	.51	.01	147.10
93000.0	.0	93000.0	.0	.0	9143.0	.0	5130.0	428.8	147.10
.67	.00	10.17	.00	.000	.035	.000	.000	122.10	10054.05
.002602	200.	200.	200.	2	19	0	.00	891.50	10945.54

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 20782.000

20782.000	12.10	134.60	131.19	.00	136.21	1.60	.47	.00	147.67
93000.0	.0	93000.0	.0	.0	9149.4	.0	5168.2	432.5	147.67
.67	.00	10.16	.00	.000	.035	.000	.000	122.50	10055.97
.002584	182.	182.	182.	0	19	0	.00	888.05	10944.03

*SECNO 20800.000

20800.000	12.13	134.66	131.22	.00	136.25	1.60	.05	.00	147.70
93000.0	.0	93000.0	.0	.0	9170.2	.0	5172.0	432.9	147.70
.67	.00	10.14	.00	.000	.035	.000	.000	122.53	10055.94
.002564	18.	18.	18.	0	19	0	.00	888.12	10944.06

*SECNO 21000.000

21000.000	12.37	135.23	131.56	.00	136.76	1.52	.49	.01	148.20
93000.0	.0	93000.0	.0	.0	9398.4	.0	5214.6	437.0	148.20
.68	.00	9.90	.00	.000	.035	.000	.000	122.86	10053.55
.002373	200.	200.	200.	2	19	0	.00	891.23	10944.78

T1 SIMONS, LI & ASSOCIATES, INC. - TEMPE, ARIZONA
T2 SR 153 OVER THE SALT RIVER (1-13-94)
T3 FILE: SR153.DAT 215,000 CFS 100-YEAR DISCHARGE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	.00068	0	0	215000	108	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	2	0	-1	0	0	0	-1	0	0	0

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

*SECNO 14000.000

14000.000	20.08	126.58	119.80	.00	128.80	2.22	.36	.00	130.00
215000.0	.0	215000.0	.0	.0	17999.5	.0	5763.2	293.4	132.60
.32	.00	11.94	.00	.000	.035	.000	.000	106.50	10039.51
.001764	200.	200.	200.	2	14	0	.00	1027.43	11066.94

*SECNO 14200.000

14200.000	19.97	126.97	120.21	.00	129.15	2.19	.35	.00	133.00
215000.0	.0	215000.0	.0	.0	18121.8	.0	5846.1	298.2	133.00
.33	.00	11.86	.00	.000	.035	.000	.000	107.00	10029.10
.001764	200.	200.	200.	2	14	0	.00	1045.80	11074.90

*SECNO 14400.000

14400.000	19.78	127.28	120.71	.00	129.53	2.25	.36	.02	133.50
215000.0	.0	215000.0	.0	.0	17876.2	.0	5928.8	302.9	133.50
.33	.00	12.03	.00	.000	.035	.000	.000	107.50	10044.46
.001810	200.	200.	200.	2	14	0	.00	1029.88	11074.34

*SECNO 14665.000

14665.000	19.51	127.71	121.41	.00	130.04	2.33	.49	.03	134.10
215000.0	.0	215000.0	.0	.0	17538.9	.0	6036.5	309.2	134.10
.34	.00	12.26	.00	.000	.035	.000	.000	108.20	10045.49
.001889	265.	265.	265.	2	14	0	.00	1013.03	11058.51

*SECNO 14785.000

14785.000	19.57	127.97	121.62	.00	130.27	2.30	.23	.00	134.30
215000.0	.0	215000.0	.0	.0	17657.9	.0	6085.0	312.0	134.30
.34	.00	12.18	.00	.000	.035	.000	.000	108.40	10029.99
.001883	120.	120.	120.	2	14	0	.00	1028.62	11058.60

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 15000.000

15000.000	19.47	128.37	122.12	.00	130.69	2.32	.41	.00	134.70
215000.0	.0	215000.0	.0	.0	17595.8	.0	6172.0	317.1	134.70
.35	.00	12.22	.00	.000	.035	.000	.000	108.90	10029.97
.001936	215.	215.	215.	0	14	0	.00	1042.06	11072.03

*SECNO 15200.000

15200.000	19.34	128.74	122.63	.00	131.09	2.35	.39	.01	135.20
215000.0	.0	215000.0	.0	.0	17458.9	.0	6252.4	321.9	135.20
.35	.00	12.31	.00	.000	.035	.000	.000	109.40	10030.36
.001985	200.	200.	200.	1	14	0	.00	1041.27	11071.64

CCHV= .300 CEHV= .500

*SECNO 15217.000

15217.000	19.43	128.83	122.59	.00	131.14	2.31	.03	.01	135.20
215000.0	.0	215000.0	.0	.0	17629.6	.0	6259.3	322.3	135.20
.35	.00	12.20	.00	.000	.035	.000	.000	109.40	10029.58
.001923	17.	17.	17.	2	19	0	.00	1042.91	11072.49

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	73.50	30974.00	2.00	109.70	109.40

*SECNO 15326.000

CLASS A LOW FLOW

3420 BRIDGE W.S.= 128.36 BRIDGE VELOCITY= 13.62 CALCULATED CHANNEL AREA= 15652.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	131.72	.64	0.	215000.	30974.	30974.	145.20	152.20	0.

15326.000	19.77	129.47	.00	.00	131.72	2.25	.59	.00	135.50
215000.0	.0	215000.0	.0	.0	17858.0	.0	6303.7	324.9	135.50
.35	.00	12.04	.00	.000	.035	.000	.000	109.70	10044.34
.001815	109.	109.	109.	0	0	0	.00	1029.18	11073.52

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 15467.000

15467.000	19.73	129.73	123.22	.00	131.99	2.26	.26	.01	135.70
215000.0	.0	215000.0	.0	.0	17815.3	.0	6361.4	328.2	135.70
.36	.00	12.07	.00	.000	.035	.000	.000	110.00	10044.29
.001829	141.	141.	141.	1	14	0	.00	1029.20	11073.49

*SECNO 15608.000

15608.000	19.70	130.00	123.50	.00	132.25	2.25	.26	.00	136.00
215000.0	.0	215000.0	.0	.0	17857.1	.0	6419.2	331.5	136.00
.36	.00	12.04	.00	.000	.035	.000	.000	110.30	10044.33
.001817	141.	141.	141.	1	14	0	.00	1031.15	11075.48

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	80.00	26567.00	2.00	110.70	110.30

*SECNO 15730.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 129.54 BRIDGE VELOCITY= 13.56 CALCULATED CHANNEL AREA= 15687.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	132.87	.67	0.	215000.	26567.	26567.	141.70	148.70	0.

15730.000	19.96	130.66	.00	.00	132.87	2.20	.62	.00	136.30
215000.0	.0	215000.0	.0	.0	18044.2	.0	6469.4	334.4	136.30
.36	.00	11.92	.00	.000	.035	.000	.000	110.70	10027.72
.001755	122.	122.	122.	0	0	0	.00	1029.73	11057.44

*SECNO 15800.000

15800.000	19.99	130.79	124.02	.00	132.99	2.20	.12	.00	136.40
215000.0	.0	215000.0	.0	.0	18070.0	.0	6498.4	336.1	136.40
.36	.00	11.90	.00	.000	.035	.000	.000	110.80	10027.64
.001747	70.	70.	70.	0	14	0	.00	1029.84	11057.48

CCHV= .100 CEHV= .300

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 16000.000

16000.000	19.83	131.13	124.58	.00	133.35	2.22	.36	.01	136.90
215000.0	.0	215000.0	.0	.0	17982.4	.0	6581.2	340.8	136.90
.37	.00	11.96	.00	.000	.035	.000	.000	111.30	10028.27
.001816	200.	200.	200.	0	14	0	.00	1047.09	11075.36

*SECNO 16200.000

16200.000	19.83	131.53	124.92	.00	133.72	2.19	.36	.00	137.30
215000.0	.0	215000.0	.0	.0	18118.7	.0	6664.1	345.6	137.30
.37	.00	11.87	.00	.000	.035	.000	.000	111.70	10035.58
.001779	200.	200.	200.	2	14	0	.00	1051.36	11086.93

*SECNO 16400.000

16400.000	19.64	131.84	125.44	.00	134.10	2.26	.37	.02	137.70
215000.0	.0	215000.0	.0	.0	17812.5	.0	6746.6	350.5	138.30
.38	.00	12.07	.00	.000	.035	.000	.000	112.20	10028.58
.001872	200.	200.	200.	2	14	0	.00	1045.13	11073.71

*SECNO 16600.000

16600.000	19.50	132.20	125.93	.00	134.49	2.29	.38	.01	138.10
215000.0	.0	215000.0	.0	.0	17716.5	.0	6828.1	355.3	138.70
.38	.00	12.14	.00	.000	.035	.000	.000	112.70	10028.14
.001911	200.	200.	200.	0	14	0	.00	1047.52	11075.66

*SECNO 16800.000

16800.000	19.37	132.57	126.42	.00	134.88	2.31	.39	.01	138.60
215000.0	.0	215000.0	.0	.0	17618.8	.0	6909.3	360.1	139.20
.39	.00	12.20	.00	.000	.035	.000	.000	113.20	10028.06
.001951	200.	200.	200.	0	14	0	.00	1049.42	11077.48

*SECNO 17000.000

17000.000	19.36	132.96	126.81	.00	135.27	2.31	.39	.00	139.00
215000.0	.0	215000.0	.0	.0	17616.1	.0	6990.1	364.9	139.60
.39	.00	12.20	.00	.000	.035	.000	.000	113.60	10029.13
.001955	200.	200.	200.	0	14	0	.00	1050.32	11079.45

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 17200.000

17200.000	19.24	133.34	127.31	.00	135.68	2.34	.40	.01	139.40
215000.0	.0	215000.0	.0	.0	17503.9	.0	7070.8	369.7	140.00
.40	.00	12.28	.00	.000	.035	.000	.000	114.10	10029.17
.001997	200.	200.	200.	1	14	0	.00	1050.26	11079.43

*SECNO 17400.000

17400.000	19.11	133.71	127.75	.00	136.09	2.38	.40	.01	139.80
215000.0	.0	215000.0	.0	.0	17375.5	.0	7150.8	374.5	140.40
.40	.00	12.37	.00	.000	.035	.000	.000	114.60	10028.23
.002023	200.	200.	200.	1	19	0	.00	1044.54	11072.77

*SECNO 17600.000

17600.000	19.09	134.09	128.18	.00	136.51	2.42	.41	.01	140.30
215000.0	.0	215000.0	.0	.0	17207.0	.0	7230.2	379.3	140.90
.40	.00	12.49	.00	.000	.035	.000	.000	115.00	10029.64
.002055	200.	200.	200.	2	19	0	.00	1029.95	11059.59

*SECNO 17800.000

17800.000	18.98	134.48	128.68	.00	136.94	2.46	.42	.01	140.70
215000.0	.0	215000.0	.0	.0	17075.2	.0	7308.9	384.0	141.30
.41	.00	12.59	.00	.000	.035	.000	.000	115.50	10029.64
.002101	200.	200.	200.	1	19	0	.00	1027.20	11056.84

*SECNO 18000.000

18000.000	18.87	134.87	129.20	.00	137.38	2.50	.43	.01	141.00
215000.0	.0	215000.0	.0	.0	16936.4	.0	7387.0	388.7	141.70
.41	.00	12.69	.00	.000	.035	.000	.000	116.00	10029.51
.002153	200.	200.	200.	1	19	0	.00	1025.28	11054.79

*SECNO 18200.000

18200.000	18.78	135.28	129.72	.00	137.83	2.55	.44	.02	141.50
215000.0	.0	215000.0	.0	.0	16765.0	.0	7464.4	393.4	142.10
.42	.00	12.82	.00	.000	.035	.000	.000	116.50	10029.67
.002215	200.	200.	200.	2	19	0	.00	1021.06	11050.73

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18400.000

18400.000	18.89	135.79	130.13	.00	138.27	2.48	.43	.01	142.00
215000.0	.0	215000.0	.0	.0	17016.8	.0	7541.9	398.1	142.60
.42	.00	12.63	.00	.000	.035	.000	.000	116.90	10032.41
.002134	200.	200.	200.	2	19	0	.00	1033.19	11065.61

*SECNO 18600.000

18600.000	18.75	136.15	130.69	.00	138.74	2.60	.44	.04	142.40
215000.0	.0	215000.0	.0	.0	16624.4	.0	7619.2	402.8	143.00
.43	.00	12.93	.00	.000	.035	.000	.000	117.40	10031.93
.002237	200.	200.	200.	2	19	0	.00	1007.76	11039.69

*SECNO 18800.000

18800.000	18.66	136.56	131.23	.00	139.22	2.66	.46	.02	142.80
215000.0	.0	215000.0	.0	.0	16412.6	.0	7695.0	407.5	143.40
.43	.00	13.10	.00	.000	.035	.000	.000	117.90	10029.73
.002331	200.	200.	200.	2	19	0	.00	1005.93	11035.66

*SECNO 19000.000

19000.000	18.71	137.01	131.68	.00	139.69	2.68	.47	.01	143.20
215000.0	.0	215000.0	.0	.0	16359.7	.0	7770.2	412.1	143.80
.44	.00	13.14	.00	.000	.035	.000	.000	118.30	10029.56
.002335	200.	200.	200.	0	19	0	.00	999.18	11028.74

*SECNO 19200.000

19200.000	18.64	137.44	132.23	.00	140.18	2.74	.47	.02	143.70
215000.0	.0	215000.0	.0	.0	16179.3	.0	7844.9	416.6	144.30
.44	.00	13.29	.00	.000	.035	.000	.000	118.80	10029.77
.002398	200.	200.	200.	2	19	0	.00	991.17	11020.94

*SECNO 19400.000

19400.000	18.58	137.88	132.85	.00	140.69	2.81	.49	.02	144.10
215000.0	.0	215000.0	.0	.0	15989.6	.0	7918.8	421.2	144.70
.44	.00	13.45	.00	.000	.035	.000	.000	119.30	10029.65
.002467	200.	200.	200.	2	15	0	.00	983.00	11012.65

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 19600.000

19600.000	18.54	138.34	133.41	.00	141.21	2.87	.50	.02	144.50
215000.0	.0	215000.0	.0	.0	15809.0	.0	7991.8	425.6	145.10
.45	.00	13.60	.00	.000	.035	.000	.000	119.80	10029.49
.002531	200.	200.	200.	2	15	0	.00	974.20	11003.69

*SECNO 19800.000

19800.000	18.63	138.83	133.86	.00	141.72	2.89	.51	.00	145.00
215000.0	.0	215000.0	.0	.0	15771.8	.0	8064.3	430.1	145.60
.45	.00	13.63	.00	.000	.035	.000	.000	120.20	10029.49
.002522	200.	200.	200.	0	15	0	.00	965.55	10995.04

*SECNO 20000.000

20000.000	18.59	139.29	134.44	.00	142.25	2.96	.51	.02	145.60
215000.0	.0	215000.0	.0	.0	15567.8	.0	8136.2	434.5	145.60
.46	.00	13.81	.00	.000	.035	.000	.000	120.70	10028.92
.002598	200.	200.	200.	2	15	0	.00	955.57	10984.50

*SECNO 20200.000

20200.000	18.57	139.77	135.02	.00	142.80	3.03	.53	.02	146.10
215000.0	.0	215000.0	.0	.0	15399.6	.0	8207.3	438.9	146.10
.46	.00	13.96	.00	.000	.035	.000	.000	121.20	10029.98
.002659	200.	200.	200.	2	15	0	.00	946.61	10976.60

*SECNO 20400.000

20400.000	18.72	140.32	135.45	.00	143.33	3.00	.53	.00	146.60
215000.0	.0	215000.0	.0	.0	15464.1	.0	8278.2	443.2	146.60
.46	.00	13.90	.00	.000	.035	.000	.000	121.60	10033.12
.002592	200.	200.	200.	2	15	0	.00	939.90	10973.02

*SECNO 20600.000

20600.000	18.68	140.78	136.07	.00	143.89	3.11	.53	.03	147.10
215000.0	.0	215000.0	.0	.0	15192.2	.0	8348.6	447.5	147.10
.47	.00	14.15	.00	.000	.035	.000	.000	122.10	10028.96
.002706	200.	200.	200.	2	15	0	.00	926.55	10955.52

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 20782.000

20782.000	18.81	141.31	136.53	.00	144.38	3.07	.49	.00	147.67
215000.0	.0	215000.0	.0	.0	15286.5	.0	8412.2	451.4	147.67
.47	.00	14.06	.00	.000	.035	.000	.000	122.50	10031.06
.002693	182.	182.	182.	2	15	0	.00	937.89	10968.94

*SECNO 20800.000

20800.000	18.84	141.37	136.57	.00	144.43	3.06	.05	.00	147.70
215000.0	.0	215000.0	.0	.0	15303.9	.0	8418.5	451.8	147.70
.47	.00	14.05	.00	.000	.035	.000	.000	122.53	10031.00
.002683	18.	18.	18.	0	15	0	.00	938.00	10969.00

*SECNO 21000.000

21000.000	19.09	141.95	136.85	.00	144.96	3.00	.52	.01	148.20
215000.0	.0	215000.0	.0	.0	15456.6	.0	8489.2	456.0	148.20
.48	.00	13.91	.00	.000	.035	.000	.000	122.86	10042.38
.002506	200.	200.	200.	2	15	0	.00	912.35	10954.74

T1 SIMONS, LI & ASSOCIATES, INC. - TEMPE, ARIZONA
T2 SR 153 OVER THE SALT RIVER (1-13-94)
T3 FILE: SR153.DAT 289,000 CFS SPF DISCHARGE

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	0	0	0	.00068	0	0	289000	110	0

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	3	0	-1	0	0	0	-1	0	0	0

IHLEQ = 1. THEREFORE FRICTION LOSS (HL) IS CALCULATED AS A FUNCTION OF PROFILE TYPE, WHICH CAN VARY FROM REACH TO REACH. SEE DOCUMENTATION FOR DETAILS.

*SECNO 14000.000

14000.000	23.68	130.18	122.37	.00	132.93	2.75	.35	.01	130.00
289000.0	.1	288999.9	.0	.3	21732.0	.0	6843.1	302.0	132.60
.28	.25	13.30	.00	.050	.035	.000	.000	106.50	10029.98
.001741	200.	200.	200.	2	14	0	.00	1047.76	11077.75

*SECNO 14200.000

14200.000	23.59	130.59	122.76	.00	133.28	2.69	.35	.01	133.00
289000.0	.0	289000.0	.0	.0	21950.7	.0	6943.4	306.9	133.00
.29	.00	13.17	.00	.000	.035	.000	.000	107.00	10018.23
.001731	200.	200.	200.	2	14	0	.00	1067.54	11085.77

*SECNO 14400.000

14400.000	23.38	130.88	123.23	.00	133.66	2.78	.35	.03	133.50
289000.0	.0	289000.0	.0	.0	21613.0	.0	7043.4	311.7	133.50
.29	.00	13.37	.00	.000	.035	.000	.000	107.50	10038.98
.001777	200.	200.	200.	2	14	0	.00	1046.16	11085.14

*SECNO 14665.000

14665.000	23.08	131.28	123.90	.00	134.17	2.89	.48	.03	134.10
289000.0	.0	289000.0	.0	.0	21174.8	.0	7173.6	318.0	134.10
.30	.00	13.65	.00	.000	.035	.000	.000	108.20	10040.19
.001852	265.	265.	265.	2	14	0	.00	1023.63	11063.81

*SECNO 14785.000

14785.000	23.16	131.56	124.14	.00	134.40	2.84	.22	.01	134.30
289000.0	.0	289000.0	.0	.0	21382.2	.0	7232.2	320.9	134.30
.30	.00	13.52	.00	.000	.035	.000	.000	108.40	10019.21
.001839	120.	120.	120.	2	14	0	.00	1044.73	11063.94

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 15000.000

15000.000	23.06	131.96	124.68	.00	134.80	2.84	.40	.00	134.70
289000.0	.0	289000.0	.0	.0	21368.8	.0	7337.7	326.1	134.70
.31	.00	13.52	.00	.000	.035	.000	.000	108.90	10019.22
.001884	215.	215.	215.	0	14	0	.00	1063.56	11082.78

*SECNO 15200.000

15200.000	22.92	132.32	125.18	.00	135.19	2.88	.38	.01	135.20
289000.0	.0	289000.0	.0	.0	21224.9	.0	7435.5	331.0	135.20
.31	.00	13.62	.00	.000	.035	.000	.000	109.40	10019.62
.001925	200.	200.	200.	1	14	0	.00	1062.75	11082.38

CCHV= .300 CEHV= .500

*SECNO 15217.000

15217.000	23.01	132.41	125.10	.00	135.24	2.83	.03	.01	135.20
289000.0	.0	289000.0	.0	.0	21395.5	.0	7443.8	331.4	135.20
.31	.00	13.51	.00	.000	.035	.000	.000	109.40	10020.89
.001871	17.	17.	17.	2	19	0	.00	1062.33	11083.22

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	73.50	30974.00	2.00	109.70	109.40

*SECNO 15326.000

CLASS A LOW FLOW

3420 BRIDGE W.S.= 131.75 BRIDGE VELOCITY= 15.39 CALCULATED CHANNEL AREA= 18649.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	135.96	.80	0.	289000.	30974.	30974.	145.20	152.20	0.

15326.000	23.51	133.21	.00	.00	135.96	2.74	.72	.00	135.50
289000.0	.0	289000.0	.0	.0	21736.3	.0	7497.7	334.0	135.50
.31	.00	13.30	.00	.000	.035	.000	.000	109.70	10038.73
.001744	109.	109.	109.	0	0	0	.00	1046.00	11084.73

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 15467.000

15467.000	23.45	133.45	125.74	.00	136.21	2.76	.25	.01	135.70
289000.0	.0	289000.0	.0	.0	21683.4	.0	7568.0	337.4	135.70
.31	.00	13.33	.00	.000	.035	.000	.000	110.00	10038.68
.001758	141.	141.	141.	1	14	0	.00	1046.00	11084.68

*SECNO 15608.000

15608.000	23.41	133.71	125.98	.00	136.46	2.75	.25	.00	136.00
289000.0	.0	289000.0	.0	.0	21711.2	.0	7638.2	340.8	136.00
.32	.00	13.31	.00	.000	.035	.000	.000	110.30	10038.76
.001749	141.	141.	141.	0	14	0	.00	1046.30	11085.06

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.56	2.60	.00	875.00	80.00	26567.00	2.00	110.70	110.30

*SECNO 15730.000
CLASS A LOW FLOW

3420 BRIDGE W.S.= 133.04 BRIDGE VELOCITY= 15.26 CALCULATED CHANNEL AREA= 18758.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	137.20	.82	0.	289000.	26567.	26567.	141.70	148.70	0.

15730.000	23.83	134.53	.00	.00	137.20	2.66	.74	.00	136.30
289000.0	.0	289000.0	.0	.0	22062.7	.0	7699.5	343.7	136.30
.32	.00	13.10	.00	.000	.035	.000	.000	110.70	10016.11
.001662	122.	122.	122.	0	0	0	.00	1047.14	11063.25

*SECNO 15800.000

15800.000	23.85	134.65	126.54	.00	137.31	2.66	.12	.00	136.40
289000.0	.0	289000.0	.0	.0	22082.9	.0	7735.0	345.4	136.40
.32	.00	13.09	.00	.000	.035	.000	.000	110.80	10016.05
.001657	70.	70.	70.	0	14	0	.00	1047.23	11063.28

CCHV= .100 CEHV= .300

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 16000.000

16000.000	23.68	134.98	127.13	.00	137.65	2.67	.34	.00	136.90
289000.0	.0	289000.0	.0	.0	22039.9	.0	7836.3	350.3	136.90
.33	.00	13.11	.00	.000	.035	.000	.000	111.30	10016.74
.001705	200.	200.	200.	0	14	0	.00	1064.38	11081.13

*SECNO 16200.000

16200.000	23.66	135.36	127.42	.00	137.99	2.64	.34	.00	137.30
289000.0	.0	289000.0	.0	.0	22173.1	.0	7937.8	355.1	137.30
.33	.00	13.03	.00	.000	.035	.000	.000	111.70	10025.25
.001678	200.	200.	200.	2	14	0	.00	1067.70	11092.95

*SECNO 16400.000

16400.000	23.44	135.64	127.98	.00	138.36	2.73	.34	.03	137.70
289000.0	.0	289000.0	.0	.0	21812.9	.0	8038.8	360.0	138.30
.33	.00	13.25	.00	.000	.035	.000	.000	112.20	10017.18
.001762	200.	200.	200.	2	14	0	.00	1061.99	11079.17

*SECNO 16600.000

16600.000	23.27	135.97	128.47	.00	138.73	2.75	.36	.01	138.10
289000.0	.0	289000.0	.0	.0	21702.8	.0	8138.7	364.9	138.70
.34	.00	13.32	.00	.000	.035	.000	.000	112.70	10017.16
.001796	200.	200.	200.	0	14	0	.00	1063.93	11081.09

*SECNO 16800.000

16800.000	23.12	136.32	128.96	.00	139.10	2.79	.36	.01	138.60
289000.0	.0	289000.0	.0	.0	21577.7	.0	8238.0	369.8	139.20
.34	.00	13.39	.00	.000	.035	.000	.000	113.20	10016.83
.001836	200.	200.	200.	1	14	0	.00	1066.03	11082.86

*SECNO 17000.000

17000.000	23.08	136.68	129.34	.00	139.47	2.79	.37	.00	139.00
289000.0	.0	289000.0	.0	.0	21555.6	.0	8337.1	374.7	139.60
.35	.00	13.41	.00	.000	.035	.000	.000	113.60	10017.96
.001844	200.	200.	200.	0	14	0	.00	1066.83	11084.80

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 17200.000

17200.000	22.92	137.02	129.84	.00	139.86	2.83	.37	.01	139.40
289000.0	.0	289000.0	.0	.0	21398.8	.0	8435.7	379.6	140.00
.35	.00	13.51	.00	.000	.035	.000	.000	114.10	10018.13
.001889	200.	200.	200.	2	14	0	.00	1066.59	11084.72

*SECNO 17400.000

17400.000	22.77	137.37	130.29	.00	140.25	2.88	.38	.01	139.80
289000.0	.0	289000.0	.0	.0	21223.4	.0	8533.5	384.5	140.40
.36	.00	13.62	.00	.000	.035	.000	.000	114.60	10017.28
.001925	200.	200.	200.	2	14	0	.00	1063.81	11081.10

*SECNO 17600.000

17600.000	22.71	137.71	130.70	.00	140.66	2.95	.39	.02	140.30
289000.0	.0	289000.0	.0	.0	20969.8	.0	8630.4	389.3	140.90
.36	.00	13.78	.00	.000	.035	.000	.000	115.00	10018.76
.001965	200.	200.	200.	2	19	0	.00	1046.37	11065.13

*SECNO 17800.000

17800.000	22.57	138.07	131.21	.00	141.08	3.00	.40	.02	140.70
289000.0	.0	289000.0	.0	.0	20788.8	.0	8726.2	394.1	141.30
.36	.00	13.90	.00	.000	.035	.000	.000	115.50	10018.88
.002015	200.	200.	200.	2	19	0	.00	1043.31	11062.19

*SECNO 18000.000

18000.000	22.45	138.45	131.73	.00	141.50	3.05	.41	.01	141.00
289000.0	.0	289000.0	.0	.0	20618.5	.0	8821.3	398.9	141.70
.37	.00	14.02	.00	.000	.035	.000	.000	116.00	10018.73
.002066	200.	200.	200.	2	19	0	.00	1041.40	11060.13

*SECNO 18200.000

18200.000	22.32	138.82	132.26	.00	141.94	3.11	.42	.02	141.50
289000.0	.0	289000.0	.0	.0	20417.0	.0	8915.5	403.7	142.10
.37	.00	14.15	.00	.000	.035	.000	.000	116.50	10019.03
.002122	200.	200.	200.	2	19	0	.00	1037.04	11056.07

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 18400.000

18400.000	22.44	139.34	132.61	.00	142.36	3.02	.42	.01	142.00
289000.0	.0	289000.0	.0	.0	20710.7	.0	9009.9	408.5	142.60
.37	.00	13.95	.00	.000	.035	.000	.000	116.90	10022.47
.002052	200.	200.	200.	2	19	0	.00	1050.63	11073.10

*SECNO 18600.000

18600.000	22.24	139.64	133.19	.00	142.83	3.19	.42	.05	142.40
289000.0	.0	289000.0	.0	.0	20172.4	.0	9103.8	413.2	143.00
.38	.00	14.33	.00	.000	.035	.000	.000	117.40	10024.14
.002162	200.	200.	200.	2	19	0	.00	1020.82	11044.95

*SECNO 18800.000

18800.000	22.13	140.03	133.79	.00	143.30	3.26	.44	.02	142.80
289000.0	.0	289000.0	.0	.0	19937.5	.0	9195.9	417.9	143.40
.38	.00	14.50	.00	.000	.035	.000	.000	117.90	10019.30
.002252	200.	200.	200.	2	19	0	.00	1021.61	11040.91

*SECNO 19000.000

19000.000	22.16	140.46	134.25	.00	143.76	3.29	.45	.01	143.20
289000.0	.0	289000.0	.0	.0	19840.1	.0	9287.2	422.6	143.80
.39	.00	14.57	.00	.000	.035	.000	.000	118.30	10019.19
.002269	200.	200.	200.	1	19	0	.00	1014.77	11033.97

*SECNO 19200.000

19200.000	22.07	140.87	134.80	.00	144.24	3.38	.46	.02	143.70
289000.0	.0	289000.0	.0	.0	19599.9	.0	9377.7	427.2	144.30
.39	.00	14.74	.00	.000	.035	.000	.000	118.80	10019.50
.002338	200.	200.	200.	2	19	0	.00	1006.46	11025.96

*SECNO 19400.000

19400.000	21.98	141.28	135.43	.00	144.74	3.46	.47	.03	144.10
289000.0	.0	289000.0	.0	.0	19357.1	.0	9467.1	431.8	144.70
.39	.00	14.93	.00	.000	.035	.000	.000	119.30	10019.45
.002411	200.	200.	200.	2	15	0	.00	998.36	11017.81

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 19600.000

19600.000	21.91	141.71	136.00	.00	145.26	3.55	.49	.03	144.50
289000.0	.0	289000.0	.0	.0	19121.4	.0	9555.5	436.4	145.10
.40	.00	15.11	.00	.000	.035	.000	.000	119.80	10019.37
.002482	200.	200.	200.	2	15	0	.00	989.47	11008.83

*SECNO 19800.000

19800.000	21.99	142.19	136.46	.00	145.76	3.58	.50	.01	145.00
289000.0	.0	289000.0	.0	.0	19038.2	.0	9643.1	440.9	145.60
.40	.00	15.18	.00	.000	.035	.000	.000	120.20	10019.42
.002489	200.	200.	200.	1	15	0	.00	980.56	10999.98

*SECNO 20000.000

20000.000	21.92	142.62	137.06	.00	146.30	3.68	.51	.03	145.60
289000.0	.0	289000.0	.0	.0	18774.4	.0	9729.9	445.4	145.60
.40	.00	15.39	.00	.000	.035	.000	.000	120.70	10018.94
.002571	200.	200.	200.	2	15	0	.00	970.58	10989.51

*SECNO 20200.000

20200.000	21.88	143.08	137.64	.00	146.85	3.77	.52	.03	146.10
289000.0	.0	289000.0	.0	.0	18558.6	.0	9815.6	449.8	146.10
.41	.00	15.57	.00	.000	.035	.000	.000	121.20	10020.05
.002640	200.	200.	200.	2	15	0	.00	961.99	10982.04

*SECNO 20400.000

20400.000	22.01	143.61	138.07	.00	147.37	3.76	.52	.00	146.60
289000.0	.0	289000.0	.0	.0	18568.8	.0	9900.8	454.2	146.60
.41	.00	15.56	.00	.000	.035	.000	.000	121.60	10026.27
.002601	200.	200.	200.	0	15	0	.00	954.06	10980.33

*SECNO 20600.000

20600.000	21.95	144.05	138.72	.00	147.94	3.90	.53	.04	147.10
289000.0	.0	289000.0	.0	.0	18246.2	.0	9985.3	458.6	147.10
.42	.00	15.84	.00	.000	.035	.000	.000	122.10	10019.15
.002716	200.	200.	200.	2	15	0	.00	941.27	10960.42

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 20782.000

20782.000	22.12	144.62	139.21	.00	148.44	3.82	.49	.01	147.67
289000.0	.0	289000.0	.0	.0	18425.1	.0	10062.0	462.6	147.67
.42	.00	15.69	.00	.000	.035	.000	.000	122.50	10021.13
.002688	182.	182.	182.	2	15	0	.00	957.74	10978.87

*SECNO 20800.000

20800.000	22.15	144.68	139.25	.00	148.49	3.81	.05	.00	147.70
289000.0	.0	289000.0	.0	.0	18442.8	.0	10069.6	463.0	147.70
.42	.00	15.67	.00	.000	.035	.000	.000	122.53	10021.08
.002680	18.	18.	18.	0	15	0	.00	957.85	10978.92

*SECNO 21000.000

21000.000	22.35	145.21	139.51	.00	149.02	3.81	.52	.00	148.20
289000.0	.0	289000.0	.0	.0	18451.1	.0	10154.3	467.3	148.20
.42	.00	15.66	.00	.000	.035	.000	.000	122.86	10036.96
.002553	200.	200.	200.	0	15	0	.00	922.62	10959.58

THIS RUN EXECUTED 18JAN94 13:44:45

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HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FILE: SR153.DAT

SUMMARY PRINTOUT

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
14000.000	93000.00	119.17	114.85	120.38	8.81	12.67	979.77	18.29	1.23	.47	10.83
14000.000	215000.00	126.58	119.80	128.80	11.94	20.08	1027.43	17.64	1.93	.50	23.03
14000.000	289000.00	130.18	122.37	132.93	13.30	23.68	1047.76	17.41	2.26	.51	30.06
14200.000	93000.00	119.54	115.31	120.75	8.82	12.54	992.62	18.62	1.24	.48	10.89
14200.000	215000.00	126.97	120.21	129.15	11.86	19.97	1045.80	17.64	1.91	.50	22.63
14200.000	289000.00	130.59	122.76	133.28	13.17	23.59	1067.54	17.31	2.22	.51	29.24
14400.000	93000.00	119.90	115.81	121.13	8.92	12.40	992.43	19.40	1.27	.49	11.34
14400.000	215000.00	127.28	120.71	129.53	12.03	19.78	1029.88	18.10	1.96	.51	23.58
14400.000	289000.00	130.88	123.23	133.66	13.37	23.38	1046.16	17.77	2.29	.52	30.64
14665.000	93000.00	120.39	116.52	121.68	9.11	12.19	991.32	20.71	1.33	.50	12.12
14665.000	215000.00	127.71	121.41	130.04	12.26	19.51	1013.03	18.89	2.04	.52	25.02
14665.000	289000.00	131.28	123.90	134.17	13.65	23.08	1023.63	18.52	2.39	.53	32.63
14785.000	93000.00	120.65	116.70	121.93	9.07	12.25	991.70	20.44	1.32	.50	11.96
14785.000	215000.00	127.97	121.62	130.27	12.18	19.57	1028.62	18.83	2.02	.52	24.56
14785.000	289000.00	131.56	124.14	134.40	13.52	23.16	1044.73	18.39	2.35	.53	31.74
15000.000	93000.00	121.08	117.20	122.38	9.12	12.18	990.27	20.79	1.34	.50	12.18
15000.000	215000.00	128.37	122.12	130.69	12.22	19.47	1042.06	19.36	2.04	.52	24.93
15000.000	289000.00	131.96	124.68	134.80	13.52	23.06	1063.56	18.84	2.36	.53	31.94
15200.000	93000.00	121.49	117.70	122.81	9.21	12.09	989.98	21.45	1.37	.51	12.57
15200.000	215000.00	128.74	122.63	131.09	12.31	19.34	1041.27	19.85	2.08	.53	25.58
15200.000	289000.00	132.32	125.18	135.19	13.62	22.92	1062.75	19.25	2.40	.54	32.66
15217.000	93000.00	121.56	117.70	122.85	9.11	12.16	999.41	20.93	1.33	.50	12.15
15217.000	215000.00	128.83	122.59	131.14	12.20	19.43	1042.91	19.23	2.03	.52	24.74
15217.000	289000.00	132.41	125.10	135.24	13.51	23.01	1062.33	18.71	2.35	.53	31.76

No significant change in W.S.E.

w/ BR.

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
15326.000	93000.00	121.90	.00	123.19	9.11	12.20	991.00	20.74	1.33	.50	12.15
15326.000	215000.00	129.47	.00	131.72	12.04	19.77	1029.18	18.15	1.97	.51	23.66
15326.000	289000.00	133.21	.00	135.96	13.30	23.51	1046.00	17.44	2.26	.51	30.06
15467.000	93000.00	122.19	118.30	123.48	9.12	12.19	990.96	20.79	1.34	.50	12.17
15467.000	215000.00	129.73	123.22	131.99	12.07	19.73	1029.20	18.29	1.98	.51	23.85
15467.000	289000.00	133.45	125.74	136.21	13.33	23.45	1046.00	17.58	2.27	.52	30.31
15608.000	93000.00	122.50	118.60	123.78	9.08	12.20	1000.52	20.76	1.33	.50	12.04
15608.000	215000.00	130.00	123.50	132.25	12.04	19.70	1031.15	18.17	1.96	.51	23.64
15608.000	289000.00	133.71	125.98	136.46	13.31	23.41	1046.30	17.49	2.26	.51	30.14
15730.000	93000.00	122.86	.00	124.16	9.15	12.16	990.28	21.03	1.35	.50	12.32
15730.000	215000.00	130.66	.00	132.87	11.92	19.96	1029.73	17.55	1.92	.50	22.86
15730.000	289000.00	134.53	.00	137.20	13.10	23.83	1047.14	16.62	2.19	.50	28.62
15800.000	93000.00	123.02	119.10	124.31	9.10	12.22	990.44	20.67	1.33	.50	12.11
15800.000	215000.00	130.79	124.02	132.99	11.90	19.99	1029.84	17.47	1.91	.50	22.75
15800.000	289000.00	134.65	126.54	137.31	13.09	23.85	1047.23	16.57	2.18	.50	28.54
16000.000	93000.00	123.42	119.63	124.74	9.22	12.12	991.14	21.55	1.35	.51	12.43
16000.000	215000.00	131.13	124.58	133.35	11.96	19.83	1047.09	18.16	1.95	.51	23.27
16000.000	289000.00	134.98	127.13	137.65	13.11	23.68	1064.38	17.05	2.20	.51	28.89
16200.000	93000.00	123.89	120.00	125.17	9.08	12.19	1003.76	20.86	1.31	.51	11.89
16200.000	215000.00	131.53	124.92	133.72	11.87	19.83	1051.36	17.79	1.91	.50	22.71
16200.000	289000.00	135.36	127.42	137.99	13.03	23.66	1067.70	16.78	2.17	.50	28.33
16400.000	93000.00	124.29	120.51	125.61	9.22	12.09	992.28	21.63	1.35	.51	12.46
16400.000	215000.00	131.84	125.44	134.10	12.07	19.64	1045.13	18.72	1.99	.52	24.03
16400.000	289000.00	135.64	127.98	138.36	13.25	23.44	1061.99	17.62	2.26	.52	29.93
16600.000	93000.00	124.71	121.00	126.05	9.27	12.01	994.56	22.10	1.37	.52	12.69
16600.000	215000.00	132.20	125.93	134.49	12.14	19.50	1047.52	19.11	2.02	.52	24.48
16600.000	289000.00	135.97	128.47	138.73	13.32	23.27	1063.93	17.96	2.29	.52	30.44
16800.000	93000.00	125.15	121.49	126.50	9.31	11.95	996.19	22.46	1.38	.52	12.88
16800.000	215000.00	132.57	126.42	134.88	12.20	19.37	1049.42	19.51	2.04	.52	24.95
16800.000	289000.00	136.32	128.96	139.10	13.39	23.12	1066.03	18.36	2.32	.52	31.05
17000.000	93000.00	125.62	121.89	126.94	9.24	12.02	997.82	21.90	1.36	.52	12.54
17000.000	215000.00	132.96	126.81	135.27	12.20	19.36	1050.32	19.55	2.05	.53	24.97
17000.000	289000.00	136.68	129.34	139.47	13.41	23.08	1066.83	18.44	2.32	.53	31.17
17200.000	93000.00	126.05	122.39	127.39	9.29	11.95	997.98	22.35	1.38	.52	12.80
17200.000	215000.00	133.34	127.31	135.68	12.28	19.24	1050.26	19.97	2.08	.53	25.50
17200.000	289000.00	137.02	129.84	139.86	13.51	22.92	1066.59	18.89	2.36	.53	31.93
17400.000	93000.00	126.49	122.89	127.84	9.32	11.89	1001.78	22.68	1.41	.52	13.14
17400.000	215000.00	133.71	127.75	136.09	12.37	19.11	1044.54	20.23	2.10	.53	25.98
17400.000	289000.00	137.37	130.29	140.25	13.62	22.77	1063.81	19.25	2.40	.54	32.64

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
17600.000	93000.00	126.95	123.29	128.29	9.32	11.95	993.12	22.42	1.41	.52	13.10
17600.000	215000.00	134.09	128.18	136.51	12.49	19.09	1029.95	20.55	2.14	.54	26.77
17600.000	289000.00	137.71	130.70	140.66	13.78	22.71	1046.37	19.65	2.46	.54	33.87
17800.000	93000.00	127.39	123.80	128.75	9.38	11.89	990.96	22.86	1.43	.52	13.39
17800.000	215000.00	134.48	128.68	136.94	12.59	18.98	1027.20	21.01	2.18	.54	27.44
17800.000	289000.00	138.07	131.21	141.08	13.90	22.57	1043.31	20.15	2.51	.55	34.84
18000.000	93000.00	127.83	124.31	129.22	9.45	11.83	988.77	23.37	1.45	.53	13.71
18000.000	215000.00	134.87	129.20	137.38	12.69	18.87	1025.28	21.53	2.22	.55	28.17
18000.000	289000.00	138.45	131.73	141.50	14.02	22.45	1041.40	20.66	2.55	.56	35.77
18200.000	93000.00	128.29	124.82	129.70	9.53	11.79	984.83	23.86	1.48	.53	14.06
18200.000	215000.00	135.28	129.72	137.83	12.82	18.78	1021.06	22.15	2.27	.56	29.10
18200.000	289000.00	138.82	132.26	141.94	14.15	22.32	1037.04	21.22	2.61	.56	36.91
18400.000	93000.00	128.81	125.22	130.17	9.38	11.91	998.82	22.99	1.42	.52	13.36
18400.000	215000.00	135.79	130.13	138.27	12.63	18.89	1033.19	21.34	2.19	.55	27.71
18400.000	289000.00	139.34	132.61	142.36	13.95	22.44	1050.63	20.52	2.52	.55	35.22
18600.000	93000.00	129.24	125.75	130.65	9.53	11.84	982.00	23.79	1.48	.53	14.06
18600.000	215000.00	136.15	130.69	138.74	12.93	18.75	1007.76	22.37	2.30	.56	29.78
18600.000	289000.00	139.64	133.19	142.83	14.33	22.24	1020.82	21.62	2.67	.57	38.20
18800.000	93000.00	129.70	126.27	131.14	9.64	11.80	970.05	24.34	1.51	.54	14.56
18800.000	215000.00	136.56	131.23	139.22	13.10	18.66	1005.93	23.31	2.37	.57	31.09
18800.000	289000.00	140.03	133.79	143.30	14.50	22.13	1021.61	22.52	2.74	.58	39.75
19000.000	93000.00	130.19	126.69	131.63	9.63	11.89	963.28	24.05	1.50	.54	14.49
19000.000	215000.00	137.01	131.68	139.69	13.14	18.71	999.18	23.35	2.39	.57	31.36
19000.000	289000.00	140.46	134.25	143.76	14.57	22.16	1014.77	22.69	2.77	.58	40.32
19200.000	93000.00	130.66	127.21	132.12	9.71	11.86	956.01	24.45	1.53	.54	14.84
19200.000	215000.00	137.44	132.23	140.18	13.29	18.64	991.17	23.98	2.44	.58	32.46
19200.000	289000.00	140.87	134.80	144.24	14.74	22.07	1006.46	23.38	2.84	.59	41.89
19400.000	93000.00	131.13	127.74	132.63	9.82	11.83	947.50	25.06	1.56	.55	15.35
19400.000	215000.00	137.88	132.85	140.69	13.45	18.58	983.00	24.67	2.50	.59	33.67
19400.000	289000.00	141.28	135.43	144.74	14.93	21.98	998.36	24.11	2.92	.60	43.55
19600.000	93000.00	131.61	128.28	133.14	9.91	11.81	938.65	25.55	1.59	.55	15.79
19600.000	215000.00	138.34	133.41	141.21	13.60	18.54	974.20	25.31	2.56	.59	34.86
19600.000	289000.00	141.71	136.00	145.26	15.11	21.91	989.47	24.82	2.99	.61	45.23
19800.000	93000.00	132.13	128.70	133.65	9.89	11.93	930.36	25.10	1.58	.55	15.66
19800.000	215000.00	138.83	133.86	141.72	13.63	18.63	965.55	25.22	2.57	.59	35.05
19800.000	289000.00	142.19	136.46	145.76	15.18	21.99	980.56	24.89	3.02	.61	45.77
20000.000	93000.00	132.61	129.24	134.16	10.00	11.91	920.33	25.66	1.62	.55	16.18
20000.000	215000.00	139.29	134.44	142.25	13.81	18.59	955.57	25.98	2.64	.60	36.47
20000.000	289000.00	142.62	137.06	146.30	15.39	21.92	970.58	25.71	3.10	.62	47.78

SECNO	Q	CWSEL	CRIWS	EG	VCH	DEPTH	TOPWID	10*KS	SHEAR	FRCH	POWER
20200.000	93000.00	133.11	129.78	134.69	10.09	11.91	910.75	26.05	1.64	.56	16.60
20200.000	215000.00	139.77	135.02	142.80	13.96	18.57	946.61	26.59	2.70	.61	37.69
20200.000	289000.00	143.08	137.64	146.85	15.57	21.88	961.99	26.40	3.18	.62	49.50
20400.000	93000.00	133.65	130.22	135.21	10.02	12.05	911.08	25.38	1.61	.55	16.17
20400.000	215000.00	140.32	135.45	143.33	13.90	18.72	939.90	25.92	2.66	.60	37.00
20400.000	289000.00	143.61	138.07	147.37	15.56	22.01	954.06	26.01	3.16	.62	49.17
20600.000	93000.00	134.13	130.75	135.74	10.17	12.03	891.50	26.02	1.67	.56	16.94
20600.000	215000.00	140.78	136.07	143.89	14.15	18.68	926.55	27.06	2.77	.62	39.18
20600.000	289000.00	144.05	138.72	147.94	15.84	21.95	941.27	27.16	3.29	.63	52.04
20782.000	93000.00	134.60	131.19	136.21	10.16	12.10	888.05	25.84	1.66	.56	16.88
20782.000	215000.00	141.31	136.53	144.38	14.06	18.81	937.89	26.93	2.74	.61	38.52
20782.000	289000.00	144.62	139.21	148.44	15.69	22.12	957.74	26.88	3.23	.63	50.61
20800.000	93000.00	134.66	131.22	136.25	10.14	12.13	888.12	25.64	1.65	.56	16.76
20800.000	215000.00	141.37	136.57	144.43	14.05	18.84	938.00	26.83	2.73	.61	38.37
20800.000	289000.00	144.68	139.25	148.49	15.67	22.15	957.85	26.80	3.22	.63	50.45
21000.000	93000.00	135.23	131.56	136.76	9.90	12.37	891.23	23.73	1.56	.54	15.45
21000.000	215000.00	141.95	136.85	144.96	13.91	19.09	912.35	25.06	2.65	.60	36.84
21000.000	289000.00	145.21	139.51	149.02	15.66	22.35	922.62	25.53	3.19	.62	49.90

FILE: SR153.DAT

SUMMARY PRINTOUT TABLE 100

SECNO	EGLWC	ELLC	EGPRS	ELTRD	QPR	QWEIR	CLASS	H3	DEPTH	CWSEL	VCH	EG
15326.000	123.19	145.20	.00	152.20	93000.00	.00	1.00	.34	12.20	121.90	9.11	123.
15326.000	131.72	145.20	.00	152.20	215000.00	.00	1.00	.64	19.77	129.47	12.04	131.
15326.000	135.96	145.20	.00	152.20	289000.00	.00	1.00	.80	23.51	133.21	13.30	135.
15730.000	124.16	141.70	.00	148.70	93000.00	.00	1.00	.36	12.16	122.86	9.15	124.
15730.000	132.87	141.70	.00	148.70	215000.00	.00	1.00	.67	19.96	130.66	11.92	132.
15730.000	137.20	141.70	.00	148.70	289000.00	.00	1.00	.82	23.83	134.53	13.10	137.

FILE: SR153.DAT

SUMMARY PRINTOUT TABLE 105

SECNO	CWSEL	HL	OLOSS	TOPWID	QLOB	QCH	QROB
15200.000	121.49	.42	.01	989.98	.00	93000.00	.00
15200.000	128.74	.39	.01	1041.27	.00	215000.00	.00
15200.000	132.32	.38	.01	1062.75	.00	289000.00	.00
15217.000	121.56	.04	.01	999.41	.00	93000.00	.00
15217.000	128.83	.03	.01	1042.91	.00	215000.00	.00
15217.000	132.41	.03	.01	1062.33	.00	289000.00	.00
15326.000	121.90	.34	.00	991.00	.00	93000.00	.00
15326.000	129.47	.59	.00	1029.18	.00	215000.00	.00
15326.000	133.21	.72	.00	1046.00	.00	289000.00	.00
15467.000	122.19	.29	.00	990.96	.00	92999.99	.00
15467.000	129.73	.26	.01	1029.20	.00	215000.00	.00
15467.000	133.45	.25	.01	1046.00	.00	289000.00	.00
15608.000	122.50	.29	.00	1000.52	.00	93000.00	.00
15608.000	130.00	.26	.00	1031.15	.00	215000.00	.00
15608.000	133.71	.25	.00	1046.30	.00	289000.00	.00
15730.000	122.86	.38	.00	990.28	.00	93000.00	.00
15730.000	130.66	.62	.00	1029.73	.00	215000.00	.00
15730.000	134.53	.74	.00	1047.14	.00	289000.00	.00
15800.000	123.02	.15	.00	990.44	.00	93000.00	.00
15800.000	130.79	.12	.00	1029.84	.00	215000.00	.00
15800.000	134.65	.12	.00	1047.23	.00	289000.00	.00

SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= 2735.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

APPENDIX D

SCOUR CALCULATIONS

HEC-2 RESULTS: (XSEC NO. 15467)

RETURN FREQUENCY	DISCHARGE (CFS)	VELOCITY (fps)	DEPTH (ft)	FROUDE NO.
100-YEAR	215,000	12.1	19.7	.51
"SUPERFLOOD"	289,000	13.3	23.5	.52

DUNE SCOUR:

$$A = 0.0655 d^{1.209} \quad \text{(ALLEN, 1963)}$$

$$A = 0.0655 (19.7)^{1.209} \quad \text{(100-YEAR)}$$

$$A = 2.41$$

$$y_{sd} = \tfrac{1}{2}(2.41) = \underline{\underline{1.2 \text{ ft}}}$$

ANTI-DUNE SCOUR:

$$y_{sAD} = \left(\frac{V}{8.56}\right)^2 \quad \text{(ADWR, 1985)}$$

$$y_{sAD} = \left(\frac{12.1}{8.56}\right)^2 \quad \text{(100-YEAR)}$$

$$y_{sAD} = \underline{\underline{2.0 \text{ ft}}}$$

BED-FORM SCOUR SUMMARY:

RETURN FREQUENCY	DUNE SCOUR (ft)	ANTI-DUNE SCOUR (ft)	BED-FORM SCOUR (ft)
100-YEAR	1.2	2.0	2.0
"SUPERFLOOD"	1.5	2.4	2.4

PIER SCOUR: (CSU EQUATION, FHWA HEC-18, APRIL 1993)

$$y_s = 2.0\, K_1 K_2 K_3 \left(\frac{a}{y_1}\right)^{0.65} \mathbb{F}_{r_1}^{0.43}\, y_1$$

y_s = PIER SCOUR DEPTH, ft
y_1 = UPSTREAM FLOW DEPTH, ft
K_1 = CORRECTION FACTOR FOR PIER SHAPE
K_2 = CORRECTION FACTOR FOR FLOW ANGLE OF ATTACK
K_3 = CORRECTION FACTOR FOR BED CONDITION
a = EFFECTIVE PIER WIDTH, ft
$\mathbb{F}_{r_1}$ = FROUDE NUMBER (HEC-2)

ASSUMPTIONS:

$K_1 = 1.1$ SQUARE NOSE SHAPE FACTOR CONSIDERING DEBRIS LOADING ON THE PIER COLUMN

$K_2 = 1.0$ PIERS ARE ALIGNED WITH THE FLOW

$K_3 = 1.0$ BED-FORM IMPACT CONSIDERED SEPARATELY

$a = 6.5'$ ø PIER + 4' ADDITIONAL DEBRIS = 10.5'

$$y_s = 2.2 \left(\frac{10.5}{19.7}\right)^{0.65} (.51)^{0.43}\, 19.7 \quad \text{(100-YEAR)}$$

$y_s = \underline{\underline{21.6 \text{ ft}}}$

$$y_s = 2.2 \left(\frac{10.5}{25.5}\right)^{0.65} (.52)^{0.43}\, 23.5 \quad \text{(SUPERFLOOD)}$$

$y_s = \underline{\underline{23.1 \text{ ft}}}$

DEGRADATION — STABLE SLOPE COMPUTATIONS
Dominant Discharge

1.) Meyer-Peter, Muller formula p. 787

$$S = \frac{0.19\left(\frac{n_s}{D_{90}^{1/6}}\right)^{3/2} D_{50}}{d}$$

S – hydraulic gradient
n_s – Mannings n
D_{90} – D_{90}, mm
D_{50} – D_{50}, mm
d – mean depth, ft

$$S = \frac{0.19\left[(0.035)/(190)^{1/6}\right]^{3/2}(80)}{13.8}$$

$$= 0.00194 \text{ ft/ft.}$$

2.) Schoklitsch formula p. 787

$$S = \left(\frac{0.00021\,DB}{Q}\right)^{3/4}$$

S – hydraulic gradient
D – D_{50}, mm
B – stream width, ft.
Q – discharge, cfs

$$S = \left[\frac{(0.00021)(80)(902)}{93{,}000}\right]^{3/4}$$

$$= 0.00144 \text{ ft/ft.}$$

3.) INCIPIENT MOTION

$$\tau_d = \tau_c$$

$$\gamma R S = F^* (\gamma_s - \gamma) D_{50}$$

$$R S = 0.040 (1.65)(0.262)$$

$$S = \frac{0.040 (1.65)(0.262)}{13.8}$$

$$= 0.00125 \text{ ft/ft.}$$

4.) LANE'S TRACTIVE FORCE

$$\tau_c = \gamma d S$$

$$S = \frac{\tau_c}{\gamma d}$$

$$= \frac{1.2}{62.4(13.8')}$$ From Fig. H-14

$$= 0.00139$$

$$\text{Average} = \frac{0.00194^* + 0.00144 + 0.00125 + 0.00139}{3}$$

$$= 0.00136 \text{ ft/ft}$$

* Disregard value in computing average

Procedure: Degradation limited by stable slope

Assumptions: 1. Grade Control #2 @ Sta. 144+00 is downstream pivot point at elevation 1107.5

2. Stable slope of .00136 ft/ft (See DLR calc.s of 8/29/88)

$$.00136 = \frac{\Delta \text{Elv.}}{\Delta \text{Sta.}} = \frac{\text{Elv. Ch. @ Bridge} - \text{Elv. GC2}}{\text{Bridge} - \text{GC2}}$$

$$= (153+26 - 144+00) \cdot .00136 + 1107.5$$

Ch. Elv. at Bridge due to Long term Scour = 1108.8

Current Elv. at Bridge = 1109.7

Long Term Scour = 1109.7 − 1108.8 = 0.9 ft