WHITE TANKS FRS #4 INLET CHANNEL IMPROVEMENTS LOMR PACKET

Federal Emergency Management Agency

Washington, D.C. 20472

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Phoenix, AZ 85009

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:
Case No.: 01-09-453P

The Honorable Janice K. Brewer
Chairperson, Maricopa County
Board of Supervisors
301 West Jefferson Street, 10th Floor
Phoenix, AZ 85003

Community: Maricopa County, AZ
Community No.: 040037
Panel Affected: 04013C2055 F
Effective Date of This Revision: OCT 09 2001

102-D-A

Dear Ms. Brewer:

This responds to a request that the Federal Emergency Management Agency (FEMA) revise the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for Maricopa County, Arizona and Incorporated Areas, in accordance with Part 65 of the National Flood Insurance Program (NFIP) regulations. In a letter dated February 20, 2001, Mr. Michael Duncan, P.E., Senior Civil Engineer, Flood Control District of Maricopa County, requested that FEMA revise the FIRM and FIS report to show the effects of channelization along Jackrabbit Trail Wash from approximately 3,600 feet downstream of Interstate Highway 10 (I-10) to approximately 1,550 feet upstream of McDowell Road. This request also included an existing concrete channel between the eastbound off-ramp and the westbound on-ramp of I-10, five existing 10-foot by 4-foot concrete box culverts (CBs) at the eastbound off-ramp of I-10, five existing 10-foot by 5-foot CBs at the westbound on-ramp of I-10, and five existing 12-foot by 4.5 foot CBs at McDowell Road.

All data required to complete our review of this request were submitted with letters from Mr. Duncan.

We have completed our review of the submitted data and the flood data shown on the effective FIRM and in the effective FIS report. We have revised the FIRM and FIS report to modify the elevations and floodplain and floodway boundary delineations of the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood) along Jackrabbit Trail Wash from approximately 400 feet downstream to approximately 1,550 feet upstream of McDowell Road; from approximately 1,800 feet downstream to approximately 600 feet downstream of I-10; and from approximately 2,500 feet downstream to approximately 2,000 feet downstream of I-10. As a result of the modifications, the Base Flood Elevations (BFEs) for Jackrabbit Trail Wash along the revised reach were removed. The base flood is contained in the channel and culverts. Also as a result of the modifications, the Special Flood Hazard Area (SFHA), the area that would be inundated by the base flood, and the regulatory floodway were removed throughout the revised reach. The centerline of the channel along the revised reach shifted to the west. Effective BFEs that previously were not shown on the FIRM were added at approximately 1,600 feet upstream and approximately 1,750 feet upstream of McDowell Road. The modifications are shown on the enclosed annotated copies of FIRM Panel 04013C2055 F, Profile Panels 697P and 698P, and affected portions of the Summary of Discharges Table and Floodway Data Table. This Letter of Map Revision (LOMR) hereby revises the above-referenced panel of the effective FIRM and the affected portions of the FIS report, both dated July 19, 2001.

Because this revision request also affects the Town of Buckeye, a separate LOMR for that community was issued on the same date as this LOMR.

The modifications are effective as of the date shown above. The map panel listed above and as modified by this letter will be used for all flood insurance policies and renewals issued for your community.

The following table is a partial listing of existing and modified BFEs:

Location	Existing BFE (feet)*	Modified BFE (feet)*
Approximately 2,500 feet downstream of I-10	1,052	None
Approximately 1,000 feet downstream of I-10	1,059	None
Approximately 1,500 feet upstream of McDowell Road	1,090	None

*Referenced to the National Geodetic Vertical Datum, rounded to the nearest whole foot

Public notification of the modified BFEs will be given in the *Buckeye Valley Newspaper* on or about November 1 and November 8, 2001. A copy of this notification is enclosed. In addition, a notice of changes will be published in the *Federal Register*. Within 90 days of the second publication in the *Buckeye Valley Newspaper*, any interested party may request that FEMA reconsider the determination made by this LOMR. Any request for reconsideration must be based on scientific or technical data. All interested parties are on notice that, until the 90-day period elapses, the determination to modify the BFEs made by this LOMR may itself be modified.

Because this LOMR will not be printed and distributed to primary users, such as local insurance agents and mortgage lenders, your community will serve as a repository for these new data. We encourage you to disseminate the information reflected by this LOMR throughout the community, so that interested persons, such as property owners, local insurance agents, and mortgage lenders, may benefit from the information. We also encourage you to prepare a related article for publication in your community's local newspaper. This article should describe the assistance that officials of your community will give to interested persons by providing these data and interpreting the NFIP maps.

We will not physically revise and republish the FIRM and FIS report for your community to reflect the modifications made by this LOMR at this time. When changes to the previously cited FIRM panel and FIS report warrant physical revision and republication in the future, we will incorporate the modifications made by this LOMR at that time.

The floodway is provided to your community as a tool to regulate floodplain development. Therefore, the floodway modifications described in this LOMR, while acceptable to FEMA, must also be acceptable to your community and adopted by appropriate community action, as specified in Paragraph 60.3(d) of the NFIP regulations.

This LOMR is based on minimum floodplain management criteria established under the NFIP. Your community is responsible for approving all floodplain development and for ensuring all necessary permits required by Federal or State law have been received. State, county, and community officials, based on knowledge of local conditions and in the interest of safety, may set higher standards for construction in the SFHA. If the State, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

The basis of this LOMR is, in whole or in part, a channel-modification/culvert project. NFIP regulations, as cited in Paragraph 60.3(b)(7), require that communities ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into

your community's existing floodplain management regulations. Consequently, the ultimate responsibility for maintenance of the modified channel and culverts rests with your community.

This determination has been made pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (Public Law 93-234) and is in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, Public Law 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65. Pursuant to Section 1361 of the National Flood Insurance Act of 1968, as amended, communities participating in the NFIP are required to adopt and enforce floodplain management regulations that meet or exceed NFIP criteria. These criteria are the minimum requirements and do not supersede any State or local requirements of a more stringent nature. This includes adoption of the effective FIRM, and FIS report to which the regulations apply and the modifications described in this LOMR.

If you have any questions regarding floodplain management regulations for your community or the NFIP in general, please contact the Consultation Coordination Officer (CCO) for your community. Information on the CCO for your community may be obtained by calling the Chief, Community Mitigation Programs Branch, Mitigation Division of FEMA in San Francisco, California, at (415) 923-7184. If you have any questions regarding this LOMR, please call our Map Assistance Center, toll free, at 1-877-FEMA MAP (1-877-336-2627).

Sincerely,

Max H. Yuan, P.E., Project Engineer
Hazards Study Branch
Federal Insurance and
Mitigation Administration

For: Matthew B. Miller, P.E., Chief
Hazards Study Branch
Federal Insurance and
Mitigation Administration

Enclosures

cc: The Honorable Dusty Hull
Mayor, Town of Buckeye

Ms. Shanna Yager
Floodplain Administrator
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Senior Civil Engineer
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CHANGES ARE MADE IN DETERMINATIONS OF BASE FLOOD ELEVATIONS FOR THE TOWN OF BUCKEYE AND THE UNINCORPORATED AREAS OF MARICOPA COUNTY, ARIZONA, UNDER THE NATIONAL FLOOD INSURANCE PROGRAM

On July 19, 2001, the Federal Emergency Management Agency identified Special Flood Hazard Areas (SFHAs) in the Town of Buckeye and in the unincorporated areas of Maricopa County, Arizona, through issuance of a Flood Insurance Rate Map (FIRM). The Federal Insurance and Mitigation Administration has determined that modification of the elevations of the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood) for certain locations in these communities is appropriate. The modified Base Flood Elevations (BFEs) revise the FIRM for the communities.

The changes are being made pursuant to Section 206 of the Flood Disaster Protection Act of 1973 (Public Law 93-234) and are in accordance with the National Flood Insurance Act of 1968, as amended (Title XIII of the Housing and Urban Development Act of 1968, Public Law 90-448), 42 U.S.C. 4001-4128, and 44 CFR Part 65.

A hydraulic analysis was performed to incorporate the effects of channelization along Jackrabbit Trail Wash from approximately 3,600 feet downstream of Interstate Highway 10 to approximately 1,550 feet upstream of McDowell Road; an existing concrete channel between the eastbound off-ramp and the westbound on-ramp of Interstate Highway 10; five existing 10-foot by 4-foot concrete box culverts (CBs) at the eastbound off-ramp of Interstate Highway 10; five existing 10-foot by 5-foot CBs at the westbound on-ramp of Interstate Highway 10; and five existing 12-foot by 4.5-foot CBs at McDowell Road. This has resulted in the removal of the regulatory floodway and SFHA throughout the revised reach and removal of the BFEs for Jackrabbit Trail Wash from approximately 3,600 feet downstream of Interstate Highway 10 to approximately 1,550 feet upstream of McDowell Road. The centerline of the channel along the revised reach shifted west. The base flood is contained in the channel and culverts. The table below indicates existing and modified BFEs for selected locations along the affected lengths of the flooding source(s) cited above.

Location	Existing BFE (feet)*	Modified BFE (feet)*
[1]Approximately 3,100 feet downstream of Interstate Highway 10	1,046	None
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[1,2]Approximately 1,000 feet downstream of Interstate Highway 10	1,059	None
[1]Approximately 500 feet upstream of Interstate Highway 10	1,075	None
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*National Geodetic Vertical Datum, rounded to nearest whole foot
[1]Town of Buckeye
[2]Unincorporated areas of Maricopa County

Under the above-mentioned Acts of 1968 and 1973, the Federal Insurance and Mitigation Administration must develop criteria for floodplain management. To participate in the National Flood Insurance Program (NFIP), the community must use the modified BFEs to administer the floodplain management measures of the NFIP. These modified BFEs will also be used to calculate the appropriate flood insurance premium rates for new buildings and their contents and for the second layer of insurance on existing buildings and contents.

Upon the second publication of notice of these changes in this newspaper, any person has 90 days in which he or she can request, through the Chief Executive Officer of the community, that the Federal Insurance and Mitigation Administration reconsider the determination. Any request for reconsideration must be based on knowledge of changed conditions or new scientific or technical data. All interested parties are on notice that until the 90-day period elapses, the Federal Insurance and Mitigation Administration's determination to modify the BFEs may itself be changed.

Any person having knowledge or wishing to comment on these changes should immediately notify:

The Honorable Dusty Hull
Mayor, Town of Buckeye
100 North Apache Road, Suite A
Buckeye, AZ 85326

OR

The Honorable Janice K. Brewer
Chairperson, Maricopa County
Board of Supervisors
301 West Jefferson Street, 10th Floor
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Federal Emergency Management Agency

Washington, D.C. 20472

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Case No.: 01-09-453P

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100 North Apache Road, Suite A
Buckeye, AZ 85326

Community: Town of Buckeye, AZ
Community No.: 040039
Panel Affected: 04013C2055 F
Effective Date of This Revision: OCT 09 2001

102-D-A

Dear Mayor Hull:

This responds to a request that the Federal Emergency Management Agency (FEMA) revise the effective Flood Insurance Rate Map (FIRM) and Flood Insurance Study (FIS) report for Maricopa County, Arizona and Incorporated Areas (the effective FIRM and FIS report for your community), in accordance with Part 65 of the National Flood Insurance Program (NFIP) regulations. In a letter dated February 20, 2001, Mr. Michael Duncan, P.E., Senior Civil Engineer, Flood Control District of Maricopa County, requested that FEMA revise the FIRM and FIS report to show the effects of channelization along Jackrabbit Trail Wash from approximately 3,600 feet downstream of Interstate Highway 10 (I-10) to approximately 1,550 feet upstream of McDowell Road. This request also included an existing concrete channel between the eastbound off-ramp and the westbound on-ramp of I-10, five existing 10-foot by 4-foot concrete box culverts (CBs) at the eastbound off-ramp of I-10, five existing 10-foot by 5-foot CBs at the westbound on-ramp of I-10, and five existing 12-foot by 4.5-foot CBs at McDowell Road.

All data required to complete our review of this request were submitted with letters from Mr. Duncan.

We have completed our review of the submitted data and the flood data shown on the effective FIRM and in the effective FIS report. We have revised the FIRM and FIS report to modify the elevations and floodplain and floodway boundary delineations of the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood) along Jackrabbit Trail Wash from approximately 2,000 feet downstream to approximately 500 feet upstream of I-10 and from approximately 3,600 feet downstream to approximately 2,150 feet downstream of I-10. As a result of the modifications, the Base Flood Elevations (BFEs) for Jackrabbit Trail Wash along the revised reach were removed. The base flood is contained in the channel and culverts. Also as a result of the modifications, the Special Flood Hazard Area (SFHA), the area that would be inundated by the base flood, and the regulatory floodway were removed throughout the revised reach. The centerline of the channel along the revised reach shifted to the west. The modifications are shown on the enclosed annotated copies of FIRM Panel 04013C2055 F, Profile Panels 697P and 698P, and affected portions of the Summary of Discharges Table and Floodway Data Table. This Letter of Map Revision (LOMR) hereby revises the above-referenced panel of the effective FIRM and the affected portions of the FIS report, both dated July 19, 2001.

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Federal Insurance and
Mitigation Administration

For: Matthew B. Miller, P.E., Chief
Hazards Study Branch
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Enclosures

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*National Geodetic Vertical Datum, rounded to nearest whole foot
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[2]Unincorporated areas of Maricopa County

Under the above-mentioned Acts of 1968 and 1973, the Federal Insurance and Mitigation Administration must develop criteria for floodplain management. To participate in the National Flood Insurance Program (NFIP), the community must use the modified BFEs to administer the floodplain management measures of the NFIP. These modified BFEs will also be used to calculate the appropriate flood insurance premium rates for new buildings and their contents and for the second layer of insurance on existing buildings and contents.

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Mayor, Town of Buckeye
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OR

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Chairperson, Maricopa County
Board of Supervisors
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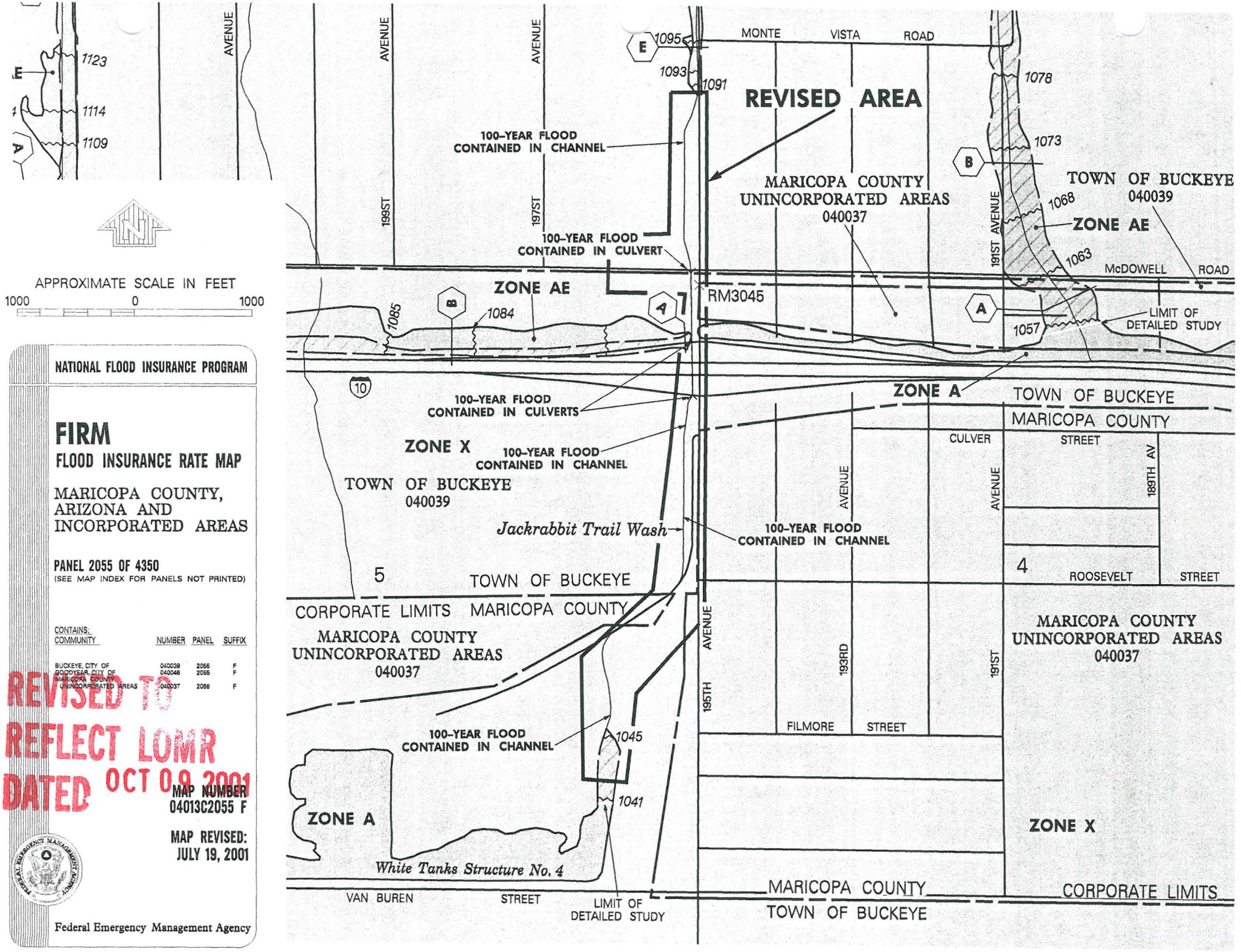

APPROXIMATE SCALE IN FEET
1000 0 1000
NATIONAL FLOOD INSURANCE PROGRAM
FIRM
FLOOD INSURANCE RATE MAP
MARICOPA COUNTY, ARIZONA AND INCORPORATED AREAS
PANEL 2055 OF 4350
(SEE MAP INDEX FOR PANELS NOT PRINTED)
CONTAINS:
COMMUNITY NUMBER PANEL SUFFIX
BUCKEYE, CITY OF 040039 2055 F
GOODYEAR, CITY OF 040046 2055 F
MARICOPA COUNTY UNINCORPORATED AREAS 040037 2055 F
REVISED TO REFLECT LOMR DATED OCT 09 2001
MAP NUMBER 04013C2055 F
MAP REVISED: JULY 19, 2001
Federal Emergency Management Agency
REVISED AREA
100-YEAR FLOOD CONTAINED IN CHANNEL
100-YEAR FLOOD CONTAINED IN CULVERT
100-YEAR FLOOD CONTAINED IN CULVERTS
100-YEAR FLOOD CONTAINED IN CHANNEL
MARICOPA COUNTY UNINCORPORATED AREAS 040037
TOWN OF BUCKEYE 040039
ZONE AE
ZONE A
ZONE X
RM3045
MONTE VISTA ROAD
McDOWELL ROAD
LIMIT OF DETAILED STUDY
Jackrabbit Trail Wash
TOWN OF BUCKEYE
MARICOPA COUNTY
CORPORATE LIMITS
CULVER STREET
189TH AV
ROOSEVELT STREET
FILMORE STREET
VAN BUREN STREET
199ST
197ST
195TH AVENUE
193RD AVENUE
191ST AVENUE
AVENUE
White Tanks Structure No. 4
1095
1093
1091
1078
1073
1068
1063
1057
1085
1084
1045
1041
5
4

Table 3. Summary of Discharges (Cont'd)

Flooding Source and Location	Drainage Area (Square Miles)	Peak Discharges (cfs) 10-Year	50-Year	100-Year	500-Year
North Fork Cholla Wash					
Upstream of the confluence with Cholla Wash	0.81	--[1]	--[1]	704	--[1]
Waterfall Wash					
At the confluence with Beardsley Canal Wash	4.86	--[1]	--[1]	2,245	--[1]
White Tanks #3 Wash					
At White Tanks Structure #3	2.86	--[1]	--[1]	1,743	--[1]
Bedrock Wash					
At White Tanks Structure #3	4.93	--[1]	--[1]	1,738	--[1]
At the confluence with North Fork Bedrock Wash	3.86	--[1]	--[1]	1,920	--[1]
North Fork Bedrock Wash					
At 0.15 miles upstream of the confluence with Bedrock Wash	2.1	--[1]	--[1]	1,560	--[1]
Jackrabbit Trail Wash					
~~At Interstate 10~~	~~17.43~~	~~--[1]~~	~~--[1]~~	~~1,186~~	~~--[1]~~
~~At McDowell Road Culverts~~	~~17.43~~	~~--[1]~~	~~--[1]~~	~~1,186~~	~~--[1]~~
At Thomas Road	2.07	--[1]	--[1]	1,105	--[1]
At At Indian School Road	1.36	--[1]	--[1]	726	--[1]
At Camelback Road	0.43	--[1]	--[1]	221	--[1]
At Medlock Drive	0.22	--[1]	--[1]	187	--[1]
Tuthill Dike Wash					
Downstream of Interstate 10	13.90	--[1]	--[1]	4,061	--[1]
Upstream of Interstate 10	13.90	--[1]	--[1]	5,503	--[1]
At McDowell Road and the confluence with Bulldozer Wash	14.56	--[1]	--[1]	6,601	--[1]

REVISED DATA

[1]Not Computed

REVISED TO REFLECT LOMR DATED OCT 09 2001

FLOODING SOURCE		FLOODWAY			BASE FLOOD WATER SURFACE ELEVATION			
CROSS SECTION	DISTANCE[1]	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE (FEET)
					FLOODING SOURCE			
Jackrabbit Trail Wash								
A	0.070	141	184	5.9	1,041.2	1,041.2	1,041.2	0.0
~~B~~	~~0.312~~	~~145~~	~~173~~	~~6.3~~	~~1,050.5~~	~~1,050.5~~	~~1,050.6~~	~~0.1~~
~~C~~	~~0.668~~	~~72~~	~~151~~	~~7.9~~	~~1,061.5~~	~~1,061.5~~	~~1,061.5~~	~~0.0~~
~~D~~	~~1.016~~	~~336~~	~~285~~	~~4.2~~	~~1,079.4~~	~~1,079.4~~	~~1,079.4~~	~~0.0~~
E	1.348	87	156	6.1	1,094.6	1,094.6	1,094.6	0.0
F	1.725	115	165	5.8	1,113.3	1,113.3	1,113.3	0.0
G	2.107	114	169	6.5	1,131.0	1,131.0	1,131.0	0.0
H	2.482	104	157	7.0	1,143.7	1,143.7	1,143.7	0.0
I	2.860	116	189	4.8	1,152.1	1,152.1	1,152.1	0.0
J	3.247	53	122	5.9	1,163.2	1,163.2	1,163.2	0.0
K	3.625	116	113	5.3	1,174.2	1,174.2	1,174.2	0.0
L	3.930	50	59	3.7	1,182.8	1,182.8	1,182.8	0.0
M	4.152	175	230	0.8	1,185.7	1,185.7	1,185.7	0.0

REVISED DATA

[1]Miles Above White Tanks Structure #4

REVISED TO REFLECT LOMR DATED OCT 09 2001

TABLE 5

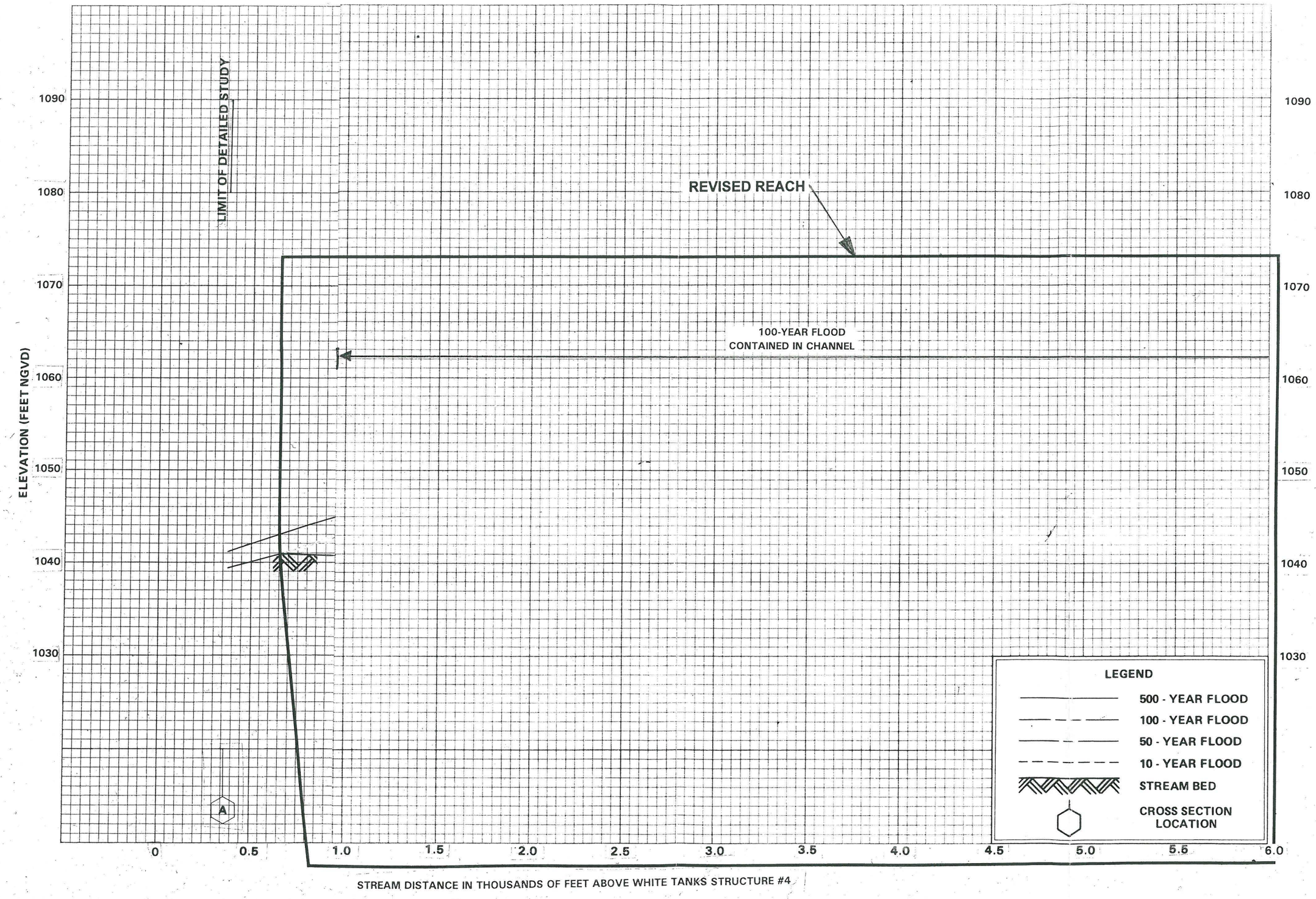
FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ AND INCORPORATED AREAS

FLOODWAY DATA

JACKRABBIT TRAIL WASH

BASE FLOOD



REVISED TO REFLECT LOMR DATED OCT 09 2001

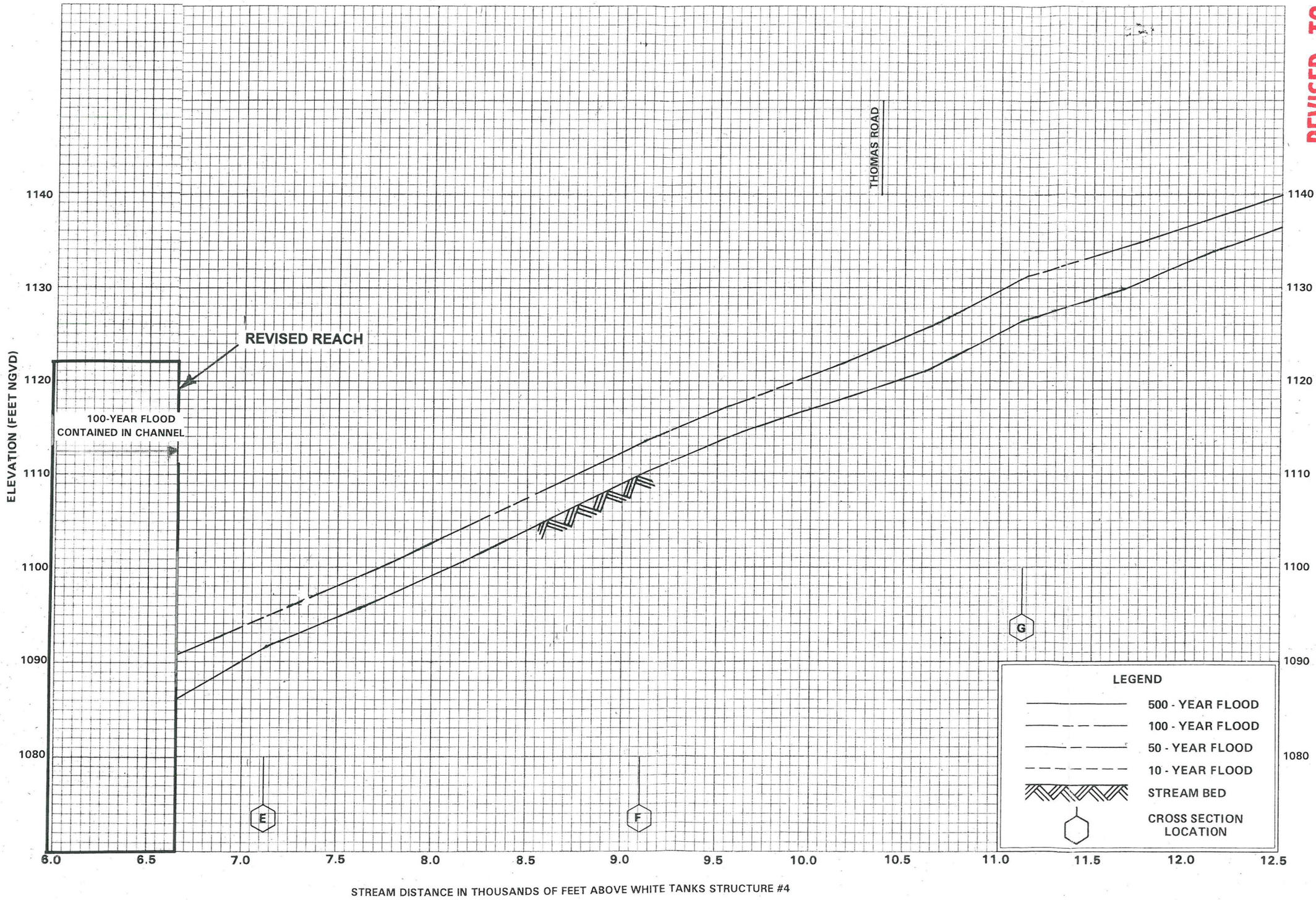
FLOOD PROFILES

JACKRABBIT TRAIL WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

697P



REVISED TO REFLECT LOMR DATED OCT 09 200

FLOOD PROFILES

JACKRABBIT TRAIL WASH

FEDERAL EMERGENCY MANAGEMENT AGENCY

MARICOPA COUNTY, AZ
AND INCORPORATED AREAS

698P

NATIONAL FLOOD INSURANCE PROGRAM

FEMA MAP COORDINATION CONTRACTOR

AUG 28 2001

FLOOD CONTROL DISTRICT
RECEIVED
AUG 31 '01

CH & GM	FINANCE
PIO	LANDS
ADMIN	C & M
REG	P & PM
ENG	FILE
CONTRACTS	
ROUTING	

Mr. Michael Duncan, P.E.
Senior Civil Engineer
Flood Control District
of Maricopa County
2801 West Durango Street
Phoenix, AZ 85009-6399

IN REPLY REFER TO:
Case No.: 01-09-453P
Communities: Town of Buckeye and Maricopa County, AZ
Community Nos.: 040039 and 040037

316-INTc

Dear Mr. Duncan:

This is in regard to your February 20, 2001, request that the Federal Emergency Management Agency (FEMA) issue a Letter of Map Revision for the above-referenced communities. In our letter to you dated June 1, 2001, we indicated we were reviewing the data submitted in support of your request and, within 60 days of the date of that letter, we would notify you if we needed additional data or if we encountered delays. Because we have encountered such delays, we will need additional time to complete our review. Therefore, we will inform you of our findings within 30 days of the date of this letter.

If you have general questions about your request, FEMA policy, or the National Flood Insurance Program, please call the FEMA Map Assistance Center, toll free, at 1-877-FEMA MAP (1-877-336-2627). If you have specific questions concerning your request, please call the Revisions Coordinator for your State, Pernille Buch-Pedersen, who may be reached at (703) 317-6224.

Sincerely,

Monther S. Madanat, Director
Engineering Division
Michael Baker Jr., Inc.

cc: Mr. Woodrow Scoutten, P.E.
Town Engineer
Town of Buckeye

Mr. Victor Calderon
Community Assistance Program Manager
Arizona Division of Emergency
Management

3601 Eisenhower Avenue, Suite 600, Alexandria, Virginia 22304-6425 PH: 703.960.8800 FX: 703.960.9125

Michael Baker Jr., Inc., under contract with the FEDERAL EMERGENCY MANAGEMENT AGENCY, is a Map Coordination Contractor for the National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FEMA MAP COORDINATION CONTRACTOR

June 1, 2001

Mr. Michael Duncan, P.E.
Senior Civil Engineer
Flood Control District
of Maricopa County
2801 West Durango Street
Phoenix, AZ 85009-6399

FLOOD CONTROL DISTRICT
RECEIVED
JUN 04 '01
IC-B GM | FINANCE
PIO | LANDS
ADMIN | O & M
REG | P & PM

IN REPLY REFER TO:
Case No.: 01-09-453P
Communities: Town of Buckeye and Maricopa County, AZ
Community Nos.: 040039 and 040037

316-ACK.FRQ

Dear Mr. Duncan:

This responds to your request dated February 20, 2001, that the Federal Emergency Management Agency (FEMA) issue a revision to the Flood Insurance Rate Map (FIRM) for Maricopa County, Arizona and Incorporated Areas. Pertinent information about the request is listed below.

Identifier:	White Tanks Flood Retarding Structure #4 Inlet Channel Improvements
Flooding Source:	Jackrabbit Trail Wash
FIRM Panel(s) Affected:	04013C2055 E

We have completed an inventory of the items that you submitted. We have received the data and the review and processing fee ($3,400) required to begin a detailed technical review of your request. If additional data are required, we will inform you within 60 days of the date of this letter.

When you write us about your request, please include the case number referenced above in your letter.

If you have general questions about your request, FEMA policy, or the National Flood Insurance Program, please call the FEMA Map Assistance Center, toll free, at 1-877-FEMA MAP (1-877-336-2627). If you have specific questions concerning your request, please call the Revisions Coordinator for your State, Pernille Buch-Pedersen, who may be reached at (703) 317-6224.

Sincerely,

Monther S. Madanat, Director
Technical Services Division
Michael Baker Jr., Inc.

cc: Mr. Woodrow Scoutten, P.E.
Town Engineer
Town of Buckeye

Mr. Victor Calderon
Community Assistance Program Manager
Arizona Division of Emergency
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National Flood Insurance Program
NFIP
Administered by FEMA

Need Information on Flood Hazard Maps?

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- A link to a listing of training courses and conferences related to emergency management

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FEMA MAP ASSISTANCE CENTER
FMAC
1-877-FEMA MAP

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- A subscription service providing free news on the latest developments in flood hazard mapping via e-mail
- E-mail links to Map Specialists at the FEMA Map Assistance Center (1-877-FEMA MAP)

Questions and suggestions? Contact John Magnotti at 202-646-3932, or john.magnotti@fema.gov

Want to talk to a Map Specialist about Flood Hazard Mapping?

If your home or business is located in the floodplain, you will need to purchase and maintain flood insurance. If you have a mortgage, your bank will require it.

FEMA MAP ASSISTANCE CENTER

FMAC

1-877-FEMA MAP

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or visit our Web Site at www.fema.gov/mit/tsd

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Typical flood hazard map questions we answer:

Property Owner: "My home has never flooded. Why do I need flood insurance?"

Real Estate Agent: "I think the previous owner had an exemption from flood insurance— is there a record of this exemption?"

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- To order any current FEMA publication... **1-800-480-2520**
- For lender questions on flood policy coverage and rates... **1-800-611-6125**
- For agent questions on policy coverage and rates... **1-800-720-1093**

National Flood Insurance Program
NFIP
Administered by FEMA

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
Jan Brewer
Fulton Brock
Andrew Kunasek
Don Stapley
Mary Rose Garrido Wilcox

May 21, 2001

Brendan Nelson
Technical Services Division
Michael Baker Jr., Inc.
3601 Eisenhower Avenue, Suite 600
Alexandria VA 22304-6425

REFERENCE: Case No. 01-09-453P
Town of Buckeye and Maricopa County, AZ
Community Nos.: 040039 and 040037

316-ACK.FRQ

Jackrabbit Trail Wash

LOMR for White Tanks FRS #4 Inlet Channel Improvements

Dear Mr. Nelson:

In response to the Michael Baker, Inc. letter of March 13, 2001, the following items are enclosed, to allow you to begin a detailed review of my LOMR request:

1) Copies of public notice letters to affected property owners.

2) Letters from the communities concerning the adoption and enforcement of the modified regulatory floodway

The check for $ 3,400 has been submitted separately. If you have any questions, please call me at 602-506-4732, or email me at mwd@mail.maricopa.gov .

Sincerely,

Michael Duncan

Michael Duncan, P.E.
Engineering Division

Enclosures

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
Jan Brewer
Fulton Brock
Andrew Kunasek
Don Stapley
Mary Rose Garrido Wilcox

April 9, 2001

Bingham Investment Company
1655 S. Country Club Dr.
Mesa AZ 85210

Subject: Jackrabbit Trail Wash
Revised Regulatory Floodway
To be contained within improved channel

To Whom It May Concern:

County Assessor records indicate that you have property in the vicinity of the improved channel for Jackrabbit Trail Wash (along the west side of Jackrabbit Trail). The channel improvements, by the Flood Control District of Maricopa County, which extended from 1/4 mile north of McDowell Road to 3/4 mile south of McDowell Road, were completed about 2 years ago.

The floodplain and floodway of Jackrabbit Trail Wash will now be contained within the improved channel. This letter serves as notice that we intend to modify the floodplain and floodway accordingly, by having the floodplain map revised by the Federal Emergency Management Agency.

If you have any questions regarding this matter, please call me at 602-506-4732.

Sincerely,

Michael Duncan

Michael Duncan
Senior Civil Engineer

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
Jan Brewer
Fulton Brock
Andrew Kunasek
Don Stapley
Mary Rose Garrido Wilcox

April 9, 2001

Dean and Jackie Goupil
6446 E. Trailridge Circle, # 76
Mesa AZ 85215

Subject: Jackrabbit Trail Wash
Revised Regulatory Floodway
To be contained within improved channel

To Whom It May Concern:

County Assessor records indicate that you have property in the vicinity of the improved channel for Jackrabbit Trail Wash (along the west side of Jackrabbit Trail). The channel improvements, by the Flood Control District of Maricopa County, which extended from 1/4 mile north of McDowell Road to 3/4 mile south of McDowell Road, were completed about 2 years ago.

The floodplain and floodway of Jackrabbit Trail Wash will now be contained within the improved channel. This letter serves as notice that we intend to modify the floodplain and floodway accordingly, by having the floodplain map revised by the Federal Emergency Management Agency.

If you have any questions regarding this matter, please call me at 602-506-4732.

Sincerely,

Michael Duncan

Michael Duncan
Senior Civil Engineer

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
Jan Brewer
Fulton Brock
Andrew Kunasek
Don Stapley
Mary Rose Garrido Wilcox

April 9, 2001

Goupil LLC
10327 E. Apache Trail
Apache Junction AZ 85220

Subject: Jackrabbit Trail Wash
Revised Regulatory Floodway
To be contained within improved channel

To Whom It May Concern:

County Assessor records indicate that you have property in the vicinity of the improved channel for Jackrabbit Trail Wash (along the west side of Jackrabbit Trail). The channel improvements, by the Flood Control District of Maricopa County, which extended from 1/4 mile north of McDowell Road to 3/4 mile south of McDowell Road, were completed about 2 years ago.

The floodplain and floodway of Jackrabbit Trail Wash will now be contained within the improved channel. This letter serves as notice that we intend to modify the floodplain and floodway accordingly, by having the floodplain map revised by the Federal Emergency Management Agency.

If you have any questions regarding this matter, please call me at 602-506-4732.

Sincerely,

Michael Duncan

Michael Duncan
Senior Civil Engineer

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
Jan Brewer
Fulton Brock
Andrew Kunasek
Don Stapley
Mary Rose Garrido Wilcox

April 9, 2001

State Land Department
1616 W. Adams St.
Phoenix AZ 85007

Subject: Jackrabbit Trail Wash
Revised Regulatory Floodway
To be contained within improved channel

To Whom It May Concern:

County Assessor records indicate that you have property in the vicinity of the improved channel for Jackrabbit Trail Wash (along the west side of Jackrabbit Trail). The channel improvements, by the Flood Control District of Maricopa County, which extended from 1/4 mile north of McDowell Road to 3/4 mile south of McDowell Road, were completed about 2 years ago.

The floodplain and floodway of Jackrabbit Trail Wash will now be contained within the improved channel. This letter serves as notice that we intend to modify the floodplain and floodway accordingly, by having the floodplain map revised by the Federal Emergency Management Agency.

If you have any questions regarding this matter, please call me at 602-506-4732.

Sincerely,

Michael Duncan

Michael Duncan
Senior Civil Engineer

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5897

BOARD OF DIRECTORS
Betsey Bayless
Jan Brewer
Fulton Brock
Don Stapley
Mary Rose Garrido Wilcox

April 16, 2001

Hazards Study Branch
Federal Emergency Management Agency
500 C Street SW
Washington, D.C. 20472

SUBJECT: Improved Channel for Jackrabbit Trail Wash and Modified Regulatory Floodway

To Whom It May Concern:

I have reviewed our LOMR application package of the channel improvements constructed by the Flood Control District of Maricopa County that describes the effects on the floodplain and floodway of Jackrabbit Trail Wash.

Concerning the portion of the LOMR that affects Unincorporated Maricopa County, as Floodplain Administrator for Unincorporated Maricopa County, I will adopt and enforce the related, modified regulatory floodway.

Sincerely,

Michael S. Ellegood, P.E.
Chief Engineer and General Manager

Town of Buckeye

FLOOD CONTROL DISTRICT
RECEIVED
MAY 21 '01

CH & BV	FINANCE
PIO	LANDS
ADMIN	O & M
REB	P & PM
ENG	FILE
CONTRACTS	

May 18, 2001

Mr. Matthew B. Miller, PE
Chief, Hazard Studies Branch
Mitigation Directorate
Federal Emergency Management Agency
500 "C" Street, S.W.
Washington, DC 20472

Re: CASE NO.: 01-09-453P
WHITE TANKS FLOOD RETARDING STRUCTURE #4 INLET CHANNEL IMPROVEMENTS
JACKRABBIT TRAIL WASH
FIRM PANEL 04013C2055E

Dear Mr. Miller:

This letter is in response to your letter of March 13, 2000 requesting that additional data be submitted prior to issuance of a revision to the affected Flood Insurance Rate Map. One item requested is a letter stating that our community will adopt and enforce the modified regulatory floodway. This letter serves as the Town of Buckeye verification that we will adopt and enforce the modified floodway as it appears on the revised FIRM.

Should you have any questions, please call me at 602-993-5686.

Sincerely,

Woodrow C. Scoutten, PE
Town Engineer

cc: Joseph Blanton, Town Manager
Michael Duncan, Flood Control District of Maricopa County

100 North Apache• Buckeye, Arizona 85326 • (623) 386-4691•FAX (623) 386-7832

NATIONAL FLOOD INSURANCE PROGRAM
FEMA MAP COORDINATION CONTRACTOR

March 13, 2000

Mr. Michael Duncan, P.E.
Senior Civil Engineer
Flood Control District
of Maricopa County
2801 West Durango Street
Phoenix, AZ 85009-6399

IN REPLY REFER TO:
Case No.: 01-09-453P
Communities: Town of Buckeye and Maricopa County, AZ
Community Nos.: 040039 and 040037

316-ACK.FRQ

Dear Mr. Duncan:

This responds to your request dated February 20, 2001, that the Federal Emergency Management Agency (FEMA) issue a revision to the Flood Insurance Rate Map (FIRM) for Maricopa County, Arizona and Incorporated Areas. Pertinent information about the request is listed below.

Identifier:	White Tanks Flood Retarding Structure #4 Inlet Channel Improvement
Flooding Source:	Jackrabbit Trail Wash
FIRM Panel(s) Affected:	04013C2055 E

FEMA has implemented a procedure to recover costs associated with reviewing and processing requests for modifications to published flood information and maps. Effective June 1, 2000, FEMA revised that fee schedule. A copy of the notice summarizing the current fee schedule, which was published in the *Federal Register*, is enclosed for your information. In accordance with this schedule, the fee for your request is $3,400 and must be submitted before we can continue processing your request. Payment of this fee must be made in the form of a check or money order, made payable in U.S. funds to the National Flood Insurance Program (NFIP), or credit card payment. For identification purposes, the case number referenced above must be included on the check or money order. We will not perform a detailed technical review of your request until we receive this payment.

Payment must be forwarded to one of the addresses listed below.

Using U.S. Postal Service:
Federal Emergency Management Agency
Fee-Charge System Administrator
P.O. Box 3173
Merrifield, VA 22116-3173

Using overnight service:
FEMA Fee-Charge System Administrator
c/o Dewberry & Davis, METS Division
8401 Arlington Boulevard
Fairfax, VA 22031

FLOOD CONTROL DISTRICT
RECEIVED
MAR 19 '01
CHIEF ENGINEER
PIO
LANDS
ADMIN
FEES
ENG
FILE
CONTRACTS
MWD

3601 Eisenhower Avenue, Suite 600, Alexandria, Virginia 22304-6425 PH: 703.960.8800 FX: 703.960.9125

We have completed an inventory of the items that you submitted. The items identified below are required before we can begin a detailed review of your request.

1. Please submit a copy of the public notice(s) distributed by the above-referenced communities stating their intent to revise the regulatory floodway, or a statement by each community that it has notified all affected property owners and affected adjacent jurisdictions.

2. Please submit letters from each of the above-referenced communities stating that they will adopt and enforce the modified regulatory floodway.

All required items are to be submitted to us at the address shown at the bottom of the first page. If all required items are not submitted within 90 days of the date of this letter, we will treat any subsequent request as an original submittal, and it will be subject to all submittal/payment procedures.

If you are unable to meet the 90-day deadline for submittal of required items, and would like FEMA to continue processing your request, you must request an extension of the deadline. This request must be submitted to us in writing and must provide (1) the reason why the data cannot be submitted within the requested timeframe, and (2) a new date for the submittal of the data. FEMA receives a very large volume of requests and cannot maintain inactive requests for an indefinite period of time. Therefore, the fees will be forfeited for any request for which neither the requested data nor a written extension request is received within 90 days.

When you write us about your request, please include the case number referenced above in your letter.

If you have general questions about your request, FEMA policy, or the NFIP, please call the FEMA Map Assistance Center, toll free, at 1-877-FEMA MAP (1-877-336-2627). If you have specific questions concerning your request, please call the Revisions Coordinator for your State, Pernille Buch-Pedersen, who may be reached at (703) 317-6224.

Sincerely,

Monther S. Madanat, Director
Technical Services Division
Michael Baker Jr., Inc.

cc: Mr. Woodrow C. Scoutten, P.E.
Town Engineer
Town of Buckeye

Ms. Terri Miller
Program Coordinator
Arizona Division of Emergency Management

Federal Emergency Management Agency

Washington, D.C. 20472

FEE SCHEDULE FOR PROCESSING REQUESTS FOR MAP CHANGES

This notice contains the revised fee schedule for processing certain types of requests for changes to National Flood Insurance Program (NFIP) maps. The change in the fee schedule will allow FEMA to further reduce the expenses to the NFIP by more fully recovering the costs associated with processing conditional and final map change requests. The revised fee schedule for map changes is effective for all requests dated June 1, 2000, or later and supersedes the current fee schedule, which was established on March 1, 1999.

To develop the revised fee schedule for conditional and final map change requests, FEMA evaluated the actual costs of reviewing and processing requests for Conditional Letters of Map Amendment (CLOMAs), Conditional Letters of Map Revision – based on Fill (CLOMR-Fs), Conditional Letters of Map Revision (CLOMRs), Letters of Map Revision – based on Fill (LOMR-Fs), Letters of Map Revision (LOMRs), and Physical Map Revisions (PMRs).

Fee Schedule for Requests for CLOMAs, CLOMR-Fs, and LOMR-Fs

Based on our review of actual cost data for Fiscal Year 1999, we are continuing to charge the following review and processing fees, which requesters must submit with all requests:

Request for single-lot/single-structure CLOMA, CLOMR-F, and LOMR-F	$400
Request for single-lot/single-structure LOMR-F based on as-built information (CLOMR-F previously issued by us)	$300
Request for multiple-lot/multiple-structure CLOMA	$700
Request for multiple-lot/multiple-structure CLOMR-F and LOMR-F	$800
Request for multiple-lot/multiple-structure LOMR-F based on as-built information (CLOMR-F previously issued)	$700

Fee Schedule for Requests for CLOMRs

Based on our review of actual cost data for Fiscal Year 1999, we are continuing to charge the following review and processing fees, which requesters must submit with all requests unless exempted by 44 CFR 72.5:

Request based on new hydrology, bridge, culvert, channel, or combination of any of these	$3,100
Request based on levee, berm, or other structural measure	$4,000

Fee Schedule for Requests for LOMRs and PMRs

Based on our review of actual cost data for Fiscal Year 1999, **we revised the review and processing fee for requests based on levees, berms, or other structural measures, from $4,700 to $6,000.** Therefore, unless 44 CFR 72.5 exempts the request, requesters must submit the review and processing fees shown below with requests for LOMRs and PMRs dated June 1, 2000, or later that are not based on structural measures or alluvial fans.

Request based on bridge, culvert, channel, or combination thereof	$4,000
Request based on levee, berm, or other structural measure	$6,000
Request based on as-built information submitted as followup to CLOMR	$3,400

Fees for CLOMRs, LOMRs, and PMRs Based on Structural Measures on Alluvial Fans

Based on our review of actual cost data for Fiscal Year 1999, we are continuing to charge $5,000 as the initial fee for requests for CLOMRs and LOMRs based on structural measures on alluvial fans. We also will continue to recover the remainder of the review and processing costs by invoicing the requester before issuing a determination letter, consistent with current practice. We will continue to use the prevailing private-sector labor rate charged to us ($50 per hour) to calculate the total reimbursable fees.

Payment Submission Requirements

Requesters must make fee payments for non-exempt requests before we render services. This payment must be in the form of a check or money order or by credit card payment. Please make all checks and money orders in U.S. funds payable to the *National Flood Insurance Program*. We will deposit all fees collected to the National Flood Insurance Fund, which is the source of funding for providing this service.

National Flood Insurance Program
NFIP
Administered by FEMA

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FMAC
1-877-FEMA MAP

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National Flood Insurance Program

NFIP

Administered by FEMA

FLOOD CONTROL DISTRICT
of
Maricopa County

2801 West Durango Street • Phoenix, Arizona 85009-6399
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BOARD OF DIRECTORS
Jan Brewer
Fulton Brock
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February 20, 2001

Pernille Buch-Pedersen, Regional Manager
Baker Civil
3601 Eisenhower Avenue, Suite 600
Alexandria, Virginia 22304

Communities:	Town of Buckeye, Arizona,	and Unincorporated Maricopa County
Community Nos.:	040039	040037

Flooding Sources: Jackrabbit Trail Wash
FIRM Panel Affected: 04013C2055E -- September 30, 1995

Dear Ms. Buch-Pedersen:

I have enclosed a LOMR Technical Supporting Data Notebook to address the floodplain changes due to a channelization project. All of the revised floodplain is contained within the channel. I have also enclosed the associated roll of certified as-builts entitled White Tanks #4 FRS Inlet Improvements - Roosevelt Street to McDowell Road. Please review and process a Letter of Map Revision for this portion of Jackrabbit Trail Wash. If you have any questions, please phone me at (602) 506-4732 or email me at mwd@mail.maricopa.gov.

Sincerely,

Michael Duncan

Michael Duncan, P.E.
Engineering Division

Enclosures

Copies to: Max Yuan, P.E., Project Engineer
Hazards Study Branch, Mitigation Directorate
Federal Emergency Management Agency
500 C Street SW
Washington, D.C. 20472-0001

Woodrow Scoutten, P.E.
Buckeye Town Engineer
10410 North 31st Avenue
Suite 412
Phoenix, Arizona 85051

Terri Miller
Community Assistance Program Coordinator
Arizona Division of Emergency Management
5636 E. McDowell Road
Phoenix, AZ 85008

Coord: JJT EAR

LOMR PACKET FOR

WHITE TANKS FLOOD RETARDING STRUCTURE #4
INLET CHANNEL IMPROVEMENTS

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BY: Flood Control District of Maricopa

CONTACT: Mike Duncan (602) 506-4732 email: mwd@mail.maricopa.gov

SECTION 1

INTRODUCTION AND REVISED-FLOODPLAIN EXHIBIT

The Flood Retarding Structure called White Tanks No. 4 is located about 25 miles west of downtown Phoenix, Arizona, at a location 3/4 mile south of Interstate 10, and just west of Jackrabbit Trail (also called 195th Ave.). Storm runoff from the east slope of the White Tank Mountains reach White Tanks No. 4 through two major inlets: one near Jackrabbit Trail and one near Tuthill Road (which is one mile west of Jackrabbit Trail).

The subject of this LOMR packet is channel improvements for the inlet near Jackrabbit Trail. Historically, flows reached this inlet by way of an earthen channel that is just west of Jackrabbit Trail. The overall extent of the channel improvements is shown on the L.O.M.R. Exhibit included in this Section. Existing box culverts at McDowell Road, the Westbound On Ramp of I-10, and the Eastbound Off Ramp of I-10 were not altered during the channel improvement project. In addition, an existing concrete-lined channel between the two box culverts of the I-10 ramps was not altered.

The remaining portions of the channel were earthen and received improvements, that included re-grading, concrete lining, grouted riprap, and 5 drop structures, as part of the channel improvement project. The project extended from 1/4 mile north of McDowell Road to 3/4 mile south of McDowell Road.

L.O.M.R. EXHIBIT

WHITE TANKS #4 F.R.S. INLET IMPROVEMENTS

Flood Control District of Maricopa County

EXISTING FLOODWAY

OTHER EXISTING FLOODPLAIN

McDOWELL ROAD

I-10

ROOSEVELT ST.

195th AVE (JACKRABBIT TRAIL)

REVISED FLOODPLAIN AND FLOODWAY BOUNDARY

* FLOODWAY AND FLOODPLAIN CONTAINED IN BOX CULVERT AT THIS LOCATION

200 0 200 400 Feet

N

NOTE: REVISED FLOODPLAIN IS CONTAINED WITHIN IMPROVED CHANNEL.

M. DUNCAN 18 JAN 01

SECTION 2

FEMA FORMS

These forms are included in this section:

MT-2 Form 1 -- Requester/Official

MT-2 Form 4 -- Riverine Hydraulic

MT-2 Form 6 -- Channelization

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

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

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

1. REQUESTED RESPONSE FROM FEMA

This request is for a:

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

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

☐ Other Describe:

2. OVERVIEW

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

☒ Physical Change ☐ Improved Methodology/Data ☐ Floodway Revision

☐ Other Describe:

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

2. Flooding Source: Jackrabbit Trail Wash

3. Project Name/Identifier: White Tanks Flood Retarding Structure #4 Inlet Channel Improvements

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

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

Community No.	Community Name	State	Map No.	Panel No.	Effective Date
Ex: 480301 480287	Katy, City Harris County	TX TX	480301 48201C	0005D 0220G	02/08/83 09/28/90
040039	Buckeye, Town of	AZ	04013C	2055E	09/30/95
040037	Maricopa County, Unincorporated Areas	AZ	04013C	2055E	09/30/95

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

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

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

4. ENCROACHMENT INFORMATION

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

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

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

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

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

5. MAINTENANCE RESPONSIBILITY

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

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

6. REVIEW FEE

The review fee for the appropriate request category has been included. ☐ Yes Fee amount: $

OR

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

Please see Instructions for Fee Amounts

7. SIGNATURE

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

Michael W. Duncan

Signature of Revision Requester

Michael W. Duncan, P.E., Senior Civil Engineer
Printed Name and Title of Revision Requester

Flood Control District of Maricopa County
Company Name

Telephone No.: 602-506-4732 Date: 01/24/01

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

Signature of Community Official

WOODROW C. SCOUTTEN, TOWN ENGINEER
Printed Name and Title of Community Official

Community Name TOWN OF BUCKEYE

Telephone No.: 602-993-5686 Date: 1-26-01

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR

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

Michael W. Duncan

Signature

Michael W. Duncan, P.E., Senior Civil Engineer
Printed Name and Title of Revision Requester

Registr No. 24124 Expires (Date) 09/30/2002 State Arizona

Type of License/Expertise: Professional Civil Engineer

Check which forms have been included with this request

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

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

PUBLIC BURDEN DISCLOSURE NOTICE

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

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

Note: Fill out one form for each flooding source studied

Community Name: Buckeye (Town) and Maricopa County

Flooding Source: Jackrabbit Trail Wash

Project Name/Identifier: White Tanks Flood Retarding Structure #4 Inlet Channel Improvements

1. REACH TO BE REVISED

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

Downstream Limit: 1000 feet above White Tanks Structure #4 (3/4 mile south of McDowell Road)

Upstream Limit: 6700 feet above White Tanks Structure #4 (1/4 mile north of McDowell Road)

2. MODELS SUBMITTED

Requirements: for areas which have detailed flooding:	**for areas which do not have detailed flooding**:
Full input and output listings along with files on diskette for each of the models listed below (items 1-4) and a summary of the source of input parameters used in the models must be provided. The summary must include a description of any changes made from model to model (e.g., Duplicate Effective model to Corrected Effective model). At a minimum, the Duplicate Effective (item 1) and the Revised or Post-Project Conditions (item 4) models must be submitted. See instructions for directions on when other models may be required.	Only the 100-year (Base) flood profile is required. A hydraulic model is not required for areas which do not have detailed flooding; however, BFEs may not be added to the revised FIRM. If a hydraulic model is developed for the area, items 3 and 4 described below must be submitted.

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

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

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

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

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

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

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

3. STARTING WATER-SURFACE ELEVATIONS

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

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

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

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

☐ Supercritical depth ☐ Critical Depth ☐ Drawdowns ☐ Negative Floodway Surcharges

☐ Floodway Surcharges Greater Than Maximum Allowed by Community/State

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

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

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

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

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

5. REVISED FIRM/FBFM AND FLOOD PROFILES

1. Profile Transition

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

Downstream End 1000 within 0.18 (feet) Upstream End 6752 within 0.36 (feet)
Cross-Section # *Cross-Section #*

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

Downstream End _____ within _____ (feet) Upstream End _____ within _____ (feet)
Cross-Section # *Cross-Section #*

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

Downstream End _____ within _____ (feet) Upstream End _____ within _____ (feet)
Cross-Section # *Cross-Section #*

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

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

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

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

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

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

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

Floodway Data Table

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

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

FEDERAL EMERGENCY MANAGEMENT AGENCY **CHANNELIZATION**	O.M.B. Burden No. 3067-0148 Expires April 30, 2001

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1.75 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

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

Community Name: Buckeye (Town) and Maricopa County

Flooding Source: Jackrabbit Trail Wash

Project Name/Identifier: White Tanks Flood Retarding Structure #4 Inlet Channel Improvements

1. REACH TO BE REVISED

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

Downstream Limit: 1000 feet above White Tanks Structure #4 (3/4 mile south of McDowell Road)

Upstream Limit: 6700 feet above White Tanks Structure #4 (1/4 mile north of McDowell Road)

2. CHANNEL DESCRIPTION

Attach the following information about the channel (check box if information has been provided):

☒ Description of the inlet and outlet

☒ Description of the shape of the channel *(both cross sectional and planimetric configuration)* and its lining *(channel bottom and sides)*:

3. ACCESSORY STRUCTURES

The channelization includes:

☐ Levees *(Attach Levee/Floodwall System Analysis Form - Form 8)*
☐ Drop structures
☐ Superelevated sections
☐ Transitions in cross sectional geometry
☐ Debris basin/detention basin
☐ Energy dissipater
☐ Other (Describe):

4. DRAWING CHECKLIST

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

☒ Channel alignment and locations of inlet, outlet, and accessory structures

☒ Channel lining

☒ Typical cross sections and profiles of channel banks and invert

PLEASE REFER TO THE INSTRUCTIONS FOR THE APPROPRIATE MAILING ADDRESS

5. HYDRAULIC CONSIDERATIONS

1. The channel was designed to carry 2206 (cfs) and/or the 100-year flood.

2. The design elevation in the channel based on:

   ☒ Subcritical flow

   ☐ Critical flow

   ☐ Supercritical flow

   ☐ Energy grade line

3. **If there is the potential for a hydraulic jump at the following locations, check the box(es) that apply and attach an explanation of how the hydraulic jump is controlled without affecting the stability of the channel.**

Inlet to channel?	☐ Yes
Outlet of channel?	☐ Yes
At Drop Structures?	☐ Yes
At Transitions?	☐ Yes
Other locations?	☐ Yes

Explanation Attached? ☐ **Yes** ☐ **No** ☒ **N/A**

6. SEDIMENT TRANSPORT CONSIDERATIONS

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

☐ Estimated sediment load

☐ Method used to estimate sediment transport

☐ Method used to estimate scour and/or deposition

☐ Method used to revise hydraulic or hydrologic analysis (model) to account for sediment transport

SECTION 3

AS-BUILT PLANS

A roll of certified as-built plans entitled:

> WHITE TANKS #4 FRS INLET IMPROVEMENTS --
> ROOSEVELT STREET TO McDOWELL ROAD

is included with this notebook.

SECTION 4

HYDROLOGY

The hydrology for this area is contained in the

> White Tanks/Agua Fria Area Drainage Master Study,
> by The WLB Group, Inc., 1992.

In this hydrology, upstream of the channel improvement project, there are several breakouts from the earthen channel, to the east, across Jackrabbit Trail. The project design discharge of 2,206 cfs is based on the assumption that none of the breakouts occur, to ensure that the project is adequate for all future, upstream channel improvements.

SECTION 5

HYDRAULICS

Overview

Both subcritical and supercritical hydraulic models were developed for the channel improvement project, in this study:

> White Tanks No. 4 FRS Inlet Improvements, FCD No. 92-38, by Dibble and Associates,

with a final report entitled:

> Final Design and Quantity Calculations, 1994.

The subcritical model yielded the wider top widths and was used in the preparation of this LOMR packet. All of the revised floodplain was contained within the improved channel.

Hydraulic Model

BOUNDARY CONDITION:

The downstream end of the channel improvement falls between cross-sections 0.142 and 0.228 of the existing study (White Tanks / Agua Fria Area Drainage Master Study). The slope of the Energy Grade between these two cross-sections is 0.0063. To be conservative, this was reduced by one-third, and **an energy slope of 0.004 was assumed at the downstream end**.

CONTENTS THAT FOLLOW:

INPUT LISTING:	Wt4chan.dat (diskette is at back of notebook)
OUTPUT LISTING:	Wt4chan.out (diskette is at back of notebook)
CHECK-2 REPORT	

```
T1 WHITE TANKS #4 FLOOD RETENTION INLET CHANNEL
T2 CONCRETE LINER REVSISIONS            4/11/94
T3      CHANNEL IMPROVE, SUBCRITICAL FLOW  (Q100 = 2206CFS)
T4      STATION 10+79.83 TO 75+00
T5 MODIFIED 02-07-01 BY MIKE DUNCAN OF F.C.D. OF MARICOPA COUNTY:
T6 ENDED MODEL AT SEC 6752;
T7 CHANGED GRADES TO MATCH AS-BUILTS (OLD CHANNEL FILLED IN);
T8 CHANGED XKOR FROM 1.6 TO 1.51 AT THE 3 CULVERTS, BASED ON CHECK-2 REPORTS.

J1   -10                        .004000                    2206
J2    -1                                              -1
J3   100             105             120             150

NC   .04     .04    .025      .1      .3

* This section is extrapolated from survey sections
X1  1000      10     140     226       0       0       0
GR1055.3      82  1055.1      87  1047.4     120  1043.8     140  1043.2     151
GR1040.9     171  1041.2     208  1041.7     226  1045.2     259  1045.6     336

* Sta 10+79.83
* Match Exst Dirt Channel

X1  1080       4     120     259   79.83   79.83   79.83
CI   200 1041.20               2       6   60.00
X4     1 1047.20  158.00
GR1055.6      82  1055.4      87  1045.5     259  1045.9     336

* Sta 11+16.25
* Begin Channel Transition

X1  1116       4     120     260   36.42   36.42   36.42
CI       .000808                           60.00
X4     1 1047.23  158.00
GR1055.6      82  1055.4      87  1046.1     260  1046.1     333

X1  1150       4     119     261   33.75   33.75   33.75
CI                                         61.49
X4     1 1047.26  157.26
GR1055.5      82  1055.4      87  1046.5     261  1046.3     330

X1  1200       4     113     258   50.00   50.00   50.00
CI                                         63.69
X4     1 1047.30  156.16
GR1055.5      77  1055.3      83  1046.7     258  1046.5     329

X1  1250       5     104     249   50.00   50.00   50.00
CI                                         65.90
X4     1 1047.34  155.05
GR1055.4      69  1055.2      75  1046.5     104  1046.8     249  1046.6     326

X1  1300       5      64     240   50.00   50.00   50.00
CI                                         68.10
X4     1 1047.38  153.95
GR1055.5      58  1055.2      64  1046.9      92  1047.0     240  1046.9     318

X1  1350       5      76     226   50.00   50.00   50.00
```

```
CI                                          70.31
X4      1 1047.42  152.85
GR1055.6       42  1055.3       49  1047.2       76  1047.2     226  1047.2     306

X1  1400        5       75      208   50.00   50.00   50.00
CI                                          72.52
X4      1 1047.46  151.74
GR1055.6       21  1055.3       29  1048.0       54  1047.6     208  1047.6     292

X1  1456        5       47      181   56.33   56.33   56.33
CI                                2        6   75.00
X4      1 1047.50  150.50
GR1055.3        0  1048.7       25  1048.0       47  1048.2     181  1048.0     277

* Sta 14+56.33
* End Channel Transition

X1  1495        2        0      400   38.67   38.67   38.67
CI                                2        4   75.00
GR1047.6        0  1047.6      400

* Sta 14+95.00
* End Dirt Channel
* Begin Conc Channel Lining
* Begin Channel Side Slope Transition

NC   .03      .03     .015

X1  1550        2                   55.00   55.00   55.00
CI                                2        2   65.00
GR1050.4        0  1050.4      400

* Sta 15+50.00
* End Channel Side Slope Transition
* Begin Sloped Drop

X1  1560        2                   10.00   10.00   10.00
CI        1044.83                           65.00
GR1050.9        0  1050.9      400

* Sta 15+60.00
* End Sloped Drop
* Begin Grouted Riprap Channel

NC   .04      .04     .028

X1  1580        2                   20.00   20.00   20.00
CI        .000808                           65.00
GR1050.9        0  1050.9      400

* Sta 16+00.00
* Begin Channel Transition

X1  1600        2                   20.00   20.00   20.00
CI        .000808                           65.00
GR1050.9        0  1050.9      400
```

```
X1  1650       2                    50.00   50.00   50.00
CI                                          60.62
GR1051.1       0  1051.1     400

X1  1700       2                    50.00   50.00   50.00
CI                                          56.25
GR1051.2       0  1051.2     400

X1  1750       2                    50.00   50.00   50.00
CI                                          51.87
GR1051.3       0  1051.3     400

X1  1800       2                    50.00   50.00   50.00
CI                                          47.49
GR1051.4       0  1051.4     400

X1  1850       2                    50.00   50.00   50.00
CI                                          43.12
GR1051.5       0  1051.5     400

X1  1900       2                    50.00   50.00   50.00
CI                                          38.74
GR1051.7       0  1051.7     400

X1  1931       2                    31.29   31.29   31.29
CI       1045.13                            36.00
GR1051.7       0  1051.7     400

* Sta 19+31.29
* End Channel Transition
* End Grouted Riprap
* Begin Conc Channel

NC   .03     .03    .015

X1  1950       2                    18.71   18.71   18.71
CI       .001499
GR1051.8       0  1051.8     400

X1  2000       2                    50.00   50.00   50.00
GR1051.8       0  1051.8     400

X1  2050       2                    50.00   50.00   50.00
GR1051.9       0  1051.9     400

X1  2100       2                    50.00   50.00   50.00
GR1052.0       0  1052.0     400

X1  2150       2                    50.00   50.00   50.00
GR1052.0       0  1052.0     400

X1  2200       2                    50.00   50.00   50.00
GR1052.1       0  1052.1     400

X1  2250       2                    50.00   50.00   50.00
GR1052.0       0  1052.0     400
```

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X1  2300        2                    50.00   50.00   50.00
GR1052.2        0  1052.2     400

X1  2350        2                    50.00   50.00   50.00
GR1052.3        0  1052.3     400

X1  2400        2                    50.00   50.00   50.00
GR1052.6        0  1052.4     400

X1  2450        2                    50.00   50.00   50.00
GR1052.9        0  1052.5     400

X1  2500        2                    50.00   50.00   50.00
GR1053.0        0  1052.5     400

X1  2550        2                    50.00   50.00   50.00
GR1053.1        0  1052.6     400

X1  2600        2                    50.00   50.00   50.00
GR1053.2        0  1052.7     400

X1  2650        2                    50.00   50.00   50.00
GR1053.3        0  1052.7     400

X1  2700        2                    50.00   50.00   50.00
GR1053.3        0  1052.8     400

X1  2750        2                    50.00   50.00   50.00
GR1053.4        0  1052.9     400

X1  2800        2                    50.00   50.00   50.00
GR1053.0        0  1053.0     400

X1  2850        2                    50.00   50.00   50.00
GR1056.0        0  1056.0     400

X1  2885        2                    35.00   35.00   35.00
GR1056.8        0  1056.8     400

* Sloped Drop (28+85.00 to 29+00.00)

X1  2900        2                    15.00   15.00   15.00
CI        1051.56
GR1057.1        0  1057.1     400

X1  2950        2                    50.00   50.00   50.00
CI        .005000
GR1057.4        0  1057.4     400

X1  3000        2                    50.00   50.00   50.00
GR1057.6        0  1057.6     400

X1  3050        2                    50.00   50.00   50.00
GR1057.9        0  1057.9     400

X1  3100        2                    50.00   50.00   50.00
GR1058.0        0  1058.0     400
```

```
X1  3150        2                    50.00   50.00   50.00
GR1058.3        0  1058.3     400

X1  3200        2                    50.00   50.00   50.00
GR1058.6        0  1058.6     400

X1  3250        2                    50.00   50.00   50.00
GR1058.9        0  1058.9     400

X1  3300        2                    50.00   50.00   50.00
GR1059.1        0  1059.1     400

X1  3350        2                    50.00   50.00   50.00
GR1059.4        0  1059.4     400

X1  3400        2                    50.00   50.00   50.00
GR1059.6        0  1059.6     400

X1  3450        2                    50.00   50.00   50.00
GR1059.9        0  1059.9     400

X1  3500        2                    50.00   50.00   50.00
GR1060.1        0  1060.1     400

X1  3550        2                    50.00   50.00   50.00
GR1060.3        0  1060.3     400

X1  3600        2                    50.00   50.00   50.00
GR1060.6        0  1060.6     400

X1  3650        2                    50.00   50.00   50.00
GR1060.9        0  1060.9     400

X1  3700        2                    50.00   50.00   50.00
CI        1055.56
GR1061.1        0  1061.1     400

X1  3720        2                    20.00   20.00   20.00
CI        .022400
GR1061.9        0  1061.9     400

X1  3740        2                    20.00   20.00   20.00
GR1062.7        0  1062.7     400

X1  3760        2                    20.00   20.00   20.00
GR1063.5        0  1063.5     400

X1  3780        2                    20.00   20.00   20.00
GR1064.3        0  1064.3     400

X1  3800        2                    20.00   20.00   20.00
CI        1057.80
GR1065.1        0  1065.1     400

X1  3850        2                    50.00   50.00   50.00
CI        .001493
```

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GR1065.3        0  1065.3     400

X1  3900        2                    50.00   50.00   50.00
GR1065.3        0  1065.3     400

X1  3950        2                    50.00   50.00   50.00
GR1065.4        0  1065.4     400

* Sta 40+08.23
* Begin Channel Transition

X1  4008        2                    58.23   58.23   58.23
CI                                           36.00
GR1065.4        0  1065.4     400

X1  4050        2                    41.77   41.77   41.77
CI                                           44.21
GR1065.5        0  1065.5     400

X1  4100        2                    50.33   50.33   50.33
CI                                           54.10
GR1065.6        0  1065.6     400

* E Q U A T I O N
* Sta 41+00.33 Bk =
* Sta 40+95.00 Ahd

X1  4125        2                    30.00   30.00   30.00
CI                                           60.00
GR1066.3        0  1066.3     400

* Sta 41+25.00
* End Channel Transition

X1  4163        2                    38.00   38.00   38.00
GR1067.1        0  1067.1     400

* Sloped Drop (41+63.00 to 41+75.00)

X1  4175        2                    12.00   12.00   12.00
CI        1062.42
GR1067.3        0  1067.3     400

* Sta 41+90.00
* End Channel Improvements
* Match Exst Wingwalls

X1  4190        7     133     195      15      15      15
CI                                          .01
GR1069.0      100  1069.0     121  1067.4     133  1062.4  133.01  1062.4  194.99
GR1067.4      195  1069.0     210

NC                              .3      .5

X1  4197        7     153     207      11      11      11
X3    10                                                  1100.0  1100.0
GR1068.5      100  1068.1     123  1068.2     153  1062.5  153.01  1062.5  206.99
```

```
GR1069.0     207  1069.0     230

* South I-10 Bridge

SB  1.25    1.51      3.      70      54       4     200          1062.7  1062.5
X1  4248       8     153     207      51      51      51
X2                     1.  1066.7    1069
GR1069.0     100  1068.8     123  1068.7     143  1068.6     153  1062.7  153.01
GR1062.7  206.99  1068.1     207  1069.6     229

X1  4300       9     139     197      52      52      52
GR1069.7     100  1069.1     123  1068.2     139  1063.1     146  1063.1     167
GR1063.2     184  1064.5     192  1068.1     197  1072.5     216

NC                             .1      .3

X1  4350       6     133     185      50      50      50
GR1070.0     100  1068.8     133  1063.4     141  1063.4     179  1068.3     185
GR1073.1     216

X1  4400       7     132     184      50      50      50
GR1070.5     100  1069.3     132  1063.8     139  1063.9     159  1063.6     177
GR1068.6     184  1073.6     216

X1  4450       6     132     185      50      50      50
GR1070.9     100  1069.6     132  1064.1     138  1064.0     178  1068.9     185
GR1074.2     216

X1  4500       8     132     183      50      50      50
GR1071.3     100  1070.9     122  1070.0     132  1064.5     137  1064.2     159
GR1064.2     178  1069.1     183  1074.8     215

X1  4550       8     132     183      50      50      50
GR1071.1     100  1071.2     112  1070.4     132  1064.5     138  1064.5     160
GR1064.5     178  1069.2     183  1075.3     215

X1  4600       7     137     192      50      50      50
GR1072.1     100  1070.6     137  1064.7     145  1064.7     166  1064.7     187
GR1069.5     192  1075.9     215

X1  4645      14     141     216      45      45      45
GR1072.4     100  1072.0     123  1070.6     141  1066.6     147  1065.5     180
GR1066.2     189  1065.8     195  1066.5     196  1066.8     211  1070.2     216
GR1071.5     227  1073.8     255  1075.7     300  1076.2     350

NC                             .3      .5

X1  4660       6     153     207      15      15      15
X3    10                                                  1100.0  1100.0
GR1072.5     100  1073.0     153  1065.0  153.01  1065.0  206.99  1073.0     207
GR1073.0     210

* North I-10 Bridge

SB 1.25     1.51       3      70      54       4     250          1065.3  1065.0
X1  4712       6     153     207      52      52      52
X2                       1  1070.3    1073
```

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                                                                                Wt4chan
X3    10                                                                  1100.0  1100.0
GR1072.9     100  1072.5     153  1065.3  153.01  1065.3  206.99  1072.5     207
GR1072.5     215

X1  4733       2       0     400      21      21      21
CI   180 1065.40  21.015       2       2      54
GR1073.0       0  1073.0     400

* Exst Sloped Drop (47+33.00 to 47+38.00)

* Sta 47+38.00
* Begin Channel Improvements

NC                            .1       .3

X1  4738       2       0     400       5       5       5
CI   200 1067.42               2       2   50.00
GR1073.4       0  1073.4     400

X1  4750       2                      12      12      12
CI       .001481
GR1073.4       0  1073.5     400

X1  4800       2                      50      50      50
GR1073.5       0  1073.5     400

X1  4850       2                      50      50      50
GR1073.6       0  1073.6     400

X1  4900       2                      50      50      50
GR1073.7       0  1073.7     400

X1  4950       2                      50      50      50
GR1073.7       0  1073.7     400

X1  5000       2                      50      50      50
GR1073.8       0  1073.8     400

X1  5050       2                      50      50      50
GR1073.8       0  1073.8     400

X1  5100       2                      50      50      50
GR1074.5       0  1074.5     400

X1  5120       2                      20      20      20
CI                             2   .0001   50.00
GR1075.4       0  1075.7     400

X1  5170       2                      50      50      50
GR1076.7       0  1076.5     400

* Sloped Drop (51+70.00 to 51+80.00)

X1  5180       2                      18      18      18
CI       1071.56
GR1076.9       0  1076.6     400
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X1  5200       2                      20      20      20
CI       .007040
GR1077.4       0  1076.7     400

* Sta 52+35.00
* End Channel Improvements
* Match Exst Bridge

NC                            .3      .5

X1  5235       6     148     199      35      35      35
CI                                          .01
X3    10                                                  1100.0  1100.0
GR1079.0     100  1081.0     148  1072.0  148.01  1072.0  198.99  1078.2     199
GR1078.2     227

* McDowell Road Bridge

SB  1.05    1.51       3      70      51       3     216          1072.9  1072.0
X1  5323       6     148     199      88      88      88
X2                      1  1077.4    1080
X3    10                                                  1100.0  1100.0
GR1080.4     100  1082.0     148  1072.9  148.01  1072.9  198.99  1079.2     199
GR1078.7     224

* Sta 53+25.00
* Match Exst Bridge
* Begin Channel Improvements
* Begin Channel Transition

X1  5325       2       0     400       2       2       2
CI       1072.94               2   .0001   50.00
GR1082.1       0  1079.5     400

NC                            .1      .3

X1  5350       2                  25.00   25.00   25.00
CI       .001494               2   .0001   46.80
GR1080.2       0  1079.6     400

X1  5400       2                  50.00   50.00   50.00
CI                             2       2   40.39
GR1080.2       0  1080.2     400

X1  5434       2                  34.27   34.27   34.27
CI                                         36.00
GR1080.2       0  1080.2     400

* Sta 54+34.27
* End Channel Transition

X1  5450       2                  15.73   15.73   15.73
GR1080.2       0  1080.2     400

X1  5500       2                  50.00   50.00   50.00
GR1080.2       0  1080.2     400
```

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X1  5544       2                    43.53   43.53   43.53
GR1080.2       0  1080.2     400

* E Q U A T I O N
* Sta 55+43.53 Bk =
* Sta 55+36.64 Ahd

X1  5600       2                    63.36   63.36   63.36
GR1080.2       0  1080.2     400

X1  5650       2                    50.00   50.00   50.00
GR1080.3       0  1080.3     400

X1  5700       2                    50.00   50.00   50.00
GR1080.1       0  1080.1     400

X1  5750       2                    50.00   50.00   50.00
GR1080.1       0  1080.1     400

X1  5800       2                    50.00   50.00   50.00
GR1080.1       0  1080.1     400

X1  5850       2                    50.00   50.00   50.00
GR1083.3       0  1083.3     400

X1  5885       2                    35.00   35.00   35.00
GR1084.2       0  1084.1     400

* Sloped Drop (58+85.00 to 59+00.00)

X1  5900       2                    15.00   15.00   15.00
CI       1078.78
GR1084.4       0  1084.4     400

X1  5950       2                    50.00   50.00   50.00
CI       .005000
GR1084.7       0  1084.7     400

X1  6000       2                    50.00   50.00   50.00
GR1084.9       0  1084.9     400

X1  6050       2                    50.00   50.00   50.00
GR1085.1       0  1085.1     400

X1  6100       2                    50.00   50.00   50.00
GR1085.4       0  1085.4     400

X1  6150       2                    50.00   50.00   50.00
GR1085.7       0  1085.7     400

X1  6200       2                    50.00   50.00   50.00
GR1086.0       0  1086.0     400

X1  6250       2                    50.00   50.00   50.00
GR1086.3       0  1086.3     400

X1  6300       2                    50.00   50.00   50.00
```

```
GR1086.5        0  1086.5     400

X1  6340        2                   40.00   40.00   40.00
CI        1080.98
GR1086.7        0  1086.7     400

X1  6360        2                   20.00   20.00   20.00
CI         .023300
GR1087.4        0  1087.4     400

X1  6380        2                   20.00   20.00   20.00
GR1088.0        0  1088.0     400

X1  6400        2                   20.00   20.00   20.00
GR1088.6        0  1088.6     400

X1  6420        2                   20.00   20.00   20.00
GR1089.4        0  1089.4     400

X1  6440        2                   20.00   20.00   20.00
CI        1083.31
GR1089.9        0  1089.9     400

X1  6460        2                   20.00   20.00   20.00
CI         .001492
GR1090.0        0  1090.0     400

X1  6500        2                   40.00   40.00   40.00
GR1090.1        0  1090.1     400

X1  6540        2                   40.00   40.00   40.00
GR1090.2        0  1090.2     400

X1  6580        2                   40.00   40.00   40.00
GR1090.3        0  1090.3     400

* Sta 66+20.93
* Begin Channel Transition

X1  6621        2                   40.93   40.93   40.93
CI        1083.58                 2       2   36.00
GR1090.5        0  1090.5     400

X1  6650       15     121     157   29.07   29.07   29.07
CI         .013140               2       4   31.56
GR1090.2      100  1089.9     108  1090.3     157  1090.1     171  1089.6     177
GR1090.2      181  1089.3     202  1088.9     205  1090.1     213  1091.0     236
GR1090.5      264  1091.3     270  1091.3     301  1091.6     350  1091.5     400

X1  6700       15     120     157   50.00   50.00   50.00
CI                            2       6   23.92
GR1090.7      100  1090.4     108  1090.9     157  1090.7     171  1089.6     177
GR1090.7      181  1090.2     203  1089.2     206  1090.6     214  1091.6     234
GR1090.9      260  1091.7     266  1091.9     300  1092.2     350  1092.0     400


X1  6752       15     120     157   51.83   51.83   51.83
```

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                                                                    Wt4chan
CI                                  2        6   16.00
GR1091.7     100  1090.9     108  1091.0     157  1090.9     170  1091.0     177
GR1091.1     181  1090.6     200  1089.8     206  1091.1     214  1092.0     232
GR1091.4     261  1092.2     267  1092.3     300  1092.6     350  1092.6     400

* Sta 67+51.83
* End Channel Transition
* End Channel Improvements
* End Conc Channel
* Match Exst Dirt Channel

EJ
ER
```

```
1*******************************************
 *  HEC-2 WATER SURFACE PROFILES            *
 *                                          *
 *  Version   4.6.2;  May 1991              *
 *                                          *
 *  RUN DATE    07FEB01    TIME   10:50:09  *
 *******************************************
```

```
*****************************************
*  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
```

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THIS RUN EXECUTED 07FEB01 10:50:09

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

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

```
T1 WHITE TANKS #4 FLOOD RETENTION INLET CHANNEL
T2 CONCRETE LINER REVSISIONS            4/11/94
T3      CHANNEL IMPROVE, SUBCRITICAL FLOW  (Q100 = 2206CFS)
T4      STATION 10+79.83 TO 75+00
T5 MODIFIED 02-07-01 BY MIKE DUNCAN OF F.C.D. OF MARICOPA COUNTY:
T6 ENDED MODEL AT SEC 6752;
T7 CHANGED GRADES TO MATCH AS-BUILTS (OLD CHANNEL FILLED IN);
T8 CHANGED XKOR FROM 1.6 TO 1.51 AT THE 3 CULVERTS, BASED ON CHECK-2 REPORTS.
```

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10				.004000			2206		

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

100 105 120 150

This section is extrapolated from survey sections

Sta 10+79.83
Match Exst Dirt Channel

Sta 11+16.25
Begin Channel Transition

Sta 14+56.33
End Channel Transition

Sta 14+95.00
End Dirt Channel

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Begin Conc Channel Lining
Begin Channel Side Slope Transition

Sta 15+50.00
End Channel Side Slope Transition
Begin Sloped Drop

Sta 15+60.00
End Sloped Drop
Begin Grouted Riprap Channel

Sta 16+00.00
Begin Channel Transition

Sta 19+31.29

End Channel Transition
End Grouted Riprap
Begin Conc Channel

Sloped Drop (28+85.00 to 29+00.00)

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Sta 40+08.23

Begin Channel Transition

E Q U A T I O N
Sta 41+00.33 Bk =
Sta 40+95.00 Ahd

Sta 41+25.00
End Channel Transition

Sloped Drop (41+63.00 to 41+75.00)

Sta 41+90.00
End Channel Improvements
Match Exst Wingwalls

South I-10 Bridge

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North I-10 Bridge

Exst Sloped Drop (47+33.00 to 47+38.00)

Sta 47+38.00
Begin Channel Improvements

Sloped Drop (51+70.00 to 51+80.00)

Sta 52+35.00
End Channel Improvements
Match Exst Bridge

McDowell Road Bridge

Sta 53+25.00
Match Exst Bridge
Begin Channel Improvements
Begin Channel Transition

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Sta 54+34.27
End Channel Transition

E Q U A T I O N
Sta 55+43.53 Bk =
Sta 55+36.64 Ahd

Sloped Drop (58+85.00 to 59+00.00)

Sta 66+20.93
Begin Channel Transition

Sta 67+51.83
End Channel Transition
End Channel Improvements
End Conc Channel
Match Exst Dirt Channel

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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

*PROF 1

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS

CCHV= .100 CEHV= .300
*SECNO 1000.000
2096 WSEL NOT GIVEN, AVG OF MAX, MIN USED

1000.000	3.82	1044.72	1044.35	.00	1045.64	.92	.00	.00	1043.80
2206.0	3.3	2069.8	133.0	2.3	261.3	42.9	.0	.0	1041.70
.00	1.39	7.92	3.10	.040	.025	.040	.000	1040.90	134.90
.004044	0.	0.	0.	0	11	4	.00	119.56	254.46

*SECNO 1080.000
CHIMP CLSTA= 200.00 CELCH= 1041.20 BW= 60.00 STCHL= 87.00 STCHR= 259.00
EXCAVATION DATA
AEX= 414.8SQ-FT VEXR= .0K*CU-YD VEXT= .0K*CU-YD

1080.000	3.84	1045.04	1044.42	.00	1045.95	.90	.30	.00	1055.40

```
   2206.0        .0    2206.0        .0        .0     289.5        .0        .5        .2   1045.50
      .00       .00      7.62       .00      .000      .025      .000      .000   1041.20    162.32
  .003562       80.       80.       80.         0        11         0       .00     90.73    253.05


*SECNO 1116.000
CHIMP CLSTA=     200.00 CELCH=    1041.23 BW=      60.00 STCHL=      87.00 STCHR=     260.00
EXCAVATION DATA
AEX=     443.5SQ-FT     VEXR=        .6K*CU-YD     VEXT=         .6K*CU-YD

  1116.000       4.05   1045.28   1044.44       .00   1046.07       .79       .12       .01   1055.40
   2206.0         .0    2206.0        .0        .0     309.2        .0        .8        .3   1046.10
      .00       .00      7.13       .00      .000      .025      .000      .000   1041.23    161.89
  .002933       36.       36.       36.         2        15         0       .00     92.46    254.34


*SECNO 1150.000
CHIMP CLSTA=     200.00 CELCH=    1041.26 BW=      61.49 STCHL=      87.00 STCHR=     262.18
EXCAVATION DATA
AEX=     471.2SQ-FT     VEXR=        .6K*CU-YD     VEXT=        1.2K*CU-YD

  1150.000       4.23   1045.49   1044.42       .00   1046.17       .69       .09       .01   1055.40
   2206.0         .0    2206.0        .0        .0     332.0        .0       1.0        .3   1046.50
      .01       .00      6.64       .00      .000      .025      .000      .000   1041.26    160.79
  .002412       34.       34.       34.         2        15         0       .00     95.36    256.15


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   07FEB01      10:50:09                                                                          PAGE     7

    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 1200.000
CHIMP CLSTA=     200.00 CELCH=    1041.30 BW=      63.69 STCHL=      83.00 STCHR=     264.16
EXCAVATION DATA
AEX=     491.0SQ-FT     VEXR=        .9K*CU-YD     VEXT=        2.0K*CU-YD

  1200.000       4.41   1045.70   1044.41       .00   1046.29       .59       .11       .01   1055.30
   2206.0         .0    2206.0        .0        .0     358.5        .0       1.4        .5   1046.68
      .01       .00      6.15       .00      .000      .025      .000      .000   1041.30    159.34
  .001963       50.       50.       50.         2        15         0       .00     98.96    258.30


*SECNO 1250.000
CHIMP CLSTA=     200.00 CELCH=    1041.34 BW=      65.90 STCHL=     104.00 STCHR=     265.47
EXCAVATION DATA
AEX=     504.1SQ-FT     VEXR=        .9K*CU-YD     VEXT=        3.0K*CU-YD

  1250.000       4.53   1045.87   1044.39       .00   1046.39       .52       .09       .01   1046.50
   2206.0         .0    2206.0        .0        .0     380.8        .0       1.9        .6   1046.76
      .01       .00      5.79       .00      .000      .025      .000      .000   1041.34    157.99
  .001674       50.       50.       50.         2        19         0       .00    102.15    260.14
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*SECNO 1300.000
CHIMP CLSTA=     200.00 CELCH=    1041.38 BW=      68.10 STCHL=      64.00 STCHR=     267.57
EXCAVATION DATA
AEX=     525.0SQ-FT     VEXR=       1.0K*CU-YD     VEXT=        3.9K*CU-YD

  1300.000      4.62   1046.00   1044.37       .00   1046.47       .47       .08       .00   1055.20
    2206.0        .0    2206.0       .0        .0     400.4        .0       2.3        .7   1046.96
       .01       .00      5.51       .00      .000      .025      .000      .000   1041.38    156.70
   .001470       50.       50.       50.         2        14         0       .00    105.09    261.80


*SECNO 1350.000
CHIMP CLSTA=     200.00 CELCH=    1041.42 BW=      70.31 STCHL=      76.00 STCHR=     269.85
EXCAVATION DATA
AEX=     548.2SQ-FT     VEXR=       1.0K*CU-YD     VEXT=        4.9K*CU-YD

  1350.000      4.70   1046.12   1044.36       .00   1046.55       .43       .07       .00   1047.20
    2206.0        .0    2206.0       .0        .0     418.5        .0       2.8        .8   1047.20
       .02       .00      5.27       .00      .000      .025      .000      .000   1041.42    155.45
   .001314       50.       50.       50.         2        14         0       .00    107.89    263.34
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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 1400.000
CHIMP CLSTA=     200.00 CELCH=    1041.46 BW=      72.52 STCHL=      54.00 STCHR=     273.11
EXCAVATION DATA
AEX=     592.3SQ-FT     VEXR=       1.1K*CU-YD     VEXT=        6.0K*CU-YD

  1400.000      4.75   1046.21   1044.34       .00   1046.61       .40       .06       .00   1048.00
    2206.0        .0    2206.0       .0        .0     435.3        .0       3.3        .9   1047.60
       .02       .00      5.07       .00      .000      .025      .000      .000   1041.46    154.23
   .001191       50.       50.       50.         2        14         0       .00    110.56    264.79


*SECNO 1456.000
CHIMP CLSTA=     200.00 CELCH=    1041.50 BW=      75.00 STCHL=      47.00 STCHR=     276.48
EXCAVATION DATA
AEX=     660.7SQ-FT     VEXR=       1.3K*CU-YD     VEXT=        7.3K*CU-YD

  1456.000      4.81   1046.31   1044.33       .00   1046.68       .37       .06       .00   1048.00
    2206.0        .0    2206.0       .0        .0     453.0        .0       3.8       1.1   1048.00
       .02       .00      4.87       .00      .000      .025      .000      .000   1041.50    152.89
   .001079       56.       56.       56.         2        14         0       .00    113.46    266.34


*SECNO 1495.000
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```
CHIMP CLSTA=     200.00 CELCH=    1041.54 BW=      75.00 STCHL=        .00 STCHR=     400.00
EXCAVATION DATA
AEX=     565.2SQ-FT     VEXR=        .9K*CU-YD     VEXT=        8.2K*CU-YD

  1495.000      4.79   1046.32   1044.40       .00   1046.74       .41       .04       .01   1047.60
    2206.0        .0    2206.0        .0        .0     427.9        .0       4.2       1.2   1047.60
       .02       .00      5.16       .00      .000      .025      .000      .000   1041.54    152.92
   .001162       39.       39.       39.         2        14         0       .00    103.73    256.65


*SECNO 1550.000
CHIMP CLSTA=     200.00 CELCH=    1041.58 BW=      65.00 STCHL=     149.86 STCHR=     250.14
EXCAVATION DATA
AEX=     728.9SQ-FT     VEXR=       1.3K*CU-YD     VEXT=        9.5K*CU-YD

  1550.000      4.63   1046.21   1044.76       .00   1046.85       .64       .05       .07   1050.40
    2206.0        .0    2206.0        .0        .0     344.1        .0       4.7       1.3   1050.40
       .03       .00      6.41       .00      .000      .015      .000      .000   1041.58    158.23
   .000656       55.       55.       55.         2        14         0       .00     83.54    241.77


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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 1560.000
CHIMP CLSTA=     200.00 CELCH=    1044.83 BW=      65.00 STCHL=     155.36 STCHR=     244.64
EXCAVATION DATA
AEX=     468.3SQ-FT     VEXR=        .2K*CU-YD     VEXT=        9.7K*CU-YD


3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  1560.000      3.18   1048.01   1048.01       .00   1049.48      1.47       .01       .25   1050.90
    2206.0        .0    2206.0        .0        .0     226.6        .0       4.8       1.3   1050.90
       .03       .00      9.73       .00      .000      .015      .000      .000   1044.83    161.15
   .002377       10.       10.       10.         0        14         0       .00     77.70    238.85


*SECNO 1580.000
CHIMP CLSTA=     200.00 CELCH=    1044.85 BW=      65.00 STCHL=     155.39 STCHR=     244.61
EXCAVATION DATA
AEX=     466.8SQ-FT     VEXR=        .3K*CU-YD     VEXT=       10.0K*CU-YD


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =    .68

  1580.000      3.65   1048.50   1048.02       .00   1049.58      1.09       .07       .04   1050.90
    2206.0        .0    2206.0        .0        .0     263.8        .0       4.9       1.3   1050.90
```

.03	.00	8.36	.00	.000	.028	.000	.000	1044.85	160.20
.005170	20.	20.	20.	9	5	0	.00	79.59	239.80

*SECNO 1600.000
CHIMP CLSTA= 200.00 CELCH= 1044.86 BW= 65.00 STCHL= 155.42 STCHR= 244.58
EXCAVATION DATA
AEX= 465.4SQ-FT VEXR= .3K*CU-YD VEXT= 10.4K*CU-YD

1600.000	3.89	1048.75	1048.04	.00	1049.69	.94	.09	.01	1050.90
2206.0	.0	2206.0	.0	.0	283.6	.0	5.0	1.4	1050.90
.03	.00	7.78	.00	.000	.028	.000	.000	1044.86	159.71
.004135	20.	20.	20.	2	11	0	.00	80.58	240.29

*SECNO 1650.000
CHIMP CLSTA= 200.00 CELCH= 1044.90 BW= 60.62 STCHL= 157.30 STCHR= 242.70

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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

EXCAVATION DATA
AEX= 452.5SQ-FT VEXR= .8K*CU-YD VEXT= 11.2K*CU-YD

1650.000	4.02	1048.92	1048.22	.00	1049.92	.99	.21	.02	1051.10
2206.0	.0	2206.0	.0	.0	276.1	.0	5.4	1.5	1051.10
.03	.00	7.99	.00	.000	.028	.000	.000	1044.90	161.65
.004243	50.	50.	50.	2	11	0	.00	76.71	238.35

*SECNO 1700.000
CHIMP CLSTA= 200.00 CELCH= 1044.94 BW= 56.25 STCHL= 159.36 STCHR= 240.64
EXCAVATION DATA
AEX= 430.3SQ-FT VEXR= .8K*CU-YD VEXT= 12.0K*CU-YD

1700.000	4.16	1049.10	1048.41	.00	1050.15	1.05	.22	.02	1051.20
2206.0	.0	2206.0	.0	.0	268.3	.0	5.7	1.6	1051.20
.03	.00	8.22	.00	.000	.028	.000	.000	1044.94	163.56
.004375	50.	50.	50.	2	11	0	.00	72.87	236.44

*SECNO 1750.000
CHIMP CLSTA= 200.00 CELCH= 1044.98 BW= 51.87 STCHL= 161.43 STCHR= 238.57
EXCAVATION DATA
AEX= 407.4SQ-FT VEXR= .8K*CU-YD VEXT= 12.8K*CU-YD

1750.000	4.29	1049.27	1048.62	.00	1050.40	1.13	.22	.02	1051.30
2206.0	.0	2206.0	.0	.0	259.1	.0	6.0	1.6	1051.30
.03	.00	8.52	.00	.000	.028	.000	.000	1044.98	165.49
.004586	50.	50.	50.	2	11	0	.00	69.01	234.51

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*SECNO 1800.000
CHIMP CLSTA=     200.00 CELCH=    1045.02 BW=      47.49 STCHL=     163.50 STCHR=     236.50
EXCAVATION DATA
AEX=     384.1SQ-FT     VEXR=        .7K*CU-YD     VEXT=       13.6K*CU-YD

  1800.000       4.41   1049.44   1048.85       .00   1050.66      1.22       .24       .03   1051.40
    2206.0         .0    2206.0        .0        .0     248.7        .0       6.3       1.7   1051.40
       .03        .00      8.87       .00      .000      .028      .000      .000   1045.02    167.42
   .004886        50.       50.       50.         2        11         0       .00     65.15    232.58


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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 1850.000
CHIMP CLSTA=     200.00 CELCH=    1045.06 BW=      43.12 STCHL=     165.57 STCHR=     234.43
EXCAVATION DATA
AEX=     360.4SQ-FT     VEXR=        .7K*CU-YD     VEXT=       14.2K*CU-YD

  1850.000       4.54   1049.61   1049.10       .00   1050.95      1.34       .25       .04   1051.50
    2206.0         .0    2206.0        .0        .0     237.2        .0       6.5       1.8   1051.50
       .04        .00      9.30       .00      .000      .028      .000      .000   1045.06    169.35
   .005288        50.       50.       50.         2        11         0       .00     61.30    230.65


*SECNO 1900.000
CHIMP CLSTA=     200.00 CELCH=    1045.10 BW=      38.74 STCHL=     167.44 STCHR=     232.56
EXCAVATION DATA
AEX=     342.5SQ-FT     VEXR=        .7K*CU-YD     VEXT=       14.9K*CU-YD

  1900.000       4.67   1049.78   1049.41       .00   1051.27      1.49       .28       .05   1051.70
    2206.0         .0    2206.0        .0        .0     224.8        .0       6.8       1.9   1051.70
       .04        .00      9.81       .00      .000      .028      .000      .000   1045.10    171.28
   .005826        50.       50.       50.         2         8         0       .00     57.44    228.72


*SECNO 1931.000
CHIMP CLSTA=     200.00 CELCH=    1045.13 BW=      36.00 STCHL=     168.86 STCHR=     231.14
EXCAVATION DATA
AEX=     322.8SQ-FT     VEXR=        .4K*CU-YD     VEXT=       15.3K*CU-YD

  1931.000       4.76   1049.89   1049.61       .00   1051.50      1.61       .19       .04   1051.70
    2206.0         .0    2206.0        .0        .0     216.5        .0       7.0       1.9   1051.70
       .04        .00     10.19       .00      .000      .028      .000      .000   1045.13    172.49
   .006263        31.       31.       31.         2         8         0       .00     55.02    227.51


*SECNO 1950.000
CHIMP CLSTA=     200.00 CELCH=    1045.16 BW=      36.00 STCHL=     168.72 STCHR=     231.28
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EXCAVATION DATA
AEX=     327.3SQ-FT     VEXR=        .2K*CU-YD     VEXT=       15.5K*CU-YD

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.98

  1950.000      4.92   1050.08   1049.62       .00   1051.56      1.48       .05       .01   1051.80
    2206.0        .0    2206.0        .0        .0     225.7        .0       7.1       1.9   1051.80
       .04       .00      9.77       .00      .000      .015      .000      .000   1045.16    172.15
   .001590       19.       19.       19.         2        11         0       .00     55.69    227.85
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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 2000.000
CHIMP CLSTA=     200.00 CELCH=    1045.23 BW=      36.00 STCHL=     168.87 STCHR=     231.13
EXCAVATION DATA
AEX=     322.7SQ-FT     VEXR=        .6K*CU-YD     VEXT=       16.1K*CU-YD

  2000.000      4.95   1050.18   1049.69       .00   1051.64      1.47       .08       .00   1051.80
    2206.0        .0    2206.0        .0        .0     227.1        .0       7.3       2.0   1051.80
       .04       .00      9.71       .00      .000      .015      .000      .000   1045.23    172.10
   .001562       50.       50.       50.         2        11         0       .00     55.79    227.90

*SECNO 2050.000
CHIMP CLSTA=     200.00 CELCH=    1045.31 BW=      36.00 STCHL=     168.82 STCHR=     231.18
EXCAVATION DATA
AEX=     324.2SQ-FT     VEXR=        .6K*CU-YD     VEXT=       16.7K*CU-YD

  2050.000      4.95   1050.26   1049.77       .00   1051.72      1.46       .08       .00   1051.90
    2206.0        .0    2206.0        .0        .0     227.2        .0       7.6       2.1   1051.90
       .04       .00      9.71       .00      .000      .015      .000      .000   1045.31    172.10
   .001560       50.       50.       50.         0        11         0       .00     55.80    227.90

*SECNO 2100.000
CHIMP CLSTA=     200.00 CELCH=    1045.38 BW=      36.00 STCHL=     168.77 STCHR=     231.23
EXCAVATION DATA
AEX=     325.8SQ-FT     VEXR=        .6K*CU-YD     VEXT=       17.3K*CU-YD

  2100.000      4.96   1050.34   1049.84       .00   1051.80      1.46       .08       .00   1052.00
    2206.0        .0    2206.0        .0        .0     227.4        .0       7.8       2.1   1052.00
       .04       .00      9.70       .00      .000      .015      .000      .000   1045.38    172.09
   .001556       50.       50.       50.         0        11         0       .00     55.81    227.91

*SECNO 2150.000
CHIMP CLSTA=     200.00 CELCH=    1045.46 BW=      36.00 STCHL=     168.92 STCHR=     231.08
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EXCAVATION DATA
AEX=     321.1SQ-FT     VEXR=        .6K*CU-YD     VEXT=       17.9K*CU-YD

  2150.000      4.96   1050.42   1049.92       .00   1051.88      1.46       .08       .00   1052.00
    2206.0        .0    2206.0        .0        .0     227.7        .0       8.1       2.2   1052.00
       .04       .00      9.69       .00      .000      .015      .000      .000   1045.46    172.08
   .001550       50.       50.       50.         0        11         0       .00     55.84    227.92
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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 2200.000
CHIMP CLSTA=     200.00 CELCH=    1045.53 BW=      36.00 STCHL=     168.87 STCHR=     231.13
EXCAVATION DATA
AEX=     322.7SQ-FT     VEXR=        .6K*CU-YD     VEXT=       18.5K*CU-YD

  2200.000      4.97   1050.50   1049.99       .00   1051.96      1.45       .08       .00   1052.10
    2206.0        .0    2206.0        .0        .0     228.1        .0       8.4       2.2   1052.10
       .05       .00      9.67       .00      .000      .015      .000      .000   1045.53    172.07
   .001542       50.       50.       50.         0        11         0       .00     55.86    227.93

*SECNO 2250.000
CHIMP CLSTA=     200.00 CELCH=    1045.61 BW=      36.00 STCHL=     169.22 STCHR=     230.78
EXCAVATION DATA
AEX=     311.8SQ-FT     VEXR=        .6K*CU-YD     VEXT=       19.1K*CU-YD

  2250.000      4.98   1050.59   1050.07       .00   1052.03      1.45       .08       .00   1052.00
    2206.0        .0    2206.0        .0        .0     228.5        .0       8.6       2.3   1052.00
       .05       .00      9.65       .00      .000      .015      .000      .000   1045.61    172.05
   .001534       50.       50.       50.         0        11         0       .00     55.89    227.95

*SECNO 2300.000
CHIMP CLSTA=     200.00 CELCH=    1045.68 BW=      36.00 STCHL=     168.97 STCHR=     231.03
EXCAVATION DATA
AEX=     319.6SQ-FT     VEXR=        .6K*CU-YD     VEXT=       19.7K*CU-YD

  2300.000      4.99   1050.67   1050.14       .00   1052.11      1.44       .08       .00   1052.20
    2206.0        .0    2206.0        .0        .0     228.9        .0       8.9       2.4   1052.20
       .05       .00      9.64       .00      .000      .015      .000      .000   1045.68    172.04
   .001526       50.       50.       50.         0        11         0       .00     55.92    227.96

*SECNO 2350.000
CHIMP CLSTA=     200.00 CELCH=    1045.76 BW=      36.00 STCHL=     168.92 STCHR=     231.08
EXCAVATION DATA
AEX=     321.1SQ-FT     VEXR=        .6K*CU-YD     VEXT=       20.3K*CU-YD
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2350.000	4.99	1050.75	1050.22	.00	1052.19	1.44	.08	.00	1052.30
2206.0	.0	2206.0	.0	.0	229.3	.0	9.1	2.4	1052.30
.05	.00	9.62	.00	.000	.015	.000	.000	1045.76	172.02
.001519	50.	50.	50.	0	11	0	.00	55.95	227.98

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 2400.000
CHIMP CLSTA= 200.00 CELCH= 1045.83 BW= 36.00 STCHL= 168.63 STCHR= 231.30
EXCAVATION DATA
AEX= 328.9SQ-FT VEXR= .6K*CU-YD VEXT= 20.9K*CU-YD

2400.000	5.00	1050.83	1050.29	.00	1052.26	1.43	.08	.00	1052.52
2206.0	.0	2206.0	.0	.0	229.7	.0	9.4	2.5	1052.48
.05	.00	9.61	.00	.000	.015	.000	.000	1045.83	172.01
.001512	50.	50.	50.	0	11	0	.00	55.98	227.99

*SECNO 2450.000
CHIMP CLSTA= 200.00 CELCH= 1045.91 BW= 36.00 STCHL= 168.35 STCHR= 231.52
EXCAVATION DATA
AEX= 336.8SQ-FT VEXR= .6K*CU-YD VEXT= 21.5K*CU-YD

2450.000	5.00	1050.91	1050.37	.00	1052.34	1.43	.08	.00	1052.73
2206.0	.0	2206.0	.0	.0	229.9	.0	9.7	2.6	1052.67
.05	.00	9.59	.00	.000	.015	.000	.000	1045.91	172.00
.001507	50.	50.	50.	0	11	0	.00	56.00	228.00

*SECNO 2500.000
CHIMP CLSTA= 200.00 CELCH= 1045.98 BW= 36.00 STCHL= 168.39 STCHR= 231.46
EXCAVATION DATA
AEX= 335.2SQ-FT VEXR= .6K*CU-YD VEXT= 22.1K*CU-YD

2500.000	5.01	1050.99	1050.44	.00	1052.41	1.43	.08	.00	1052.79
2206.0	.0	2206.0	.0	.0	230.2	.0	9.9	2.6	1052.71
.05	.00	9.58	.00	.000	.015	.000	.000	1045.98	171.99
.001502	50.	50.	50.	0	11	0	.00	56.01	228.01

*SECNO 2550.000
CHIMP CLSTA= 200.00 CELCH= 1046.06 BW= 36.00 STCHL= 168.34 STCHR= 231.51
EXCAVATION DATA
AEX= 336.8SQ-FT VEXR= .6K*CU-YD VEXT= 22.7K*CU-YD

2550.000	5.01	1051.07	1050.52	.00	1052.49	1.42	.08	.00	1052.89
2206.0	.0	2206.0	.0	.0	230.3	.0	10.2	2.7	1052.81
.06	.00	9.58	.00	.000	.015	.000	.000	1046.06	171.99

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   .001499       50.       50.       50.         0        11         0       .00     56.03    228.01

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   07FEB01      10:50:09                                                                                    PAGE   15

    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 2600.000
 CHIMP CLSTA=     200.00 CELCH=    1046.13 BW=      36.00 STCHL=     168.29 STCHR=     231.56
 EXCAVATION DATA
 AEX=     338.4SQ-FT     VEXR=        .6K*CU-YD     VEXT=       23.4K*CU-YD

   2600.000      5.01   1051.14   1050.59       .00   1052.57      1.42       .07       .00   1052.59
     2206.0        .0    2206.0        .0        .0    230.5        .0      10.5       2.8   1052.91
        .06       .00      9.57       .00      .000     .015      .000      .000   1046.13    171.98
    .001497       50.       50.       50.         0       11         0       .00     56.03    228.02

 *SECNO 2650.000
 CHIMP CLSTA=     200.00 CELCH=    1046.21 BW=      36.00 STCHL=     168.32 STCHR=     231.49
 EXCAVATION DATA
 AEX=     336.8SQ-FT     VEXR=        .6K*CU-YD     VEXT=       24.0K*CU-YD

   2650.000      5.01   1051.22   1050.67       .00   1052.64      1.42       .07       .00   1053.05
     2206.0        .0    2206.0        .0        .0    230.6        .0      10.7       2.8   1052.95
        .06       .00      9.57       .00      .000     .015      .000      .000   1046.21    171.98
    .001495       50.       50.       50.         0       11         0       .00     56.04    228.02

 *SECNO 2700.000
 CHIMP CLSTA=     200.00 CELCH=    1046.28 BW=      36.00 STCHL=     168.39 STCHR=     231.46
 EXCAVATION DATA
 AEX=     335.2SQ-FT     VEXR=        .6K*CU-YD     VEXT=       24.6K*CU-YD

   2700.000      5.01   1051.29   1050.74       .00   1052.71      1.42       .07       .00   1053.09
     2206.0        .0    2206.0        .0        .0    230.6        .0      11.0       2.9   1053.01
        .06       .00      9.57       .00      .000     .015      .000      .000   1046.28    171.98
    .001494       50.       50.       50.         0       11         0       .00     56.04    228.02

 *SECNO 2750.000
 CHIMP CLSTA=     200.00 CELCH=    1046.36 BW=      36.00 STCHL=     168.34 STCHR=     231.51
 EXCAVATION DATA
 AEX=     336.8SQ-FT     VEXR=        .6K*CU-YD     VEXT=       25.2K*CU-YD

   2750.000      5.01   1051.37   1050.82       .00   1052.79      1.42       .07       .00   1053.19
     2206.0        .0    2206.0        .0        .0    230.7        .0      11.3       3.0   1053.11
        .06       .00      9.56       .00      .000     .015      .000      .000   1046.36    171.98
    .001493       50.       50.       50.         0       11         0       .00     56.05    228.02
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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 2800.000
CHIMP CLSTA=     200.00 CELCH=    1046.43 BW=      36.00 STCHL=     168.86 STCHR=     231.14
EXCAVATION DATA
AEX=     322.7SQ-FT     VEXR=        .6K*CU-YD     VEXT=       25.8K*CU-YD

  2800.000      5.01   1051.44   1050.89       .00   1052.86      1.42       .07       .00   1053.00
    2206.0        .0    2206.0        .0        .0     230.7        .0      11.5       3.0   1053.00
       .06       .00      9.56       .00      .000      .015      .000      .000   1046.43    171.98
   .001493       50.       50.       50.         0        11         0       .00     56.05    228.02


*SECNO 2850.000
CHIMP CLSTA=     200.00 CELCH=    1046.51 BW=      36.00 STCHL=     163.01 STCHR=     236.99
EXCAVATION DATA
AEX=     522.0SQ-FT     VEXR=        .8K*CU-YD     VEXT=       26.6K*CU-YD

  2850.000      5.01   1051.52   1050.97       .00   1052.94      1.42       .07       .00   1056.00
    2206.0        .0    2206.0        .0        .0     230.6        .0      11.8       3.1   1056.00
       .06       .00      9.56       .00      .000      .015      .000      .000   1046.51    171.98
   .001493       50.       50.       50.         0        11         0       .00     56.05    228.02


*SECNO 2885.000
CHIMP CLSTA=     200.00 CELCH=    1046.56 BW=      36.00 STCHL=     161.52 STCHR=     238.48
EXCAVATION DATA
AEX=     578.4SQ-FT     VEXR=        .7K*CU-YD     VEXT=       27.3K*CU-YD

  2885.000      5.01   1051.57   1051.02       .00   1052.99      1.42       .05       .00   1056.80
    2206.0        .0    2206.0        .0        .0     230.6        .0      12.0       3.1   1056.80
       .07       .00      9.57       .00      .000      .015      .000      .000   1046.56    171.98
   .001494       35.       35.       35.         0        11         0       .00     56.04    228.02


*SECNO 2900.000
CHIMP CLSTA=     200.00 CELCH=    1051.56 BW=      36.00 STCHL=     170.92 STCHR=     229.08
EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .2K*CU-YD     VEXT=       27.6K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2900.000      4.46   1056.02   1056.02       .00   1057.90      1.88       .03       .14   1057.10
    2206.0        .0    2206.0        .0        .0     200.3        .0      12.1       3.1   1057.10
       .07       .00     11.01       .00      .000      .015      .000      .000   1051.56    173.08
   .002255       15.       15.       15.         0        11         0       .00     53.84    226.92
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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 2950.000
CHIMP CLSTA=     200.00 CELCH=    1051.81 BW=      36.00 STCHL=     170.82 STCHR=     229.18
EXCAVATION DATA
AEX=     263.7SQ-FT     VEXR=        .5K*CU-YD     VEXT=       28.1K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  2950.000      4.46   1056.27   1056.27       .00   1058.15      1.88       .11       .00   1057.40
    2206.0        .0    2206.0       .0        .0     200.5        .0      12.3       3.2   1057.40
       .07       .00     11.00       .00      .000      .015      .000      .000   1051.81    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3000.000
CHIMP CLSTA=     200.00 CELCH=    1052.06 BW=      36.00 STCHL=     170.92 STCHR=     229.08
EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       28.5K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3000.000      4.46   1056.52   1056.52       .00   1058.40      1.88       .11       .00   1057.60
    2206.0        .0    2206.0       .0        .0     200.5        .0      12.5       3.3   1057.60
       .07       .00     11.00       .00      .000      .015      .000      .000   1052.06    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3050.000
CHIMP CLSTA=     200.00 CELCH=    1052.31 BW=      36.00 STCHL=     170.82 STCHR=     229.18
EXCAVATION DATA
AEX=     263.7SQ-FT     VEXR=        .5K*CU-YD     VEXT=       29.0K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3050.000      4.46   1056.77   1056.77       .00   1058.65      1.88       .11       .00   1057.90
    2206.0        .0    2206.0       .0        .0     200.5        .0      12.7       3.3   1057.90
       .07       .00     11.00       .00      .000      .015      .000      .000   1052.31    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3100.000
CHIMP CLSTA=     200.00 CELCH=    1052.56 BW=      36.00 STCHL=     171.12 STCHR=     228.88
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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
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                                                                  Wt4chan
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC       ICONT      CORAR      TOPWID     ENDST


EXCAVATION DATA
AEX=     255.0SQ-FT     VEXR=        .5K*CU-YD     VEXT=       29.5K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3100.000      4.46   1057.02   1057.02       .00   1058.90      1.88       .11       .00   1058.00
    2206.0        .0    2206.0        .0        .0     200.5        .0      13.0       3.4   1058.00
       .07       .00     11.00       .00      .000      .015      .000      .000   1052.56    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3150.000
CHIMP CLSTA=     200.00 CELCH=    1052.81 BW=      36.00 STCHL=     171.02 STCHR=     228.98
EXCAVATION DATA
AEX=     257.9SQ-FT     VEXR=        .5K*CU-YD     VEXT=       30.0K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3150.000      4.46   1057.27   1057.27       .00   1059.15      1.88       .11       .00   1058.30
    2206.0        .0    2206.0        .0        .0     200.5        .0      13.2       3.5   1058.30
       .07       .00     11.00       .00      .000      .015      .000      .000   1052.81    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3200.000
CHIMP CLSTA=     200.00 CELCH=    1053.06 BW=      36.00 STCHL=     170.92 STCHR=     229.08
EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       30.5K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3200.000      4.46   1057.52   1057.52       .00   1059.40      1.88       .11       .00   1058.60
    2206.0        .0    2206.0        .0        .0     200.5        .0      13.4       3.5   1058.60
       .07       .00     11.00       .00      .000      .015      .000      .000   1053.06    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3250.000
CHIMP CLSTA=     200.00 CELCH=    1053.31 BW=      36.00 STCHL=     170.82 STCHR=     229.18
EXCAVATION DATA
AEX=     263.7SQ-FT     VEXR=        .5K*CU-YD     VEXT=       30.9K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
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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


3720 CRITICAL DEPTH ASSUMED
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  3250.000      4.46   1057.77   1057.77       .00   1059.65      1.88       .11       .00   1058.90
    2206.0        .0    2206.0        .0        .0     200.5        .0      13.7       3.6   1058.90
       .07       .00     11.00       .00      .000      .015      .000      .000   1053.31    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3300.000
CHIMP CLSTA=     200.00 CELCH=    1053.56 BW=      36.00 STCHL=     170.92 STCHR=     229.08
EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       31.4K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3300.000      4.46   1058.02   1058.02       .00   1059.90      1.88       .11       .00   1059.10
    2206.0        .0    2206.0        .0        .0     200.5        .0      13.9       3.6   1059.10
       .08       .00     11.00       .00      .000      .015      .000      .000   1053.56    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3350.000
CHIMP CLSTA=     200.00 CELCH=    1053.81 BW=      36.00 STCHL=     170.82 STCHR=     229.18
EXCAVATION DATA
AEX=     263.7SQ-FT     VEXR=        .5K*CU-YD     VEXT=       31.9K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3350.000      4.46   1058.27   1058.27       .00   1060.15      1.88       .11       .00   1059.40
    2206.0        .0    2206.0        .0        .0     200.5        .0      14.1       3.7   1059.40
       .08       .00     11.00       .00      .000      .015      .000      .000   1053.81    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3400.000
CHIMP CLSTA=     200.00 CELCH=    1054.06 BW=      36.00 STCHL=     170.92 STCHR=     229.08
EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       32.4K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3400.000      4.46   1058.52   1058.52       .00   1060.40      1.88       .11       .00   1059.60
    2206.0        .0    2206.0        .0        .0     200.5        .0      14.4       3.8   1059.60
       .08       .00     11.00       .00      .000      .015      .000      .000   1054.06    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


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   07FEB01      10:50:09                                                                          PAGE   20


     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 3450.000
CHIMP CLSTA=     200.00 CELCH=    1054.31 BW=      36.00 STCHL=     170.82 STCHR=     229.18
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EXCAVATION DATA
AEX=     263.7SQ-FT     VEXR=        .5K*CU-YD     VEXT=       32.9K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3450.000      4.46   1058.77   1058.77       .00   1060.65      1.88       .11       .00   1059.90
    2206.0        .0    2206.0        .0        .0     200.5        .0      14.6       3.8   1059.90
       .08       .00     11.00       .00      .000      .015      .000      .000   1054.31    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3500.000
CHIMP CLSTA=     200.00 CELCH=    1054.56 BW=      36.00 STCHL=     170.92 STCHR=     229.08
EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       33.4K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3500.000      4.46   1059.02   1059.02       .00   1060.90      1.88       .11       .00   1060.10
    2206.0        .0    2206.0        .0        .0     200.5        .0      14.8       3.9   1060.10
       .08       .00     11.00       .00      .000      .015      .000      .000   1054.56    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3550.000
CHIMP CLSTA=     200.00 CELCH=    1054.81 BW=      36.00 STCHL=     171.02 STCHR=     228.98
EXCAVATION DATA
AEX=     257.9SQ-FT     VEXR=        .5K*CU-YD     VEXT=       33.9K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3550.000      4.46   1059.27   1059.27       .00   1061.15      1.88       .11       .00   1060.30
    2206.0        .0    2206.0        .0        .0     200.5        .0      15.0       3.9   1060.30
       .08       .00     11.00       .00      .000      .015      .000      .000   1054.81    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3600.000
CHIMP CLSTA=     200.00 CELCH=    1055.06 BW=      36.00 STCHL=     170.92 STCHR=     229.08
1
   07FEB01      10:50:09                                                                                PAGE   21


    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


EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       34.3K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3600.000      4.46   1059.52   1059.52       .00   1061.40      1.88       .11       .00   1060.60
    2206.0        .0    2206.0        .0        .0     200.5        .0      15.3       4.0   1060.60
       .08       .00     11.00       .00      .000      .015      .000      .000   1055.06    173.07
```

```
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3650.000
CHIMP CLSTA=     200.00 CELCH=    1055.31 BW=      36.00 STCHL=     170.82 STCHR=     229.18
EXCAVATION DATA
AEX=     263.7SQ-FT     VEXR=        .5K*CU-YD     VEXT=       34.8K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3650.000      4.46   1059.77   1059.77       .00   1061.65      1.88       .11       .00   1060.90
    2206.0        .0    2206.0        .0        .0     200.5        .0      15.5       4.1   1060.90
       .08       .00     11.00       .00      .000      .015      .000      .000   1055.31    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3700.000
CHIMP CLSTA=     200.00 CELCH=    1055.56 BW=      36.00 STCHL=     170.92 STCHR=     229.08
EXCAVATION DATA
AEX=     260.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       35.3K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3700.000      4.46   1060.02   1060.02       .00   1061.90      1.88       .11       .00   1061.10
    2206.0        .0    2206.0        .0        .0     200.5        .0      15.7       4.1   1061.10
       .09       .00     11.00       .00      .000      .015      .000      .000   1055.56    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 3720.000
CHIMP CLSTA=     200.00 CELCH=    1056.01 BW=      36.00 STCHL=     170.22 STCHR=     229.78
EXCAVATION DATA
AEX=     281.5SQ-FT     VEXR=        .2K*CU-YD     VEXT=       35.5K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
1
   07FEB01      10:50:09                                                                          PAGE    22


    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


3720 CRITICAL DEPTH ASSUMED
  3720.000      4.46   1060.47   1060.47       .00   1062.35      1.88       .04       .00   1061.90
    2206.0        .0    2206.0        .0        .0     200.5        .0      15.8       4.2   1061.90
       .09       .00     11.00       .00      .000      .015      .000      .000   1056.01    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


*SECNO 3740.000
CHIMP CLSTA=     200.00 CELCH=    1056.46 BW=      36.00 STCHL=     169.51 STCHR=     230.49
EXCAVATION DATA
AEX=     302.8SQ-FT     VEXR=        .2K*CU-YD     VEXT=       35.7K*CU-YD
```

```
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3740.000      4.46   1060.92   1060.92       .00   1062.80      1.88       .04       .00   1062.70
    2206.0        .0    2206.0        .0        .0     200.5        .0      15.9       4.2   1062.70
       .09       .00     11.00       .00      .000      .015      .000      .000   1056.46    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


*SECNO 3760.000
CHIMP CLSTA=     200.00 CELCH=    1056.90 BW=      36.00 STCHL=     168.81 STCHR=     231.19
EXCAVATION DATA
AEX=     324.5SQ-FT     VEXR=        .2K*CU-YD     VEXT=       36.0K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3760.000      4.46   1061.37   1061.37       .00   1063.25      1.88       .04       .00   1063.50
    2206.0        .0    2206.0        .0        .0     200.5        .0      16.0       4.2   1063.50
       .09       .00     11.00       .00      .000      .015      .000      .000   1056.90    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


*SECNO 3780.000
CHIMP CLSTA=     200.00 CELCH=    1057.35 BW=      36.00 STCHL=     168.10 STCHR=     231.90
EXCAVATION DATA
AEX=     346.7SQ-FT     VEXR=        .2K*CU-YD     VEXT=       36.2K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3780.000      4.46   1061.81   1061.81       .00   1063.69      1.88       .04       .00   1064.30
    2206.0        .0    2206.0        .0        .0     200.5        .0      16.1       4.2   1064.30
       .09       .00     11.00       .00      .000      .015      .000      .000   1057.35    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


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   07FEB01      10:50:09                                                                          PAGE   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 3800.000
CHIMP CLSTA=     200.00 CELCH=    1057.80 BW=      36.00 STCHL=     167.40 STCHR=     232.60
EXCAVATION DATA
AEX=     369.4SQ-FT     VEXR=        .3K*CU-YD     VEXT=       36.5K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  3800.000      4.46   1062.26   1062.26       .00   1064.14      1.88       .04       .00   1065.10
    2206.0        .0    2206.0        .0        .0     200.5        .0      16.2       4.3   1065.10
       .09       .00     11.00       .00      .000      .015      .000      .000   1057.80    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93
```

```
*SECNO 3850.000
CHIMP CLSTA=     200.00 CELCH=    1057.87 BW=      36.00 STCHL=     167.15 STCHR=     232.85
EXCAVATION DATA
AEX=     377.6SQ-FT     VEXR=        .7K*CU-YD     VEXT=       37.2K*CU-YD

  3850.000      4.89   1062.76   1062.34       .00   1064.27      1.51       .10       .04   1065.30
    2206.0        .0    2206.0        .0        .0    223.4        .0      16.4       4.3   1065.30
       .09       .00      9.88       .00      .000     .015      .000      .000   1057.87    172.24
   .001640       50.       50.       50.         9        5         0       .00     55.52    227.76


*SECNO 3900.000
CHIMP CLSTA=     200.00 CELCH=    1057.95 BW=      36.00 STCHL=     167.30 STCHR=     232.70
EXCAVATION DATA
AEX=     372.7SQ-FT     VEXR=        .7K*CU-YD     VEXT=       37.9K*CU-YD

  3900.000      4.91   1062.86   1062.41       .00   1064.36      1.49       .08       .00   1065.30
    2206.0        .0    2206.0        .0        .0    224.9        .0      16.7       4.4   1065.30
       .09       .00      9.81       .00      .000     .015      .000      .000   1057.95    172.18
   .001608       50.       50.       50.         0       11         0       .00     55.63    227.82


*SECNO 3950.000
CHIMP CLSTA=     200.00 CELCH=    1058.02 BW=      36.00 STCHL=     167.25 STCHR=     232.75
EXCAVATION DATA
AEX=     374.3SQ-FT     VEXR=        .7K*CU-YD     VEXT=       38.5K*CU-YD

  3950.000      4.93   1062.95   1062.48       .00   1064.44      1.49       .08       .00   1065.40
    2206.0        .0    2206.0        .0        .0    225.5        .0      17.0       4.4   1065.40
       .09       .00      9.78       .00      .000     .015      .000      .000   1058.02    172.16
   .001594       50.       50.       50.         0       11         0       .00     55.68    227.84


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   07FEB01      10:50:09                                                                          PAGE   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 4008.000
CHIMP CLSTA=     200.00 CELCH=    1058.11 BW=      36.00 STCHL=     167.42 STCHR=     232.58
EXCAVATION DATA
AEX=     368.7SQ-FT     VEXR=        .8K*CU-YD     VEXT=       39.4K*CU-YD

  4008.000      4.98   1063.09   1062.57       .00   1064.53      1.44       .09       .00   1065.40
    2206.0        .0    2206.0        .0        .0    229.1        .0      17.3       4.5   1065.40
       .09       .00      9.63       .00      .000     .015      .000      .000   1058.11    172.03
   .001523       58.       58.       58.         2       11         0       .00     55.94    227.97


*SECNO 4050.000
CHIMP CLSTA=     200.00 CELCH=    1058.17 BW=      44.21 STCHL=     163.24 STCHR=     236.76
EXCAVATION DATA
```

AEX= 431.3SQ-FT VEXR= .6K*CU-YD VEXT= 40.0K*CU-YD

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.53

4050.000	5.72	1063.90	1062.16	.00	1064.64	.75	.04	.07	1065.50
2206.0	.0	2206.0	.0	.0	318.1	.0	17.5	4.6	1065.50
.10	.00	6.93	.00	.000	.015	.000	.000	1058.17	166.46
.000648	42.	42.	42.	3	15	0	.00	67.08	233.54

*SECNO 4100.000
CHIMP CLSTA= 200.00 CELCH= 1058.25 BW= 54.10 STCHL= 158.25 STCHR= 241.75
EXCAVATION DATA
AEX= 505.8SQ-FT VEXR= .9K*CU-YD VEXT= 40.8K*CU-YD

4100.000	5.96	1064.21	1061.79	.00	1064.69	.49	.02	.03	1065.60
2206.0	.0	2206.0	.0	.0	393.4	.0	17.9	4.7	1065.60
.10	.00	5.61	.00	.000	.015	.000	.000	1058.25	161.03
.000388	50.	50.	50.	2	14	0	.00	77.94	238.97

*SECNO 4125.000
CHIMP CLSTA= 200.00 CELCH= 1058.29 BW= 60.00 STCHL= 153.99 STCHR= 246.01
1
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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

EXCAVATION DATA
AEX= 608.6SQ-FT VEXR= .6K*CU-YD VEXT= 41.5K*CU-YD

4125.000	6.02	1064.31	1061.63	.00	1064.71	.40	.01	.01	1066.30
2206.0	.0	2206.0	.0	.0	433.4	.0	18.2	4.7	1066.30
.10	.00	5.09	.00	.000	.015	.000	.000	1058.29	157.97
.000310	30.	30.	30.	2	11	0	.00	84.07	242.03

*SECNO 4163.000
CHIMP CLSTA= 200.00 CELCH= 1058.35 BW= 60.00 STCHL= 152.50 STCHR= 247.50
EXCAVATION DATA
AEX= 678.1SQ-FT VEXR= .9K*CU-YD VEXT= 42.4K*CU-YD

4163.000	5.97	1064.32	1061.69	.00	1064.73	.41	.01	.00	1067.10
2206.0	.0	2206.0	.0	.0	429.8	.0	18.6	4.8	1067.10
.10	.00	5.13	.00	.000	.015	.000	.000	1058.35	158.05
.000318	38.	38.	38.	0	11	0	.00	83.89	241.95

```
*SECNO 4175.000
CHIMP CLSTA=     200.00 CELCH=    1062.42 BW=      60.00 STCHL=     160.24 STCHR=     239.76
EXCAVATION DATA
AEX=     340.4SQ-FT     VEXR=        .2K*CU-YD     VEXT=       42.6K*CU-YD


3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  4175.000      3.34   1065.76   1065.76       .00   1067.28      1.53       .01       .34   1067.30
    2206.0        .0    2206.0        .0        .0    222.5        .0      18.7       4.8   1067.30
       .10       .00      9.92       .00      .000     .015      .000      .000   1062.42    163.33
   .002348       12.       12.       12.         0       11         0       .00     73.35    236.67


*SECNO 4190.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  4190.000      3.40   1065.80   1065.80       .00   1067.50      1.70       .04       .05   1067.40
    2206.0        .0    2206.0        .0        .0    210.8        .0      18.8       4.8   1067.40
       .10       .00     10.47       .00      .000     .015      .000      .000   1062.40    133.00
   .002507       15.       15.       15.         0         5         0       .00     61.99    195.00


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   07FEB01      10:50:09                                                                          PAGE   26


    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 4197.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1100.00 ELREA=      1100.00

  4197.000      3.72   1066.22   1066.22       .00   1068.09      1.87       .03       .09   1068.20
    2206.0        .0    2206.0        .0        .0    200.8        .0      18.8       4.9   1069.00
       .10       .00     10.99       .00      .000     .015      .000      .000   1062.50    153.00
   .002534       11.       11.       11.         0         8         0       .00     53.99    207.00


SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS    1065.51 , NOT    1066.22 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.25       1.51       3.00      70.00      54.00       4.00     200.00        .00   1062.70    1062.50

*SECNO 4248.000
```

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.83

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1069.07	1068.78	.00	1.	2192.	200.	200.	1066.70	1069.00	70.

4248.000	5.47	1068.17	.00	.00	1069.04	.87	.94	.00	1068.60
2206.0	.0	2206.0	.0	.0	295.4	.0	19.1	4.9	1068.10
.11	.00	7.47	.01	.000	.015	.030	.000	1062.70	153.00
.000753	51.	51.	51.	3	0	0	.00	55.04	208.04

*SECNO 4300.000

4300.000	4.92	1068.02	1067.27	.00	1069.28	1.26	.05	.20	1068.20
2206.0	.0	2206.0	.0	.0	245.1	.0	19.4	5.0	1068.10
.11	.00	9.00	.00	.000	.015	.000	.000	1063.10	139.24
.001278	52.	52.	52.	2	15	0	.00	57.66	196.90

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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

CCHV= .100 CEHV= .300
*SECNO 4350.000

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

4350.000	4.44	1067.84	1067.84	.00	1069.82	1.98	.08	.22	1068.80
2206.0	.0	2206.0	.0	.0	195.4	.0	19.7	5.0	1068.30
.11	.00	11.29	.00	.000	.015	.000	.000	1063.40	134.42
.002277	50.	50.	50.	0	11	0	.00	50.02	184.44

*SECNO 4400.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

4400.000	4.63	1068.23	1068.23	.00	1070.20	1.98	.11	.00	1069.30
2206.0	.0	2206.0	.0	.0	195.6	.0	19.9	5.1	1068.60
.11	.00	11.28	.00	.000	.015	.000	.000	1063.60	133.37
.002281	50.	50.	50.	0	8	0	.00	50.11	183.48

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*SECNO 4450.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  4450.000      4.39   1068.39   1068.39       .00   1070.33      1.94       .11       .00   1069.60
    2206.0        .0    2206.0        .0        .0     197.5        .0      20.1       5.2   1068.90
       .11       .00     11.17       .00      .000      .015      .000      .000   1064.00    133.32
   .002255       50.       50.       50.         0         8         0       .00     50.96    184.28

*SECNO 4500.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  4500.000      4.40   1068.60   1068.60       .00   1070.59      1.99       .11       .02   1070.00
    2206.0        .0    2206.0        .0        .0     194.7        .0      20.3       5.2   1069.10
       .11       .00     11.33       .00      .000      .015      .000      .000   1064.20    133.27
   .002297       50.       50.       50.         0         5         0       .00     49.22    182.49

*SECNO 4550.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1
   07FEB01      10:50:09                                                                          PAGE    28

    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

  4550.000      4.36   1068.86   1068.86       .00   1070.86      2.01       .12       .00   1070.40
    2206.0        .0    2206.0        .0        .0     194.1        .0      20.6       5.3   1069.20
       .11       .00     11.37       .00      .000      .015      .000      .000   1064.50    133.57
   .002307       50.       50.       50.         0         5         0       .00     49.07    182.64

*SECNO 4600.000

3301 HV CHANGED MORE THAN HVINS

  4600.000      5.01   1069.71   1068.92       .00   1071.02      1.31       .08       .07   1070.60
    2206.0        .0    2206.0        .0        .0     240.5        .1      20.8       5.3   1069.50
       .11       .00      9.17       .02      .000      .015      .030      .000   1064.70    138.21
   .001269       50.       50.       50.         6         8         0       .00     54.55    192.75

*SECNO 4645.000
  4645.000      4.49   1069.99   1069.43       .00   1071.10      1.11       .06       .02   1070.60
    2206.0        .0    2206.0        .0        .0     260.8        .0      21.1       5.4   1070.20
       .12       .00      8.46       .00      .000      .015      .000      .000   1065.50    141.92
   .001409       45.       45.       45.         3        15         0       .00     73.76    215.68

CCHV=      .300 CEHV=      .500
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```
*SECNO 4660.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1100.00 ELREA=      1100.00

  4660.000      5.21   1070.21   1068.71       .00   1071.16       .95       .02       .05   1073.00
    2206.0        .0    2206.0        .0        .0     281.3        .0      21.2       5.4   1073.00
       .12       .00      7.84       .00      .000      .015      .000      .000   1065.00    153.00
   .000877       15.       15.       15.         2        15         0       .00     53.99    207.00


SPECIAL BRIDGE

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.25      1.51      3.00     70.00     54.00      4.00    250.00       .00   1065.30   1065.00

*SECNO 4712.000
PRESSURE FLOW

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   07FEB01      10:50:09                                                                                PAGE   29

    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


 EGPRS      EGLWC      H3        QWEIR     QPR       BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                               AREA
   1072.03   1071.55       .44        0.     2206.      250.      250.     1070.30   1073.00        0.


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1100.00 ELREA=      1100.00

  4712.000      6.01   1071.31       .00       .00   1072.03       .72       .87       .00   1072.50
    2206.0        .0    2206.0        .0        .0     324.7        .0      21.5       5.5   1072.50
       .12       .00      6.79       .00      .000      .015      .000      .000   1065.30    153.00
   .000562       52.       52.       52.         3         0         0       .00     54.00    207.00


*SECNO 4733.000
CHIMP CLSTA=     180.00 CELCH=    1065.40 BW=      54.00 STCHL=        .00 STCHR=     400.00
EXCAVATION DATA
AEX=     525.9SQ-FT     VEXR=        .3K*CU-YD     VEXT=       42.9K*CU-YD

  4733.000      6.30   1071.70   1068.96       .00   1072.13       .43       .01       .09   1073.00
    2206.0        .0    2206.0        .0        .0     419.8        .0      21.7       5.5   1073.00
       .12       .00      5.25       .00      .000      .015      .000      .000   1065.40    140.39
   .000320       21.       21.       21.         2        11         0       .00     79.21    219.61


CCHV=     .100 CEHV=     .300
*SECNO 4738.000
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```
CHIMP CLSTA=     200.00 CELCH=    1067.42 BW=      50.00 STCHL=        .00 STCHR=     400.00
EXCAVATION DATA
AEX=     370.5SQ-FT     VEXR=        .1K*CU-YD     VEXT=       43.0K*CU-YD


3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  4738.000      3.73   1071.15   1071.15       .00   1072.80      1.65       .00       .37   1073.40
    2206.0        .0    2206.0        .0        .0     214.1        .0      21.8       5.5   1073.40
       .12       .00     10.30       .00      .000      .015      .000      .000   1067.42    167.55
   .002284        5.        5.        5.         0        18         0       .00     64.90    232.45


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   07FEB01      10:50:09                                                                          PAGE    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 4750.000
CHIMP CLSTA=     200.00 CELCH=    1067.44 BW=      50.00 STCHL=     162.99 STCHR=     237.04
EXCAVATION DATA
AEX=     372.9SQ-FT     VEXR=        .2K*CU-YD     VEXT=       43.2K*CU-YD

  4750.000      3.94   1071.38   1071.15       .00   1072.84      1.46       .02       .02   1073.44
    2206.0        .0    2206.0        .0        .0     227.8        .0      21.8       5.5   1073.46
       .12       .00      9.68       .00      .000      .015      .000      .000   1067.44    167.13
   .001892       12.       12.       12.         8         5         0       .00     65.74    232.87


*SECNO 4800.000
CHIMP CLSTA=     200.00 CELCH=    1067.51 BW=      50.00 STCHL=     163.02 STCHR=     236.98
EXCAVATION DATA
AEX=     371.1SQ-FT     VEXR=        .7K*CU-YD     VEXT=       43.9K*CU-YD

  4800.000      4.13   1071.64   1071.22       .00   1072.94      1.30       .09       .02   1073.50
    2206.0        .0    2206.0        .0        .0     241.0        .0      22.1       5.6   1073.50
       .12       .00      9.15       .00      .000      .015      .000      .000   1067.51    166.73
   .001595       50.       50.       50.         2        11         0       .00     66.54    233.27


*SECNO 4850.000
CHIMP CLSTA=     200.00 CELCH=    1067.59 BW=      50.00 STCHL=     162.97 STCHR=     237.03
EXCAVATION DATA
AEX=     373.0SQ-FT     VEXR=        .7K*CU-YD     VEXT=       44.6K*CU-YD

  4850.000      4.14   1071.72   1071.30       .00   1073.02      1.30       .08       .00   1073.60
    2206.0        .0    2206.0        .0        .0     241.4        .0      22.4       5.7   1073.60
       .12       .00      9.14       .00      .000      .015      .000      .000   1067.59    166.72
   .001588       50.       50.       50.         0        11         0       .00     66.56    233.28
```

```
*SECNO 4900.000
CHIMP CLSTA=     200.00 CELCH=    1067.66 BW=      50.00 STCHL=     162.92 STCHR=     237.08
EXCAVATION DATA
AEX=     374.9SQ-FT     VEXR=        .7K*CU-YD     VEXT=       45.2K*CU-YD

  4900.000      4.15   1071.81   1071.37       .00   1073.10      1.30       .08       .00   1073.70
    2206.0        .0    2206.0        .0        .0     241.5        .0      22.6       5.8   1073.70
       .12       .00      9.13       .00      .000      .015      .000      .000   1067.66    166.71
   .001585       50.       50.       50.         0        11         0       .00     66.57    233.29


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   07FEB01      10:50:09                                                                          PAGE   31

    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 4950.000
CHIMP CLSTA=     200.00 CELCH=    1067.73 BW=      50.00 STCHL=     163.07 STCHR=     236.93
EXCAVATION DATA
AEX=     369.5SQ-FT     VEXR=        .7K*CU-YD     VEXT=       45.9K*CU-YD

  4950.000      4.16   1071.89   1071.45       .00   1073.18      1.29       .08       .00   1073.70
    2206.0        .0    2206.0        .0        .0     242.0        .0      22.9       5.9   1073.70
       .13       .00      9.12       .00      .000      .015      .000      .000   1067.73    166.70
   .001576       50.       50.       50.         0        11         0       .00     66.60    233.30


*SECNO 5000.000
CHIMP CLSTA=     200.00 CELCH=    1067.81 BW=      50.00 STCHL=     163.02 STCHR=     236.98
EXCAVATION DATA
AEX=     371.4SQ-FT     VEXR=        .7K*CU-YD     VEXT=       46.6K*CU-YD

  5000.000      4.17   1071.98   1071.52       .00   1073.26      1.28       .08       .00   1073.80
    2206.0        .0    2206.0        .0        .0     242.6        .0      23.2       5.9   1073.80
       .13       .00      9.09       .00      .000      .015      .000      .000   1067.81    166.68
   .001563       50.       50.       50.         0        11         0       .00     66.64    233.32


*SECNO 5050.000
CHIMP CLSTA=     200.00 CELCH=    1067.88 BW=      50.00 STCHL=     163.16 STCHR=     236.84
EXCAVATION DATA
AEX=     365.9SQ-FT     VEXR=        .7K*CU-YD     VEXT=       47.3K*CU-YD

  5050.000      4.18   1072.06   1071.59       .00   1073.34      1.28       .08       .00   1073.80
    2206.0        .0    2206.0        .0        .0     243.4        .0      23.5       6.0   1073.80
       .13       .00      9.06       .00      .000      .015      .000      .000   1067.88    166.66
   .001548       50.       50.       50.         0        11         0       .00     66.69    233.34


*SECNO 5100.000
CHIMP CLSTA=     200.00 CELCH=    1067.96 BW=      50.00 STCHL=     161.91 STCHR=     238.09
```

```
EXCAVATION DATA
AEX=     412.8SQ-FT     VEXR=        .7K*CU-YD     VEXT=       48.0K*CU-YD

  5100.000      4.19   1072.15   1071.67       .00   1073.42      1.27       .08       .00   1074.50
    2206.0        .0    2206.0        .0        .0     244.2        .0      23.7       6.1   1074.50
       .13       .00      9.03       .00      .000      .015      .000      .000   1067.96    166.63
   .001533       50.       50.       50.         0        11         0       .00     66.73    233.37


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   07FEB01      10:50:09                                                                                PAGE   32

    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 5120.000
CHIMP CLSTA=     200.00 CELCH=    1067.99 BW=      50.00 STCHL=     159.93 STCHR=     225.00
EXCAVATION DATA
AEX=     435.0SQ-FT     VEXR=        .3K*CU-YD     VEXT=       48.3K*CU-YD

  5120.000      3.87   1071.86   1071.79       .00   1073.59      1.73       .04       .14   1075.52
    2206.0        .0    2206.0        .0        .0     208.7        .0      23.9       6.1   1075.57
       .13       .00     10.57       .00      .000      .015      .000      .000   1067.99    167.25
   .002281       20.       20.       20.         3        11         0       .00     57.75    225.00


*SECNO 5170.000
CHIMP CLSTA=     200.00 CELCH=    1068.06 BW=      50.00 STCHL=     157.88 STCHR=     225.00
EXCAVATION DATA
AEX=     500.2SQ-FT     VEXR=        .9K*CU-YD     VEXT=       49.2K*CU-YD

  5170.000      4.19   1072.25   1071.86       .00   1073.72      1.47       .10       .03   1076.62
    2206.0        .0    2206.0        .0        .0     226.9        .0      24.1       6.2   1076.59
       .13       .00      9.72       .00      .000      .015      .000      .000   1068.06    166.63
   .001765       50.       50.       50.         6         5         0       .00     58.37    225.00


*SECNO 5180.000
CHIMP CLSTA=     200.00 CELCH=    1071.56 BW=      50.00 STCHL=     164.57 STCHR=     225.00
EXCAVATION DATA
AEX=     286.7SQ-FT     VEXR=        .3K*CU-YD     VEXT=       49.5K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  5180.000      3.81   1075.37   1075.37       .00   1077.17      1.80       .04       .10   1076.78
    2206.0        .0    2206.0        .0        .0     205.0        .0      24.2       6.2   1076.73
       .13       .00     10.76       .00      .000      .015      .000      .000   1071.56    167.38
   .002412       18.       18.       18.         0        11         0       .00     57.62    225.00


*SECNO 5200.000
CHIMP CLSTA=     200.00 CELCH=    1071.70 BW=      50.00 STCHL=     164.18 STCHR=     225.00
EXCAVATION DATA
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AEX=     296.6SQ-FT     VEXR=        .2K*CU-YD     VEXT=       49.7K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  5200.000      3.81   1075.51   1075.51       .00   1077.31      1.80       .05       .00   1077.11
    2206.0        .0    2206.0        .0        .0    205.2        .0      24.3       6.2   1077.01
       .13       .00     10.75       .00      .000     .015      .000      .000   1071.70    167.37
   .002406       20.       20.       20.         0        5         0       .00     57.63    225.00


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   07FEB01      10:50:09                                                                                PAGE   33

    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 5235.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1100.00 ELREA=      1100.00

  5235.000      3.87   1075.87   1075.87       .00   1077.81      1.94       .09       .07   1081.00
    2206.0        .0    2206.0        .0        .0    197.4        .0      24.4       6.3   1078.20
       .13       .00     11.17       .00      .000     .015      .000      .000   1072.00    148.01
   .002526       35.       35.       35.         0        5         0       .00     50.99    199.00


SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS    1075.20 , NOT    1075.87 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.05      1.51      3.00     70.00     51.00      3.00    216.00       .00   1072.90   1072.00

*SECNO 5323.000

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54

CLASS B LOW FLOW

3420 BRIDGE W.S.=    1076.48 BRIDGE VELOCITY=      11.40     CALCULATED CHANNEL AREA=       172.

 EGPRS      EGLWC       H3        QWEIR     QLOW      BAREA   TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                                  AREA
   1078.32   1079.12      .00        0.     2206.      216.      216.     1077.40   1080.00        0.
```

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3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1100.00 ELREA=      1100.00

  5323.000      5.10   1078.00       .00       .00   1079.12      1.12      1.31       .00   1082.00
    2206.0        .0    2206.0        .0        .0     259.9        .0      24.9       6.4   1079.20
       .14       .00      8.49       .00      .000      .015      .000      .000   1072.90    148.00
   .001067       88.       88.       88.         0         0         0       .00     50.99    199.00


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   07FEB01      10:50:09                                                                                PAGE   34

    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 5325.000
CHIMP CLSTA=     200.00 CELCH=    1072.94 BW=      50.00 STCHL=        .00 STCHR=     400.00
EXCAVATION DATA
AEX=     458.2SQ-FT     VEXR=        .0K*CU-YD     VEXT=       49.7K*CU-YD

  5325.000      5.43   1078.37   1076.75       .00   1079.20       .84       .00       .08   1082.10
    2206.0        .0    2206.0        .0        .0     300.8        .0      24.9       6.4   1079.50
       .14       .00      7.33       .00      .000      .015      .000      .000   1072.94    164.15
   .000748        2.        2.        2.         3        15         0       .00     60.85    225.00


CCHV=      .100 CEHV=      .300
*SECNO 5350.000
CHIMP CLSTA=     200.00 CELCH=    1072.98 BW=      46.80 STCHL=     162.64 STCHR=     223.40
EXCAVATION DATA
AEX=     372.5SQ-FT     VEXR=        .4K*CU-YD     VEXT=       50.1K*CU-YD

  5350.000      5.30   1078.28   1076.95       .00   1079.27       .99       .02       .05   1079.96
    2206.0        .0    2206.0        .0        .0     276.4        .0      25.1       6.4   1079.86
       .14       .00      7.98       .00      .000      .015      .000      .000   1072.98    165.99
   .000922       25.       25.       25.         2        15         0       .00     57.41    223.40


*SECNO 5400.000
CHIMP CLSTA=     200.00 CELCH=    1073.05 BW=      40.39 STCHL=     165.51 STCHR=     234.49
EXCAVATION DATA
AEX=     390.9SQ-FT     VEXR=        .7K*CU-YD     VEXT=       50.8K*CU-YD

  5400.000      5.22   1078.27   1077.24       .00   1079.34      1.07       .05       .03   1080.20
    2206.0        .0    2206.0        .0        .0     265.2        .0      25.4       6.5   1080.20
       .14       .00      8.32       .00      .000      .015      .000      .000   1073.05    169.37
   .001053       50.       50.       50.         2        15         0       .00     61.26    230.63


*SECNO 5434.000
CHIMP CLSTA=     200.00 CELCH=    1073.10 BW=      36.00 STCHL=     167.81 STCHR=     232.19
EXCAVATION DATA
AEX=     356.2SQ-FT     VEXR=        .5K*CU-YD     VEXT=       51.3K*CU-YD
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  5434.000      4.93   1078.04   1077.57       .00   1079.51      1.47       .04       .12   1080.20
    2206.0        .0    2206.0        .0        .0    226.7        .0      25.6       6.5   1080.20
       .14       .00      9.73       .00      .000     .015      .000      .000   1073.10    172.12
   .001571       34.       34.       34.         2       11         0       .00     55.76    227.88


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   07FEB01      10:50:09                                                                          PAGE   35

    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 5450.000
 CHIMP CLSTA=     200.00 CELCH=    1073.13 BW=      36.00 STCHL=     167.85 STCHR=     232.15
 EXCAVATION DATA
 AEX=     354.7SQ-FT     VEXR=        .2K*CU-YD     VEXT=       51.5K*CU-YD

  5450.000      4.93   1078.06   1077.59       .00   1079.53      1.48       .02       .00   1080.20
    2206.0        .0    2206.0        .0        .0    226.1        .0      25.7       6.5   1080.20
       .14       .00      9.76       .00      .000     .015      .000      .000   1073.13    172.14
   .001582       16.       16.       16.         0       11         0       .00     55.72    227.86


 *SECNO 5500.000
 CHIMP CLSTA=     200.00 CELCH=    1073.20 BW=      36.00 STCHL=     168.00 STCHR=     232.00
 EXCAVATION DATA
 AEX=     349.9SQ-FT     VEXR=        .7K*CU-YD     VEXT=       52.1K*CU-YD

  5500.000      4.94   1078.14   1077.66       .00   1079.61      1.48       .08       .00   1080.20
    2206.0        .0    2206.0        .0        .0    226.3        .0      25.9       6.6   1080.20
       .14       .00      9.75       .00      .000     .015      .000      .000   1073.20    172.13
   .001579       50.       50.       50.         0       11         0       .00     55.73    227.87


 *SECNO 5544.000
 CHIMP CLSTA=     200.00 CELCH=    1073.27 BW=      36.00 STCHL=     168.13 STCHR=     231.87
 EXCAVATION DATA
 AEX=     345.8SQ-FT     VEXR=        .6K*CU-YD     VEXT=       52.7K*CU-YD

  5544.000      4.94   1078.21   1077.73       .00   1079.68      1.47       .07       .00   1080.20
    2206.0        .0    2206.0        .0        .0    226.7        .0      26.2       6.7   1080.20
       .14       .00      9.73       .00      .000     .015      .000      .000   1073.27    172.12
   .001571       44.       44.       44.         0       11         0       .00     55.76    227.88


 *SECNO 5600.000
 CHIMP CLSTA=     200.00 CELCH=    1073.36 BW=      36.00 STCHL=     168.32 STCHR=     231.68
 EXCAVATION DATA
 AEX=     339.7SQ-FT     VEXR=        .8K*CU-YD     VEXT=       53.5K*CU-YD

  5600.000      4.96   1078.32   1077.82       .00   1079.78      1.46       .10       .00   1080.20
    2206.0        .0    2206.0        .0        .0    227.2        .0      26.5       6.7   1080.20
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      .15       .00      9.71       .00      .000      .015      .000   1073.36    172.10
   .001560       63.       63.       63.         0        11         0       .00     55.80    227.90


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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 5650.000
 CHIMP CLSTA=     200.00 CELCH=    1073.44 BW=      36.00 STCHL=     168.27 STCHR=     231.73
 EXCAVATION DATA
 AEX=     341.3SQ-FT     VEXR=        .6K*CU-YD     VEXT=       54.1K*CU-YD

   5650.000      4.97   1078.40   1077.90       .00   1079.86      1.46       .08       .00   1080.30
     2206.0        .0    2206.0        .0        .0    227.8        .0      26.8       6.8   1080.30
       .15       .00      9.68       .00      .000      .015      .000      .000   1073.44    172.08
   .001548       50.       50.       50.         0        11         0       .00     55.84    227.92


 *SECNO 5700.000
 CHIMP CLSTA=     200.00 CELCH=    1073.51 BW=      36.00 STCHL=     168.82 STCHR=     231.18
 EXCAVATION DATA
 AEX=     324.1SQ-FT     VEXR=        .6K*CU-YD     VEXT=       54.8K*CU-YD

   5700.000      4.98   1078.49   1077.97       .00   1079.94      1.45       .08       .00   1080.10
     2206.0        .0    2206.0        .0        .0    228.4        .0      27.0       6.9   1080.10
       .15       .00      9.66       .00      .000      .015      .000      .000   1073.51    172.06
   .001536       50.       50.       50.         0        11         0       .00     55.89    227.94


 *SECNO 5750.000
 CHIMP CLSTA=     200.00 CELCH=    1073.59 BW=      36.00 STCHL=     168.97 STCHR=     231.03
 EXCAVATION DATA
 AEX=     319.4SQ-FT     VEXR=        .6K*CU-YD     VEXT=       55.3K*CU-YD

   5750.000      4.99   1078.58   1078.04       .00   1080.02      1.44       .08       .00   1080.10
     2206.0        .0    2206.0        .0        .0    229.0        .0      27.3       6.9   1080.10
       .15       .00      9.63       .00      .000      .015      .000      .000   1073.59    172.04
   .001524       50.       50.       50.         0        11         0       .00     55.93    227.96


 *SECNO 5800.000
 CHIMP CLSTA=     200.00 CELCH=    1073.66 BW=      36.00 STCHL=     169.12 STCHR=     230.88
 EXCAVATION DATA
 AEX=     314.8SQ-FT     VEXR=        .6K*CU-YD     VEXT=       55.9K*CU-YD

   5800.000      5.00   1078.66   1078.12       .00   1080.09      1.43       .08       .00   1080.10
     2206.0        .0    2206.0        .0        .0    229.5        .0      27.5       7.0   1080.10
       .15       .00      9.61       .00      .000      .015      .000      .000   1073.66    172.02
   .001514       50.       50.       50.         0        11         0       .00     55.97    227.98
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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 5850.000
CHIMP CLSTA=     200.00 CELCH=    1073.73 BW=      36.00 STCHL=     162.87 STCHR=     237.13
EXCAVATION DATA
AEX=     527.3SQ-FT     VEXR=        .8K*CU-YD     VEXT=       56.7K*CU-YD

  5850.000       5.01   1078.74   1078.19       .00   1080.17      1.43       .08       .00   1083.30
    2206.0        .0    2206.0        .0        .0     230.0        .0      27.8       7.1   1083.30
       .15        .00      9.59       .00      .000      .015      .000      .000   1073.73    172.00
   .001506       50.       50.       50.         0        11         0       .00     56.00    228.00


*SECNO 5885.000
CHIMP CLSTA=     200.00 CELCH=    1073.79 BW=      36.00 STCHL=     161.25 STCHR=     238.71
EXCAVATION DATA
AEX=     587.9SQ-FT     VEXR=        .7K*CU-YD     VEXT=       57.4K*CU-YD

  5885.000       5.01   1078.80   1078.25       .00   1080.22      1.42       .05       .00   1084.16
    2206.0        .0    2206.0        .0        .0     230.3        .0      28.0       7.1   1084.14
       .15        .00      9.58       .00      .000      .015      .000      .000   1073.79    171.99
   .001499       35.       35.       35.         0        11         0       .00     56.02    228.01


*SECNO 5900.000
CHIMP CLSTA=     200.00 CELCH=    1078.78 BW=      36.00 STCHL=     170.76 STCHR=     229.24
EXCAVATION DATA
AEX=     265.5SQ-FT     VEXR=        .2K*CU-YD     VEXT=       57.7K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  5900.000       4.46   1083.24   1083.24       .00   1085.12      1.88       .03       .14   1084.40
    2206.0        .0    2206.0        .0        .0     200.3        .0      28.1       7.1   1084.40
       .15        .00     11.01       .00      .000      .015      .000      .000   1078.78    173.08
   .002257       15.       15.       15.         0        11         0       .00     53.84    226.92


*SECNO 5950.000
CHIMP CLSTA=     200.00 CELCH=    1079.03 BW=      36.00 STCHL=     170.66 STCHR=     229.34
EXCAVATION DATA
AEX=     268.4SQ-FT     VEXR=        .5K*CU-YD     VEXT=       58.2K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  5950.000       4.46   1083.49   1083.49       .00   1085.37      1.88       .11       .00   1084.70
    2206.0        .0    2206.0        .0        .0     200.6        .0      28.3       7.2   1084.70
       .16        .00     11.00       .00      .000      .015      .000      .000   1079.03    173.07
   .002248       50.       50.       50.         0         5         0       .00     53.86    226.93
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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 6000.000
 CHIMP CLSTA=     200.00 CELCH=    1079.28 BW=      36.00 STCHL=     170.76 STCHR=     229.24
 EXCAVATION DATA
 AEX=     265.5SQ-FT     VEXR=        .5K*CU-YD     VEXT=       58.7K*CU-YD

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
   6000.000      4.46   1083.74   1083.74       .00   1085.62      1.88       .11       .00   1084.90
     2206.0        .0    2206.0        .0        .0     200.5        .0      28.5       7.3   1084.90
        .16       .00     11.00       .00      .000      .015      .000      .000   1079.28    173.07
    .002249       50.       50.       50.         0         5         0       .00     53.85    226.93


 *SECNO 6050.000
 CHIMP CLSTA=     200.00 CELCH=    1079.53 BW=      36.00 STCHL=     170.86 STCHR=     229.14
 EXCAVATION DATA
 AEX=     262.6SQ-FT     VEXR=        .5K*CU-YD     VEXT=       59.2K*CU-YD

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
   6050.000      4.46   1083.99   1083.99       .00   1085.87      1.88       .11       .00   1085.10
     2206.0        .0    2206.0        .0        .0     200.5        .0      28.8       7.3   1085.10
        .16       .00     11.00       .00      .000      .015      .000      .000   1079.53    173.07
    .002248       50.       50.       50.         0         5         0       .00     53.85    226.93


 *SECNO 6100.000
 CHIMP CLSTA=     200.00 CELCH=    1079.78 BW=      36.00 STCHL=     170.76 STCHR=     229.24
 EXCAVATION DATA
 AEX=     265.5SQ-FT     VEXR=        .5K*CU-YD     VEXT=       59.6K*CU-YD

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED
   6100.000      4.46   1084.24   1084.24       .00   1086.12      1.88       .11       .00   1085.40
     2206.0        .0    2206.0        .0        .0     200.5        .0      29.0       7.4   1085.40
        .16       .00     11.00       .00      .000      .015      .000      .000   1079.78    173.07
    .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


 *SECNO 6150.000
 CHIMP CLSTA=     200.00 CELCH=    1080.03 BW=      36.00 STCHL=     170.66 STCHR=     229.34
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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


EXCAVATION DATA
AEX=     268.4SQ-FT     VEXR=        .5K*CU-YD     VEXT=       60.1K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6150.000      4.46   1084.49   1084.49       .00   1086.37      1.88       .11       .00   1085.70
    2206.0        .0    2206.0        .0        .0     200.5        .0      29.2       7.4   1085.70
       .16       .00     11.00       .00      .000      .015      .000      .000   1080.03    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 6200.000
CHIMP CLSTA=     200.00 CELCH=    1080.28 BW=      36.00 STCHL=     170.56 STCHR=     229.44
EXCAVATION DATA
AEX=     271.4SQ-FT     VEXR=        .5K*CU-YD     VEXT=       60.6K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6200.000      4.46   1084.74   1084.74       .00   1086.62      1.88       .11       .00   1086.00
    2206.0        .0    2206.0        .0        .0     200.5        .0      29.4       7.5   1086.00
       .16       .00     11.00       .00      .000      .015      .000      .000   1080.28    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 6250.000
CHIMP CLSTA=     200.00 CELCH=    1080.53 BW=      36.00 STCHL=     170.46 STCHR=     229.54
EXCAVATION DATA
AEX=     274.3SQ-FT     VEXR=        .5K*CU-YD     VEXT=       61.1K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6250.000      4.46   1084.99   1084.99       .00   1086.87      1.88       .11       .00   1086.30
    2206.0        .0    2206.0        .0        .0     200.5        .0      29.7       7.6   1086.30
       .16       .00     11.00       .00      .000      .015      .000      .000   1080.53    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 6300.000
CHIMP CLSTA=     200.00 CELCH=    1080.78 BW=      36.00 STCHL=     170.56 STCHR=     229.44
EXCAVATION DATA
AEX=     271.4SQ-FT     VEXR=        .5K*CU-YD     VEXT=       61.6K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
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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

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3720 CRITICAL DEPTH ASSUMED
  6300.000      4.46   1085.24   1085.24       .00   1087.12      1.88       .11       .00   1086.50
    2206.0        .0    2206.0        .0        .0     200.5        .0      29.9       7.6   1086.50
       .16       .00     11.00       .00      .000      .015      .000      .000   1080.78    173.07
   .002250       50.       50.       50.         0         5         0       .00     53.85    226.93


*SECNO 6340.000
CHIMP CLSTA=     200.00 CELCH=    1080.98 BW=      36.00 STCHL=     170.56 STCHR=     229.44
EXCAVATION DATA
AEX=     271.4SQ-FT     VEXR=        .4K*CU-YD     VEXT=       62.0K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6340.000      4.46   1085.44   1085.44       .00   1087.32      1.88       .09       .00   1086.70
    2206.0        .0    2206.0        .0        .0     200.5        .0      30.1       7.7   1086.70
       .17       .00     11.00       .00      .000      .015      .000      .000   1080.98    173.07
   .002250       40.       40.       40.         0         5         0       .00     53.85    226.93


*SECNO 6360.000
CHIMP CLSTA=     200.00 CELCH=    1081.45 BW=      36.00 STCHL=     170.09 STCHR=     229.91
EXCAVATION DATA
AEX=     285.3SQ-FT     VEXR=        .2K*CU-YD     VEXT=       62.3K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6360.000      4.46   1085.91   1085.91       .00   1087.79      1.88       .04       .00   1087.40
    2206.0        .0    2206.0        .0        .0     200.5        .0      30.2       7.7   1087.40
       .17       .00     11.00       .00      .000      .015      .000      .000   1081.45    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


*SECNO 6380.000
CHIMP CLSTA=     200.00 CELCH=    1081.91 BW=      36.00 STCHL=     169.82 STCHR=     230.18
EXCAVATION DATA
AEX=     293.3SQ-FT     VEXR=        .2K*CU-YD     VEXT=       62.5K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6380.000      4.46   1086.37   1086.37       .00   1088.25      1.88       .04       .00   1088.00
    2206.0        .0    2206.0        .0        .0     200.5        .0      30.3       7.7   1088.00
       .17       .00     11.00       .00      .000      .015      .000      .000   1081.91    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


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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
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*SECNO 6400.000
CHIMP CLSTA=     200.00 CELCH=    1082.38 BW=      36.00 STCHL=     169.56 STCHR=     230.44
EXCAVATION DATA
AEX=     301.4SQ-FT     VEXR=        .2K*CU-YD     VEXT=       62.7K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6400.000      4.46   1086.84   1086.84       .00   1088.72      1.88       .04       .00   1088.60
    2206.0        .0    2206.0        .0        .0     200.5        .0      30.4       7.7   1088.60
       .17       .00     11.00       .00      .000      .015      .000      .000   1082.38    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


*SECNO 6420.000
CHIMP CLSTA=     200.00 CELCH=    1082.84 BW=      36.00 STCHL=     168.89 STCHR=     231.11
EXCAVATION DATA
AEX=     322.0SQ-FT     VEXR=        .2K*CU-YD     VEXT=       62.9K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6420.000      4.46   1087.31   1087.31       .00   1089.19      1.88       .04       .00   1089.40
    2206.0        .0    2206.0        .0        .0     200.5        .0      30.5       7.8   1089.40
       .17       .00     11.00       .00      .000      .015      .000      .000   1082.84    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


*SECNO 6440.000
CHIMP CLSTA=     200.00 CELCH=    1083.31 BW=      36.00 STCHL=     168.82 STCHR=     231.18
EXCAVATION DATA
AEX=     324.1SQ-FT     VEXR=        .2K*CU-YD     VEXT=       63.2K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6440.000      4.46   1087.77   1087.77       .00   1089.65      1.88       .04       .00   1089.90
    2206.0        .0    2206.0        .0        .0     200.5        .0      30.5       7.8   1089.90
       .17       .00     11.00       .00      .000      .015      .000      .000   1083.31    173.07
   .002250       20.       20.       20.         0         5         0       .00     53.85    226.93


*SECNO 6460.000
CHIMP CLSTA=     200.00 CELCH=    1083.34 BW=      36.00 STCHL=     168.68 STCHR=     231.32
1
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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


EXCAVATION DATA
AEX=     328.5SQ-FT     VEXR=        .2K*CU-YD     VEXT=       63.4K*CU-YD

  6460.000      4.78   1088.12   1087.80       .00   1089.72      1.60       .04       .03   1090.00
    2206.0        .0    2206.0        .0        .0     217.3        .0      30.6       7.8   1090.00
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      .17       .00     10.15       .00      .000      .015      .000     1083.34    172.46
   .001778      20.       20.       20.         8         5         0       .00      55.08    227.54

*SECNO 6500.000
CHIMP CLSTA=     200.00 CELCH=    1083.40 BW=      36.00 STCHL=     168.60 STCHR=     231.40
EXCAVATION DATA
AEX=     331.0SQ-FT     VEXR=        .5K*CU-YD     VEXT=       63.9K*CU-YD

  6500.000      4.91   1088.31   1087.86       .00   1089.80      1.49       .07       .01   1090.10
    2206.0        .0    2206.0        .0        .0     224.9        .0      30.8       7.9   1090.10
       .17       .00      9.81       .00      .000      .015      .000      .000   1083.40    172.18
   .001606      40.       40.       40.         2        11         0       .00      55.64    227.82

*SECNO 6540.000
CHIMP CLSTA=     200.00 CELCH=    1083.46 BW=      36.00 STCHL=     168.52 STCHR=     231.48
EXCAVATION DATA
AEX=     333.5SQ-FT     VEXR=        .5K*CU-YD     VEXT=       64.4K*CU-YD

  6540.000      4.91   1088.37   1087.92       .00   1089.86      1.49       .06       .00   1090.20
    2206.0        .0    2206.0        .0        .0     225.2        .0      31.1       7.9   1090.20
       .17       .00      9.80       .00      .000      .015      .000      .000   1083.46    172.17
   .001601      40.       40.       40.         0        11         0       .00      55.65    227.83

*SECNO 6580.000
CHIMP CLSTA=     200.00 CELCH=    1083.52 BW=      36.00 STCHL=     168.44 STCHR=     231.56
EXCAVATION DATA
AEX=     336.1SQ-FT     VEXR=        .5K*CU-YD     VEXT=       64.9K*CU-YD

  6580.000      4.92   1088.44   1087.98       .00   1089.93      1.49       .06       .00   1090.30
    2206.0        .0    2206.0        .0        .0     225.4        .0      31.3       8.0   1090.30
       .17       .00      9.79       .00      .000      .015      .000      .000   1083.52    172.16
   .001596      40.       40.       40.         0        11         0       .00      55.67    227.84

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   07FEB01      10:50:09                                                                          PAGE    43

    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 6621.000
CHIMP CLSTA=     200.00 CELCH=    1083.58 BW=      36.00 STCHL=     168.16 STCHR=     231.84
EXCAVATION DATA
AEX=     344.9SQ-FT     VEXR=        .5K*CU-YD     VEXT=       65.4K*CU-YD

  6621.000      4.93   1088.51   1088.04       .00   1089.99      1.48       .07       .00   1090.50
    2206.0        .0    2206.0        .0        .0     225.9        .0      31.5       8.0   1090.50
       .17       .00      9.77       .00      .000      .015      .000      .000   1083.58    172.15
   .001587      41.       41.       41.         0        11         0       .00      55.71    227.85
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*SECNO 6650.000
CHIMP CLSTA=     200.00 CELCH=    1083.96 BW=      31.56 STCHL=     172.13 STCHR=     243.40
EXCAVATION DATA
AEX=     304.7SQ-FT     VEXR=        .3K*CU-YD     VEXT=       65.7K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6650.000      4.56   1088.52   1088.52       .00   1090.30      1.78       .05       .09   1090.01
    2206.0        .0    2206.0        .0        .0     206.3        .0      31.6       8.1   1090.87
       .17       .00     10.69       .00      .000      .015      .000      .000   1083.96    175.10
   .002273       29.       29.       29.         0        11         0       .00     58.92    234.02


*SECNO 6700.000
CHIMP CLSTA=     200.00 CELCH=    1084.62 BW=      23.92 STCHL=     177.70 STCHR=     251.09
EXCAVATION DATA
AEX=     295.0SQ-FT     VEXR=        .6K*CU-YD     VEXT=       66.3K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  6700.000      4.86   1089.48   1089.48       .00   1091.18      1.71       .11       .01   1089.79
    2206.0        .0    2206.0        .0        .0     210.5        .0      31.9       8.1   1091.14
       .18       .00     10.48       .00      .000      .015      .000      .000   1084.62    178.33
   .002303       50.       50.       50.         0         8         0       .00     62.77    241.10


*SECNO 6752.000
CHIMP CLSTA=     200.00 CELCH=    1085.30 BW=      16.00 STCHL=     180.43 STCHR=     246.41
EXCAVATION DATA
AEX=     229.8SQ-FT     VEXR=        .5K*CU-YD     VEXT=       66.8K*CU-YD

7185 MINIMUM SPECIFIC ENERGY
1
   07FEB01      10:50:09                                                                          PAGE   44


    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


3720 CRITICAL DEPTH ASSUMED
  6752.000      5.39   1090.69   1090.69       .00   1092.53      1.84       .12       .04   1091.09
    2206.0        .0    2206.0        .0        .0     202.5        .0      32.1       8.2   1091.70
       .18       .00     10.90       .00      .000      .015      .000      .000   1085.30    181.22
   .002434       52.       52.       52.         0         9         0       .00     59.12    240.34


1
PROFILE FOR STREAM  CHANNEL IMPROVE, SUBCRIT


PLOTTED POINTS (BY PRIORITY) E-ENERGY,W-WATER SURFACE,I-INVERT,C-CRITICAL W.S.,L-LEFT BANK,R-RIGHT BANK,M-LOWER END STA
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ELEVATION  1041.     1051.     1061.     1071.     1081.     1091.     1101.     1111.     1121.     1131.
   SECNO   CUMDIS

 1000.00      0.  IR CWE    .         .         .         .         .         .         .         .         .
              5.  IR CWE    .         .         .         .         .         .         .         .         .
             10.  IR CWE    .         .         .         .         .         .         .         .         .
             15.  I RCWE    .         .         .         .         .         .         .         .         .
             20.  I RCWEL   .         .         .         .         .         .         .         .         .
             25.  I RCWE L  .         .         .         .         .         .         .         .         .
             30.  I RCWE L  .         .         .         .         .         .         .         .         .
             35.  I RCWE  L .         .         .         .         .         .         .         .         .
             40.  I  CWE   L.         .         .         .         .         .         .         .         .
             45.  I  CWE   L.         .         .         .         .         .         .         .         .
             50.  I  CWE    L         .         .         .         .         .         .         .         .
             55.  I  CWE    .L        .         .         .         .         .         .         .         .
             60.  I   WE    . L       .         .         .         .         .         .         .         .
             65.  I   WE    . L       .         .         .         .         .         .         .         .
             70.  I   WE    .  L      .         .         .         .         .         .         .         .
             75.  I   WE    .   L     .         .         .         .         .         .         .         .
 1080.00     80.  I   WE    .    L    .         .         .         .         .         .         .         .
             85.  I   WE    .    L    .         .         .         .         .         .         .         .
             90.  I   WE    .    L    .         .         .         .         .         .         .         .
             95.  I   WE    .    L    .         .         .         .         .         .         .         .
            100.  I   WE    .    L    .         .         .         .         .         .         .         .
            105.  I   WE    .    L    .         .         .         .         .         .         .         .
            110.  I   WE    .    L    .         .         .         .         .         .         .         .
            115.  I   WE    .    L    .         .         .         .         .         .         .         .
 1116.00    120.  I   WE    .    L    .         .         .         .         .         .         .         .
            125.  I   WE    .    L    .         .         .         .         .         .         .         .
            130.  I   WE    .    L    .         .         .         .         .         .         .         .
            135.  I   WE    .    L    .         .         .         .         .         .         .         .
            140.  I   CE    .    L    .         .         .         .         .         .         .         .
            145.  I   CE    .    L    .         .         .         .         .         .         .         .
 1150.00    150.  I   CER   .    L    .         .         .         .         .         .         .         .
            155.  I   CER   .   L     .         .         .         .         .         .         .         .
            160.  I   CER   .   L     .         .         .         .         .         .         .         .
            165.  I   CER   .   L     .         .         .         .         .         .         .         .
            170.  I   CER   .   L     .         .         .         .         .         .         .         .
            175.  I   CER   .   L     .         .         .         .         .         .         .         .
            180.  I   CER   .   L     .         .         .         .         .         .         .         .
            185.  I   CER   .   L     .         .         .         .         .         .         .         .
            190.  I   CER   .   L     .         .         .         .         .         .         .         .
            195.  I   CER   .   L     .         .         .         .         .         .         .         .
 1200.00    200.  I   CER   .   L     .         .         .         .         .         .         .         .
            205.  I   CER   .   L     .         .         .         .         .         .         .         .
            210.  I   CER   .  L      .         .         .         .         .         .         .         .
            215.  I   CER   . L       .         .         .         .         .         .         .         .
            220.  I   CER   .L        .         .         .         .         .         .         .         .
            225.  I   CER   L         .         .         .         .         .         .         .         .
            230.  I  C ER  L.         .         .         .         .         .         .         .         .
            235.  I  C ER L .         .         .         .         .         .         .         .         .
            240.  I  C ERL  .         .         .         .         .         .         .         .         .
            245.  I  C EL   .         .         .         .         .         .         .         .         .
 1250.00    250.  I  C EL   .         .         .         .         .         .         .         .         .
            255.  I  C EL   .         .         .         .         .         .         .         .         .
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         260.  I  C WEL  .          .          .          .          .          .          .          .
         265.  I  C WE L .          .          .          .          .          .          .          .
         270.  I  C WE  L.          .          .          .          .          .          .          .
         275.  I  C WE   L          .          .          .          .          .          .          .
         280.  I  C WE   .L         .          .          .          .          .          .          .
         285.  I  C WE   . L        .          .          .          .          .          .          .
         290.  I  C WE   .  L       .          .          .          .          .          .          .
         295.  I  C WE   .  L       .          .          .          .          .          .          .
1300.00  300.  I  C WE   .   L      .          .          .          .          .          .          .
         305.  I  C WE   .  L       .          .          .          .          .          .          .
         310.  I  C WE   .  L       .          .          .          .          .          .          .
         315.  I  C WE   . L        .          .          .          .          .          .          .
         320.  I  C WE   .L         .          .          .          .          .          .          .
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         335.  .I C WE  L.          .          .          .          .          .          .          .
         340.  .I C WE L .          .          .          .          .          .          .          .
         345.  .I C WEL  .          .          .          .          .          .          .          .
1350.00  350.  .I C WE   .          .          .          .          .          .          .          .
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1400.00  400.  .I C WEL  .          .          .          .          .          .          .          .
         405.  .I C WEL  .          .          .          .          .          .          .          .
         410.  .I C WEL  .          .          .          .          .          .          .          .
         415.  .I C WEL  .          .          .          .          .          .          .          .
         420.  .I C WEL  .          .          .          .          .          .          .          .
         425.  .I C WEL  .          .          .          .          .          .          .          .
         430.  .I C WEL  .          .          .          .          .          .          .          .
         435.  .I C WEL  .          .          .          .          .          .          .          .
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         455.  .I C WEL  .          .          .          .          .          .          .          .
1456.00  460.  .I C WEL  .          .          .          .          .          .          .          .
         465.  .I C WEL  .          .          .          .          .          .          .          .
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         475.  .I C WEL  .          .          .          .          .          .          .          .
         480.  .I C WEL  .          .          .          .          .          .          .          .
         485.  .I C WEL  .          .          .          .          .          .          .          .
         490.  .I C WEL  .          .          .          .          .          .          .          .
1495.00  495.  .I  CWEL  .          .          .          .          .          .          .          .
         500.  .I  CWEL  .          .          .          .          .          .          .          .
         505.  .I  CWEL  .          .          .          .          .          .          .          .
         510.  .I  CWEL  .          .          .          .          .          .          .          .
         515.  .I  CWE L .          .          .          .          .          .          .          .
         520.  .I  CWE L .          .          .          .          .          .          .          .
         525.  .I  CWE L .          .          .          .          .          .          .          .
         530.  .I  CWE L .          .          .          .          .          .          .          .
         535.  .I  CWE  L.          .          .          .          .          .          .          .
         540.  .I  CWE  L.          .          .          .          .          .          .          .
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         545.  .I  CWE  L.
1550.00  550.  .I  CWE   L
         555.  . I  CWE  L
1560.00  560.  .   I  W EL
         565.  .   I  W EL
         570.  .   I  W EL
         575.  .   I  W EL
1580.00  580.  .   I  CWEL
         585.  .   I  CWEL
         590.  .   I  CWEL
         595.  .   I  CWEL
1600.00  600.  .   I  CWEL
         605.  .   I  CWEL
         610.  .   I  CWEL
         615.  .   I  CWEL
         620.  .   I  CWEL
         625.  .   I  CWEL
         630.  .   I  CWEL
         635.  .   I  CWEL
         640.  .   I  CWEL
         645.  .   I  CWEL
1650.00  650.  .   I  CWEL
         655.  .   I  CWEL
         660.  .   I  CWEL
         665.  .   I  CWEL
         670.  .   I  CWEL
         675.  .   I  CWEL
         680.  .   I  CWEL
         685.  .   I  CWEL
         690.  .   I  CWEL
         695.  .   I  CWEL
1700.00  700.  .   I   WEL
         705.  .   I   WEL
         710.  .   I   WEL
         715.  .   I   WEL
         720.  .   I   WEL
         725.  .   I   WEL
         730.  .   I   WEL
         735.  .   I   WEL
         740.  .   I   WEL
         745.  .   I   WEL
1750.00  750.  .   I   W E
         755.  .   I   W E
         760.  .   I   W E
         765.  .   I   W E
         770.  .   I   W E
         775.  .   I   W E
         780.  .   I   W E
         785.  .   I   W E
         790.  .   I   CWE
         795.  .   I   CWE
1800.00  800.  .   I   CWEL
         805.  .   I   CWEL
         810.  .   I   CWEL
         815.  .   I   CWEL
         820.  .   I   CWEL
         825.  .   I   CWEL
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	830.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	835.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	840.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	845.	.	I	CWEL	.	.	.	.	.	.	.	.	.
1850.00	850.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	855.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	860.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	865.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	870.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	875.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	880.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	885.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	890.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	895.	.	I	CWEL	.	.	.	.	.	.	.	.	.
1900.00	900.	.	I	WEL	.	.	.	.	.	.	.	.	.
	905.	.	I	WEL	.	.	.	.	.	.	.	.	.
	910.	.	I	WEL	.	.	.	.	.	.	.	.	.
	915.	.	I	WEL	.	.	.	.	.	.	.	.	.
	920.	.	I	W.E	.	.	.	.	.	.	.	.	.
	925.	.	I	W.E	.	.	.	.	.	.	.	.	.
	930.	.	I	W.E	.	.	.	.	.	.	.	.	.
1931.00	935.	.	I	W.E	.	.	.	.	.	.	.	.	.
	940.	.	I	W.E	.	.	.	.	.	.	.	.	.
	945.	.	I	W.E	.	.	.	.	.	.	.	.	.
1950.00	950.	.	I	W.E	.	.	.	.	.	.	.	.	.
	955.	.	I	W.E	.	.	.	.	.	.	.	.	.
	960.	.	I	W.E	.	.	.	.	.	.	.	.	.
	965.	.	I	W.E	.	.	.	.	.	.	.	.	.
	970.	.	I	W.E	.	.	.	.	.	.	.	.	.
	975.	.	I	W.E	.	.	.	.	.	.	.	.	.
	980.	.	I	W.E	.	.	.	.	.	.	.	.	.
	985.	.	I	W.E	.	.	.	.	.	.	.	.	.
	990.	.	I	W.E	.	.	.	.	.	.	.	.	.
	995.	.	I	W.E	.	.	.	.	.	.	.	.	.
2000.00	1000.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1005.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1010.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1015.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1020.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1025.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1030.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1035.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1040.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1045.	.	I	W.E	.	.	.	.	.	.	.	.	.
2050.00	1050.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1055.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1060.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1065.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1070.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1075.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1080.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1085.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1090.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1095.	.	I	W.E	.	.	.	.	.	.	.	.	.
2100.00	1100.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1105.	.	I	W.E	.	.	.	.	.	.	.	.	.
	1110.	.	I	W.E	.	.	.	.	.	.	.	.	.

	1115.	.	I	W.E	.	.	.	.	.	.	.	.
	1120.	.	I	W.E	.	.	.	.	.	.	.	.
	1125.	.	I	W.E	.	.	.	.	.	.	.	.
	1130.	.	I	W.E	.	.	.	.	.	.	.	.
	1135.	.	I	W.E	.	.	.	.	.	.	.	.
	1140.	.	I	CWE	.	.	.	.	.	.	.	.
	1145.	.	I	CWE	.	.	.	.	.	.	.	.
2150.00	1150.	.	I	CWE	.	.	.	.	.	.	.	.
	1155.	.	I	CWE	.	.	.	.	.	.	.	.
	1160.	.	I	CWE	.	.	.	.	.	.	.	.
	1165.	.	I	CWE	.	.	.	.	.	.	.	.
	1170.	.	I	CWE	.	.	.	.	.	.	.	.
	1175.	.	I	CWE	.	.	.	.	.	.	.	.
	1180.	.	I	CWE	.	.	.	.	.	.	.	.
	1185.	.	I	CWE	.	.	.	.	.	.	.	.
	1190.	.	I	CWE	.	.	.	.	.	.	.	.
	1195.	.	I	CWE	.	.	.	.	.	.	.	.
2200.00	1200.	.	I	CWE	.	.	.	.	.	.	.	.
	1205.	.	I	CWE	.	.	.	.	.	.	.	.
	1210.	.	I	CWE	.	.	.	.	.	.	.	.
	1215.	.	I	CWE	.	.	.	.	.	.	.	.
	1220.	.	I	CWE	.	.	.	.	.	.	.	.
	1225.	.	I	CWE	.	.	.	.	.	.	.	.
	1230.	.	I	CWE	.	.	.	.	.	.	.	.
	1235.	.	I	CWE	.	.	.	.	.	.	.	.
	1240.	.	I	CWE	.	.	.	.	.	.	.	.
	1245.	.	I	CWE	.	.	.	.	.	.	.	.
2250.00	1250.	.	I	CWE	.	.	.	.	.	.	.	.
	1255.	.	I	CWE	.	.	.	.	.	.	.	.
	1260.	.	I	CWE	.	.	.	.	.	.	.	.
	1265.	.	I	CWE	.	.	.	.	.	.	.	.
	1270.	.	I	CWE	.	.	.	.	.	.	.	.
	1275.	.	I	CWE	.	.	.	.	.	.	.	.
	1280.	.	I	CWE	.	.	.	.	.	.	.	.
	1285.	.	I	CWE	.	.	.	.	.	.	.	.
	1290.	.	I	CWE	.	.	.	.	.	.	.	.
	1295.	.	I	CWE	.	.	.	.	.	.	.	.
2300.00	1300.	.	I	CWE	.	.	.	.	.	.	.	.
	1305.	.	I	CWE	.	.	.	.	.	.	.	.
	1310.	.	I	CWE	.	.	.	.	.	.	.	.
	1315.	.	I	CWE	.	.	.	.	.	.	.	.
	1320.	.	I	CWE	.	.	.	.	.	.	.	.
	1325.	.	I	CWE	.	.	.	.	.	.	.	.
	1330.	.	I	CWE	.	.	.	.	.	.	.	.
	1335.	.	I	CWE	.	.	.	.	.	.	.	.
	1340.	.	I	CWE	.	.	.	.	.	.	.	.
	1345.	.	I	CWE	.	.	.	.	.	.	.	.
2350.00	1350.	.	I	CWE	.	.	.	.	.	.	.	.
	1355.	.	I	CWE	.	.	.	.	.	.	.	.
	1360.	.	I	CWE	.	.	.	.	.	.	.	.
	1365.	.	I	CWE	.	.	.	.	.	.	.	.
	1370.	.	I	CWE	.	.	.	.	.	.	.	.
	1375.	.	I	CWEL	.	.	.	.	.	.	.	.
	1380.	.	I	CWEL	.	.	.	.	.	.	.	.
	1385.	.	I	CWEL	.	.	.	.	.	.	.	.
	1390.	.	I	CWEL	.	.	.	.	.	.	.	.
	1395.	.	I	CWEL	.	.	.	.	.	.	.	.

2400.00	1400.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1405.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1410.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1415.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1420.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1425.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1430.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1435.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1440.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1445.	.	I	CWEL	.	.	.	.	.	.	.	.	.
2450.00	1450.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1455.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1460.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1465.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1470.	.	I	CWEL	.	.	.	.	.	.	.	.	.
	1475.	.	I	WEL	.	.	.	.	.	.	.	.	.
	1480.	.	I	WEL	.	.	.	.	.	.	.	.	.
	1485.	.	I	WEL	.	.	.	.	.	.	.	.	.
	1490.	.	I	WEL	.	.	.	.	.	.	.	.	.
	1495.	.	I	W E	.	.	.	.	.	.	.	.	.
2500.00	1500.	.	I	W E	.	.	.	.	.	.	.	.	.
	1505.	.	I	W E	.	.	.	.	.	.	.	.	.
	1510.	.	I	W E	.	.	.	.	.	.	.	.	.
	1515.	.	I	W E	.	.	.	.	.	.	.	.	.
	1520.	.	I	W E	.	.	.	.	.	.	.	.	.
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	1530.	.	I	W E	.	.	.	.	.	.	.	.	.
	1535.	.	I	W E	.	.	.	.	.	.	.	.	.
	1540.	.	I	W E	.	.	.	.	.	.	.	.	.
	1545.	.	I	W E	.	.	.	.	.	.	.	.	.
2550.00	1550.	.	I	W E	.	.	.	.	.	.	.	.	.
	1555.	.	I	W E	.	.	.	.	.	.	.	.	.
	1560.	.	I	W E	.	.	.	.	.	.	.	.	.
	1565.	.	I	W E	.	.	.	.	.	.	.	.	.
	1570.	.	I	W E	.	.	.	.	.	.	.	.	.
	1575.	.	I	W E	.	.	.	.	.	.	.	.	.
	1580.	.	I	W E	.	.	.	.	.	.	.	.	.
	1585.	.	I	W E	.	.	.	.	.	.	.	.	.
	1590.	.	I	W E	.	.	.	.	.	.	.	.	.
	1595.	.	I	W E	.	.	.	.	.	.	.	.	.
2600.00	1600.	.	I	W E	.	.	.	.	.	.	.	.	.
	1605.	.	I	W E	.	.	.	.	.	.	.	.	.
	1610.	.	I	W E	.	.	.	.	.	.	.	.	.
	1615.	.	I	W E	.	.	.	.	.	.	.	.	.
	1620.	.	I	W E	.	.	.	.	.	.	.	.	.
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	1645.	.	I	W E	.	.	.	.	.	.	.	.	.
2650.00	1650.	.	I	W E	.	.	.	.	.	.	.	.	.
	1655.	.	I	W E	.	.	.	.	.	.	.	.	.
	1660.	.	I	W E	.	.	.	.	.	.	.	.	.
	1665.	.	I	W E	.	.	.	.	.	.	.	.	.
	1670.	.	I	W E	.	.	.	.	.	.	.	.	.
	1675.	.	I	W E	.	.	.	.	.	.	.	.	.
	1680.	.	I	W E	.	.	.	.	.	.	.	.	.

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         1685.  .   I    W E      .         .         .         .         .         .         .         .         .
         1690.  .   I    W E      .         .         .         .         .         .         .         .         .
         1695.  .   I    W E      .         .         .         .         .         .         .         .         .
2700.00  1700.  .   I    W E      .         .         .         .         .         .         .         .         .
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2750.00  1750.  .   I    W E      .         .         .         .         .         .         .         .         .
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         1785.  .    I   CWE      .         .         .         .         .         .         .         .         .
         1790.  .    I   CWE      .         .         .         .         .         .         .         .         .
         1795.  .    I   CWE      .         .         .         .         .         .         .         .         .
2800.00  1800.  .    I   CWE      .         .         .         .         .         .         .         .         .
         1805.  .    I   CWE      .         .         .         .         .         .         .         .         .
         1810.  .    I   CWEL     .         .         .         .         .         .         .         .         .
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         1825.  .    I   CWE L    .         .         .         .         .         .         .         .         .
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2850.00  1850.  .    I   CWE  L   .         .         .         .         .         .         .         .         .
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2885.00  1885.  .    I   CWE   L  .         .         .         .         .         .         .         .         .
         1890.  .     I  . W E L  .         .         .         .         .         .         .         .         .
         1895.  .       I.  CWEL  .         .         .         .         .         .         .         .         .
2900.00  1900.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1905.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1910.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1915.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1920.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1925.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1930.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1935.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1940.  .        .I   WLE .         .         .         .         .         .         .         .         .
         1945.  .        .I   WLE .         .         .         .         .         .         .         .         .
2950.00  1950.  .        .I   W E .         .         .         .         .         .         .         .         .
         1955.  .        .I   W E .         .         .         .         .         .         .         .         .
         1960.  .        .I   W E .         .         .         .         .         .         .         .         .
         1965.  .        .I   W E .         .         .         .         .         .         .         .         .
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         1970.  .        .I   W E  .        .        .        .        .        .        .        .
         1975.  .        .I   W E  .        .        .        .        .        .        .        .
         1980.  .        .I    WE  .        .        .        .        .        .        .        .
         1985.  .        .I    WE  .        .        .        .        .        .        .        .
         1990.  .        .I    WE  .        .        .        .        .        .        .        .
         1995.  .        .I    WE  .        .        .        .        .        .        .        .
3000.00  2000.  .        .I    WLE .        .        .        .        .        .        .        .
         2005.  .        .I    WLE .        .        .        .        .        .        .        .
         2010.  .        .I    WLE .        .        .        .        .        .        .        .
         2015.  .        .I    WLE .        .        .        .        .        .        .        .
         2020.  .        .I    WLE .        .        .        .        .        .        .        .
         2025.  .        .I    WLE .        .        .        .        .        .        .        .
         2030.  .        .I    WLE .        .        .        .        .        .        .        .
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         2040.  .        .I    WLE .        .        .        .        .        .        .        .
         2045.  .        .I    WLE .        .        .        .        .        .        .        .
3050.00  2050.  .        .I    WLE .        .        .        .        .        .        .        .
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         2070.  .        . I   WLE .        .        .        .        .        .        .        .
         2075.  .        . I   WLE .        .        .        .        .        .        .        .
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         2085.  .        . I   WLE .        .        .        .        .        .        .        .
         2090.  .        . I   WLE .        .        .        .        .        .        .        .
         2095.  .        . I   WLE .        .        .        .        .        .        .        .
3100.00  2100.  .        . I   WLE .        .        .        .        .        .        .        .
         2105.  .        . I   WLE .        .        .        .        .        .        .        .
         2110.  .        . I   WLE .        .        .        .        .        .        .        .
         2115.  .        . I   WLE .        .        .        .        .        .        .        .
         2120.  .        . I   WLE .        .        .        .        .        .        .        .
         2125.  .        . I   WLE .        .        .        .        .        .        .        .
         2130.  .        . I   WLE .        .        .        .        .        .        .        .
         2135.  .        . I   WLE .        .        .        .        .        .        .        .
         2140.  .        . I   WLE .        .        .        .        .        .        .        .
         2145.  .        . I   WLE .        .        .        .        .        .        .        .
3150.00  2150.  .        . I   WLE .        .        .        .        .        .        .        .
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         2170.  .        . I   W E .        .        .        .        .        .        .        .
         2175.  .        . I   W E .        .        .        .        .        .        .        .
         2180.  .        . I    WE .        .        .        .        .        .        .        .
         2185.  .        . I    WE .        .        .        .        .        .        .        .
         2190.  .        . I    WE .        .        .        .        .        .        .        .
         2195.  .        . I    WE .        .        .        .        .        .        .        .
3200.00  2200.  .        . I    WLE.        .        .        .        .        .        .        .
         2205.  .        . I    WLE.        .        .        .        .        .        .        .
         2210.  .        . I    WLE.        .        .        .        .        .        .        .
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         2220.  .        . I    WLE.        .        .        .        .        .        .        .
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         2240.  .        . I    WLE.        .        .        .        .        .        .        .
         2245.  .        . I    WLE.        .        .        .        .        .        .        .
3250.00  2250.  .        . I    WLE.        .        .        .        .        .        .        .
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         2255.  .         . I    WLE.        .         .         .         .         .         .         .         .
         2260.  .         . I    WLE.        .         .         .         .         .         .         .         .
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3300.00  2300.  .         .  I   WLE.        .         .         .         .         .         .         .         .
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3350.00  2350.  .         .  I   W E.        .         .         .         .         .         .         .         .
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3400.00  2400.  .         .  I    WLE        .         .         .         .         .         .         .         .
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3550.00  2550.  .        .  I   WLE      .        .        .        .        .        .        .        .
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         2580.  .        .  I    WE      .        .        .        .        .        .        .        .
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         2590.  .        .  I    WE      .        .        .        .        .        .        .        .
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3600.00  2600.  .        .  I    WLE     .        .        .        .        .        .        .        .
         2605.  .        .  I    WLE     .        .        .        .        .        .        .        .
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3650.00  2650.  .        .  I    WLE     .        .        .        .        .        .        .        .
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         3980.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         3985.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         3990.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         3995.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4000.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4005.  .         .         .         I  .WEL      .         .         .         .         .         .         .
5000.00  4010.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4015.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4020.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4025.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4030.  .         .         .         I  .WEL      .         .         .         .         .         .         .
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         4050.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4055.  .         .         .         I  .WEL      .         .         .         .         .         .         .
5050.00  4060.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4065.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4070.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4075.  .         .         .         I  .WEL      .         .         .         .         .         .         .
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         4090.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4095.  .         .         .         I  .WEL      .         .         .         .         .         .         .
         4100.  .         .         .         I  .W E      .         .         .         .         .         .         .
         4105.  .         .         .         I  .W EL     .         .         .         .         .         .         .
5100.00  4110.  .         .         .         I  .W EL     .         .         .         .         .         .         .
         4115.  .         .         .         I  .W EL     .         .         .         .         .         .         .
         4120.  .         .         .         I  .W EL     .         .         .         .         .         .         .
         4125.  .         .         .         I  .W EL     .         .         .         .         .         .         .
5120.00  4130.  .         .         .         I  .W E L    .         .         .         .         .         .         .
         4135.  .         .         .         I  .W E L    .         .         .         .         .         .         .
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         4145.  .         .         .         I  .W E L    .         .         .         .         .         .         .
         4150.  .         .         .         I  .W E L    .         .         .         .         .         .         .
         4155.  .         .         .         I  .W E L    .         .         .         .         .         .         .
         4160.  .         .         .         I  .W E L    .         .         .         .         .         .         .
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         4170.  .         .         .         I  .W E L    .         .         .         .         .         .         .
         4175.  .         .         .         I  .W E ML   .         .         .         .         .         .         .
5170.00  4180.  .         .         .         I  .W E  L   .         .         .         .         .         .         .
         4185.  .         .         .          I . W E L   .         .         .         .         .         .         .
         4190.  .         .         .           I.  W EL   .         .         .         .         .         .         .
         4195.  .         .         .            I   W E   .         .         .         .         .         .         .
5180.00  4200.  .         .         .            .I  W E   .         .         .         .         .         .         .
         4205.  .         .         .            .I   WE   .         .         .         .         .         .         .
         4210.  .         .         .            .I   WE   .         .         .         .         .         .         .
         4215.  .         .         .            .I   WE   .         .         .         .         .         .         .
5200.00  4220.  .         .         .            .I   WE   .         .         .         .         .         .         .
         4225.  .         .         .            .I   WEL  .         .         .         .         .         .         .
         4230.  .         .         .            .I   WRE  .         .         .         .         .         .         .
         4235.  .         .         .            .I   WMEL .         .         .         .         .         .         .
         4240.  .         .         .            .I   W EL .         .         .         .         .         .         .
         4245.  .         .         .            .I   W E L.         .         .         .         .         .         .
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         4250.  .        .        .        .I   W E  L        .        .        .        .        .
5235.00  4255.  .        .        .        .I   W E  L        .        .        .        .        .
         4260.  C        .        .        .I   W E  L        .        .        .        .        .
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         4275.  C        .        .        .I   W ER L        .        .        .        .        .
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5323.00  4345.  C        .        .        . I    WE .L       .        .        .        .        .
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5400.00  4420.  .        .        .        . I   CWEL.        .        .        .        .        .
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         4820.  .         .         .         .  I   CWE.         .         .         .         .         .
5800.00  4825.  .         .         .         .  I   CWE.         .         .         .         .         .
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         4905.  .         .         .         .  I   CWE.  L      .         .         .         .         .
5885.00  4910.  .         .         .         .  I   CWE.  L      .         .         .         .         .
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         4920.  .         .         .         .     I   .W E      .         .         .         .         .
5900.00  4925.  .         .         .         .       I . W E     .         .         .         .         .
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5950.00  4975.  .         .         .         .       I .  WE     .         .         .         .         .
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         4985.  .         .         .         .       I .  WLE    .         .         .         .         .
         4990.  .         .         .         .       I .  WLE    .         .         .         .         .
         4995.  .         .         .         .       I .  WLE    .         .         .         .         .
         5000.  .         .         .         .       I .  WLE    .         .         .         .         .
         5005.  .         .         .         .       I .  WLE    .         .         .         .         .
         5010.  .         .         .         .       I .  WLE    .         .         .         .         .
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6000.00  5025.  .         .         .         .       I .  WLE    .         .         .         .         .
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6050.00  5075.  .         .         .         .        I.  WLE    .         .         .         .         .
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         5100.  .         .         .         .        I.  WLE    .         .         .         .         .
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6100.00   5125.  .    .    .    .    I.  W E  .    .    .    .    .    .
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6150.00   5175.  .    .    .    .    I.   WE  .    .    .    .    .    .
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          5220.  .    .    .    .    I.   WLE .    .    .    .    .    .
6200.00   5225.  .    .    .    .    I.   WLE .    .    .    .    .    .
          5230.  .    .    .    .    I.   WLE .    .    .    .    .    .
          5235.  .    .    .    .    I.   WLE .    .    .    .    .    .
          5240.  .    .    .    .    I.   WLE .    .    .    .    .    .
          5245.  .    .    .    .    I.   WLE .    .    .    .    .    .
          5250.  .    .    .    .     I   WLE .    .    .    .    .    .
          5255.  .    .    .    .     I   WLE .    .    .    .    .    .
          5260.  .    .    .    .     I   WLE .    .    .    .    .    .
          5265.  .    .    .    .     I   WLE .    .    .    .    .    .
          5270.  .    .    .    .     I   WLE .    .    .    .    .    .
6250.00   5275.  .    .    .    .     I   WLE .    .    .    .    .    .
          5280.  .    .    .    .     I   WLE .    .    .    .    .    .
          5285.  .    .    .    .     I   WLE .    .    .    .    .    .
          5290.  .    .    .    .     I   WLE .    .    .    .    .    .
          5295.  .    .    .    .     I   WLE .    .    .    .    .    .
          5300.  .    .    .    .     I   W E .    .    .    .    .    .
          5305.  .    .    .    .     I   W E .    .    .    .    .    .
          5310.  .    .    .    .     I   W E .    .    .    .    .    .
          5315.  .    .    .    .     I   W E .    .    .    .    .    .
          5320.  .    .    .    .     I   W E .    .    .    .    .    .
6300.00   5325.  .    .    .    .     I   W E .    .    .    .    .    .
          5330.  .    .    .    .     I   W E .    .    .    .    .    .
          5335.  .    .    .    .     I   W E .    .    .    .    .    .
          5340.  .    .    .    .     I   W E .    .    .    .    .    .
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          5350.  .    .    .    .     I   W E .    .    .    .    .    .
          5355.  .    .    .    .     I   W E .    .    .    .    .    .
          5360.  .    .    .    .     I    WE .    .    .    .    .    .
6340.00   5365.  .    .    .    .     I    WE .    .    .    .    .    .
          5370.  .    .    .    .     I    WLE .    .    .    .    .    .
          5375.  .    .    .    .     I    WLE .    .    .    .    .    .
          5380.  .    .    .    .     I    WLE .    .    .    .    .    .
6360.00   5385.  .    .    .    .     .I   W E .    .    .    .    .    .
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6380.00  5405.  .         .         .         .        .I   W E  .         .         .         .         .         .
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6400.00  5425.  .         .         .         .        .I    W E .         .         .         .         .         .
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         5440.  .         .         .         .        . I   W E .         .         .         .         .         .
6420.00  5445.  .         .         .         .        . I   W EL.         .         .         .         .         .
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         5455.  .         .         .         .        . I    W E.         .         .         .         .         .
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6440.00  5465.  .         .         .         .        . I    W E.         .         .         .         .         .
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         5475.  .         .         .         .        . I    W E.         .         .         .         .         .
         5480.  .         .         .         .        . I    W E.         .         .         .         .         .
6460.00  5485.  .         .         .         .        . I    W E.         .         .         .         .         .
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         5505.  .         .         .         .        . I    W E.         .         .         .         .         .
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6500.00  5525.  .         .         .         .        .  I   W E.         .         .         .         .         .
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         5555.  .         .         .         .        .  I   W E.         .         .         .         .         .
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6540.00  5565.  .         .         .         .        .  I   W E.         .         .         .         .         .
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6580.00  5605.  .         .         .         .        .  I   CWE.         .         .         .         .         .
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         5625.  .         .         .         .        .  I   CWE.         .         .         .         .         .
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         5640.  .         .         .         .        .  I   CWEL         .         .         .         .         .
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6621.00  5650.  .         .         .         .        .  I   CWEL         .         .         .         .         .
         5655.  .         .         .         .        .  I   CWEL         .         .         .         .         .
         5660.  .         .         .         .        .  I   CWER         .         .         .         .         .
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         5670.  .         .         .         .        .  I   CWER         .         .         .         .         .
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  6650.00  5675.  .         .         .         .         .  I    WER         .         .         .         .         .
           5680.  .         .         .         .         .  I    WER         .         .         .         .         .
           5685.  .         .         .         .         .  I    WLE         .         .         .         .         .
           5690.  .         .         .         .         .  I    WLE         .         .         .         .         .
           5695.  .         .         .         .         .  I    WLE         .         .         .         .         .
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           5705.  .         .         .         .         .  I    WLE         .         .         .         .         .
           5710.  .         .         .         .         .   I   WLE         .         .         .         .         .
           5715.  .         .         .         .         .   I   WLE         .         .         .         .         .
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  6700.00  5725.  .         .         .         .         .   I    WE         .         .         .         .         .
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           5745.  .         .         .         .         .   I    WRE        .         .         .         .         .
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           5755.  .         .         .         .         .   I    WLE        .         .         .         .         .
           5760.  .         .         .         .         .   I    WLE        .         .         .         .         .
           5765.  .         .         .         .         .   I     WE        .         .         .         .         .
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           5775.  .         .         .         .         .   I     WRE       .         .         .         .         .
  6752.00  5780.  .         .         .         .         .   I     WRE       .         .         .         .         .
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                                                                                THIS RUN EXECUTED 07FEB01    10:50:09
 ************************************
  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

 CHANNEL IMPROVE, SUBCRIT

 SUMMARY PRINTOUT TABLE  100

       SECNO     EGLWC     ELLC     EGPRS     ELTRD      QPR     QWEIR     CLASS      H3     DEPTH     CWSEL      VCH      EG
 *   4248.000  1068.78  1066.70  1069.07  1069.00  2192.05      1.44     30.00     .00      5.47   1068.17     7.47  1069.04
     4712.000  1071.55  1070.30  1072.03  1073.00  2206.00       .00     10.00     .44      6.01   1071.31     6.79  1072.03
 *   5323.000  1079.12  1077.40  1078.32  1080.00  2206.00       .00      2.00     .00      5.10   1078.00     8.49  1079.12
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 CHANNEL IMPROVE, SUBCRIT
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SUMMARY PRINTOUT TABLE 105

	SECNO	CWSEL	HL	OLOSS	TOPWID	QLOB	QCH	QROB
*	4190.000	1065.80	.04	.05	61.99	.00	2206.00	.00
*	4197.000	1066.22	.03	.09	53.99	.00	2206.00	.00
*	4248.000	1068.17	.94	.00	55.04	.00	2206.00	.00
	4300.000	1068.02	.05	.20	57.66	.00	2206.00	.00
	4645.000	1069.99	.06	.02	73.76	.00	2206.00	.00
	4660.000	1070.21	.02	.05	53.99	.00	2206.00	.00
	4712.000	1071.31	.87	.00	54.00	.00	2206.00	.00
	4733.000	1071.70	.01	.09	79.21	.00	2206.00	.00
*	5200.000	1075.51	.05	.00	57.63	.00	2206.00	.00
*	5235.000	1075.87	.09	.07	50.99	.00	2206.00	.00
*	5323.000	1078.00	1.31	.00	50.99	.00	2206.00	.00
	5325.000	1078.37	.00	.08	60.85	.00	2206.00	.00

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CHANNEL IMPROVE, SUBCRIT

SUMMARY PRINTOUT TABLE 120

SECNO	CWSEL	EG	VCH	10*KS	DEPTH	TOPWID	CLSTA	BW	STCHL	XLBEL	STCHR	RBEL
1000.000	1044.72	1045.64	7.92	40.44	3.82	119.56	.00	.01	140.00	1043.80	226.00	1041.70
1080.000	1045.04	1045.95	7.62	35.62	3.84	90.73	200.00	60.00	87.00	1055.40	259.00	1045.50
1116.000	1045.28	1046.07	7.13	29.33	4.05	92.46	200.00	60.00	87.00	1055.40	260.00	1046.10
1150.000	1045.49	1046.17	6.64	24.12	4.23	95.36	200.00	61.49	87.00	1055.40	262.18	1046.50
1200.000	1045.70	1046.29	6.15	19.63	4.41	98.96	200.00	63.69	83.00	1055.30	264.16	1046.68
1250.000	1045.87	1046.39	5.79	16.74	4.53	102.15	200.00	65.90	104.00	1046.50	265.47	1046.76
1300.000	1046.00	1046.47	5.51	14.70	4.62	105.09	200.00	68.10	64.00	1055.20	267.57	1046.96

	1350.000	1046.12	1046.55	5.27	13.14	4.70	107.89	200.00	70.31	76.00	1047.20	269.85	1047.20
	1400.000	1046.21	1046.61	5.07	11.91	4.75	110.56	200.00	72.52	54.00	1048.00	273.11	1047.60
	1456.000	1046.31	1046.68	4.87	10.79	4.81	113.46	200.00	75.00	47.00	1048.00	276.48	1048.00
	1495.000	1046.32	1046.74	5.16	11.62	4.79	103.73	200.00	75.00	.00	1047.60	400.00	1047.60
	1550.000	1046.21	1046.85	6.41	6.56	4.63	83.54	200.00	65.00	149.86	1050.40	250.14	1050.40
*	1560.000	1048.01	1049.48	9.73	23.77	3.18	77.70	200.00	65.00	155.36	1050.90	244.64	1050.90
*	1580.000	1048.50	1049.58	8.36	51.70	3.65	79.59	200.00	65.00	155.39	1050.90	244.61	1050.90
	1600.000	1048.75	1049.69	7.78	41.35	3.89	80.58	200.00	65.00	155.42	1050.90	244.58	1050.90
	1650.000	1048.92	1049.92	7.99	42.43	4.02	76.71	200.00	60.62	157.30	1051.10	242.70	1051.10
	1700.000	1049.10	1050.15	8.22	43.75	4.16	72.87	200.00	56.25	159.36	1051.20	240.64	1051.20
	1750.000	1049.27	1050.40	8.52	45.86	4.29	69.01	200.00	51.87	161.43	1051.30	238.57	1051.30
	1800.000	1049.44	1050.66	8.87	48.86	4.41	65.15	200.00	47.49	163.50	1051.40	236.50	1051.40
	1850.000	1049.61	1050.95	9.30	52.88	4.54	61.30	200.00	43.12	165.57	1051.50	234.43	1051.50
	1900.000	1049.78	1051.27	9.81	58.26	4.67	57.44	200.00	38.74	167.44	1051.70	232.56	1051.70
	1931.000	1049.89	1051.50	10.19	62.63	4.76	55.02	200.00	36.00	168.86	1051.70	231.14	1051.70
*	1950.000	1050.08	1051.56	9.77	15.90	4.92	55.69	200.00	36.00	168.72	1051.80	231.28	1051.80
	2000.000	1050.18	1051.64	9.71	15.62	4.95	55.79	200.00	36.00	168.87	1051.80	231.13	1051.80

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SECNO	CWSEL	EG	VCH	10*KS	DEPTH	TOPWID	CLSTA	BW	STCHL	XLBEL	STCHR	RBEL
2050.000	1050.26	1051.72	9.71	15.60	4.95	55.80	200.00	36.00	168.82	1051.90	231.18	1051.90
2100.000	1050.34	1051.80	9.70	15.56	4.96	55.81	200.00	36.00	168.77	1052.00	231.23	1052.00
2150.000	1050.42	1051.88	9.69	15.50	4.96	55.84	200.00	36.00	168.92	1052.00	231.08	1052.00
2200.000	1050.50	1051.96	9.67	15.42	4.97	55.86	200.00	36.00	168.87	1052.10	231.13	1052.10
2250.000	1050.59	1052.03	9.65	15.34	4.98	55.89	200.00	36.00	169.22	1052.00	230.78	1052.00
2300.000	1050.67	1052.11	9.64	15.26	4.99	55.92	200.00	36.00	168.97	1052.20	231.03	1052.20
2350.000	1050.75	1052.19	9.62	15.19	4.99	55.95	200.00	36.00	168.92	1052.30	231.08	1052.30
2400.000	1050.83	1052.26	9.61	15.12	5.00	55.98	200.00	36.00	168.63	1052.52	231.30	1052.48

2450.000	1050.91	1052.34	9.59	15.07	5.00	56.00	200.00	36.00	168.35	1052.73	231.52	1052.67
2500.000	1050.99	1052.41	9.58	15.02	5.01	56.01	200.00	36.00	168.39	1052.79	231.46	1052.71
2550.000	1051.07	1052.49	9.58	14.99	5.01	56.03	200.00	36.00	168.34	1052.89	231.51	1052.81
2600.000	1051.14	1052.57	9.57	14.97	5.01	56.03	200.00	36.00	168.29	1052.99	231.56	1052.91
2650.000	1051.22	1052.64	9.57	14.95	5.01	56.04	200.00	36.00	168.32	1053.05	231.49	1052.95
2700.000	1051.29	1052.71	9.57	14.94	5.01	56.04	200.00	36.00	168.39	1053.09	231.46	1053.01
2750.000	1051.37	1052.79	9.56	14.93	5.01	56.05	200.00	36.00	168.34	1053.19	231.51	1053.11
2800.000	1051.44	1052.86	9.56	14.93	5.01	56.05	200.00	36.00	168.86	1053.00	231.14	1053.00
2850.000	1051.52	1052.94	9.56	14.93	5.01	56.05	200.00	36.00	163.01	1056.00	236.99	1056.00
2885.000	1051.57	1052.99	9.57	14.94	5.01	56.04	200.00	36.00	161.52	1056.80	238.48	1056.80
* 2900.000	1056.02	1057.90	11.01	22.55	4.46	53.84	200.00	36.00	170.92	1057.10	229.08	1057.10
* 2950.000	1056.27	1058.15	11.00	22.50	4.46	53.85	200.00	36.00	170.82	1057.40	229.18	1057.40
* 3000.000	1056.52	1058.40	11.00	22.50	4.46	53.85	200.00	36.00	170.92	1057.60	229.08	1057.60
* 3050.000	1056.77	1058.65	11.00	22.50	4.46	53.85	200.00	36.00	170.82	1057.90	229.18	1057.90
* 3100.000	1057.02	1058.90	11.00	22.50	4.46	53.85	200.00	36.00	171.12	1058.00	228.88	1058.00
* 3150.000	1057.27	1059.15	11.00	22.50	4.46	53.85	200.00	36.00	171.02	1058.30	228.98	1058.30
* 3200.000	1057.52	1059.40	11.00	22.50	4.46	53.85	200.00	36.00	170.92	1058.60	229.08	1058.60
* 3250.000	1057.77	1059.65	11.00	22.50	4.46	53.85	200.00	36.00	170.82	1058.90	229.18	1058.90

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	SECNO	CWSEL	EG	VCH	10*KS	DEPTH	TOPWID	CLSTA	BW	STCHL	XLBEL	STCHR	RBEL
*	3300.000	1058.02	1059.90	11.00	22.50	4.46	53.85	200.00	36.00	170.92	1059.10	229.08	1059.10
*	3350.000	1058.27	1060.15	11.00	22.50	4.46	53.85	200.00	36.00	170.82	1059.40	229.18	1059.40
*	3400.000	1058.52	1060.40	11.00	22.50	4.46	53.85	200.00	36.00	170.92	1059.60	229.08	1059.60
*	3450.000	1058.77	1060.65	11.00	22.50	4.46	53.85	200.00	36.00	170.82	1059.90	229.18	1059.90
*	3500.000	1059.02	1060.90	11.00	22.50	4.46	53.85	200.00	36.00	170.92	1060.10	229.08	1060.10
*	3550.000	1059.27	1061.15	11.00	22.50	4.46	53.85	200.00	36.00	171.02	1060.30	228.98	1060.30
*	3600.000	1059.52	1061.40	11.00	22.50	4.46	53.85	200.00	36.00	170.92	1060.60	229.08	1060.60
*	3650.000	1059.77	1061.65	11.00	22.50	4.46	53.85	200.00	36.00	170.82	1060.90	229.18	1060.90

*	3700.000	1060.02	1061.90	11.00	22.50	4.46	53.85	200.00	36.00	170.92	1061.10	229.08	1061.10
*	3720.000	1060.47	1062.35	11.00	22.50	4.46	53.85	200.00	36.00	170.22	1061.90	229.78	1061.90
*	3740.000	1060.92	1062.80	11.00	22.50	4.46	53.85	200.00	36.00	169.51	1062.70	230.49	1062.70
*	3760.000	1061.37	1063.25	11.00	22.50	4.46	53.85	200.00	36.00	168.81	1063.50	231.19	1063.50
*	3780.000	1061.81	1063.69	11.00	22.50	4.46	53.85	200.00	36.00	168.10	1064.30	231.90	1064.30
*	3800.000	1062.26	1064.14	11.00	22.50	4.46	53.85	200.00	36.00	167.40	1065.10	232.60	1065.10
	3850.000	1062.76	1064.27	9.88	16.40	4.89	55.52	200.00	36.00	167.15	1065.30	232.85	1065.30
	3900.000	1062.86	1064.36	9.81	16.08	4.91	55.63	200.00	36.00	167.30	1065.30	232.70	1065.30
	3950.000	1062.95	1064.44	9.78	15.94	4.93	55.68	200.00	36.00	167.25	1065.40	232.75	1065.40
	4008.000	1063.09	1064.53	9.63	15.23	4.98	55.94	200.00	36.00	167.42	1065.40	232.58	1065.40
*	4050.000	1063.90	1064.64	6.93	6.48	5.72	67.08	200.00	44.21	163.24	1065.50	236.76	1065.50
	4100.000	1064.21	1064.69	5.61	3.88	5.96	77.94	200.00	54.10	158.25	1065.60	241.75	1065.60
	4125.000	1064.31	1064.71	5.09	3.10	6.02	84.07	200.00	60.00	153.99	1066.30	246.01	1066.30
	4163.000	1064.32	1064.73	5.13	3.18	5.97	83.89	200.00	60.00	152.50	1067.10	247.50	1067.10
*	4175.000	1065.76	1067.28	9.92	23.48	3.34	73.35	200.00	60.00	160.24	1067.30	239.76	1067.30
*	4190.000	1065.80	1067.50	10.47	25.07	3.40	61.99	.00	.01	133.00	1067.40	195.00	1067.40
*	4197.000	1066.22	1068.09	10.99	25.34	3.72	53.99	.00	.01	153.00	1068.20	207.00	1069.00
*	4248.000	1068.17	1069.04	7.47	7.53	5.47	55.04	.00	.01	153.00	1068.60	207.00	1068.10

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	SECNO	CWSEL	EG	VCH	10*KS	DEPTH	TOPWID	CLSTA	BW	STCHL	XLBEL	STCHR	RBEL
	4300.000	1068.02	1069.28	9.00	12.78	4.92	57.66	.00	.01	139.00	1068.20	197.00	1068.10
*	4350.000	1067.84	1069.82	11.29	22.77	4.44	50.02	.00	.01	133.00	1068.80	185.00	1068.30
*	4400.000	1068.23	1070.20	11.28	22.81	4.63	50.11	.00	.01	132.00	1069.30	184.00	1068.60
*	4450.000	1068.39	1070.33	11.17	22.55	4.39	50.96	.00	.01	132.00	1069.60	185.00	1068.90
*	4500.000	1068.60	1070.59	11.33	22.97	4.40	49.22	.00	.01	132.00	1070.00	183.00	1069.10
*	4550.000	1068.86	1070.86	11.37	23.07	4.36	49.07	.00	.01	132.00	1070.40	183.00	1069.20
	4600.000	1069.71	1071.02	9.17	12.69	5.01	54.55	.00	.01	137.00	1070.60	192.00	1069.50

	4645.000	1069.99	1071.10	8.46	14.09	4.49	73.76	.00	.01	141.00	1070.60	216.00	1070.20
	4660.000	1070.21	1071.16	7.84	8.77	5.21	53.99	.00	.01	153.00	1073.00	207.00	1073.00
	4712.000	1071.31	1072.03	6.79	5.62	6.01	54.00	.00	.01	153.00	1072.50	207.00	1072.50
	4733.000	1071.70	1072.13	5.25	3.20	6.30	79.21	180.00	54.00	.00	1073.00	400.00	1073.00
*	4738.000	1071.15	1072.80	10.30	22.84	3.73	64.90	200.00	50.00	.00	1073.40	400.00	1073.40
	4750.000	1071.38	1072.84	9.68	18.92	3.94	65.74	200.00	50.00	162.99	1073.44	237.04	1073.46
	4800.000	1071.64	1072.94	9.15	15.95	4.13	66.54	200.00	50.00	163.02	1073.50	236.98	1073.50
	4850.000	1071.72	1073.02	9.14	15.88	4.14	66.56	200.00	50.00	162.97	1073.60	237.03	1073.60
	4900.000	1071.81	1073.10	9.13	15.85	4.15	66.57	200.00	50.00	162.92	1073.70	237.08	1073.70
	4950.000	1071.89	1073.18	9.12	15.76	4.16	66.60	200.00	50.00	163.07	1073.70	236.93	1073.70
	5000.000	1071.98	1073.26	9.09	15.63	4.17	66.64	200.00	50.00	163.02	1073.80	236.98	1073.80
	5050.000	1072.06	1073.34	9.06	15.48	4.18	66.69	200.00	50.00	163.16	1073.80	236.84	1073.80
	5100.000	1072.15	1073.42	9.03	15.33	4.19	66.73	200.00	50.00	161.91	1074.50	238.09	1074.50
	5120.000	1071.86	1073.59	10.57	22.81	3.87	57.75	200.00	50.00	159.93	1075.52	225.00	1075.57
	5170.000	1072.25	1073.72	9.72	17.65	4.19	58.37	200.00	50.00	157.88	1076.62	225.00	1076.59
*	5180.000	1075.37	1077.17	10.76	24.12	3.81	57.62	200.00	50.00	164.57	1076.78	225.00	1076.73
*	5200.000	1075.51	1077.31	10.75	24.06	3.81	57.63	200.00	50.00	164.18	1077.11	225.00	1077.01
*	5235.000	1075.87	1077.81	11.17	25.26	3.87	50.99	.00	.01	148.00	1081.00	199.00	1078.20
*	5323.000	1078.00	1079.12	8.49	10.67	5.10	50.99	.00	.01	148.00	1082.00	199.00	1079.20

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SECNO	CWSEL	EG	VCH	10*KS	DEPTH	TOPWID	CLSTA	BW	STCHL	XLBEL	STCHR	RBEL
5325.000	1078.37	1079.20	7.33	7.48	5.43	60.85	200.00	50.00	.00	1082.10	400.00	1079.50
5350.000	1078.28	1079.27	7.98	9.22	5.30	57.41	200.00	46.80	162.64	1079.96	223.40	1079.86
5400.000	1078.27	1079.34	8.32	10.53	5.22	61.26	200.00	40.39	165.51	1080.20	234.49	1080.20
5434.000	1078.04	1079.51	9.73	15.71	4.93	55.76	200.00	36.00	167.81	1080.20	232.19	1080.20
5450.000	1078.06	1079.53	9.76	15.82	4.93	55.72	200.00	36.00	167.85	1080.20	232.15	1080.20
5500.000	1078.14	1079.61	9.75	15.79	4.94	55.73	200.00	36.00	168.00	1080.20	232.00	1080.20
5544.000	1078.21	1079.68	9.73	15.71	4.94	55.76	200.00	36.00	168.13	1080.20	231.87	1080.20

	5600.000	1078.32	1079.78	9.71	15.60	4.96	55.80	200.00	36.00	168.32	1080.20	231.68	1080.20
	5650.000	1078.40	1079.86	9.68	15.48	4.97	55.84	200.00	36.00	168.27	1080.30	231.73	1080.30
	5700.000	1078.49	1079.94	9.66	15.36	4.98	55.89	200.00	36.00	168.82	1080.10	231.18	1080.10
	5750.000	1078.58	1080.02	9.63	15.24	4.99	55.93	200.00	36.00	168.97	1080.10	231.03	1080.10
	5800.000	1078.66	1080.09	9.61	15.14	5.00	55.97	200.00	36.00	169.12	1080.10	230.88	1080.10
	5850.000	1078.74	1080.17	9.59	15.06	5.01	56.00	200.00	36.00	162.87	1083.30	237.13	1083.30
	5885.000	1078.80	1080.22	9.58	14.99	5.01	56.02	200.00	36.00	161.25	1084.16	238.71	1084.14
*	5900.000	1083.24	1085.12	11.01	22.57	4.46	53.84	200.00	36.00	170.76	1084.40	229.24	1084.40
*	5950.000	1083.49	1085.37	11.00	22.48	4.46	53.86	200.00	36.00	170.66	1084.70	229.34	1084.70
*	6000.000	1083.74	1085.62	11.00	22.49	4.46	53.85	200.00	36.00	170.76	1084.90	229.24	1084.90
*	6050.000	1083.99	1085.87	11.00	22.48	4.46	53.85	200.00	36.00	170.86	1085.10	229.14	1085.10
*	6100.000	1084.24	1086.12	11.00	22.50	4.46	53.85	200.00	36.00	170.76	1085.40	229.24	1085.40
*	6150.000	1084.49	1086.37	11.00	22.50	4.46	53.85	200.00	36.00	170.66	1085.70	229.34	1085.70
*	6200.000	1084.74	1086.62	11.00	22.50	4.46	53.85	200.00	36.00	170.56	1086.00	229.44	1086.00
*	6250.000	1084.99	1086.87	11.00	22.50	4.46	53.85	200.00	36.00	170.46	1086.30	229.54	1086.30
*	6300.000	1085.24	1087.12	11.00	22.50	4.46	53.85	200.00	36.00	170.56	1086.50	229.44	1086.50
*	6340.000	1085.44	1087.32	11.00	22.50	4.46	53.85	200.00	36.00	170.56	1086.70	229.44	1086.70
*	6360.000	1085.91	1087.79	11.00	22.50	4.46	53.85	200.00	36.00	170.09	1087.40	229.91	1087.40
*	6380.000	1086.37	1088.25	11.00	22.50	4.46	53.85	200.00	36.00	169.82	1088.00	230.18	1088.00

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	SECNO	CWSEL	EG	VCH	10*KS	DEPTH	TOPWID	CLSTA	BW	STCHL	XLBEL	STCHR	RBEL
*	6400.000	1086.84	1088.72	11.00	22.50	4.46	53.85	200.00	36.00	169.56	1088.60	230.44	1088.60
*	6420.000	1087.31	1089.19	11.00	22.50	4.46	53.85	200.00	36.00	168.89	1089.40	231.11	1089.40
*	6440.000	1087.77	1089.65	11.00	22.50	4.46	53.85	200.00	36.00	168.82	1089.90	231.18	1089.90
	6460.000	1088.12	1089.72	10.15	17.78	4.78	55.08	200.00	36.00	168.68	1090.00	231.32	1090.00
	6500.000	1088.31	1089.80	9.81	16.06	4.91	55.64	200.00	36.00	168.60	1090.10	231.40	1090.10
	6540.000	1088.37	1089.86	9.80	16.01	4.91	55.65	200.00	36.00	168.52	1090.20	231.48	1090.20

	6580.000	1088.44	1089.93	9.79	15.96	4.92	55.67	200.00	36.00	168.44	1090.30	231.56	1090.30
	6621.000	1088.51	1089.99	9.77	15.87	4.93	55.71	200.00	36.00	168.16	1090.50	231.84	1090.50
*	6650.000	1088.52	1090.30	10.69	22.73	4.56	58.92	200.00	31.56	172.13	1090.01	243.40	1090.87
*	6700.000	1089.48	1091.18	10.48	23.03	4.86	62.77	200.00	23.92	177.70	1089.79	251.09	1091.14
*	6752.000	1090.69	1092.53	10.90	24.34	5.39	59.12	200.00	16.00	180.43	1091.09	246.41	1091.70

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CHANNEL IMPROVE, SUBCRIT

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	1000.000	.00	.00	.00	1040.90	2206.00	1044.72	1044.35	1045.64	40.44	7.92	306.60	346.89
	1080.000	79.83	.00	.00	1041.20	2206.00	1045.04	1044.42	1045.95	35.62	7.62	289.48	369.61
	1116.000	36.42	.00	.00	1041.23	2206.00	1045.28	1044.44	1046.07	29.33	7.13	309.25	407.34
	1150.000	33.75	.00	.00	1041.26	2206.00	1045.49	1044.42	1046.17	24.12	6.64	332.01	449.13
	1200.000	50.00	.00	.00	1041.30	2206.00	1045.70	1044.41	1046.29	19.63	6.15	358.50	497.97
	1250.000	50.00	.00	.00	1041.34	2206.00	1045.87	1044.39	1046.39	16.74	5.79	380.80	539.12
	1300.000	50.00	.00	.00	1041.38	2206.00	1046.00	1044.37	1046.47	14.70	5.51	400.45	575.34
	1350.000	50.00	.00	.00	1041.42	2206.00	1046.12	1044.36	1046.55	13.14	5.27	418.48	608.50
	1400.000	50.00	.00	.00	1041.46	2206.00	1046.21	1044.34	1046.61	11.91	5.07	435.26	639.25
	1456.000	56.33	.00	.00	1041.50	2206.00	1046.31	1044.33	1046.68	10.79	4.87	452.95	671.56
	1495.000	38.67	.00	.00	1041.54	2206.00	1046.32	1044.40	1046.74	11.62	5.16	427.86	647.01
	1550.000	55.00	.00	.00	1041.58	2206.00	1046.21	1044.76	1046.85	6.56	6.41	344.14	861.21
*	1560.000	10.00	.00	.00	1044.83	2206.00	1048.01	1048.01	1049.48	23.77	9.73	226.61	452.45
*	1580.000	20.00	.00	.00	1044.85	2206.00	1048.50	1048.02	1049.58	51.70	8.36	263.79	306.80
	1600.000	20.00	.00	.00	1044.86	2206.00	1048.75	1048.04	1049.69	41.35	7.78	283.61	343.06
	1650.000	50.00	.00	.00	1044.90	2206.00	1048.92	1048.22	1049.92	42.43	7.99	276.14	338.68
	1700.000	50.00	.00	.00	1044.94	2206.00	1049.10	1048.41	1050.15	43.75	8.22	268.27	333.50
	1750.000	50.00	.00	.00	1044.98	2206.00	1049.27	1048.62	1050.40	45.86	8.52	259.06	325.76

1800.000	50.00	.00	.00	1045.02	2206.00	1049.44	1048.85	1050.66	48.86	8.87	248.66	315.61
1850.000	50.00	.00	.00	1045.06	2206.00	1049.61	1049.10	1050.95	52.88	9.30	237.24	303.36
1900.000	50.00	.00	.00	1045.10	2206.00	1049.78	1049.41	1051.27	58.26	9.81	224.83	289.01
1931.000	31.29	.00	.00	1045.13	2206.00	1049.89	1049.61	1051.50	62.63	10.19	216.45	278.75
* 1950.000	18.71	.00	.00	1045.16	2206.00	1050.08	1049.62	1051.56	15.90	9.77	225.74	553.24
2000.000	50.00	.00	.00	1045.23	2206.00	1050.18	1049.69	1051.64	15.62	9.71	227.11	558.15

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SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
2050.000	50.00	.00	.00	1045.31	2206.00	1050.26	1049.77	1051.72	15.60	9.71	227.21	558.50
2100.000	50.00	.00	.00	1045.38	2206.00	1050.34	1049.84	1051.80	15.56	9.70	227.41	559.23
2150.000	50.00	.00	.00	1045.46	2206.00	1050.42	1049.92	1051.88	15.50	9.69	227.73	560.35
2200.000	50.00	.00	.00	1045.53	2206.00	1050.50	1049.99	1051.96	15.42	9.67	228.11	561.72
2250.000	50.00	.00	.00	1045.61	2206.00	1050.59	1050.07	1052.03	15.34	9.65	228.52	563.19
2300.000	50.00	.00	.00	1045.68	2206.00	1050.67	1050.14	1052.11	15.26	9.64	228.93	564.66
2350.000	50.00	.00	.00	1045.76	2206.00	1050.75	1050.22	1052.19	15.19	9.62	229.31	566.04
2400.000	50.00	.00	.00	1045.83	2206.00	1050.83	1050.29	1052.26	15.12	9.61	229.65	567.27
2450.000	50.00	.00	.00	1045.91	2206.00	1050.91	1050.37	1052.34	15.07	9.59	229.94	568.30
2500.000	50.00	.00	.00	1045.98	2206.00	1050.99	1050.44	1052.41	15.02	9.58	230.17	569.14
2550.000	50.00	.00	.00	1046.06	2206.00	1051.07	1050.52	1052.49	14.99	9.58	230.35	569.78
2600.000	50.00	.00	.00	1046.13	2206.00	1051.14	1050.59	1052.57	14.97	9.57	230.48	570.25
2650.000	50.00	.00	.00	1046.21	2206.00	1051.22	1050.67	1052.64	14.95	9.57	230.57	570.57
2700.000	50.00	.00	.00	1046.28	2206.00	1051.29	1050.74	1052.71	14.94	9.57	230.63	570.79
2750.000	50.00	.00	.00	1046.36	2206.00	1051.37	1050.82	1052.79	14.93	9.56	230.66	570.89
2800.000	50.00	.00	.00	1046.43	2206.00	1051.44	1050.89	1052.86	14.93	9.56	230.66	570.91
2850.000	50.00	.00	.00	1046.51	2206.00	1051.52	1050.97	1052.94	14.93	9.56	230.65	570.86
2885.000	35.00	.00	.00	1046.56	2206.00	1051.57	1051.02	1052.99	14.94	9.57	230.63	570.79
* 2900.000	15.00	.00	.00	1051.56	2206.00	1056.02	1056.02	1057.90	22.55	11.01	200.35	464.59
* 2950.000	50.00	.00	.00	1051.81	2206.00	1056.27	1056.27	1058.15	22.50	11.00	200.49	465.09

*	3000.000	50.00	.00	.00	1052.06	2206.00	1056.52	1056.52	1058.40	22.50	11.00	200.49	465.09
*	3050.000	50.00	.00	.00	1052.31	2206.00	1056.77	1056.77	1058.65	22.50	11.00	200.49	465.09
*	3100.000	50.00	.00	.00	1052.56	2206.00	1057.02	1057.02	1058.90	22.50	11.00	200.49	465.09
*	3150.000	50.00	.00	.00	1052.81	2206.00	1057.27	1057.27	1059.15	22.50	11.00	200.49	465.09
*	3200.000	50.00	.00	.00	1053.06	2206.00	1057.52	1057.52	1059.40	22.50	11.00	200.49	465.09
*	3250.000	50.00	.00	.00	1053.31	2206.00	1057.77	1057.77	1059.65	22.50	11.00	200.49	465.09

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*	3300.000	50.00	.00	.00	1053.56	2206.00	1058.02	1058.02	1059.90	22.50	11.00	[illegible]	[illegible]
*	3350.000	50.00	.00	.00	1053.81	2206.00	1058.27	1058.27	1060.15	22.50	11.00	200.49	465.09
*	3400.000	50.00	.00	.00	1054.06	2206.00	1058.52	1058.52	1060.40	22.50	11.00	200.49	465.09
*	3450.000	50.00	.00	.00	1054.31	2206.00	1058.77	1058.77	1060.65	22.50	11.00	200.49	465.09
*	3500.000	50.00	.00	.00	1054.56	2206.00	1059.02	1059.02	1060.90	22.50	11.00	200.49	465.09
*	3550.000	50.00	.00	.00	1054.81	2206.00	1059.27	1059.27	1061.15	22.50	11.00	200.49	465.09
*	3600.000	50.00	.00	.00	1055.06	2206.00	1059.52	1059.52	1061.40	22.50	11.00	200.49	465.09
*	3650.000	50.00	.00	.00	1055.31	2206.00	1059.77	1059.77	1061.65	22.50	11.00	200.49	465.09
*	3700.000	50.00	.00	.00	1055.56	2206.00	1060.02	1060.02	1061.90	22.50	11.00	200.49	465.09
*	3720.000	20.00	.00	.00	1056.01	2206.00	1060.47	1060.47	1062.35	22.50	11.00	200.49	465.09
*	3740.000	20.00	.00	.00	1056.46	2206.00	1060.92	1060.92	1062.80	22.50	11.00	200.49	465.09
*	3760.000	20.00	.00	.00	1056.90	2206.00	1061.37	1061.37	1063.25	22.50	11.00	200.49	465.09
*	3780.000	20.00	.00	.00	1057.35	2206.00	1061.81	1061.81	1063.69	22.50	11.00	200.49	465.09
*	3800.000	20.00	.00	.00	1057.80	2206.00	1062.26	1062.26	1064.14	22.50	11.00	200.49	465.09
	3850.000	50.00	.00	.00	1057.87	2206.00	1062.76	1062.34	1064.27	16.40	9.88	223.36	544.74
	3900.000	50.00	.00	.00	1057.95	2206.00	1062.86	1062.41	1064.36	16.08	9.81	224.86	550.08
	3950.000	50.00	.00	.00	1058.02	2206.00	1062.95	1062.48	1064.44	15.94	9.78	225.55	552.55
	4008.000	58.23	.00	.00	1058.11	2206.00	1063.09	1062.57	1064.53	15.23	9.63	229.11	565.33
*	4050.000	41.77	.00	.00	1058.17	2206.00	1063.90	1062.16	1064.64	6.48	6.93	318.12	866.54

	4100.000	50.33	.00	.00	1058.25	2206.00	1064.21	1061.79	1064.69	3.88	5.61	393.45	1120.28
	4125.000	30.00	.00	.00	1058.29	2206.00	1064.31	1061.63	1064.71	3.10	5.09	433.45	1253.52
	4163.000	38.00	.00	.00	1058.35	2206.00	1064.32	1061.69	1064.73	3.18	5.13	429.78	1237.73
*	4175.000	12.00	.00	.00	1062.42	2206.00	1065.76	1065.76	1067.28	23.48	9.92	222.46	455.29
*	4190.000	15.00	.00	.00	1062.40	2206.00	1065.80	1065.80	1067.50	25.07	10.47	210.78	440.57
*	4197.000	11.00	.00	.00	1062.50	2206.00	1066.22	1066.22	1068.09	25.34	10.99	200.80	438.21
*	4248.000	51.00	1069.00	1066.70	1062.70	2206.00	1068.17	.00	1069.04	7.53	7.47	295.42	804.10

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	4300.000	52.00	.00	.00	1063.10	2206.00	1068.02	1067.27	1069.28	12.78	9.00	245.11	617.07
*	4350.000	50.00	.00	.00	1063.40	2206.00	1067.84	1067.84	1069.82	22.77	11.29	195.42	462.32
*	4400.000	50.00	.00	.00	1063.60	2206.00	1068.23	1068.23	1070.20	22.81	11.28	195.57	461.93
*	4450.000	50.00	.00	.00	1064.00	2206.00	1068.39	1068.39	1070.33	22.55	11.17	197.55	464.59
*	4500.000	50.00	.00	.00	1064.20	2206.00	1068.60	1068.60	1070.59	22.97	11.33	194.72	460.28
*	4550.000	50.00	.00	.00	1064.50	2206.00	1068.86	1068.86	1070.86	23.07	11.37	194.10	459.31
	4600.000	50.00	.00	.00	1064.70	2206.00	1069.71	1068.92	1071.02	12.69	9.17	240.55	619.34
	4645.000	45.00	.00	.00	1065.50	2206.00	1069.99	1069.43	1071.10	14.09	8.46	260.85	587.76
	4660.000	15.00	.00	.00	1065.00	2206.00	1070.21	1068.71	1071.16	8.77	7.84	281.31	744.71
	4712.000	52.00	1073.00	1070.30	1065.30	2206.00	1071.31	.00	1072.03	5.62	6.79	324.74	930.62
	4733.000	21.00	.00	.00	1065.40	2206.00	1071.70	1068.96	1072.13	3.20	5.25	419.82	1233.66
*	4738.000	5.00	.00	.00	1067.42	2206.00	1071.15	1071.15	1072.80	22.84	10.30	214.07	461.64
	4750.000	12.00	.00	.00	1067.44	2206.00	1071.38	1071.15	1072.84	18.92	9.68	227.79	507.23
	4800.000	50.00	.00	.00	1067.51	2206.00	1071.64	1071.22	1072.94	15.95	9.15	240.98	552.28
	4850.000	50.00	.00	.00	1067.59	2206.00	1071.72	1071.30	1073.02	15.88	9.14	241.36	553.60
	4900.000	50.00	.00	.00	1067.66	2206.00	1071.81	1071.37	1073.10	15.85	9.13	241.52	554.16
	4950.000	50.00	.00	.00	1067.73	2206.00	1071.89	1071.45	1073.18	15.76	9.12	241.98	555.74
	5000.000	50.00	.00	.00	1067.81	2206.00	1071.98	1071.52	1073.26	15.63	9.09	242.64	558.03
	5050.000	50.00	.00	.00	1067.88	2206.00	1072.06	1071.59	1073.34	15.48	9.06	243.40	560.68

	5100.000	50.00	.00	.00	1067.96	2206.00	1072.15	1071.67	1073.42	15.33	9.03	244.19	563.43
	5120.000	20.00	.00	.00	1067.99	2206.00	1071.86	1071.79	1073.59	22.81	10.57	208.75	461.91
	5170.000	50.00	.00	.00	1068.06	2206.00	1072.25	1071.86	1073.72	17.65	9.72	226.90	525.13
*	5180.000	18.00	.00	.00	1071.56	2206.00	1075.37	1075.37	1077.17	24.12	10.76	205.00	449.18
*	5200.000	20.00	.00	.00	1071.70	2206.00	1075.51	1075.51	1077.31	24.06	10.75	205.16	449.73
*	5235.000	35.00	.00	.00	1072.00	2206.00	1075.87	1075.87	1077.81	25.26	11.17	197.42	438.93
*	5323.000	88.00	1080.00	1077.40	1072.90	2206.00	1078.00	.00	1079.12	10.67	8.49	259.91	675.48

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	5325.000	2.00	.00	.00	1072.94	2206.00	1078.37	1076.75	1079.20	7.48	7.33	300.77	806.44
	5350.000	25.00	.00	.00	1072.98	2206.00	1078.28	1076.95	1079.27	9.22	7.98	276.37	726.35
	5400.000	50.00	.00	.00	1073.05	2206.00	1078.27	1077.24	1079.34	10.53	8.32	265.23	679.90
	5434.000	34.27	.00	.00	1073.10	2206.00	1078.04	1077.57	1079.51	15.71	9.73	226.66	556.57
	5450.000	15.73	.00	.00	1073.13	2206.00	1078.06	1077.59	1079.53	15.82	9.76	226.11	554.57
	5500.000	50.00	.00	.00	1073.20	2206.00	1078.14	1077.66	1079.61	15.79	9.75	226.29	555.23
	5544.000	43.53	.00	.00	1073.27	2206.00	1078.21	1077.73	1079.68	15.71	9.73	226.65	556.52
	5600.000	63.36	.00	.00	1073.36	2206.00	1078.32	1077.82	1079.78	15.60	9.71	227.21	558.52
	5650.000	50.00	.00	.00	1073.44	2206.00	1078.40	1077.90	1079.86	15.48	9.68	227.82	560.72
	5700.000	50.00	.00	.00	1073.51	2206.00	1078.49	1077.97	1079.94	15.36	9.66	228.44	562.92
	5750.000	50.00	.00	.00	1073.59	2206.00	1078.58	1078.04	1080.02	15.24	9.63	229.02	565.00
	5800.000	50.00	.00	.00	1073.66	2206.00	1078.66	1078.12	1080.09	15.14	9.61	229.54	566.90
	5850.000	50.00	.00	.00	1073.73	2206.00	1078.74	1078.19	1080.17	15.06	9.59	229.99	568.50
	5885.000	35.00	.00	.00	1073.79	2206.00	1078.80	1078.25	1080.22	14.99	9.58	230.34	569.78
*	5900.000	15.00	.00	.00	1078.78	2206.00	1083.24	1083.24	1085.12	22.57	11.01	200.28	464.39
*	5950.000	50.00	.00	.00	1079.03	2206.00	1083.49	1083.49	1085.37	22.48	11.00	200.55	465.31
*	6000.000	50.00	.00	.00	1079.28	2206.00	1083.74	1083.74	1085.62	22.49	11.00	200.51	465.15
*	6050.000	50.00	.00	.00	1079.53	2206.00	1083.99	1083.99	1085.87	22.48	11.00	200.53	465.24

*	6100.000	50.00	.00	.00	1079.78	2206.00	1084.24	1084.24	1086.12	22.50	11.00	200.49	465.08
*	6150.000	50.00	.00	.00	1080.03	2206.00	1084.49	1084.49	1086.37	22.50	11.00	200.49	465.08
*	6200.000	50.00	.00	.00	1080.28	2206.00	1084.74	1084.74	1086.62	22.50	11.00	200.49	465.08
*	6250.000	50.00	.00	.00	1080.53	2206.00	1084.99	1084.99	1086.87	22.50	11.00	200.49	465.08
*	6300.000	50.00	.00	.00	1080.78	2206.00	1085.24	1085.24	1087.12	22.50	11.00	200.49	465.08
*	6340.000	40.00	.00	.00	1080.98	2206.00	1085.44	1085.44	1087.32	22.50	11.00	200.49	465.08
*	6360.000	20.00	.00	.00	1081.45	2206.00	1085.91	1085.91	1087.79	22.50	11.00	200.49	465.08
*	6380.000	20.00	.00	.00	1081.91	2206.00	1086.37	1086.37	1088.25	22.50	11.00	200.49	465.08

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	6400.000	20.00	.00	.00	1082.38	2206.00	1086.84	1086.84	1088.72	22.50	11.00	200.49	465.08
*	6420.000	20.00	.00	.00	1082.84	2206.00	1087.31	1087.31	1089.19	22.50	11.00	200.49	465.08
*	6440.000	20.00	.00	.00	1083.31	2206.00	1087.77	1087.77	1089.65	22.50	11.00	200.49	465.08
	6460.000	20.00	.00	.00	1083.34	2206.00	1088.12	1087.80	1089.72	17.78	10.15	217.25	523.16
	6500.000	40.00	.00	.00	1083.40	2206.00	1088.31	1087.86	1089.80	16.06	9.81	224.94	550.39
	6540.000	40.00	.00	.00	1083.46	2206.00	1088.37	1087.92	1089.86	16.01	9.80	225.18	551.27
	6580.000	40.00	.00	.00	1083.52	2206.00	1088.44	1087.98	1089.93	15.96	9.79	225.44	552.19
	6621.000	40.93	.00	.00	1083.58	2206.00	1088.51	1088.04	1089.99	15.87	9.77	225.88	553.77
*	6650.000	29.07	.00	.00	1083.96	2206.00	1088.52	1088.52	1090.30	22.73	10.69	206.30	462.74
*	6700.000	50.00	.00	.00	1084.62	2206.00	1089.48	1089.48	1091.18	23.03	10.48	210.49	459.69
*	6752.000	51.83	.00	.00	1085.30	2206.00	1090.69	1090.69	1092.53	24.34	10.90	202.47	447.13

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CHANNEL IMPROVE, SUBCRIT

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
1000.000	2206.00	1044.72	.00	.00	.00	119.56	.00

	1080.000	2206.00	1045.04	.00	.33	.00	90.73	79.83
	1116.000	2206.00	1045.28	.00	.24	.00	92.46	36.42
	1150.000	2206.00	1045.49	.00	.20	.00	95.36	33.75
	1200.000	2206.00	1045.70	.00	.22	.00	98.96	50.00
	1250.000	2206.00	1045.87	.00	.16	.00	102.15	50.00
	1300.000	2206.00	1046.00	.00	.13	.00	105.09	50.00
	1350.000	2206.00	1046.12	.00	.11	.00	107.89	50.00
	1400.000	2206.00	1046.21	.00	.10	.00	110.56	50.00
	1456.000	2206.00	1046.31	.00	.10	.00	113.46	56.33
	1495.000	2206.00	1046.32	.00	.01	.00	103.73	38.67
	1550.000	2206.00	1046.21	.00	-.11	.00	83.54	55.00
*	1560.000	2206.00	1048.01	.00	1.79	.00	77.70	10.00
*	1580.000	2206.00	1048.50	.00	.49	.00	79.59	20.00
	1600.000	2206.00	1048.75	.00	.25	.00	80.58	20.00
	1650.000	2206.00	1048.92	.00	.17	.00	76.71	50.00
	1700.000	2206.00	1049.10	.00	.17	.00	72.87	50.00
	1750.000	2206.00	1049.27	.00	.17	.00	69.01	50.00
	1800.000	2206.00	1049.44	.00	.17	.00	65.15	50.00
	1850.000	2206.00	1049.61	.00	.17	.00	61.30	50.00
	1900.000	2206.00	1049.78	.00	.17	.00	57.44	50.00
	1931.000	2206.00	1049.89	.00	.11	.00	55.02	31.29
*	1950.000	2206.00	1050.08	.00	.20	.00	55.69	18.71
	2000.000	2206.00	1050.18	.00	.10	.00	55.79	50.00

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
2050.000	2206.00	1050.26	.00	.08	.00	55.80	50.00
2100.000	2206.00	1050.34	.00	.08	.00	55.81	50.00
2150.000	2206.00	1050.42	.00	.08	.00	55.84	50.00

	2200.000	2206.00	1050.50	.00	.08	.00	55.86	50.00
	2250.000	2206.00	1050.59	.00	.08	.00	55.89	50.00
	2300.000	2206.00	1050.67	.00	.08	.00	55.92	50.00
	2350.000	2206.00	1050.75	.00	.08	.00	55.95	50.00
	2400.000	2206.00	1050.83	.00	.08	.00	55.98	50.00
	2450.000	2206.00	1050.91	.00	.08	.00	56.00	50.00
	2500.000	2206.00	1050.99	.00	.08	.00	56.01	50.00
	2550.000	2206.00	1051.07	.00	.08	.00	56.03	50.00
	2600.000	2206.00	1051.14	.00	.08	.00	56.03	50.00
	2650.000	2206.00	1051.22	.00	.08	.00	56.04	50.00
	2700.000	2206.00	1051.29	.00	.08	.00	56.04	50.00
	2750.000	2206.00	1051.37	.00	.08	.00	56.05	50.00
	2800.000	2206.00	1051.44	.00	.07	.00	56.05	50.00
	2850.000	2206.00	1051.52	.00	.07	.00	56.05	50.00
	2885.000	2206.00	1051.57	.00	.05	.00	56.04	35.00
*	2900.000	2206.00	1056.02	.00	4.45	.00	53.84	15.00
*	2950.000	2206.00	1056.27	.00	.25	.00	53.85	50.00
*	3000.000	2206.00	1056.52	.00	.25	.00	53.85	50.00
*	3050.000	2206.00	1056.77	.00	.25	.00	53.85	50.00
*	3100.000	2206.00	1057.02	.00	.25	.00	53.85	50.00
*	3150.000	2206.00	1057.27	.00	.25	.00	53.85	50.00
*	3200.000	2206.00	1057.52	.00	.25	.00	53.85	50.00
*	3250.000	2206.00	1057.77	.00	.25	.00	53.85	50.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	3300.000	2206.00	1058.02	.00	.25	.00	53.85	50.00
*	3350.000	2206.00	1058.27	.00	.25	.00	53.85	50.00

*	3400.000	2206.00	1058.52	.00	.25	.00	53.85	50.00
*	3450.000	2206.00	1058.77	.00	.25	.00	53.85	50.00
*	3500.000	2206.00	1059.02	.00	.25	.00	53.85	50.00
*	3550.000	2206.00	1059.27	.00	.25	.00	53.85	50.00
*	3600.000	2206.00	1059.52	.00	.25	.00	53.85	50.00
*	3650.000	2206.00	1059.77	.00	.25	.00	53.85	50.00
*	3700.000	2206.00	1060.02	.00	.25	.00	53.85	50.00
*	3720.000	2206.00	1060.47	.00	.45	.00	53.85	20.00
*	3740.000	2206.00	1060.92	.00	.45	.00	53.85	20.00
*	3760.000	2206.00	1061.37	.00	.45	.00	53.85	20.00
*	3780.000	2206.00	1061.81	.00	.45	.00	53.85	20.00
*	3800.000	2206.00	1062.26	.00	.45	.00	53.85	20.00
	3850.000	2206.00	1062.76	.00	.50	.00	55.52	50.00
	3900.000	2206.00	1062.86	.00	.10	.00	55.63	50.00
	3950.000	2206.00	1062.95	.00	.09	.00	55.68	50.00
	4008.000	2206.00	1063.09	.00	.14	.00	55.94	58.23
*	4050.000	2206.00	1063.90	.00	.80	.00	67.08	41.77
	4100.000	2206.00	1064.21	.00	.31	.00	77.94	50.33
	4125.000	2206.00	1064.31	.00	.10	.00	84.07	30.00
	4163.000	2206.00	1064.32	.00	.01	.00	83.89	38.00
*	4175.000	2206.00	1065.76	.00	1.44	.00	73.35	12.00
*	4190.000	2206.00	1065.80	.00	.04	.00	61.99	15.00
*	4197.000	2206.00	1066.22	.00	.42	.00	53.99	11.00
*	4248.000	2206.00	1068.17	.00	1.95	.00	55.04	51.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	4300.000	2206.00	1068.02	.00	-.15	.00	57.66	52.00
*	4350.000	2206.00	1067.84	.00	-.18	.00	50.02	50.00

*	4400.000	2206.00	1068.23	.00	.39	.00	50.11	50.00
*	4450.000	2206.00	1068.39	.00	.17	.00	50.96	50.00
*	4500.000	2206.00	1068.60	.00	.21	.00	49.22	50.00
*	4550.000	2206.00	1068.86	.00	.26	.00	49.07	50.00
	4600.000	2206.00	1069.71	.00	.85	.00	54.55	50.00
	4645.000	2206.00	1069.99	.00	.28	.00	73.76	45.00
	4660.000	2206.00	1070.21	.00	.22	.00	53.99	15.00
	4712.000	2206.00	1071.31	.00	1.11	.00	54.00	52.00
	4733.000	2206.00	1071.70	.00	.38	.00	79.21	21.00
*	4738.000	2206.00	1071.15	.00	-.55	.00	64.90	5.00
	4750.000	2206.00	1071.38	.00	.24	.00	65.74	12.00
	4800.000	2206.00	1071.64	.00	.26	.00	66.54	50.00
	4850.000	2206.00	1071.72	.00	.08	.00	66.56	50.00
	4900.000	2206.00	1071.81	.00	.08	.00	66.57	50.00
	4950.000	2206.00	1071.89	.00	.08	.00	66.60	50.00
	5000.000	2206.00	1071.98	.00	.09	.00	66.64	50.00
	5050.000	2206.00	1072.06	.00	.09	.00	66.69	50.00
	5100.000	2206.00	1072.15	.00	.09	.00	66.73	50.00
	5120.000	2206.00	1071.86	.00	-.29	.00	57.75	20.00
	5170.000	2206.00	1072.25	.00	.39	.00	58.37	50.00
*	5180.000	2206.00	1075.37	.00	3.12	.00	57.62	18.00
*	5200.000	2206.00	1075.51	.00	.14	.00	57.63	20.00
*	5235.000	2206.00	1075.87	.00	.36	.00	50.99	35.00
*	5323.000	2206.00	1078.00	.00	2.13	.00	50.99	88.00

1

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SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
5325.000	2206.00	1078.37	.00	.37	.00	60.85	2.00

	5350.000	2206.00	1078.28	.00	-.09	.00	57.41	25.00
	5400.000	2206.00	1078.27	.00	-.01	.00	61.26	50.00
	5434.000	2206.00	1078.04	.00	-.23	.00	55.76	34.27
	5450.000	2206.00	1078.06	.00	.02	.00	55.72	15.73
	5500.000	2206.00	1078.14	.00	.08	.00	55.73	50.00
	5544.000	2206.00	1078.21	.00	.07	.00	55.76	43.53
	5600.000	2206.00	1078.32	.00	.11	.00	55.80	63.36
	5650.000	2206.00	1078.40	.00	.09	.00	55.84	50.00
	5700.000	2206.00	1078.49	.00	.09	.00	55.89	50.00
	5750.000	2206.00	1078.58	.00	.08	.00	55.93	50.00
	5800.000	2206.00	1078.66	.00	.08	.00	55.97	50.00
	5850.000	2206.00	1078.74	.00	.08	.00	56.00	50.00
	5885.000	2206.00	1078.80	.00	.06	.00	56.02	35.00
*	5900.000	2206.00	1083.24	.00	4.44	.00	53.84	15.00
*	5950.000	2206.00	1083.49	.00	.26	.00	53.86	50.00
*	6000.000	2206.00	1083.74	.00	.25	.00	53.85	50.00
*	6050.000	2206.00	1083.99	.00	.25	.00	53.85	50.00
*	6100.000	2206.00	1084.24	.00	.25	.00	53.85	50.00
*	6150.000	2206.00	1084.49	.00	.25	.00	53.85	50.00
*	6200.000	2206.00	1084.74	.00	.25	.00	53.85	50.00
*	6250.000	2206.00	1084.99	.00	.25	.00	53.85	50.00
*	6300.000	2206.00	1085.24	.00	.25	.00	53.85	50.00
*	6340.000	2206.00	1085.44	.00	.20	.00	53.85	40.00
*	6360.000	2206.00	1085.91	.00	.47	.00	53.85	20.00
*	6380.000	2206.00	1086.37	.00	.47	.00	53.85	20.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	6400.000	2206.00	1086.84	.00	.47	.00	53.85	20.00

*	6420.000	2206.00	1087.31	.00	.47	.00	53.85	20.00
*	6440.000	2206.00	1087.77	.00	.47	.00	53.85	20.00
	6460.000	2206.00	1088.12	.00	.35	.00	55.08	20.00
	6500.000	2206.00	1088.31	.00	.19	.00	55.64	40.00
	6540.000	2206.00	1088.37	.00	.07	.00	55.65	40.00
	6580.000	2206.00	1088.44	.00	.07	.00	55.67	40.00
	6621.000	2206.00	1088.51	.00	.07	.00	55.71	40.93
*	6650.000	2206.00	1088.52	.00	.01	.00	58.92	29.07
*	6700.000	2206.00	1089.48	.00	.95	.00	62.77	50.00
*	6752.000	2206.00	1090.69	.00	1.22	.00	59.12	51.83

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SUMMARY OF ERRORS AND SPECIAL NOTES

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CAUTION SECNO=   1560.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   1560.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   1580.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   1950.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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CAUTION SECNO=   2900.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

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   07FEB01      10:50:09                                                    PAGE   66


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WARNING SECNO=   4050.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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CAUTION SECNO=   4248.000  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=   4248.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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   07FEB01      10:50:09                                                    PAGE   67


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CAUTION SECNO=   5323.000  PROFILE=  1  HYDRAULIC JUMP D.S.
WARNING SECNO=   5323.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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CAUTION SECNO=   6150.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
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CAUTION SECNO=   6420.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6420.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
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   07FEB01      10:50:09                                                    PAGE   68


CAUTION SECNO=   6440.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6440.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

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CAUTION SECNO=   6752.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   6752.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
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Manning's n Value and Transition Loss Coefficient Review

Report File = C:\RUN\WT4CHAN.NT2
Date: 2/7/2001
Time: 11:52:30 AM

SECNO	XNL	XNR	XNCH	CCHV	CEHV	Structure
1000	0.04	0.04	0.025	0.1	0.3	
1080	0.04	0.04	0.025	0.1	0.3	
1116	0.04	0.04	0.025	0.1	0.3	
1150	0.04	0.04	0.025	0.1	0.3	
1200	0.04	0.04	0.025	0.1	0.3	
1250	0.04	0.04	0.025	0.1	0.3	
1300	0.04	0.04	0.025	0.1	0.3	
1350	0.04	0.04	0.025	0.1	0.3	
1400	0.04	0.04	0.025	0.1	0.3	
1456	0.04	0.04	0.025	0.1	0.3	
1495	0.04	0.04	0.025	0.1	0.3	
1550	0.03	0.03	0.015	0.1	0.3	
1560	0.03	0.03	0.015	0.1	0.3	
1580	0.04	0.04	0.028	0.1	0.3	
1600	0.04	0.04	0.028	0.1	0.3	
1650	0.04	0.04	0.028	0.1	0.3	
1700	0.04	0.04	0.028	0.1	0.3	
1750	0.04	0.04	0.028	0.1	0.3	
1800	0.04	0.04	0.028	0.1	0.3	
1850	0.04	0.04	0.028	0.1	0.3	
1900	0.04	0.04	0.028	0.1	0.3	
1931	0.04	0.04	0.028	0.1	0.3	
1950	0.03	0.03	0.015	0.1	0.3	
2000	0.03	0.03	0.015	0.1	0.3	
2050	0.03	0.03	0.015	0.1	0.3	
2100	0.03	0.03	0.015	0.1	0.3	
2150	0.03	0.03	0.015	0.1	0.3	
2200	0.03	0.03	0.015	0.1	0.3	
2250	0.03	0.03	0.015	0.1	0.3	
2300	0.03	0.03	0.015	0.1	0.3	
2350	0.03	0.03	0.015	0.1	0.3	
2400	0.03	0.03	0.015	0.1	0.3	
2450	0.03	0.03	0.015	0.1	0.3	
2500	0.03	0.03	0.015	0.1	0.3	
2550	0.03	0.03	0.015	0.1	0.3	
2600	0.03	0.03	0.015	0.1	0.3	
2650	0.03	0.03	0.015	0.1	0.3	
2700	0.03	0.03	0.015	0.1	0.3	
2750	0.03	0.03	0.015	0.1	0.3	
2800	0.03	0.03	0.015	0.1	0.3	
2850	0.03	0.03	0.015	0.1	0.3	
2885	0.03	0.03	0.015	0.1	0.3	
2900	0.03	0.03	0.015	0.1	0.3	
2950	0.03	0.03	0.015	0.1	0.3	
3000	0.03	0.03	0.015	0.1	0.3	
3050	0.03	0.03	0.015	0.1	0.3	
3100	0.03	0.03	0.015	0.1	0.3	
3150	0.03	0.03	0.015	0.1	0.3	
3200	0.03	0.03	0.015	0.1	0.3	
3250	0.03	0.03	0.015	0.1	0.3	
3300	0.03	0.03	0.015	0.1	0.3	
3350	0.03	0.03	0.015	0.1	0.3	
3400	0.03	0.03	0.015	0.1	0.3	
3450	0.03	0.03	0.015	0.1	0.3	
3500	0.03	0.03	0.015	0.1	0.3	
3550	0.03	0.03	0.015	0.1	0.3	
3600	0.03	0.03	0.015	0.1	0.3	
3650	0.03	0.03	0.015	0.1	0.3	
3700	0.03	0.03	0.015	0.1	0.3	
3720	0.03	0.03	0.015	0.1	0.3	
3740	0.03	0.03	0.015	0.1	0.3	
3760	0.03	0.03	0.015	0.1	0.3	
3780	0.03	0.03	0.015	0.1	0.3	
3800	0.03	0.03	0.015	0.1	0.3	
3850	0.03	0.03	0.015	0.1	0.3	
3900	0.03	0.03	0.015	0.1	0.3	

IN NOTEBOOK SENT TO FEMA, CHECK-2 REPORTS WERE PRESENTED LIKE THIS SHEET

CHECK-2 Program: NT Module
Manning's n Value and Transition Loss Coefficient Review

Report File = C:\RUN\WT4CHAN.NT2
Date: 2/7/2001
Time: 11:52:30 AM

SECNO	XNL	XNR	XNCH	CCHV	CEHV	Structure
1000	0.04	0.04	0.025	0.1	0.3	
1080	0.04	0.04	0.025	0.1	0.3	
1116	0.04	0.04	0.025	0.1	0.3	
1150	0.04	0.04	0.025	0.1	0.3	
1200	0.04	0.04	0.025	0.1	0.3	
1250	0.04	0.04	0.025	0.1	0.3	
1300	0.04	0.04	0.025	0.1	0.3	
1350	0.04	0.04	0.025	0.1	0.3	
1400	0.04	0.04	0.025	0.1	0.3	
1456	0.04	0.04	0.025	0.1	0.3	
1495	0.04	0.04	0.025	0.1	0.3	
1550	0.03	0.03	0.015	0.1	0.3	
1560	0.03	0.03	0.015	0.1	0.3	
1580	0.04	0.04	0.028	0.1	0.3	
1600	0.04	0.04	0.028	0.1	0.3	
1650	0.04	0.04	0.028	0.1	0.3	
1700	0.04	0.04	0.028	0.1	0.3	
1750	0.04	0.04	0.028	0.1	0.3	
1800	0.04	0.04	0.028	0.1	0.3	
1850	0.04	0.04	0.028	0.1	0.3	
1900	0.04	0.04	0.028	0.1	0.3	
1931	0.04	0.04	0.028	0.1	0.3	
1950	0.03	0.03	0.015	0.1	0.3	
2000	0.03	0.03	0.015	0.1	0.3	
2050	0.03	0.03	0.015	0.1	0.3	
2100	0.03	0.03	0.015	0.1	0.3	
2150	0.03	0.03	0.015	0.1	0.3	
2200	0.03	0.03	0.015	0.1	0.3	
2250	0.03	0.03	0.015	0.1	0.3	
2300	0.03	0.03	0.015	0.1	0.3	
2350	0.03	0.03	0.015	0.1	0.3	
2400	0.03	0.03	0.015	0.1	0.3	
2450	0.03	0.03	0.015	0.1	0.3	
2500	0.03	0.03	0.015	0.1	0.3	
2550	0.03	0.03	0.015	0.1	0.3	
2600	0.03	0.03	0.015	0.1	0.3	
2650	0.03	0.03	0.015	0.1	0.3	
2700	0.03	0.03	0.015	0.1	0.3	
2750	0.03	0.03	0.015	0.1	0.3	
2800	0.03	0.03	0.015	0.1	0.3	
2850	0.03	0.03	0.015	0.1	0.3	
2885	0.03	0.03	0.015	0.1	0.3	
2900	0.03	0.03	0.015	0.1	0.3	
2950	0.03	0.03	0.015	0.1	0.3	
3000	0.03	0.03	0.015	0.1	0.3	
3050	0.03	0.03	0.015	0.1	0.3	
3100	0.03	0.03	0.015	0.1	0.3	
3150	0.03	0.03	0.015	0.1	0.3	
3200	0.03	0.03	0.015	0.1	0.3	
3250	0.03	0.03	0.015	0.1	0.3	
3300	0.03	0.03	0.015	0.1	0.3	
3350	0.03	0.03	0.015	0.1	0.3	
3400	0.03	0.03	0.015	0.1	0.3	
3450	0.03	0.03	0.015	0.1	0.3	
3500	0.03	0.03	0.015	0.1	0.3	
3550	0.03	0.03	0.015	0.1	0.3	
3600	0.03	0.03	0.015	0.1	0.3	
3650	0.03	0.03	0.015	0.1	0.3	
3700	0.03	0.03	0.015	0.1	0.3	
3720	0.03	0.03	0.015	0.1	0.3	
3740	0.03	0.03	0.015	0.1	0.3	
3760	0.03	0.03	0.015	0.1	0.3	
3780	0.03	0.03	0.015	0.1	0.3	
3800	0.03	0.03	0.015	0.1	0.3	
3850	0.03	0.03	0.015	0.1	0.3	
3900	0.03	0.03	0.015	0.1	0.3	

3950	0.03	0.03	0.015	0.1	0.3	
4008	0.03	0.03	0.015	0.1	0.3	
4050	0.03	0.03	0.015	0.1	0.3	
4100	0.03	0.03	0.015	0.1	0.3	
4125	0.03	0.03	0.015	0.1	0.3	
4163	0.03	0.03	0.015	0.1	0.3	
4175	0.03	0.03	0.015	0.1	0.3	
4190	0.03	0.03	0.015	0.1	0.3	
4197	0.03	0.03	0.015	0.3	0.5	
4248	0.03	0.03	0.015	0.3	0.5	SB+X2
4300	0.03	0.03	0.015	0.3	0.5	
4350	0.03	0.03	0.015	0.1	0.3	
4400	0.03	0.03	0.015	0.1	0.3	
4450	0.03	0.03	0.015	0.1	0.3	
4500	0.03	0.03	0.015	0.1	0.3	
4550	0.03	0.03	0.015	0.1	0.3	
4600	0.03	0.03	0.015	0.1	0.3	
4645	0.03	0.03	0.015	0.1	0.3	
4660	0.03	0.03	0.015	0.3	0.5	
4712	0.03	0.03	0.015	0.3	0.5	SB+X2
4733	0.03	0.03	0.015	0.3	0.5	
4738	0.03	0.03	0.015	0.1	0.3	
4750	0.03	0.03	0.015	0.1	0.3	
4800	0.03	0.03	0.015	0.1	0.3	
4850	0.03	0.03	0.015	0.1	0.3	
4900	0.03	0.03	0.015	0.1	0.3	
4950	0.03	0.03	0.015	0.1	0.3	
5000	0.03	0.03	0.015	0.1	0.3	
5050	0.03	0.03	0.015	0.1	0.3	
5100	0.03	0.03	0.015	0.1	0.3	
5120	0.03	0.03	0.015	0.1	0.3	
5170	0.03	0.03	0.015	0.1	0.3	
5180	0.03	0.03	0.015	0.1	0.3	
5200	0.03	0.03	0.015	0.1	0.3	
5235	0.03	0.03	0.015	0.3	0.5	
5323	0.03	0.03	0.015	0.3	0.5	SB+X2
5325	0.03	0.03	0.015	0.3	0.5	
5350	0.03	0.03	0.015	0.1	0.3	
5400	0.03	0.03	0.015	0.1	0.3	
5434	0.03	0.03	0.015	0.1	0.3	
5450	0.03	0.03	0.015	0.1	0.3	
5500	0.03	0.03	0.015	0.1	0.3	
5544	0.03	0.03	0.015	0.1	0.3	
5600	0.03	0.03	0.015	0.1	0.3	
5650	0.03	0.03	0.015	0.1	0.3	
5700	0.03	0.03	0.015	0.1	0.3	
5750	0.03	0.03	0.015	0.1	0.3	
5800	0.03	0.03	0.015	0.1	0.3	
5850	0.03	0.03	0.015	0.1	0.3	
5885	0.03	0.03	0.015	0.1	0.3	
5900	0.03	0.03	0.015	0.1	0.3	
5950	0.03	0.03	0.015	0.1	0.3	
6000	0.03	0.03	0.015	0.1	0.3	
6050	0.03	0.03	0.015	0.1	0.3	
6100	0.03	0.03	0.015	0.1	0.3	
6150	0.03	0.03	0.015	0.1	0.3	
6200	0.03	0.03	0.015	0.1	0.3	
6250	0.03	0.03	0.015	0.1	0.3	
6300	0.03	0.03	0.015	0.1	0.3	
6340	0.03	0.03	0.015	0.1	0.3	
6360	0.03	0.03	0.015	0.1	0.3	
6380	0.03	0.03	0.015	0.1	0.3	
6400	0.03	0.03	0.015	0.1	0.3	
6420	0.03	0.03	0.015	0.1	0.3	
6440	0.03	0.03	0.015	0.1	0.3	
6460	0.03	0.03	0.015	0.1	0.3	
6500	0.03	0.03	0.015	0.1	0.3	
6540	0.03	0.03	0.015	0.1	0.3	
6580	0.03	0.03	0.015	0.1	0.3	
6621	0.03	0.03	0.015	0.1	0.3	
6650	0.03	0.03	0.015	0.1	0.3	
6700	0.03	0.03	0.015	0.1	0.3	
6752	0.03	0.03	0.015	0.1	0.3	

------Summary of Statistics------

	Minimum	Maximum
Left Overbank N Value:	0.03	0.04
Right Overbank N Value:	0.03	0.04
Channel N Value:	0.015	0.028
Contraction Coefficient:	0.1	0.3
Expansion Coefficient:	0.3	0.5

------Roughness Coefficient Check------

SECNO: 1550
NT RC 01 Left overbank n value is less than 0.04

SECNO: 1550
NT RC 03 Right overbank n value is less than 0.04

SECNO: 1550
NT RC 05 Channel n value is less than 0.025

SECNO: 1560
NT RC 01 Left overbank n value is less than 0.04

SECNO: 1560
NT RC 03 Right overbank n value is less than 0.04

SECNO: 1560
NT RC 05 Channel n value is less than 0.025

SECNO: 1950
NT RC 01 Left overbank n value is less than 0.04

SECNO: 1950
NT RC 03 Right overbank n value is less than 0.04

SECNO: 1950
NT RC 05 Channel n value is less than 0.025

SECNO: 2000
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2000
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2000
NT RC 05 Channel n value is less than 0.025

SECNO: 2050
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2050
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2050
NT RC 05 Channel n value is less than 0.025

SECNO: 2100
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2100
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2100
NT RC 05 Channel n value is less than 0.025

SECNO: 2150
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2150
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2150
NT RC 05 Channel n value is less than 0.025

SECNO: 2200

```
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2200
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2200
NT RC 05  Channel n value is less than 0.025

SECNO:  2250
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2250
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2250
NT RC 05  Channel n value is less than 0.025

SECNO:  2300
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2300
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2300
NT RC 05  Channel n value is less than 0.025

SECNO:  2350
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2350
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2350
NT RC 05  Channel n value is less than 0.025

SECNO:  2400
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2400
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2400
NT RC 05  Channel n value is less than 0.025

SECNO:  2450
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2450
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2450
NT RC 05  Channel n value is less than 0.025

SECNO:  2500
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2500
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2500
NT RC 05  Channel n value is less than 0.025

SECNO:  2550
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2550
NT RC 03  Right overbank n value is less than 0.04

SECNO:  2550
NT RC 05  Channel n value is less than 0.025

SECNO:  2600
NT RC 01  Left overbank n value is less than 0.04

SECNO:  2600
NT RC 03  Right overbank n value is less than 0.04
```

SECNO: 2600
NT RC 05 Channel n value is less than 0.025

SECNO: 2650
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2650
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2650
NT RC 05 Channel n value is less than 0.025

SECNO: 2700
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2700
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2700
NT RC 05 Channel n value is less than 0.025

SECNO: 2750
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2750
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2750
NT RC 05 Channel n value is less than 0.025

SECNO: 2800
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2800
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2800
NT RC 05 Channel n value is less than 0.025

SECNO: 2850
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2850
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2850
NT RC 05 Channel n value is less than 0.025

SECNO: 2885
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2885
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2885
NT RC 05 Channel n value is less than 0.025

SECNO: 2900
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2900
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2900
NT RC 05 Channel n value is less than 0.025

SECNO: 2950
NT RC 01 Left overbank n value is less than 0.04

SECNO: 2950
NT RC 03 Right overbank n value is less than 0.04

SECNO: 2950
NT RC 05 Channel n value is less than 0.025

SECNO: 3000
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3000
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3000
NT RC 05 Channel n value is less than 0.025

SECNO: 3050
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3050
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3050
NT RC 05 Channel n value is less than 0.025

SECNO: 3100
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3100
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3100
NT RC 05 Channel n value is less than 0.025

SECNO: 3150
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3150
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3150
NT RC 05 Channel n value is less than 0.025

SECNO: 3200
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3200
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3200
NT RC 05 Channel n value is less than 0.025

SECNO: 3250
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3250
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3250
NT RC 05 Channel n value is less than 0.025

SECNO: 3300
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3300
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3300
NT RC 05 Channel n value is less than 0.025

SECNO: 3350
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3350
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3350
NT RC 05 Channel n value is less than 0.025

SECNO: 3400
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3400

```
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3400
NT RC 05  Channel n value is less than 0.025

SECNO:  3450
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3450
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3450
NT RC 05  Channel n value is less than 0.025

SECNO:  3500
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3500
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3500
NT RC 05  Channel n value is less than 0.025

SECNO:  3550
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3550
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3550
NT RC 05  Channel n value is less than 0.025

SECNO:  3600
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3600
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3600
NT RC 05  Channel n value is less than 0.025

SECNO:  3650
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3650
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3650
NT RC 05  Channel n value is less than 0.025

SECNO:  3700
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3700
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3700
NT RC 05  Channel n value is less than 0.025

SECNO:  3720
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3720
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3720
NT RC 05  Channel n value is less than 0.025

SECNO:  3740
NT RC 01  Left overbank n value is less than 0.04

SECNO:  3740
NT RC 03  Right overbank n value is less than 0.04

SECNO:  3740
NT RC 05  Channel n value is less than 0.025
```

SECNO: 3760
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3760
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3760
NT RC 05 Channel n value is less than 0.025

SECNO: 3780
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3780
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3780
NT RC 05 Channel n value is less than 0.025

SECNO: 3800
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3800
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3800
NT RC 05 Channel n value is less than 0.025

SECNO: 3850
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3850
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3850
NT RC 05 Channel n value is less than 0.025

SECNO: 3900
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3900
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3900
NT RC 05 Channel n value is less than 0.025

SECNO: 3950
NT RC 01 Left overbank n value is less than 0.04

SECNO: 3950
NT RC 03 Right overbank n value is less than 0.04

SECNO: 3950
NT RC 05 Channel n value is less than 0.025

SECNO: 4008
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4008
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4008
NT RC 05 Channel n value is less than 0.025

SECNO: 4050
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4050
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4050
NT RC 05 Channel n value is less than 0.025

SECNO: 4100
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4100
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4100
NT RC 05 Channel n value is less than 0.025

SECNO: 4125
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4125
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4125
NT RC 05 Channel n value is less than 0.025

SECNO: 4163
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4163
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4163
NT RC 05 Channel n value is less than 0.025

SECNO: 4175
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4175
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4175
NT RC 05 Channel n value is less than 0.025

SECNO: 4190
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4190
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4190
NT RC 05 Channel n value is less than 0.025

SECNO: 4197
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4197
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4197
NT RC 05 Channel n value is less than 0.025

SECNO: 4248
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4248
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4248
NT RC 05 Channel n value is less than 0.025

SECNO: 4300
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4300
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4300
NT RC 05 Channel n value is less than 0.025

SECNO: 4350
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4350
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4350

NT RC 05 Channel n value is less than 0.025

SECNO: 4400
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4400
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4400
NT RC 05 Channel n value is less than 0.025

SECNO: 4450
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4450
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4450
NT RC 05 Channel n value is less than 0.025

SECNO: 4500
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4500
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4500
NT RC 05 Channel n value is less than 0.025

SECNO: 4550
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4550
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4550
NT RC 05 Channel n value is less than 0.025

SECNO: 4600
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4600
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4600
NT RC 05 Channel n value is less than 0.025

SECNO: 4645
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4645
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4645
NT RC 05 Channel n value is less than 0.025

SECNO: 4660
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4660
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4660
NT RC 05 Channel n value is less than 0.025

SECNO: 4712
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4712
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4712
NT RC 05 Channel n value is less than 0.025

SECNO: 4733
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4733
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4733
NT RC 05 Channel n value is less than 0.025

SECNO: 4738
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4738
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4738
NT RC 05 Channel n value is less than 0.025

SECNO: 4750
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4750
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4750
NT RC 05 Channel n value is less than 0.025

SECNO: 4800
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4800
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4800
NT RC 05 Channel n value is less than 0.025

SECNO: 4850
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4850
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4850
NT RC 05 Channel n value is less than 0.025

SECNO: 4900
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4900
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4900
NT RC 05 Channel n value is less than 0.025

SECNO: 4950
NT RC 01 Left overbank n value is less than 0.04

SECNO: 4950
NT RC 03 Right overbank n value is less than 0.04

SECNO: 4950
NT RC 05 Channel n value is less than 0.025

SECNO: 5000
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5000
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5000
NT RC 05 Channel n value is less than 0.025

SECNO: 5050
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5050
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5050
NT RC 05 Channel n value is less than 0.025

SECNO: 5100
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5100
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5100
NT RC 05 Channel n value is less than 0.025

SECNO: 5120
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5120
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5120
NT RC 05 Channel n value is less than 0.025

SECNO: 5170
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5170
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5170
NT RC 05 Channel n value is less than 0.025

SECNO: 5180
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5180
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5180
NT RC 05 Channel n value is less than 0.025

SECNO: 5200
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5200
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5200
NT RC 05 Channel n value is less than 0.025

SECNO: 5235
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5235
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5235
NT RC 05 Channel n value is less than 0.025

SECNO: 5323
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5323
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5323
NT RC 05 Channel n value is less than 0.025

SECNO: 5325
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5325
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5325
NT RC 05 Channel n value is less than 0.025

SECNO: 5350

NT RC 01 Left overbank n value is less than 0.04

SECNO: 5350
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5350
NT RC 05 Channel n value is less than 0.025

SECNO: 5400
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5400
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5400
NT RC 05 Channel n value is less than 0.025

SECNO: 5434
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5434
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5434
NT RC 05 Channel n value is less than 0.025

SECNO: 5450
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5450
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5450
NT RC 05 Channel n value is less than 0.025

SECNO: 5500
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5500
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5500
NT RC 05 Channel n value is less than 0.025

SECNO: 5544
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5544
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5544
NT RC 05 Channel n value is less than 0.025

SECNO: 5600
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5600
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5600
NT RC 05 Channel n value is less than 0.025

SECNO: 5650
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5650
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5650
NT RC 05 Channel n value is less than 0.025

SECNO: 5700
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5700
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5700
NT RC 05 Channel n value is less than 0.025

SECNO: 5750
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5750
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5750
NT RC 05 Channel n value is less than 0.025

SECNO: 5800
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5800
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5800
NT RC 05 Channel n value is less than 0.025

SECNO: 5850
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5850
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5850
NT RC 05 Channel n value is less than 0.025

SECNO: 5885
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5885
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5885
NT RC 05 Channel n value is less than 0.025

SECNO: 5900
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5900
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5900
NT RC 05 Channel n value is less than 0.025

SECNO: 5950
NT RC 01 Left overbank n value is less than 0.04

SECNO: 5950
NT RC 03 Right overbank n value is less than 0.04

SECNO: 5950
NT RC 05 Channel n value is less than 0.025

SECNO: 6000
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6000
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6000
NT RC 05 Channel n value is less than 0.025

SECNO: 6050
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6050
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6050
NT RC 05 Channel n value is less than 0.025

SECNO: 6100
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6100
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6100
NT RC 05 Channel n value is less than 0.025

SECNO: 6150
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6150
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6150
NT RC 05 Channel n value is less than 0.025

SECNO: 6200
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6200
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6200
NT RC 05 Channel n value is less than 0.025

SECNO: 6250
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6250
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6250
NT RC 05 Channel n value is less than 0.025

SECNO: 6300
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6300
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6300
NT RC 05 Channel n value is less than 0.025

SECNO: 6340
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6340
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6340
NT RC 05 Channel n value is less than 0.025

SECNO: 6360
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6360
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6360
NT RC 05 Channel n value is less than 0.025

SECNO: 6380
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6380
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6380
NT RC 05 Channel n value is less than 0.025

SECNO: 6400
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6400

NT RC 03 Right overbank n value is less than 0.04

SECNO: 6400
NT RC 05 Channel n value is less than 0.025

SECNO: 6420
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6420
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6420
NT RC 05 Channel n value is less than 0.025

SECNO: 6440
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6440
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6440
NT RC 05 Channel n value is less than 0.025

SECNO: 6460
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6460
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6460
NT RC 05 Channel n value is less than 0.025

SECNO: 6500
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6500
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6500
NT RC 05 Channel n value is less than 0.025

SECNO: 6540
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6540
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6540
NT RC 05 Channel n value is less than 0.025

SECNO: 6580
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6580
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6580
NT RC 05 Channel n value is less than 0.025

SECNO: 6621
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6621
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6621
NT RC 05 Channel n value is less than 0.025

SECNO: 6650
NT RC 01 Left overbank n value is less than 0.04

SECNO: 6650
NT RC 03 Right overbank n value is less than 0.04

SECNO: 6650
NT RC 05 Channel n value is less than 0.025

```
SECNO:  6700
NT RC 01  Left overbank n value is less than 0.04

SECNO:  6700
NT RC 03  Right overbank n value is less than 0.04

SECNO:  6700
NT RC 05  Channel n value is less than 0.025

SECNO:  6752
NT RC 01  Left overbank n value is less than 0.04

SECNO:  6752
NT RC 03  Right overbank n value is less than 0.04

SECNO:  6752
NT RC 05  Channel n value is less than 0.025


------NC and NH records Check------


------Transition Coefficient check------


------Roughness Coefficient Check at Structures------

SECNO:  4197
NT RS 01  This is section  2  of SB bridge routine.
          Channel n value is less than 0.025.

SECNO:  4248
NT RS 01  This is section  3  of SB bridge routine.
          Channel n value is less than 0.025.

SECNO:  4660
NT RS 01  This is section  2  of SB bridge routine.
          Channel n value is less than 0.025.

SECNO:  4712
NT RS 01  This is section  3  of SB bridge routine.
          Channel n value is less than 0.025.

SECNO:  5235
NT RS 01  This is section  2  of SB bridge routine.
          Channel n value is less than 0.025.

SECNO:  5323
NT RS 01  This is section  3  of SB bridge routine.
          Channel n value is less than 0.025.


------Special Notes and Messages check------


---End Program---
```

CHECK-2 Program, XSEC Module
Cross Section Location and Alignment Review

Report File = C:\RUN\WT4CHAN.XS2
Date: 2/7/2001
Time: 11:52:51 AM

SECNO	Xlob	Xrob	Xlch	CHWID	Topwid	Structure	Flow Type
1000	0.00	0.00	0.00	86.00	119.56		
1080	79.83	79.83	79.83	172.00	90.73		
1116	36.42	36.42	36.42	173.00	92.46		
1150	33.75	33.75	33.75	175.18	95.36		
1200	50.00	50.00	50.00	181.16	98.96		
1250	50.00	50.00	50.00	161.47	102.15		
1300	50.00	50.00	50.00	203.57	105.09		
1350	50.00	50.00	50.00	193.85	107.89		
1400	50.00	50.00	50.00	219.11	110.56		
1456	56.33	56.33	56.33	229.48	113.46		
1495	38.67	38.67	38.67	400.00	103.73		
1550	55.00	55.00	55.00	100.28	83.54		
1560	10.00	10.00	10.00	89.28	77.70		C
1580	20.00	20.00	20.00	89.22	79.59		
1600	20.00	20.00	20.00	89.16	80.58		
1650	50.00	50.00	50.00	85.40	76.71		
1700	50.00	50.00	50.00	81.28	72.87		
1750	50.00	50.00	50.00	77.14	69.01		
1800	50.00	50.00	50.00	73.00	65.15		
1850	50.00	50.00	50.00	68.86	61.30		
1900	50.00	50.00	50.00	65.12	57.44		
1931	31.29	31.29	31.29	62.28	55.02		
1950	18.71	18.71	18.71	62.56	55.69		
2000	50.00	50.00	50.00	62.26	55.79		
2050	50.00	50.00	50.00	62.36	55.80		
2100	50.00	50.00	50.00	62.46	55.81		
2150	50.00	50.00	50.00	62.16	55.84		
2200	50.00	50.00	50.00	62.26	55.86		
2250	50.00	50.00	50.00	61.56	55.89		
2300	50.00	50.00	50.00	62.06	55.92		
2350	50.00	50.00	50.00	62.16	55.95		
2400	50.00	50.00	50.00	62.67	55.98		
2450	50.00	50.00	50.00	63.17	56.00		
2500	50.00	50.00	50.00	63.07	56.01		
2550	50.00	50.00	50.00	63.17	56.03		
2600	50.00	50.00	50.00	63.27	56.03		
2650	50.00	50.00	50.00	63.17	56.04		
2700	50.00	50.00	50.00	63.07	56.04		
2750	50.00	50.00	50.00	63.17	56.05		
2800	50.00	50.00	50.00	62.28	56.05		
2850	50.00	50.00	50.00	73.98	56.05		
2885	35.00	35.00	35.00	76.96	56.04		
2900	15.00	15.00	15.00	58.16	53.84		C
2950	50.00	50.00	50.00	58.36	53.85		C
3000	50.00	50.00	50.00	58.16	53.85		C
3050	50.00	50.00	50.00	58.36	53.85		C
3100	50.00	50.00	50.00	57.76	53.85		C
3150	50.00	50.00	50.00	57.96	53.85		C
3200	50.00	50.00	50.00	58.16	53.85		C
3250	50.00	50.00	50.00	58.36	53.85		C
3300	50.00	50.00	50.00	58.16	53.85		C
3350	50.00	50.00	50.00	58.36	53.85		C
3400	50.00	50.00	50.00	58.16	53.85		C
3450	50.00	50.00	50.00	58.36	53.85		C
3500	50.00	50.00	50.00	58.16	53.85		C
3550	50.00	50.00	50.00	57.96	53.85		C
3600	50.00	50.00	50.00	58.16	53.85		C
3650	50.00	50.00	50.00	58.36	53.85		C
3700	50.00	50.00	50.00	58.16	53.85		C
3720	20.00	20.00	20.00	59.56	53.85		C
3740	20.00	20.00	20.00	60.98	53.85		C
3760	20.00	20.00	20.00	62.38	53.85		C
3780	20.00	20.00	20.00	63.80	53.85		C
3800	20.00	20.00	20.00	65.20	53.85		C
3850	50.00	50.00	50.00	65.70	55.52		

3900	50.00	50.00	50.00	65.40	55.63		
3950	50.00	50.00	50.00	65.50	55.68		
4008	58.23	58.23	58.23	65.16	55.94		
4050	41.77	41.77	41.77	73.52	67.08		
4100	50.33	50.33	50.33	83.50	77.94		
4125	30.00	30.00	30.00	92.02	84.07		
4163	38.00	38.00	38.00	95.00	83.89		
4175	12.00	12.00	12.00	79.52	73.35		C
4190	15.00	15.00	15.00	62.00	61.99		C
4197	11.00	11.00	11.00	54.00	53.99		C
4248	51.00	51.00	51.00	54.00	55.04	SB+X2	
4300	52.00	52.00	52.00	58.00	57.66		
4350	50.00	50.00	50.00	52.00	50.02		C
4400	50.00	50.00	50.00	52.00	50.11		C
4450	50.00	50.00	50.00	53.00	50.96		C
4500	50.00	50.00	50.00	51.00	49.22		C
4550	50.00	50.00	50.00	51.00	49.07		C
4600	50.00	50.00	50.00	55.00	54.55		
4645	45.00	45.00	45.00	75.00	73.76		
4660	15.00	15.00	15.00	54.00	53.99		
4712	52.00	52.00	52.00	54.00	54.00	SB+X2	
4733	21.00	21.00	21.00	400.00	79.21		
4738	5.00	5.00	5.00	400.00	64.90		C
4750	12.00	12.00	12.00	74.05	65.74		
4800	50.00	50.00	50.00	73.96	66.54		
4850	50.00	50.00	50.00	74.06	66.56		
4900	50.00	50.00	50.00	74.16	66.57		
4950	50.00	50.00	50.00	73.86	66.60		
5000	50.00	50.00	50.00	73.96	66.64		
5050	50.00	50.00	50.00	73.68	66.69		
5100	50.00	50.00	50.00	76.18	66.73		
5120	20.00	20.00	20.00	65.07	57.75		
5170	50.00	50.00	50.00	67.12	58.37		
5180	18.00	18.00	18.00	60.43	57.62		C
5200	20.00	20.00	20.00	60.82	57.63		C
5235	35.00	35.00	35.00	51.00	50.99		C
5323	88.00	88.00	88.00	51.00	50.99	SB+X2	
5325	2.00	2.00	2.00	400.00	60.85		
5350	25.00	25.00	25.00	60.76	57.41		
5400	50.00	50.00	50.00	68.98	61.26		
5434	34.27	34.27	34.27	64.38	55.76		
5450	15.73	15.73	15.73	64.30	55.72		
5500	50.00	50.00	50.00	64.00	55.73		
5544	43.53	43.53	43.53	63.74	55.76		
5600	63.36	63.36	63.36	63.36	55.80		
5650	50.00	50.00	50.00	63.46	55.84		
5700	50.00	50.00	50.00	62.36	55.89		
5750	50.00	50.00	50.00	62.06	55.93		
5800	50.00	50.00	50.00	61.76	55.97		
5850	50.00	50.00	50.00	74.26	56.00		
5885	35.00	35.00	35.00	77.46	56.02		
5900	15.00	15.00	15.00	58.48	53.84		C
5950	50.00	50.00	50.00	58.68	53.86		C
6000	50.00	50.00	50.00	58.48	53.85		C
6050	50.00	50.00	50.00	58.28	53.85		C
6100	50.00	50.00	50.00	58.48	53.85		C
6150	50.00	50.00	50.00	58.68	53.85		C
6200	50.00	50.00	50.00	58.88	53.85		C
6250	50.00	50.00	50.00	59.08	53.85		C
6300	50.00	50.00	50.00	58.88	53.85		C
6340	40.00	40.00	40.00	58.88	53.85		C
6360	20.00	20.00	20.00	59.82	53.85		C
6380	20.00	20.00	20.00	60.36	53.85		C
6400	20.00	20.00	20.00	60.88	53.85		C
6420	20.00	20.00	20.00	62.22	53.85		C
6440	20.00	20.00	20.00	62.36	53.85		C
6460	20.00	20.00	20.00	62.64	55.08		
6500	40.00	40.00	40.00	62.80	55.64		
6540	40.00	40.00	40.00	62.96	55.65		
6580	40.00	40.00	40.00	63.12	55.67		
6621	40.93	40.93	40.93	63.68	55.71		
6650	29.07	29.07	29.07	71.27	58.92		C
6700	50.00	50.00	50.00	73.39	62.77		C
6752	51.83	51.83	51.83	65.98	59.12		C

```
XS IF 04  D = divided flow
XS IF 05  E = extended cross section
XS IF 06  C = critical depth
XS IF 07  S = X5 record

-----Distance Check-----

----Channel Width Check----

SECNO:  1550
XS CW 02  Channel width changes by a factor of two when compared to the
          the downstream cross section.

SECNO:  4750
XS CW 02  Channel width changes by a factor of two when compared to the
          the downstream cross section.

SECNO:  5350
XS CW 02  Channel width changes by a factor of two when compared to the
          the downstream cross section.

----Spacing Check----

----Ineffective Flow Area----

----Location Check----

SECNO:  4600
XS LC 01  This cross section is located too far upstream from
          critical depth cross section.
          SECNO    DEPTH     TOPWID    XLCH
          4550     4.36      49.07
          4600     5.01      54.55     50
          ---------------------------------------
          Ratio    1.15      1.11

----Discharge Check----

XS DC 02  Constant discharge used for the entire profile.

----Starting WSEL Check----

XS SW 04  Starting friction slope of  0.004  is specified on the firstJ1 record.


---End Program---
```

CHECK-2 Program: Bridge Module

Report File = C:\RUN\WT4CHAN.BR2
Date: 2/7/2001
Time: 11:52:38 AM

SECNO	MXLCEL	MNREL	EG	CWSEL	ELMIN	Structure
1000	-----	-----	1045.64	1044.72	1040.9	
1080	-----	-----	1045.95	1045.04	1041.2	
1116	-----	-----	1046.07	1045.28	1041.23	
1150	-----	-----	1046.17	1045.49	1041.26	
1200	-----	-----	1046.29	1045.7	1041.3	
1250	-----	-----	1046.39	1045.87	1041.34	
1300	-----	-----	1046.47	1046	1041.38	
1350	-----	-----	1046.55	1046.12	1041.42	
1400	-----	-----	1046.61	1046.21	1041.46	
1456	-----	-----	1046.68	1046.31	1041.5	
1495	-----	-----	1046.74	1046.32	1041.54	
1550	-----	-----	1046.85	1046.21	1041.58	
1560	-----	-----	1049.48	1048.01	1044.83	
1580	-----	-----	1049.58	1048.5	1044.85	
1600	-----	-----	1049.69	1048.75	1044.86	
1650	-----	-----	1049.92	1048.92	1044.9	
1700	-----	-----	1050.15	1049.1	1044.94	
1750	-----	-----	1050.4	1049.27	1044.98	
1800	-----	-----	1050.66	1049.44	1045.02	
1850	-----	-----	1050.95	1049.61	1045.06	
1900	-----	-----	1051.27	1049.78	1045.1	
1931	-----	-----	1051.5	1049.89	1045.13	
1950	-----	-----	1051.56	1050.08	1045.16	
2000	-----	-----	1051.64	1050.18	1045.23	
2050	-----	-----	1051.72	1050.26	1045.31	
2100	-----	-----	1051.8	1050.34	1045.38	
2150	-----	-----	1051.88	1050.42	1045.46	
2200	-----	-----	1051.96	1050.5	1045.53	
2250	-----	-----	1052.03	1050.59	1045.61	
2300	-----	-----	1052.11	1050.67	1045.68	
2350	-----	-----	1052.19	1050.75	1045.76	
2400	-----	-----	1052.26	1050.83	1045.83	
2450	-----	-----	1052.34	1050.91	1045.91	
2500	-----	-----	1052.41	1050.99	1045.98	
2550	-----	-----	1052.49	1051.07	1046.06	
2600	-----	-----	1052.57	1051.14	1046.13	
2650	-----	-----	1052.64	1051.22	1046.21	
2700	-----	-----	1052.71	1051.29	1046.28	
2750	-----	-----	1052.79	1051.37	1046.36	
2800	-----	-----	1052.86	1051.44	1046.43	
2850	-----	-----	1052.94	1051.52	1046.51	
2885	-----	-----	1052.99	1051.57	1046.56	
2900	-----	-----	1057.9	1056.02	1051.56	
2950	-----	-----	1058.15	1056.27	1051.81	
3000	-----	-----	1058.4	1056.52	1052.06	
3050	-----	-----	1058.65	1056.77	1052.31	
3100	-----	-----	1058.9	1057.02	1052.56	
3150	-----	-----	1059.15	1057.27	1052.81	
3200	-----	-----	1059.4	1057.52	1053.06	
3250	-----	-----	1059.65	1057.77	1053.31	
3300	-----	-----	1059.9	1058.02	1053.56	
3350	-----	-----	1060.15	1058.27	1053.81	
3400	-----	-----	1060.4	1058.52	1054.06	
3450	-----	-----	1060.65	1058.77	1054.31	
3500	-----	-----	1060.9	1059.02	1054.56	
3550	-----	-----	1061.15	1059.27	1054.81	
3600	-----	-----	1061.4	1059.52	1055.06	
3650	-----	-----	1061.65	1059.77	1055.31	
3700	-----	-----	1061.9	1060.02	1055.56	
3720	-----	-----	1062.35	1060.47	1056.01	
3740	-----	-----	1062.8	1060.92	1056.46	
3760	-----	-----	1063.25	1061.37	1056.9	
3780	-----	-----	1063.69	1061.81	1057.35	
3800	-----	-----	1064.14	1062.26	1057.8	
3850	-----	-----	1064.27	1062.76	1057.87	
3900	-----	-----	1064.36	1062.86	1057.95	
3950	-----	-----	1064.44	1062.95	1058.02	

4008	-----	-----	1064.53	1063.09	1058.11	
4050	-----	-----	1064.64	1063.9	1058.17	
4100	-----	-----	1064.69	1064.21	1058.25	
4125	-----	-----	1064.71	1064.31	1058.29	
4163	-----	-----	1064.73	1064.32	1058.35	
4175	-----	-----	1067.28	1065.76	1062.42	
4190	-----	-----	1067.5	1065.8	1062.4	
4197	-----	-----	1068.09	1066.22	1062.5	
4248	1066.7	1069.	1069.04	1068.17	1062.7	SB+X2
4300	-----	-----	1069.28	1068.02	1063.1	
4350	-----	-----	1069.82	1067.84	1063.4	
4400	-----	-----	1070.2	1068.23	1063.6	
4450	-----	-----	1070.33	1068.39	1064	
4500	-----	-----	1070.59	1068.6	1064.2	
4550	-----	-----	1070.86	1068.86	1064.5	
4600	-----	-----	1071.02	1069.71	1064.7	
4645	-----	-----	1071.1	1069.99	1065.5	
4660	-----	-----	1071.16	1070.21	1065	
4712	1070.3	1073.	1072.03	1071.31	1065.3	SB+X2
4733	-----	-----	1072.13	1071.7	1065.4	
4738	-----	-----	1072.8	1071.15	1067.42	
4750	-----	-----	1072.84	1071.38	1067.44	
4800	-----	-----	1072.94	1071.64	1067.51	
4850	-----	-----	1073.02	1071.72	1067.59	
4900	-----	-----	1073.1	1071.81	1067.66	
4950	-----	-----	1073.18	1071.89	1067.73	
5000	-----	-----	1073.26	1071.98	1067.81	
5050	-----	-----	1073.34	1072.06	1067.88	
5100	-----	-----	1073.42	1072.15	1067.96	
5120	-----	-----	1073.59	1071.86	1067.99	
5170	-----	-----	1073.72	1072.25	1068.06	
5180	-----	-----	1077.17	1075.37	1071.56	
5200	-----	-----	1077.31	1075.51	1071.7	
5235	-----	-----	1077.81	1075.87	1072	
5323	1077.4	1080.	1079.12	1078	1072.9	SB+X2
5325	-----	-----	1079.2	1078.37	1072.94	
5350	-----	-----	1079.27	1078.28	1072.98	
5400	-----	-----	1079.34	1078.27	1073.05	
5434	-----	-----	1079.51	1078.04	1073.1	
5450	-----	-----	1079.53	1078.06	1073.13	
5500	-----	-----	1079.61	1078.14	1073.2	
5544	-----	-----	1079.68	1078.21	1073.27	
5600	-----	-----	1079.78	1078.32	1073.36	
5650	-----	-----	1079.86	1078.4	1073.44	
5700	-----	-----	1079.94	1078.49	1073.51	
5750	-----	-----	1080.02	1078.58	1073.59	
5800	-----	-----	1080.09	1078.66	1073.66	
5850	-----	-----	1080.17	1078.74	1073.73	
5885	-----	-----	1080.22	1078.8	1073.79	
5900	-----	-----	1085.12	1083.24	1078.78	
5950	-----	-----	1085.37	1083.49	1079.03	
6000	-----	-----	1085.62	1083.74	1079.28	
6050	-----	-----	1085.87	1083.99	1079.53	
6100	-----	-----	1086.12	1084.24	1079.78	
6150	-----	-----	1086.37	1084.49	1080.03	
6200	-----	-----	1086.62	1084.74	1080.28	
6250	-----	-----	1086.87	1084.99	1080.53	
6300	-----	-----	1087.12	1085.24	1080.78	
6340	-----	-----	1087.32	1085.44	1080.98	
6360	-----	-----	1087.79	1085.91	1081.45	
6380	-----	-----	1088.25	1086.37	1081.91	
6400	-----	-----	1088.72	1086.84	1082.38	
6420	-----	-----	1089.19	1087.31	1082.84	
6440	-----	-----	1089.65	1087.77	1083.31	
6460	-----	-----	1089.72	1088.12	1083.34	
6500	-----	-----	1089.8	1088.31	1083.4	
6540	-----	-----	1089.86	1088.37	1083.46	
6580	-----	-----	1089.93	1088.44	1083.52	
6621	-----	-----	1089.99	1088.51	1083.58	
6650	-----	-----	1090.3	1088.52	1083.96	
6700	-----	-----	1091.18	1089.48	1084.62	
6752	-----	-----	1092.53	1090.69	1085.3	

SECNO: 4248
Type Structure: Special Bridge
Type of Flow: Pressure and Weir Flow

Section	SECNO	XLCH	CWSEL	EG	TOPWID	CHWID	X3 Left	X3 Right
1	4190	15	1065.8	1067.5	61.99	62.		
2	4197	11	1066.22	1068.09	53.99	54.	1100	1100
3	4248	51	1068.17	1069.04	55.04	54.	0	0
4	4300	52	1068.02	1069.28	57.66	58.		
5	4350	50	1067.84	1069.82	50.02	52.		

EGLWC:	1068.78	QLOW:	0	WRLEN:	70		
EGPRS:	1069.07	QPR:	2192.05				
BR.WS:	0	QWEIR:	1.44				
BR.VEL:	0	Q:	2206				
MNLRDEL:	1069	MXLCEL:	1066.7	ELLC:	1066.7		
MNRRDEL:	1069	MNRDEL:	1069	ELTRD:	1069		
XK:	1.25	XKOR:	1.51	COFQ:	3		
RDELEN:	70	BWC:	54	BWP:	4		
BAREA:	200	SS:	0	ELCHU:	1062.7	ELCHD:	1062.5

---BT records Check---

SECNO: 4248
BR BT 01 Left channel bank station is not specified within the BT data.
GR and BT data may not be aligned properly.

SECNO: 4248
BR BT 02 Right channel bank station is not specified within the BT data.
GR and BT data may not be aligned properly.

----Location check---

----X2 record check---

----X3 record check---

SECNO: 4197
BR X3 06 Section 2; Type of flow is Pressure and Weir Flow.
However, Left bank limiting elevation of 1100
is higher than the CWSEL of 1066.22 .

SECNO: 4197
BR X3 03 Section 2; Left bank limiting elevation of 1100 is not within the
maximum low chord elevation of 1066.7 and minimum left road
elevation of 1069 .

SECNO: 4197
BR X3 08 Section 2; Type of flow is Pressure and Weir Flow.
However, right bank limiting elevation of 1100
is higher than the CWSEL 1066.22 .

SECNO: 4197
BR X3 05 Section 2; Right bank limiting elevation of 1100 is not within the
maximum low chord elevation of 1066.7 and minimum right road
elevation of 1069 .

SECNO: 4248
BR X3 01 X3 record is not at section 3. Insert the X3 record
at that section and assign approproate limiting elevations.

---Presure Flow Check---

---Weir Flow Check---

SECNO: 4248
BR WF 02 Computed flow is pressure and weir flow. However, water surface elevation
at section 3 is lower than the minimum road elevation.

---TOPWIDTH Check---

SECNO: 4197
BR WF 09 Pressure and weir flow. However, critical depth occurs at section 2.

---Message Check---

SECNO: 4712
Type Structure: Special Bridge
Type of Flow: Pressure Flow

Section	SECNO	XLCH	CWSEL	EG	TOPWID	CHWID	X3 Left	X3 Right
1	4645	45	1069.99	1071.1	73.76	75.		
2	4660	15	1070.21	1071.16	53.99	54.	1100	1100
3	4712	52	1071.31	1072.03	54	54.	1100	1100
4	4733	21	1071.7	1072.13	79.21	400.		
5	4738	5	1071.15	1072.8	64.9	400.		

EGLWC:	1071.55	QLOW:	0	WRLEN:	0		
EGPRS:	1072.03	QPR:	2206				
BR.WS:	0	QWEIR:	0				
BR.VEL:	0	Q:	2206				
MNLRDEL:	1073	MXLCEL:	1070.3	ELLC:	1070.3		
MNRRDEL:	1073	MNRDEL:	1073	ELTRD:	1073		
XK:	1.25	XKOR:	1.51	COFQ:	3		
RDELEN:	70	BWC:	54	BWP:	4		
BAREA:	250	SS:	0	ELCHU:	1065.3	ELCHD:	1065

---BT records Check---

SECNO: 4712
BR BT 01 Left channel bank station is not specified within the BT data.
GR and BT data may not be aligned properly.

SECNO: 4712
BR BT 02 Right channel bank station is not specified within the BT data.
GR and BT data may not be aligned properly.

----Location check---

----X2 record check---

----X3 record check---

SECNO: 4712
BR X3 18 Section 3; Type of flow is Pressure Flow.
However, Left bank limiting elevation of 1100
is higher than the CWSEL 1071.31 and
velocity head is more than 0.5 ft.

SECNO: 4712
BR X3 03 Section 3; Left bank limiting elevation of 1100 is not within the
maximum low chord elevation of 1070.3 and minimum left road
elevation of 1073 .

SECNO: 4712
BR X3 19 Section 3; Type of flow is Pressure Flow.
However, right bank limiting elevation of 1100
is higher than the CWSEL 1071.31 and
velocity head is more than 0.5 ft.
SECNO: 4712

BR X3 05 Section 3; Right bank limiting elevation of 1100 is not within the
maximum low chord elevation of 1070.3 and minimum right road
elevation of 1073 .

---Presure Flow Check---

---Message Check---

SECNO: 5323
Type Structure: Special Bridge
Type of Flow: Low Flow - Class B

Section	SECNO	XLCH	CWSEL	EG	TOPWID	CHWID	X3 Left	X3 Right
1	5200	20	1075.51	1077.31	57.63	60.82		
2	5235	35	1075.87	1077.81	50.99	51.	1100	1100
3	5323	88	1078	1079.12	50.99	51.	1100	1100

```
 4       5325       2         1078.37   1079.2    60.85    400.
 5       5350       25        1078.28   1079.27   57.41    60.76

         EGLWC:     1079.12   QLOW:     2206      WRLEN:   0
         EGPRS:     1078.32   QPR:      0
         BR.WS:     1076.48   QWEIR:    0
         BR.VEL:    11.4      Q:        2206
         MNLRDEL:   1080      MXLCEL:   1077.4    ELLC:    1077.4
         MNRRDEL:   1080      MNRDEL:   1080      ELTRD:   1080
         XK:        1.05      XKOR:     1.51      COFQ:    3
         RDELEN:    70        BWC:      51        BWP:     3
         BAREA:     216       SS:       0         ELCHU:   1072.9      ELCHD:  1072

---BT records Check---

SECNO:   5323
BR BT 01  Left channel bank station is not specified within the BT data.
          GR and BT data may not be aligned properly.

SECNO:   5323
BR BT 02  Right channel bank station is not specified within the BT data.
          GR and BT data may not be aligned properly.

----Location check---

----X2 record check---

----X3 record check---

---Low Flow Check---

SECNO:    5323
BR LF 11  CWSEL of  1078  is higher than ELLC of  1077.4 ;
          However, the type of flow is Low Flow.

SECNO:    5323
BR PF 04  Computed XKOR of 1.53 is different from the XKOR of 1.51 on field 2 of SB record.
          CHECK2 uses an n value of  0.005  , which is less than the channel n value
          at section 3 by 0.01. The data used in the XKOR computation are:
          n =  0.005 ; A = 216.00; P = 114.00; R = 1.89; L =  88 ; Kf = 0.03; Ke = 0.50
          If the data is correct, the XKOR in the input file should be changed.
          Otherwise, please give explanation on the data used to compute the XKOR in
          the report file.
          If the structure is a box or circular culvert, use special culvert routine.

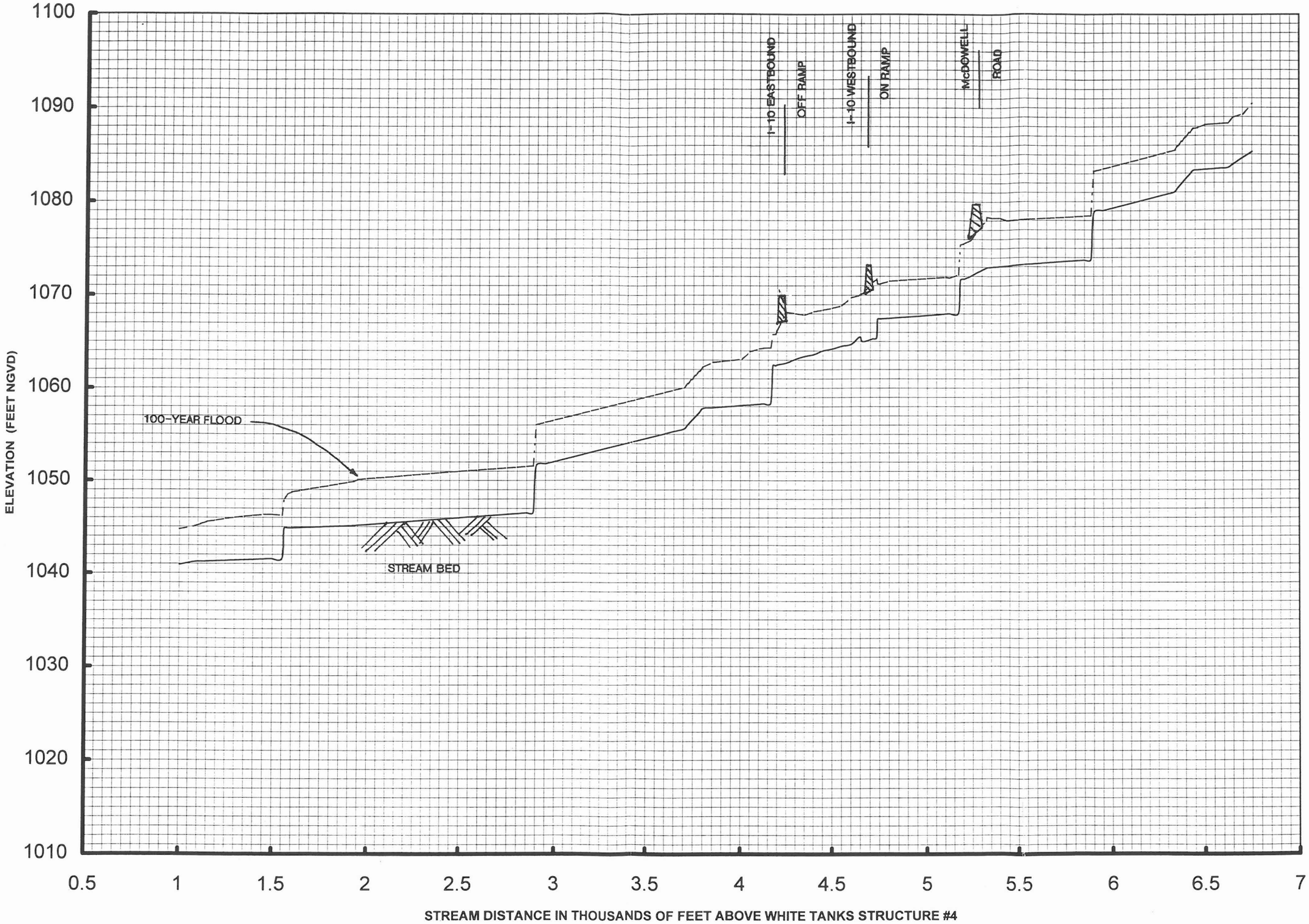
---Message Check---


---End Program---
```

SECTION 6

FLOOD PROFILE

The flood profile for the length of the channel improvement project follows.



FLOOD PROFILES

JACKRABBIT TRAIL WASH

SECTION 7

FLOOD CONTROL STRUCTURE MAINTENANCE PLAN

The related maintenance plan, for and by the Flood Control District of Maricopa County, follows this sheet.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

OPERATIONS AND MAINTENANCE DIVISION

OPERATION AND MAINTENANCE PROCEDURE

WHITE TANKS # 4 INLET IMPROVEMENTS (channel)

Inspections

1). Quarterly Operational Inspections
   a. List any discrepancies
   b. Review for action required
   c. Schedule necessary repairs

2). Annual Maintenance Inspection
   a. List all needed maintenance and repairs
   b. Assign work orders for the noted repairs

3). Formal Annual Inspections
   a. Inspect project to insure all maintenance and repairs are completed satisfactorily
   b. Complete annual inspection reports for file

4). Major Storm Event
   a. Inspect project during or after a major storm event
   b. List any problems
   c. Record high flows

5). Citizen Complaints/ Inquires
   a. Investigate area of complaint
   b. Respond to citizen within 48 hours
   c. Take action if in-house:refer to proper agent, if not

Operation and Maintenance Responsibilities

- All concrete and riprap Flood Control structures and associated metal work (repair/refurbish and debris removal)
- Erosion repairs and concrete repairs
- Sediment and debris removal from flows through channels
- Fencing and access gates
- Maintenance and access roads
- Project signs
- Weed abatement
- Safety hazards
- Rodent control
- Vandalism

SECTION 8

DISKETTE WITH HYDRAULIC MODEL

Item	**Filename**
HEC-2 model input	WT4CHAN.dat
HEC-2 model output	Wt4chan.out