Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

HYDRAULIC ANALYSIS
PIMA OUTFALL CHANNEL
ARIZONA CANAL OUTFALL CHANNEL
ARIZONA CANAL

prepared for:

Salt River Pima-Maricopa Indian Community
Engineering & Construction Services
10,005 East Osborn Road
Scottsdale, Arizona 85256

prepared by:

Robert L. Ward, P.E.
Consulting Engineer
5345 East McLellan Road, #112
Mesa, Arizona 85205

(602) 924-5962

October 19, 1998

Robert L. Ward

Registered Professional Engineer (Civil)
CERTIFICATE NO.
13505
ROBERT L.
WARD
Date Signed 10/19/98
ARIZONA U.S.A.

Table of Contents

1 PURPOSE OF STUDY 1

2 HYDROLOGY 2

3 TOPOGRAPHIC DATA 4

4 HYDRAULIC ANALYSIS 4

4.1 CROSS-SECTIONAL GEOMETRY 5

4.1.1 Arizona Canal 5

4.1.2 Pima Outfall Channel 5

4.1.3 Arizona Canal Outfall Channel (Evans-Kuhn Section) 6

4.1.4 Natural Floodplain East of 96th Street 6

4.2 STARTING WATER SURFACE ELEVATIONS 6

4.2.1 Arizona Canal 9

4.2.2 Pima Outfall Channel 9

4.3 BRIDGE & CULVERT SIMULATIONS 10

4.3.1 Arizona Canal 10

4.3.2 Pima Outfall Channel 11

4.4 MANNING'S ROUGHNESS VALUES 11

4.5 TRANSITION FROM CHANNEL GEOMETRY TO NATURAL FLOODPLAIN GEOMETRY 12

4.6 MANUAL SPLIT-FLOW CALCULATIONS 12

5 CONCLUSIONS 20

Robert L. Ward

Registered Professional Engineer (Civil)
CERTIFICATE NO.
13505
ROBERT L.
WARD
Date Signed 10/19/98
ARIZONA U.S.A.

Table of Tables

Table 4.1 - Summary of Split-Flow Routing Discharges 19

Table 5.1 - Comparison of Limiting Discharges, 100-Year, 7-Hour Storm 21

Table 5.2 - Summary of Water Surface Profile Elevations, Pima Outfall Channel & Arizona Canal Outfall Channel, 100-Year, 12-Hour Storm 22

Table of Figures

Figure 1.1 - Location Map 3

Figure 4.1 - EKA Plan Sheet For XSEC Data at East End of Channel 7

Figure 4.2 - EKA Plan Sheet For XSEC Data at East End of Channel 8

Figure 4.3 - Discharge Profile Along Arizona Canal, 100-Year, 7-Hour Storm 15

Figure 4.4 - Canal Bank Profile & Water Surface Profile, 100-Year, 7-Hour Storm 16

Figure 4.5 - Arizona Canal Profiles, XSECs 715 To 3105 17

Figure 4.6 - Routing Schematic For HEC-1 Points Used In Split-Flow Analysis 18

Figure 5.1 - Final Water Surface Design Profile, 100-Year, 12-Hour Storm 23

List of Sub-Appendices

Appendix A - SRPMIC Surveyed Cross-Section Data, 96th Street to Longmore Road

Appendix B - HEC-2 File COE7, Split-Flow Model For Arizona Canal-IBW Side-Spillway Rating Curve

Appendix C - HEC-2 File CANAL12A, Multiple Discharge Model For Arizona Canal

Appendix D - HEC-2 File PIMACH2, Multiple Discharge Model For Outfall Channels & North Overbank

Appendix E - Manual Split-Flow Calculations For 100-Year, 7-Hour Storm

Appendix F - Manual Split-Flow Calculations For 100-Year, 12-Hour Storm

Appendix G - HEC-1 Output Summary, 100-Year, 7-Hour Storm

Appendix H - HEC-1 Output Summary, 100-Year, 12-Hour Storm

Appendix I - HEC-2 File PIMACH2F, Final Design Profile, Pima & Arizona Canal Outfall Channels

List of Plates

Plate 1 - HEC-1 Routing Schematic With Drainage Boundaries

Plate 2 - Topographic Mapping With Channel & Cross-Section Alignments

Plate 3 - Topographic Mapping With Channel & Cross-Section Alignments

Plate 4 - HEC-2 XSEC Locations Between 96th Street & Longmore Road

1 PURPOSE OF STUDY

The Pima Outfall Channel is being constructed to provide a drainage outlet for floodwaters discharging from the recently completed 96th Street Storm Drain, and, from the proposed off-site drainage channel that will parallel the east side of the proposed Pima Freeway from Via Linda Drive to the Arizona Canal.

The design of this channel system has gone through a substantial evolution process since 1989. This process has created numerous name changes for the channel system. For consistency in this report, the following name conventions will be used:

1. **Pima Outfall Channel** is defined as that reach of channel that extends from just west of Pima Road to the intersection with the proposed north-south channel that will be located along the east side of the Pima Freeway. This section of channel was originally designed by Morrison Knudsen for the Arizona Department of Transportation (ADOT). The final channel design was turned over to the Salt River Pima-Maricopa Indian Community (SRPMIC), via an Inter-Governmental Agreement, in 1993. Some of the text, figures, or plates in this report may refer to ADOT channel stationing, which should be considered synonymous with the Pima Outfall Channel stationing.

2. **Arizona Canal Outfall Channel** is defined as that reach of channel that extends from the upstream end of the Pima Outfall Channel to the outlet of the 96th Street Storm Drain. This section of channel was designed by Evans-Kuhn & Associates, Inc., and, is sometimes referred to the Evans-Kuhn channel, or EKA channel.

Prior to construction of these new drainage channels, floodwaters have historically ponded along the north side of the Arizona Canal and slowly flowed west to the Indian Bend Wash (IBW) Interceptor Channel. Concerns have been raised that construction of these new drainage system features might change the hydraulic conveyance characteristics along the Arizona Canal and cause more floodwaters to enter the IBW Interceptor Channel than it was originally designed to accommodate.

Accordingly, the purpose of this study is to document the results of a hydrology and hydraulic analysis that was performed to verify that construction of: 1) the proposed Pima Outfall Channel; 2) the Pima Freeway North-South Drainage Channel; 3) the 96th Street Storm Drain; and 4) the Arizona Canal Outfall Channel, will not cause the design discharge used for the IBW Interceptor Channel to be exceeded. Limiting discharges at the following three locations were to be verified by this analysis.

1. North Longmore Road at the Arizona Canal. During the 100-year, 7-hour storm, no more than 6,500 cfs is allowed to pass west of Longmore road.

2. Pima Road intersection with Arizona Canal and proposed Pima Outfall Channel. During the 100-year, 7-hour storm, no more than 8,000 cfs

(combined Arizona Canal and Pima Outfall Channel flows) is allowed to pass west of this location.

3. Indian Bend Wash Interceptor Channel at downstream end of Arizona Canal side-spillway. The combined 100-year, 7-hour peak discharge from the proposed Pima Outfall Channel culvert and the Arizona Canal side-spillway cannot exceed 5,500 cfs.

The results of this study indicate that construction of the proposed channels and storm drain system will not cause the stated flow limitations to be exceeded at the three referenced locations during the 100-year, 7-hour storm. The 100-year, 7-hour storm is used as the basis for comparison in order to be compatible with the storm used by the Corps of Engineers for the design of the IBW Interceptor Channel.

The remainder this report presents a detailed discussion of the engineering assumptions and methodologies that were used in the hydrology and hydraulic analysis for this project. Figure 1.1 is a general vicinity map showing the project location.

2 HYDROLOGY

Detailed hydrology analyses have previously been prepared for this watershed as part of the off-site drainage design for the proposed Pima Freeway. The original hydrology study was completed in 1989 and was published in **Final Hydrology Report, Outer Loop Highway, Camelback Walk Channel to the Arizona Canal**, Simons, Li, & Associates, Inc., May 1989. Modifications were subsequently made to the original HEC-1 model to reflect minor highway alignment changes and proposed drainage improvements on SRPMIC lands. Several of these modeling revisions were published in **Preliminary Design Report, Landscaped Channel Concept, Outer Loop Highway, Via Linda to the Arizona Canal**, Robert L. Ward, P.E., March 16, 1990.

Additional modeling revisions were made after 1990 to address: 1) flow that originates between Pima Road and the Pima Freeway; 2) revised channel routing geometries; 3) the inclusion of additional channel routing operations; and 4) the addition of several divert operations to simulate flow exchanges along the Arizona Canal.

An updated hydrology study was performed in 1996 to reflect all watershed changes that have occurred since 1990. In addition to those changes listed above, the 1996 report also addressed: 1) recent urbanization of portions of the City of Scottsdale that were not urbanized when the original Pima Freeway hydrology study was performed; 2) a reservoir routing analysis of the Scottsdale Ranch Detention Basin; and 3) refinements to the outflow hydrographs at the CAP overchutes. Details of this refined hydrology analysis are presented in **Updated Hydrology Analysis, Arizona Canal Drainage Channel, Pima Freeway, Via Linda Drive to Arizona Canal**, Robert L. Ward, P.E., Consulting Engineer, August 20, 1996. Plate 1 from this 1996 report is included herein for reference as a HEC-1 routing schematic.

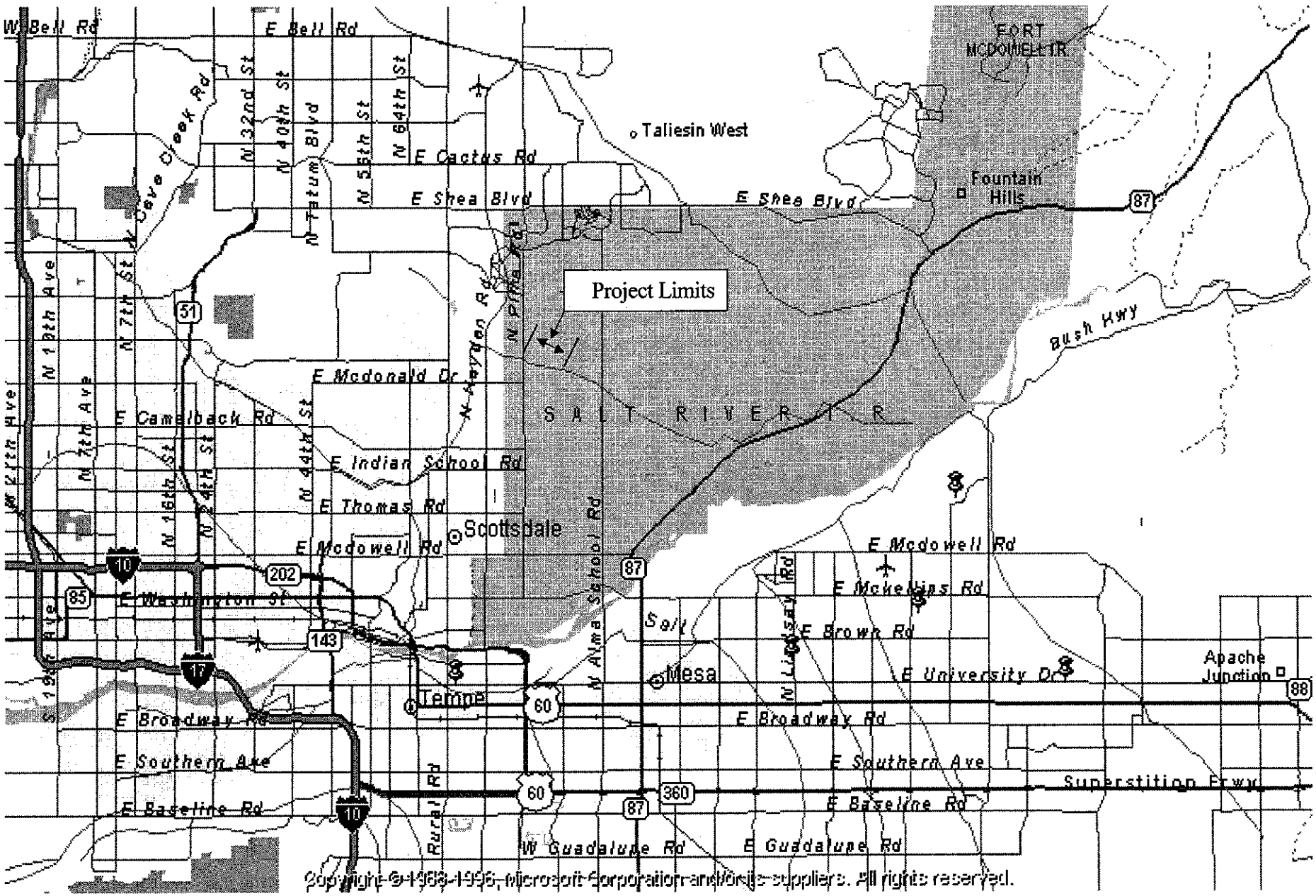


Figure 1.1
Location Map
Pima Outfall Channel

In order to address the different design storms used by the Corps of Engineers (COE) and by ADOT, this 1996 report evaluated both the 100-year, 7-hour COE storm and the 100-year, 12-hour hypothetical storm generated by HEC-1.

As stated previously, the 100-year, 7-hour storm was used to verify the flow limitations addressed in Section 1 of this report. At the request of ADOT, the 100-year, 12-hour storm was used for the design of the Pima Outfall Channel, and, for the Arizona Canal Outfall Channel.

3 TOPOGRAPHIC DATA

The original topographic mapping used for the design of the Pima Freeway off-site drainage channel was based on aerial photography dated July 19, 1989 (see Plates 2 & 3). The easterly extent of this mapping was approximately 3,300-feet east of Pima Road. Accordingly, additional mapping had to be obtained, for this current study, in order to model the natural floodplain geometry between 96th Street and Longmore Road.

This additional mapping was provided by SRPMIC in the form of surveyed cross-sections. Requested cross-section locations were drawn by R. Ward on an aerial photograph of the site (see Plate 4). The surveyed data was provided to R. Ward in the form of distance and elevation coordinates (HEC-2 GR format) referenced to the centerline of the Arizona Canal. The canal centerline station was designated as "100". Appendix A includes copies of the surveyed cross-section data that was provided by SRPMIC.

All survey data was tied to the same vertical datum that was previously used for the July 19, 1989 ADOT mapping.

4 HYDRAULIC ANALYSIS

The hydraulic analysis performed for this study focused on the development of water surface profiles for the Arizona Canal and for the proposed Pima and Arizona Canal Outfall Channels. HEC-2 was used for all hydraulic analyses presented in this report. As will be discussed in subsequent sections of this report, these water surface profiles were used to determine the locations, and magnitude, of water transfers over the north bank of the Arizona Canal.

Once the flow-splits between the canal and north overbank areas were determined, a final HEC-2 model was created to establish the 100-year water surface profile for use in both the Pima Outfall Channel and Arizona Canal Outfall Channel designs.

The following subsections discuss the hydraulic parameters that were used to create the HEC-2 models. Section 4.6 presents a discussion of the split-flow analysis that was used to determine the water transfers across the north bank of the Arizona Canal.

4.1 Cross-Sectional Geometry

Several sources of data were used to develop the cross-sectional geometry for the HEC-2 models that are presented in this report. These data sources are individually discussed in the following sections.

4.1.1 Arizona Canal

The cross-sectional geometry for the Arizona Canal was based on a trapezoidal section with a bottomwidth of 70-feet and a side-slope of approximately 1H:1V. The basis for this geometry was taken from sheet 17 of 18, COE **Design Drawings, IBW Interceptor Channel**, August 1980. Although the cross-sections listed in the COE drawings did not extend all the way to Longmore Road, it was assumed that this geometry would be the same for that reach of the canal that lies between Pima Road and Longmore Road.

The canal slope was assumed to be constant at 0.00038 ft/ft between Pima Road and Longmore Road. This invert slope is also shown on sheet 17 of 18 of the COE design drawings. This sheet lists a canal invert elevation of 1274.64 at COE Station 47+00 (2,086.45-feet east of Pima Road centerline). At a slope of 0.00038 ft/ft, this projects to an elevation of 1273.85 at Pima Road.

For the purpose of this study, all Arizona Canal invert elevations east of Pima Road were based on a 0.00038 ft/ft slope projection from elevation 1273.85 at the Pima Road centerline. For distance referencing purposes, Station 1,000 was assigned to the canal centerline at its intersection with the Pima Road centerline. Canal stationing increases east of Pima Road. Accordingly, the canal invert elevation at any point east of Pima Road would be calculated by multiplying the distance east of the Pima Road centerline by 0.00038 ft/ft and adding the result to 1273.85.

Due to the fact that the Arizona Canal is full of water, exact side-slope ratios could not be surveyed. Accordingly, side-slopes were approximated by taking survey shots at both the north and south sides of the canal bank. These survey shots were taken at the point where the canal-bank grade-break occurs. These top-of-bank coordinates were connected to the bottom elevation of the canal at points measured 35-feet north and south of the canal centerline (reflects canal bottomwidth of 70-feet).

4.1.2 Pima Outfall Channel

Geometry for the Pima Outfall Channel was taken from the **Pima Outfall Channel Drainage Report, Volume 1, Salt River Pima-Maricopa Indian Community**, January 7, 1998, SRPMIC Engineering & Construction Services, Design Division, Bryan D. Meyers, P.E. and Harold B. Jones, Jr, E.I.T.

The HEC-2 models in the SRPMIC report were revised to reflect the 2-percent cross-slope that was specified for this channel. These revisions were made to the GR records in the model.

4.1.3 Arizona Canal Outfall Channel (Evans-Kuhn Section)

The Arizona Canal Outfall Channel was designed by Evans-Kuhn & Associates, Inc. (EKA). The original 95% Pre-Final plans were titled **96th Street Storm Drain & Arizona Canal Outfall Channel**, May 11, 1992. A final plan set was published with a date of July 1, 1992.

The cross-sectional geometry for this channel is shown on Section A-A, sheet 4 of 25, from the July 1, 1992 plan set. This typical cross-section lists a channel bottomwidth of 30-feet and side-slopes that vary from1.5:1 to 2:1. It appears that a variable side-slope ratio was used to create an esthetic effect in the channel bank. Due to difficulties in constructing this variable side-slope feature, SRPMIC has indicated a desire to construct the channel with a constant side-slope of 2:1. This constant 2:1 side-slope was previously specified in the Evans-Kuhn plan set dated May 11, 1992. Accordingly, a constant 2:1 side-slope was used for the HEC-2 models presented in this report.

The EKA plans specify a channel invert slope of 0.00036 ft/ft.

The geometry for the EKA channel becomes more complex near the outlet of the 96th Street storm drain. The geometry in this region is complicated by road ramps leading out of the storm drain, as well as the integration of flows emerging from a small, southerly flowing channel along the east side of the 96th Street storm drain. Geometry from the EKA design drawings was used to create cross-sections that were considered reasonably representative of probable flow conditions through this transition area. The location and shape of these sections are shown in Figures 4.1 and 4.2.

4.1.4 Natural Floodplain East of 96th Street

The cross-sectional geometry for the natural floodplain located east of 96th Street was based on the surveyed cross-sections provided by SRPMIC (see Plate 4 and Appendix A). It should be noted that these sections included survey shots on both the north and south banks of the Arizona Canal. It was imperative that canal elevations be obtained at each of the north overbank cross-section locations so that both canal and overbank geometry would be available for the split-flow calculations that were used to determine the water transfers across the north bank of the Arizona Canal.

4.2 Starting Water Surface Elevations

The following sub-sections discuss the assumptions that were used in establishing the initial water surface elevations at the downstream end of the HEC-2 models.

Construct Roadway

Relocate Existing Power Poles–By Salt River Project. 4 Ea.–This Sheet

Construct Double 10' Dia. Cast–in–Place Concrete Pipe

Existing Power Poles May Require Bracing During Construction. SRP Field Inspection Department to Verify Prior to Trenching. Bracing to be Performed by SRP. Contractor to Pay All Applicable Fees. Total 1 This Sheet.

Remove Existing Alum. Cap in Concrete. Construct Survey Monument per MAG Std. Det. 120–1, Type "B".

STA.67+00 Construct Junction Structure #1

TBM=Nail in East Face of Power Pole. Elev.=1285.31

Sta. 73+93.79 Construct Roadway Dip Crossing

4102.21

4212.59

4318.49

Arizona Canal

For Detail of This Area See Sheet 18

MATCH SHEET 7

STA. 64+85.45(N)

H

B

12'

N 0°01'22" E ~ 1233.34'

N 0°07'23" E 2638.36

80' Future R/W

LINCOLN DRIVE

LIMIT

MATCH SHEET 9

STA. 74+70

61 62 63 64 65 66 67 68 69 70 71 72 73

1284 1285 1286 1287

Canal STA 6822

EKA STA 44+34

Approx. Centerline of Channel–L=320'+/–

Construct 214.55 L.F.–16'x14' Concrete Box Conduit per ADOT Dw'g B–03.10, Table III

Construct Interceptor Channel

Remove Existing Trees, 2 Each– This Sheet

Sta. 73+93.79 Found 3 1/2" USBR Alum. Cap N7393.7858 E9988.8798

FLOODPLAIN

BENCHMARK: Brass Cap in Concrete @ East End of Indian Bend Road and West of Pima Freeway Overpass. Elev.=1295.08 ADOT Datum

96th STREET

N

scale 50 0 50 100 feet

1" = 108.1'

PLAN

SURVEYED PLOTTED DRAWN CHECKED M.J. KUHN REVIEWED STRUCTURE WORKING GRID

NOTEBOOK NO.

DATE BY

PROFILE

Proposed Finished Grade @ Centerline of Roadway

EGL

HGL

Existing Ground @ Monument Line

EL.=1280.90

Arizona Canal

Cr.=1278.90

Inv.=1264.90

FG=1289.50

Sta.66+00.00 Grade Break Proposed Rdwy

Access Structure No. 1

Sta. 67+00 Junction Structure Interceptor Channel FL=1279.42

FL=1281.34

FL=1281.64

S=0.00140'/ft

Proposed Flowline @ Interceptor Channel

Sta. 72+60 Angle Point in Channel FL=1282.19

Roadway Sta.71+00.00 Grade Break FG=1289.50

Roadway Sta.73+00.00 Grade Break FG=1288.00

S=0.00515'/ft

FG=1288.48

FG=1288.12

FL=1282.98

FL=1282.62

S=0.00515'/ft

Cr.=1280.12

Cr.=1280.65

70 L.F.–2–10' Dia. C.I.P.P. @ S=0.007637'/ft

Inv.=1270.65

Inv.=1270.12

Q_{100}=1,500cfs

700 L.F. 2–10' Dia. C.I.P.P. @ S=0.0009857'/ft

214.55 L.F.–16'x14' Concrete Box Culvert @ S=0.001002'/ft

12" Drywell Inlet Pipe Inv.=1268.00

12" Drywell Inlet Pipe Inv.=1270.00

1290 1286 1282 1278 1274 1270 1266 1262 1258

Sta.41+99.13E= Sta.61+71.11N END C.B.C.

(FUTURE) North End of Bridge Sta.63+85N

Sta.63+95N Begin Roadway FG=1290.50

STA. 64+85.45(N) MATCH SHEET 7

Crown=1279.22 Inv.=1265.22

Sta. 67+00.00 Junction Structure No. 1 End 16'x14' CBC Begin 2–10' Dia. C.I.P.P.

Crown=1278.43 Inv.(S)=1265.43 Inv.(N)=1269.43

Sta. 74+00.00 GRADE BREAK

STA. 74+70 MATCH SHEET 9

59+50 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74

PROFILE

SURVEYED PLOTTED DRAWN CHECKED M.J. KUHN REVIEWED STRUCTURE WORKING GRID

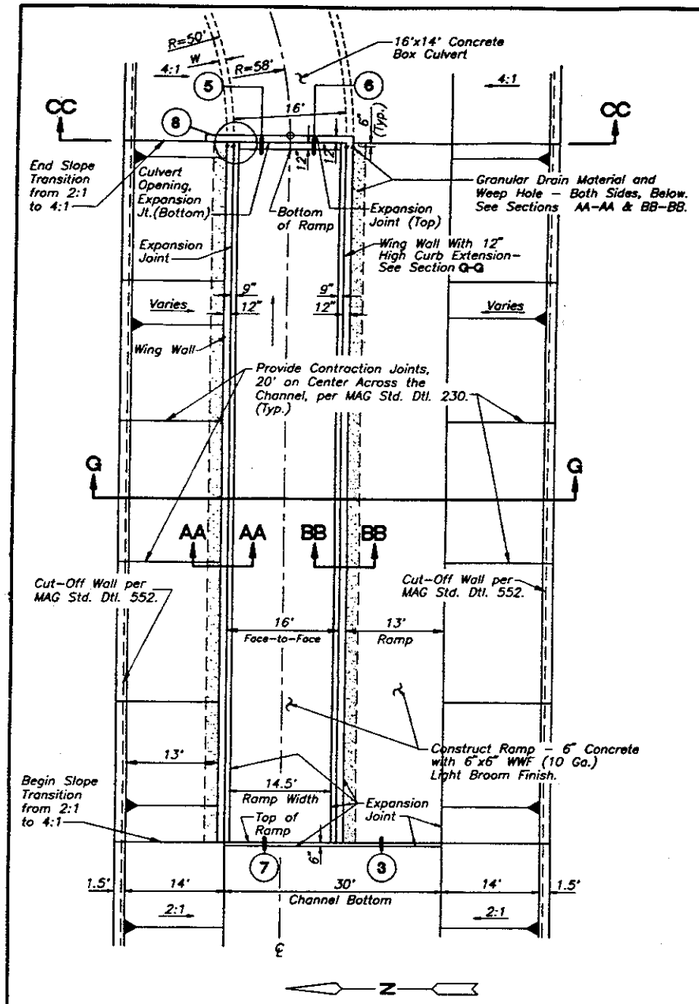
NOTEBOOK NO.

DATE BY

Figure 4.1

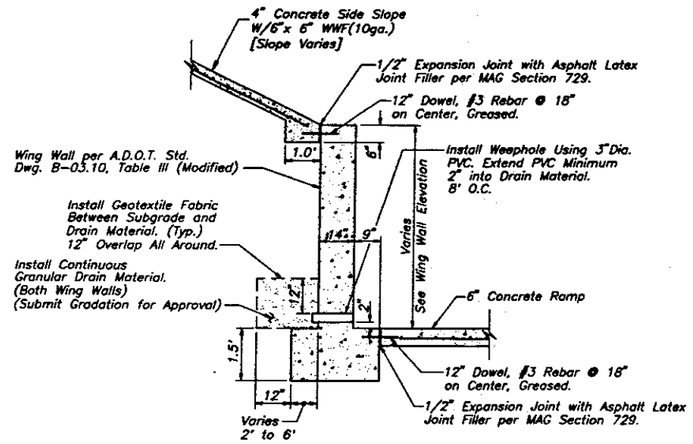
96th ST. STORM DRAIN				
Salt River Pima–Maricopa Indian Community				
DESIGN MJC	SCALE	JOB NO.	DATE	SHEET
DRAWN RLB	1"=50'Horiz	3182.2	5–11–92	8 OF 25
CHECK RJF	1"= 4'Vert			
EKA EVANS, KUHN & ASSOCIATES, INC. CONSULTING ENGINEERS				

PRE-FINAL (95%) NOT FOR CONSTRUCTION REVIEW ONLY



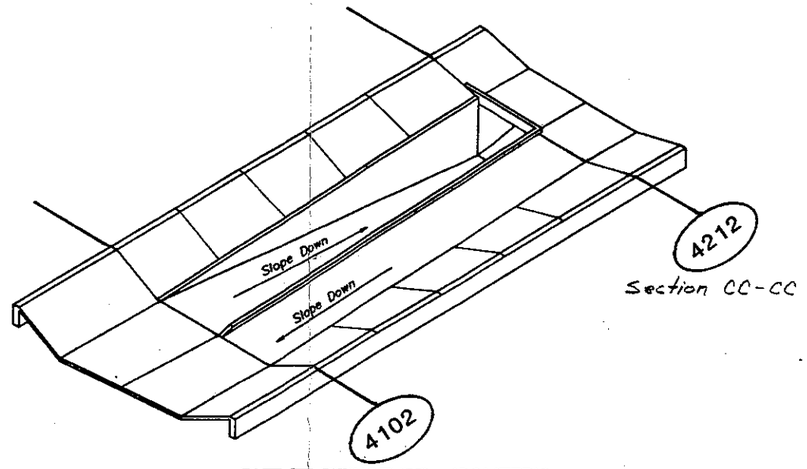
OUTLET STRUCTURE - PLAN VIEW

Scale : 1" = 10'



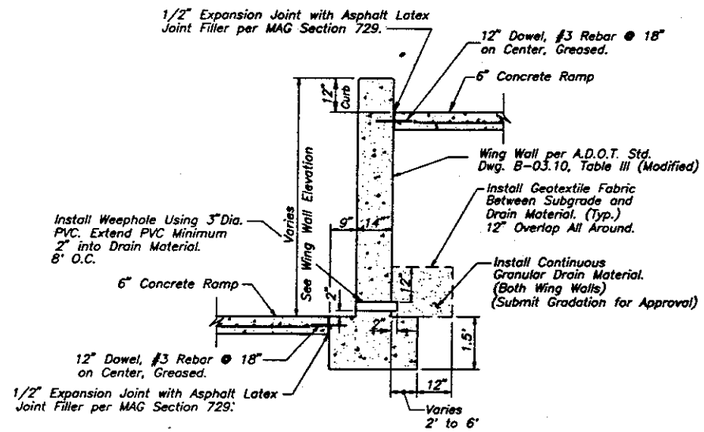
SECTION AA - AA

Scale : 1" = 2'



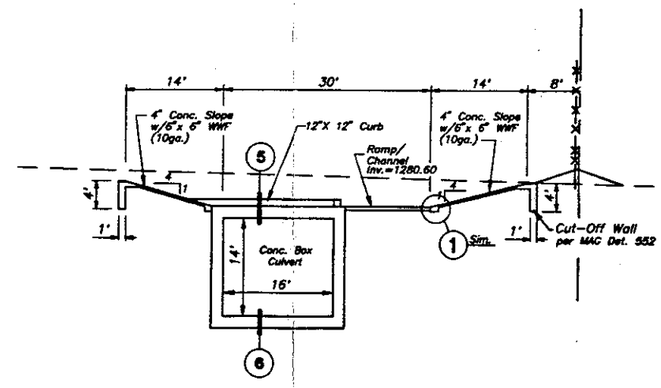
OUTLET STRUCTURE - ISOMETRIC

N.T.S.



SECTION BB - BB

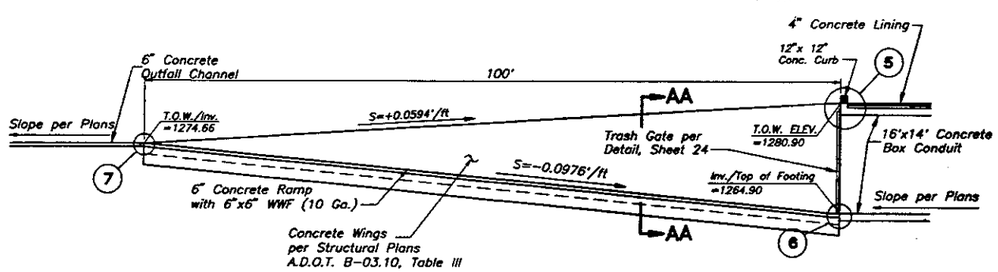
Scale : 1" = 2'



SECTION CC - CC

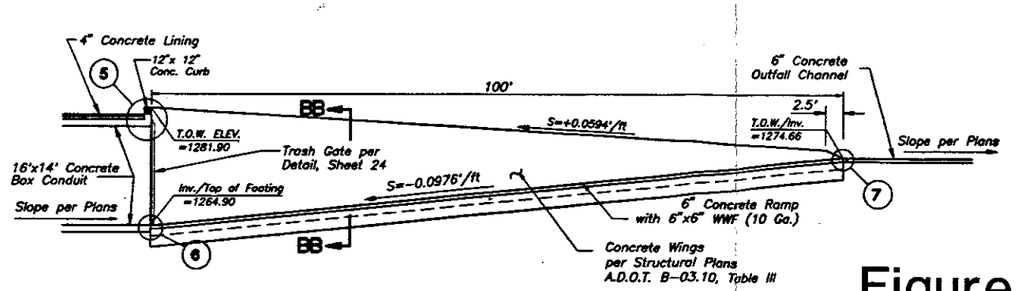
(Sta. 42+12.59)

Scale : 1" = 10'



ELEVATION - NORTH WINGWALL

Scale : 1" = 10'



ELEVATION - SOUTH WINGWALL

Scale : 1" = 10'

Figure 4.2

OUTLET STRUCTURE DETAILS

96th ST. STORM DRAIN				
Salt River Pima-Maricopa Indian Community				
DESIGN MJC / DRAWN JLC / CHECK BJF	SCALE	JOB NO.	DATE	SHEET
	As Shown	3182.2	5-11-92	19 of 25
EKA EVANS, KUHN & ASSOCIATES, INC. CONSULTING ENGINEERS				

PRE-FINAL (95%) NOT FOR CONSTRUCTION REVIEW ONLY

4.2.1 Arizona Canal

The starting water surface elevations for flows in the Arizona Canal were based on a rating curve developed from a split-flow analysis over the Arizona Canal-IBW side-spillway. The invert elevations for the spillway were taken from the 1989 ADOT topographic mapping that was used for the Pima Freeway drainage channel design. The split-flow analysis for the spillway was based on a HEC-2 model (COE7) with spillway cross-sections coded at 50-foot increments along the spillway crest. The spillway cross-sections used for this model are shown on Plate 2.

This split-flow spillway model begins at Hayden Road. The cross-section numbering scheme used for this spillway rating model is not referenced to the Arizona Canal "Station 1000" intersection point with Pima Road (see discussion in Section 4.1.1).

The rating curve developed from this split-flow analysis was input to the Arizona Canal HEC-2 model (CANAL12A) at cross-section 715, which is at the upstream side of the Arizona Canal-IBW side-spillway. The water surface elevations at XSEC 715 were based on a linear interpolation between the elevations at stations 7147 and 7197 form model COE7. Appendix B includes a copy of the HEC-2 input/output summary for this rating curve model (COE7).

4.2.2 Pima Outfall Channel

A rating curve was created to establish starting water surface elevations at Station 194+85 along the centerline of the Pima Outfall Channel. Station 194+85 is at the upstream end of the grouted riprap apron that forms the transition from the concrete channel lining to the natural cross-section of the IBW Interceptor Channel.

The development of starting water surface elevations for the Pima Outfall Channel was complicated by the fact that the original IBW Interceptor Channel geometry has been disturbed by grading for a proposed golf course. A hydraulic model was not available to show how the golf course regrading may have changed the original Corps of Engineers water surface profile for the IBW Interceptor Channel. It was assumed that this regrading would not be allowed to cause an increase in the Interceptor Channel water surface elevations developed by the Corps of Engineers. Accordingly, Corps hydraulic data was used to create an approximation of the water surface profiles that would exist near the outlet of the proposed Pima Outfall Channel.

The general concept used to develop this rating curve was based on: 1) establishing a known water surface elevation at COE Station 61+27; 2) computing an energy slope between Station 61+27 and the Pima Outfall Channel terminus;

and 3) combining the data from Steps 1 and 2 to project a water surface profile to the Pima Outfall Channel terminus. The steps, and data sources, used for this procedure are outlined as follows.

1. COE Station 61+27 and Pima Outfall Channel Station 194+85 were plotted on the topographic mapping used for the Pima Outfall Channel design (see Plate 2). COE station data was taken from Plate 9, COE **Design Memorandum No. 4, Feature Design For Interceptor Channel**, January 1980. The distance between these two stations was scaled at 1,183-feet.

2. Again, using data from Plate 9, COE **Design Memorandum No. 4**, COE water surface elevations were determined for Stations 61+27 and 72+48.34 as 1,279.27 and 1,280.1-feet MSL, respectively. The energy slope between these two stations was then computed as 0.00074 ft/ft.

3. Using the original COE cross-sectional geometry for Station 61+27, and the 100-year flow depth of 8.1-feet that is published on Plate 9 of **Design Memorandum No. 4**, a single cross-section HEC-2 model was created. This model was run for 5,500 cfs (COE design flow) using a series of energy slopes until a slope was found that produced the design water surface elevation of 1,279.27-feet at Station 61+27. The energy slope that produced this match was 0.00073 ft/ft. This slope was then used to rerun the HEC-2 model for multiple discharges (thus generating water surface elevations for each discharge) that could be used for the Pima Outfall Channel rating curve. This approach assumes that the energy slope at Station 61+27 would remain constant for all modeled discharges. This may, or may not, be a true assumption, but, given the absence of better data, it was considered a reasonable assumption for use in this analysis.

4. The data from Steps 1, 2, and 3 were combined to compute the water surface elevation at the terminus of the Pima Outfall Channel. The process is demonstrated as follows for a discharge of 4,500 cfs:

> CWSEL at COE Station 61+27 = 1,278.45 (from Step 3)
>
> Change in CWSEL between COE Station 61+27 and SRPMIC Station 194+85 = 1,183' x 0.00074 ft/ft = 0.88-ft (Steps 1 & 2)
>
> CWSEL at SRPMIC Station 194+85 = 1,278.45 + 0.88 = 1,279.33 (Step 4)

4.3 Bridge & Culvert Simulations

4.3.1 Arizona Canal

Three bridge crossings were modeled for the Arizona Canal. The first bridge is located immediately downstream of Pima Road and is a free-span footbridge that

contains no piers. This structure was modeled with the normal bridge routine in HEC-2.

The Pima Road bridge contains two-16 inch diameter piers. This structure was model with the special bridge routine in HEC-2. Two-feet of debris was assumed to be attached to each of the two piers.

The third canal crossing is the SRP de-mossing bridge, which is located just upstream of the Pima Road Bridge. This structure has one 18-inch diameter pier, which was modeled with 2-feet of additional debris. The special bridge routine was also used to simulate the hydraulic performance of this de-mossing bridge.

4.3.2 Pima Outfall Channel

An 8-cell concrete box culvert will be constructed in this channel at its intersection with Pima Road. Each cell will be 8-feet high and 10-feet wide. In accordance with instructions from ADOT, the interior cell walls were assumed to be free of any debris obstructions. The design drawings call for this culvert to be constructed with a 2-percent cross-slope along the bottom of the structure. Due to limitations within HEC-2, this culvert was modeled with a horizontal bottom using the special culvert routine. For modeling purposes, the culvert invert elevations were set equal to the culvert centerline elevations.

No other bridges or culverts are proposed across this channel.

4.4 Manning's Roughness Values

Both the Arizona Canal and the proposed Pima Outfall Channel will have concrete linings. An "n" value of 0.018 was used for the Pima Outfall Channel, while an "n" value of 0.021 was used for the Arizona Canal. A slightly higher "n" value was used for the canal in order to produce a better simulation of side-spillway flows from the canal to the IBW Interceptor Channel.

This better simulation was determined from a previous analysis that used the results of HEC-2 split-flow models as input to a divert operation in a HEC-1 model to simulate the performance of the IBW Interceptor Channel side-spillway hydrograph. Arizona Canal roughness values of 0.018, 0.021, and 0.024 were used in this analysis. An "n" value of 0.021 produced a flow-split of 5,687/2,607 cfs at the spillway, which compared favorably with the Corp's flow-split of 5,500/2,500 cfs at the same location. Accordingly, the canal "n" value of 0.021 was retained in all subsequent hydrologic and hydraulic revisions that were made as part of this study. As a matter technical interest, the Corps of Engineers used a canal "n" value of 0.024 in the design analysis for the IBW Interceptor Channel.

The natural floodplain, located north of the Arizona Canal and east of 96th Street, was modeled with an "n" value of 0.053. These natural overbank areas generally have a dense cover of trees near the canal embankment, but beyond this band of

trees vegetation becomes very sparse. Engineering judgment was used to select an "n" value of 0.053 for this area. This value is purposely at the low end of a realistic roughness envelope for the north overbank. During the split-flow analysis, the lower overbank "n" value generates a higher discharge to the proposed Pima Outfall Channel. Accordingly the selected "n" value of 0.053 promotes some safety in the Pima Outfall Channel design.

4.5 Transition From Channel Geometry to Natural Floodplain Geometry

The proposed Arizona Canal Outfall Channel terminates at the outlet of the north-south 96th Street storm drain. The channel geometry at the east end of the Arizona Canal Outfall Channel becomes very non-uniform through the junction area with the 96th Street storm drain.

Channel geometry was coded from the Evans-Kuhn design drawings (see Figures 4.1 and 4.2) to provide representative hydraulic cross sections through this transition area. East of 96th Street, the natural floodplain geometry was coded from ground survey data acquired by SRPMIC in June 1998 (see Plate 4 and Appendix A).

4.6 Manual Split-Flow Calculations

Using the procedures discussed in the preceding sections, separate HEC-2 models were prepared for the Arizona Canal and the north overbank area. The models for the north overbank area include the Pima Outfall Channel and the Arizona Canal Outfall Channel. Appendices C and D include the input/output summaries for the canal (CANAL12A) and channel (PIMACH2) models, respectively.

Each HEC-2 model was run for a range of discharges extending from 1,000 cfs to 7,000 cfs, at 500 cfs increments. The split-flow calculations were initiated at Longmore Road, using the total 100-year discharge at HEC-1 Concentration Point 1987 (see Plate 1). For the 7-hour storm, this discharge was taken from HEC-1 file PF4.7O as 6,299 cfs (see the August 1996 **Updated Hydrology Analysis** report referenced in Section 2). For the 12-hour storm, the 100-year discharge at CP 1987 is taken from HEC-1 file PF2.12O as 6,892 cfs.

As noted on Plate 5 of the previously referenced **Design Memorandum No. 4**, the COE had estimated the combined canal and overbank capacity to be 6,500 cfs at North Longmore Road. This estimate is classified as being to the nearest 500 cfs. This estimate was checked with the HEC-2 models used for this current study. This check computation, which was performed at canal cross-section station 9504 (Longmore Road), revealed that floodwaters would begin to overtop the south canal bank at a combined canal and overbank discharge of about 6,833 cfs. At a distance of 600-feet downstream of Longmore Road (canal cross-section station 8904), the maximum discharge that was remaining in the combined canal/overbank section was 6,529 cfs. These calculations provide excellent correlation with the COE estimate.

It should be re-emphasized that two separate hydrologic and hydraulic analyses were performed in order to generate data for both the 100-year, 7-hour storm and for the 100-year, 24-hour storm (see Section 2). The remainder of this discussion is generic in that the same procedures were used for each storm analysis.

Working with the two HEC-2 models for the north overbank area and the Arizona Canal (Appendices C & D), the calculation sequence was initiated by assuming a flow-split for each of these two conveyance areas. The water surface elevation for each assumed discharge was read from the corresponding HEC-2 output summary for each conveyance area. The water surface elevation from the canal was compared to the water surface elevation in the north overbank area. If these two elevations were not equal, a new flow-split discharge was assumed and the corresponding water surface elevations were again read from the HEC-2 models. This procedure was repeated until a flow-split was found which produced equal water surface elevations in both the canal and the north overbank or channel area.

The north and south canal bank elevations were checked during this iteration process to make sure that the south bank of the canal could contain the canal flow and that the north bank of the canal was below the matched water surface elevation for the canal and north overbank area. If the north canal bank elevation was above the matched water surface elevation for the canal and north overbank area, then a divided flow condition existed and no transfer of water could occur between the canal and the north overbank. If the canal water surface elevation was above the south bank elevation of the canal, then water would spill over the south canal bank and be lost from the system. No south canal bank spills occurred for the 7-hour storm. However, 363 cfs spilled over a 600-foot long section of the south canal bank (extending west of Longmore Road) during the 12-hour storm.

This iteration process was repeated about every 200-feet along the canal alignment from Longmore Road to the Pima Freeway alignment. The flows remaining in the Arizona Canal and in the Pima Outfall Channel at the intersection with the north-south Pima Freeway alignment were used to adjust the divert ratio at HEC-1 Concentration Point 546T. The HEC-1 model was then re-run with this new diversion ratio to get the separate flows in the Arizona Canal and in the Pima Outfall Channel, as water flowed west from the Pima Freeway alignment to Pima Road.

The HEC-1 model contains separate routing operations for those portions of the canal and channel that are located between the Pima Freeway and the Arizona Canal-IBW side-spillway. The HEC-1 model also includes a divert ratio to proportion water over the side-spillway. Flows diverted over the spillway are then re-combined with existing flows in the Pima Outfall Channel in order to get the total flow that will continue down the remaining portion of the IBW Interceptor Channel. The spillway divert ratio is based on the split-flow HEC-2 analysis discussed in Section 4.2.1.

Appendix E presents the results of the split-flow calculations for the 100-year, 7-hour storm. The calculations in this table begin at Longmore Road (HEC-1 CP 1987). Figure 4.3 graphically illustrates the discharge profiles that result form the calculations in Appendix E. Figure 4.4 presents the canal bank profiles and water surface profiles associated with this analysis.

A review of the profiles in Figures 4.3 and 4.4 shows the large water transfer that occurs from the canal to the Arizona Canal Outfall Channel at the upstream end of the channel. This water transfer coincides with a low-point on the north canal bank. Once this water is captured by the channel, the high north-bank elevation of the canal creates a divided flow condition for the next 2,000-feet. A low north-bank profile then allows some water to transfer back to the canal between canal Stations 3,200 to 4,600. No additional water transfers occur downstream of the intersection of the Pima Outfall Channel (Station 170+00) and the north-south Pima Freeway Channel.

Figure 4.5 shows the north and south bank profiles along the Arizona Canal from the upstream end of the canal side-spillway (XSEC 715) to canal XSEC 3105, which is the intersection of the Pima Outfall Channel and the north-south Pima Freeway Channel. A water surface profile for 2,905 cfs is also plotted on Figure 4.5 in order to verify that no additional water transfers occur along this reach of the Arizona Canal. This discharge (2,905 cfs) is the remaining flow in the canal for the 100-year, 12-hour storm. A discharge of 2,900 cfs remains in the canal during the 100-year, 7-hour storm.

Referring to Appendix E, the flow-split that occurs at Arizona Canal Station 3305.79 (ADOT Station 170+00) is input to the HEC-1 model at Divert Location 546T. This divert operation then controls the channel flow (CP 546ADT) and canal flow (CP 546CAN) until the Arizona Canal-IBW side-spillway is reached. When the canal flow reaches the spillway, Divert Location 550/551 proportions flow over the spillway, where it is then recombined with the channel flow at CP 552.

Appendix F presents the split-flow calculations for the 100-year, 12-hour storm that was used for the actual design of the Pima and Arizona Canal Outfall Channels.

Figure 4.6 is a routing schematic that shows key HEC-1 concentration points that were used in the split-flow analysis for both the 7-hour and 12-hour storms. Table 4.1 summarizes the actual discharges that accompany the concentration points shown in Figure 4.6.

Appendices G and F include the HEC-1 output summaries for the final split-flow adjusted models for the 100-year, 7-hour and the 100-year, 12-hour storms, respectively. Executable HEC-1 input files for both storm events are on magnetic disks at the back of this report. These files should be run with HEC-1 Version

Figure 4.3
Discharge Profile Along Arizona Canal
100-Year, 7-Hour Storm

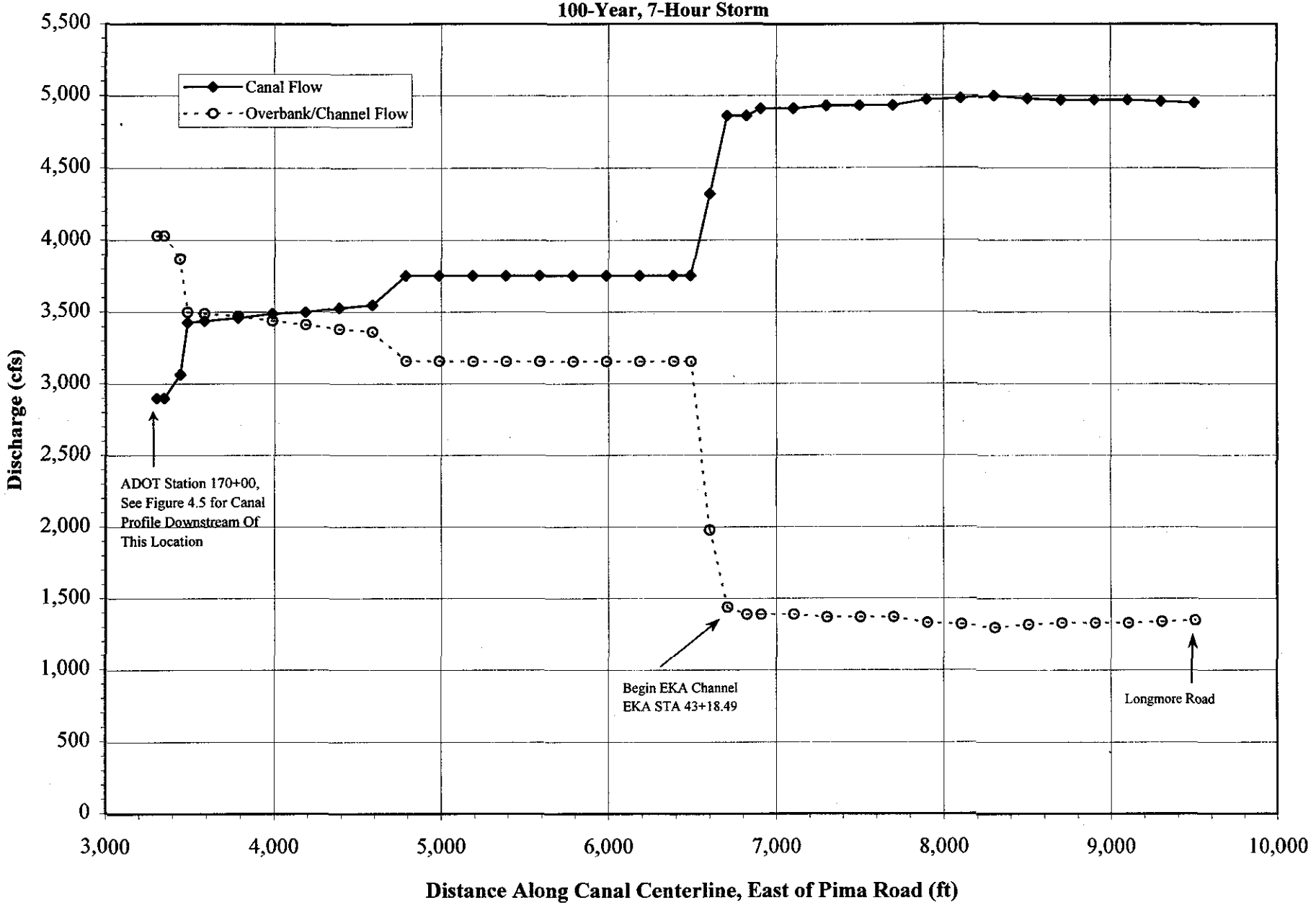


Figure 4.4
Canal-Bank & Water Surface Profiles Along Arizona Canal
100-Year, 7-Hour Storm

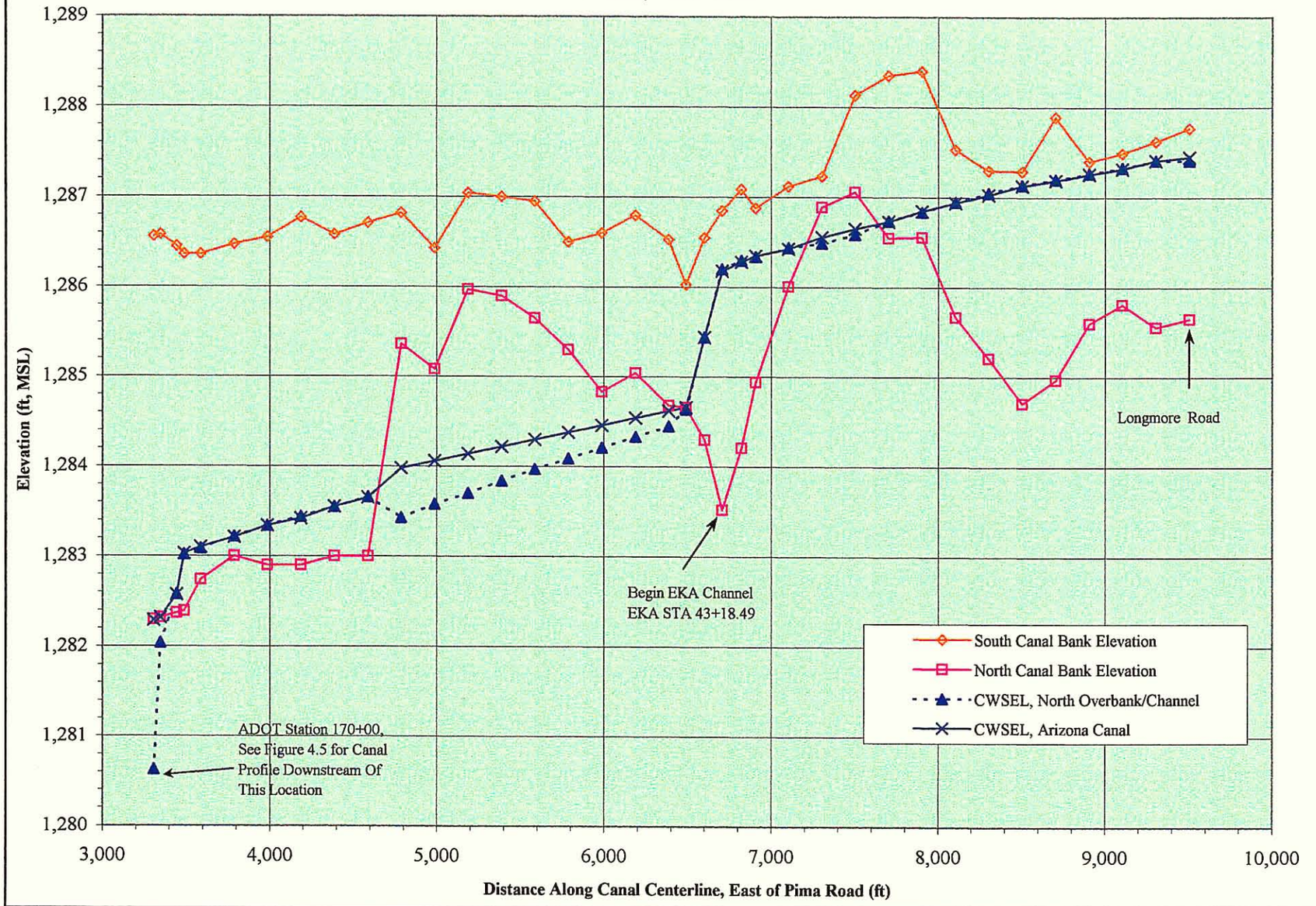
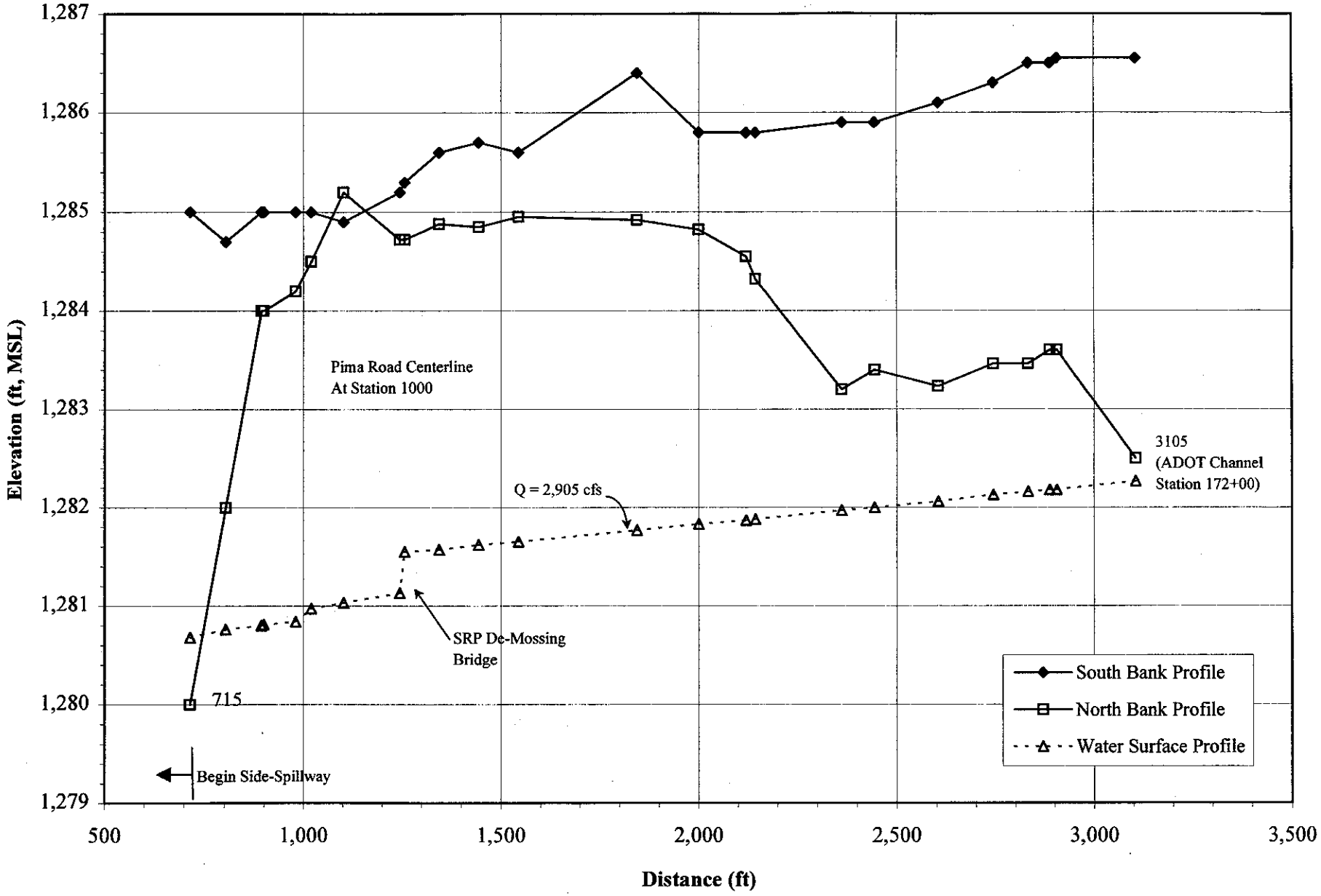
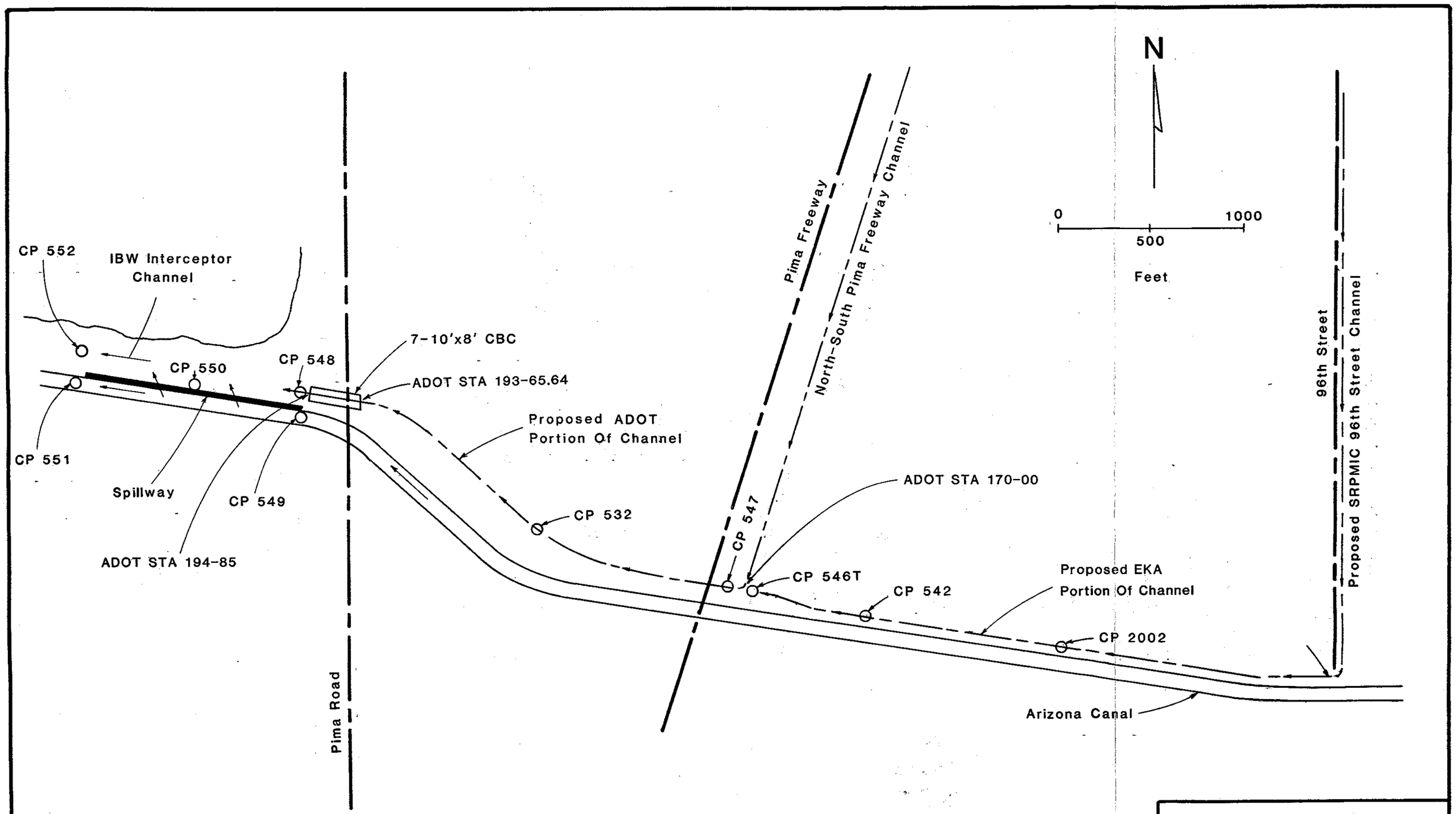


Figure 4.5
Profiles Along Arizona Canal
XSECs 715 to 3105





DRAINAGE SYSTEM SCHEMATIC	
Pima Outfall Channel	
	Figure 4.6

Table 4.1
Summary of Split-Flow Routing Discharges
Pima & Arizona Outfall Channels
(see Figure 4.6 for CP locations)

HEC-1 CP	100-Year, 7-Hour Storm (HEC-1 File: PF4A.7I)	100-Year, 12-Hour Storm (HEC-1 File: PF2A.12I)	Comments
2002	6,913	7,144	
542	6,931	7,156	
546T	6,931	7,157	Upstream end of ADOT channel, Station 170+00, prior to final flow transfer.
546ADT	4,031	4,252	This is the total flow that enters the upstream end of the ADOT Channel.
546CAN	2,900	2,905	This is the total flow that is left in the Arizona Canal after the final flow-split occurs at ADOT Station 170+00 (upstream end of ADOT channel).
549	2,868	2,869	All flow crossing Pima Road through the Arizona Canal. This CP is located at the upstream side of the IBW Interceptor Channel spillway. Spillway flows have not yet occurred.
551	2,254	2,255	Water left in the Arizona Canal after the IBW Interceptor Channel side spillway flows have occurred.
550	614	615	Water from the Arizona Canal that passes over the IBW Interceptor channel side spillway.
552	5,453	5,639	Total flow in the IBW Interceptor Channel obtained by combining spillway flows with the discharge from the Pima Outfall channel.
547	4,473	4,669	
532	4,505	4,704	
548	4,846	5,050	West side of Pima Road and north side of Arizona Canal. This is the total flow that exits the Pima Outfall channel CBC at Pima Road.
548.1	7,706	7,890	This is the combined canal & channel discharge at Pima Road, prior to flow reaching the IBW Interceptor Channel side spillway. A separate HEC-1 run is required to de-activate the spillway diversion operation in order to generate this discharge.

4.0.1E, 1991. The reader should refer to Plate 1 for the HEC-1 concentration point locations listed in the output summaries.

5 CONCLUSIONS

The results of this study show that the proposed Pima and Arizona Canal Outfall Channels, and the associated construction of the Pima Freeway and the 96th Street Storm Drain system, will not cause the COE design flows to be exceeded in the IBW Interceptor Channel during the 100-year, 7-hour storm. Table 5.1 compares the flow limitations, referenced in Section 1 of this report, to the actual flows that were generated by this study.

As stated previously, the 100-year, 12-hour storm was adopted by ADOT for use in designing the Pima Outfall Channel. For compatibility purposes, the Arizona Canal Outfall Channel also used the 100-year, 12-hour storm as the design event.

Using the results from the split-flow calculations shown in Appendix F, the recommended design discharges (100-year, 12-hour storm) for the two outfall channels are summarized in Table 5.2. Appendix I presents the input/output summary for the design HEC-2 model that incorporates the discharges listed in Table 5.2.

The profile data in Table 5.2 is plotted in Figure 5.1. The change in channel width at the confluence of the Pima Outfall Channel and the EKA Channel causes a hydraulic drop at the narrow exit point of the EKA Channel (ADOT Station 170+00). A small, abrupt drop in the invert profile also occurs at this location. The constriction at this point causes a draw-down towards, but never reaching, critical depth. The maximum Froude Number through this transition is 0.92 at ADOT Station 170+00. Both upstream and downstream of this confluence area, Froude Numbers are in the 0.29 to 0.38 range.

In order to preserve the validity of the manual split-flow calculations presented in this report, it is important that no changes be made to the north bank profile of the Arizona Canal along the EKA channel alignment. As shown in Figure 4.5, a continuously divided flow situation occurs between Pima Road and ADOT Station 170+00. Accordingly, the north canal bank could be raised west of ADOT Station 170+00, but no changes should be made to the north canal bank east of ADOT Station 170+00. Failure to adhere to this recommendation could alter the flow distributions presented in Table 5.1.

In conclusion, the results of this study provide design water surface profiles for the Pima and Arizona Canal Outfall Channels and document the engineering analysis that was performed to insure that the design capacity of the IBW Interceptor Channel will not be exceeded as a result of the construction of these channels.

Table 5.1
Comparison of Limiting Discharges
100-Year, 7-Hour Storm

Location	HEC-1 CP	Limit Discharge (cfs)	Computed Discharge (cfs)
1. North Longmore Road at Arizona Canal	CP 1987	6,500	6,299
2. Combined Canal & Channel Flow at Pima Road	CP 548	8,000	7,706
3. IBW Interceptor Channel at Downstream End of Side-Spillway	CP 552	5,500	5,453

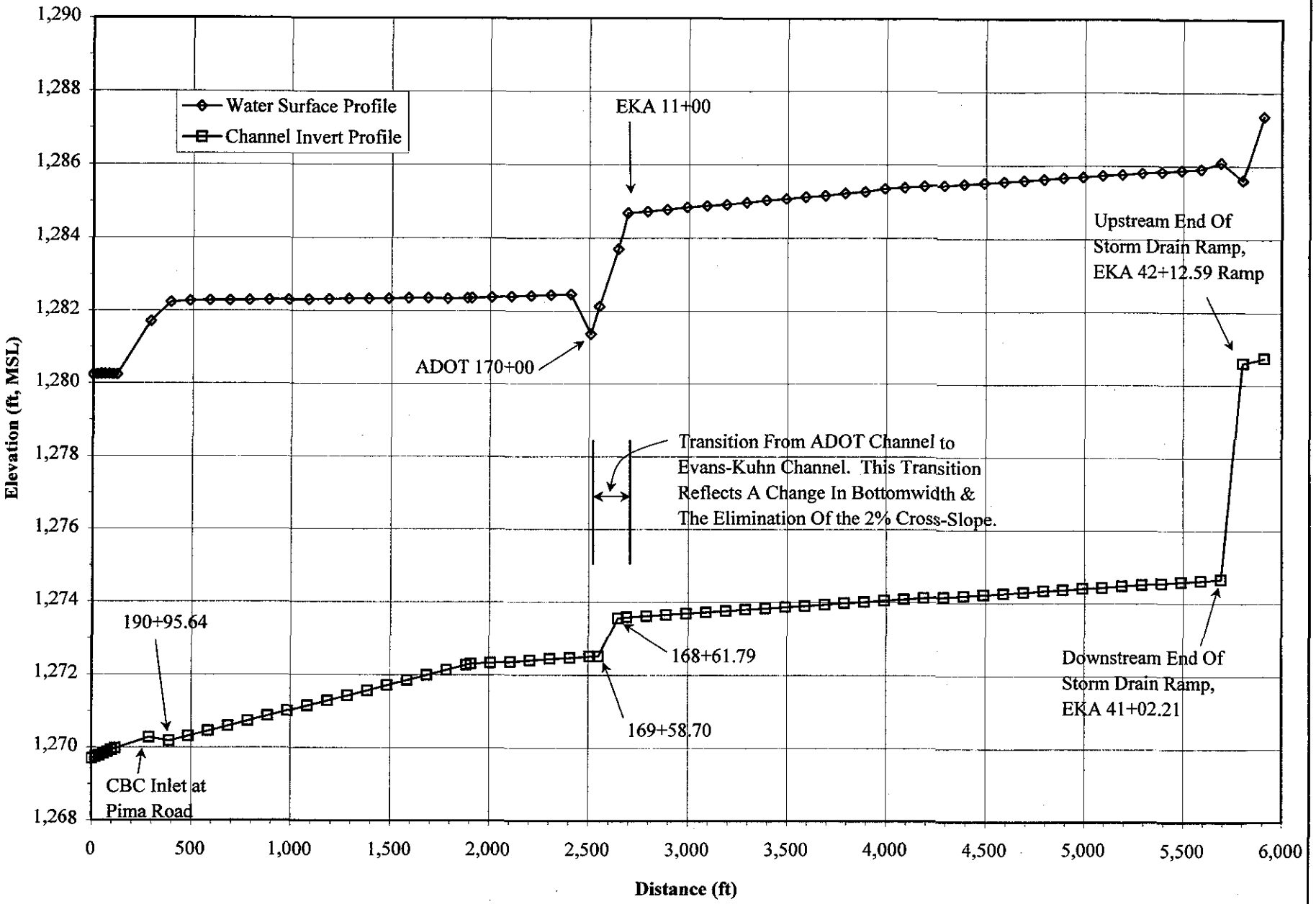
Table 5.2
Summary of Water Surface Profile Data
Pima Outfall Channel & Arizona Canal Outfall Channel

100-Year, 12-Hour Storm

HEC-2 XSEC	Channel Station	Discharge (cfs)	Water Surface Elevation (ft, MSL)	Channel Invert Elevation (ft, MSL)	HEC-1 Concentration Point Used For Design Discharge	Comment
19485	194+85.00	5,050	1,280.24	1,269.70	548	Downstream end of concrete chute
19465	194+65.10	"	1,280.25	1,269.75	"	
19445	194+45.22	"	1,280.26	1,269.79	"	
19425	194+25.33	"	1,280.26	1,269.83	"	
19405	194+05.44	"	1,280.26	1,269.88	"	
19385	193+85.55	"	1,280.25	1,269.93	"	
19365	193+65.64	"	1,280.25	1,269.98	"	CBC outlet
19195	191+95.64	"	1,281.71	1,270.28	"	CBC inlet
19095	190+95.64	"	1,282.23	1,270.18	"	Begin BW transition to CBC
19000	190+00.00	4,704	1,282.27	1,270.31	532	
18900	189+00.00	"	1,282.28	1,270.45	"	
18800	188+00.00	"	1,282.28	1,270.59	"	
18700	187+00.00	"	1,282.29	1,270.73	"	
18600	186+00.00	"	1,282.30	1,270.87	"	
18500	185+00.00	"	1,282.30	1,271.01	"	
18400	184+00.00	"	1,282.31	1,271.15	"	
18300	183+00.00	"	1,282.32	1,271.29	"	
18200	182+00.00	"	1,282.33	1,271.43	"	
18100	181+00.00	"	1,282.33	1,271.57	"	
18000	180+00.00	"	1,282.34	1,271.71	"	
17900	179+00.00	"	1,282.35	1,271.85	"	
17800	178+00.00	"	1,282.36	1,271.99	"	
17700	177+00.00	"	1,282.34	1,272.13	"	
17600	176+00.00	"	1,282.35	1,272.27	"	
17577	175+77.40	"	1,282.36	1,272.30	"	
17500	175+00.00	"	1,282.38	1,272.33	"	
17400	174+00.00	"	1,282.40	1,272.36	"	
17300	173+00.00	"	1,282.42	1,272.40	"	
17200	172+00.00	"	1,282.44	1,272.44	"	
17100	171+00.00	"	1,282.46	1,272.47	"	
17000	170+00.00	4,252	1,281.37	1,272.51	546ADT	D/S end of divider wall
16958	169+58.70	"	1,282.13	1,272.52	"	D/S end of divider wall transition
16861	168+61.79	3,957	1,283.70	1,273.56	Split-Flow Calculations	Evans Kuhn Station 10+56
1100	11+00	3,587	1,284.69	1,273.58	"	
1200	12+00	"	1,284.73	1,273.62	"	
1300	13+00	"	1,284.78	1,273.65	"	
1400	14+00	3,557	1,284.84	1,273.69	"	
1500	15+00	"	1,284.88	1,273.72	"	
1600	16+00	"	1,284.92	1,273.76	"	
1700	17+00	"	1,284.97	1,273.80	"	
1800	18+00	3,504	1,285.03	1,273.83	"	
1900	19+00	"	1,285.07	1,273.87	"	
2000	20+00	"	1,285.12	1,273.90	"	
2100	21+00	"	1,285.16	1,273.94	"	
2200	22+00	3,459	1,285.22	1,273.98	"	
2300	23+00	"	1,285.26	1,274.01	"	
2400	24+00	3,314	1,285.35	1,274.05	"	
2500	25+00	"	1,285.38	1,274.08	"	
2600	26+00	"	1,285.42	1,274.12	"	
2700	27+00	"	1,285.45	1,274.16	"	
2800	28+00	3,315	1,285.49	1,274.19	"	
2900	29+00	"	1,285.52	1,274.23	"	
3000	30+00	"	1,285.56	1,274.26	"	
3100	31+00	"	1,285.59	1,274.30	"	
3200	32+00	"	1,285.63	1,274.34	"	
3300	33+00	"	1,285.67	1,274.37	"	
3400	34+00	"	1,285.70	1,274.41	"	
3500	35+00	"	1,285.74	1,274.44	"	
3600	36+00	"	1,285.77	1,274.48	"	
3700	37+00	"	1,285.81	1,274.52	"	
3800	38+00	"	1,285.84	1,274.55	"	
3900	39+00	"	1,285.88	1,274.59	"	
4000	40+00	"	1,285.91	1,274.62	"	
4102	41+02.21	3,260	1,286.09	1,274.66	"	Bottom of storm drain ramp
4212	42+12.59	2,099	1,285.61	1,280.60	"	Top of storm drain ramp
4318	43+18.49	1,529	1,287.36	1,280.75	"	Curve in North-South interceptor channel

All profile data taken from HEC-2 file PIMACH2F.

Figure 5.1
Pima Outfall & Arizona Canal Outfall Channel
Design Profile for 100-Year, 12-Hour Storm



APPENDIX A

SRPMIC Surveyed Cross-Section Data
96th Street to Longmore Road

SRPMIC Surveyed Cross-Section Data, 96th Street to Longmore Road

XSEC 6822		XSEC 6907		XSEC 7104		XSEC 7304		XSEC 7504		XSEC 7704	
STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV
-74.6	1280.56	-68.7	1281.31	-42.0	1280.44	-20.7	1281.53	-7.3	1283.27	18.2	1286.71
-42.6	1281.08	-54.8	1281.02	-29.7	1280.83	-3.4	1281.97	10.3	1288.13	27.8	1287.26
-26.2	1284.12	-15.1	1285.92	-1.2	1281.49	15.1	1287.19	27.9	1287.85	51.6	1288.35
29.6	1286.49	29.2	1286.47	13.4	1285.31	28.8	1287.23	51.2	1287.95	148.4	1286.44
53.7	1287.09	54.1	1286.88	26.5	1285.89	52.6	1286.85	148.8	1286.86	168.5	1286.55
100.0		100.0		53.7	1287.12	100.0		168.0	1287.06	172.7	1285.75
146.3	1284.21	145.9	1284.94	100.0		147.4	1286.44	173.0	1286.27	181.0	1282.56
172.6	1284.04	167.8	1284.38	146.3	1285.92	151.0	1286.89	181.2	1282.54	184.6	1283.52
176.9	1283.43	174.7	1283.30	150.3	1286.01	151.9	1286.43	187.8	1284.09	207.6	1283.59
181.9	1281.92	180.2	1281.99	168.9	1285.73	168.9	1286.67	209.2	1283.79	288.9	1283.83
184.7	1283.01	184.5	1283.47	174.1	1285.01	169.4	1286.21	290.9	1283.94	438.5	1284.38
247.1	1282.93	297.8	1283.33	182.3	1282.74	174.4	1285.87	372.3	1284.04	525.3	1284.58
329.7	1283.14	474.0	1283.32	189.0	1284.81	174.4	1285.37	452.2	1284.24	613.8	1284.78
386.2	1283.24	536.1	1283.56	231.9	1283.81	181.6	1283.10	535.4	1284.3	717.7	1285.26
544.4	1283.55	632.0	1283.82	339.8	1283.64	182.0	1283.51	637.2	1284.78	818.6	1285.58
648.1	1284.33	730.7	1284.25	540.9	1283.69	187.4	1284.50	744.6	1285.23	927.8	1285.95
756.2	1284.81	832.6	1285.00	643.5	1283.95	208.5	1284.01	862.4	1285.54	1026.8	1286.43
857.1	1285.51	929.4	1285.32	744.1	1284.44	282.3	1283.61	972.7	1286.09	1120.7	1286.95
954.9	1285.59	1031.8	1285.79	844.8	1284.76	380.3	1283.64	1112.7	1286.63	1221.5	1287.23
1051.1	1286.06	1131.3	1286.20	943.9	1285.28	471.4	1283.78	1333.7	1287.6	1319.9	1287.52
1143.2	1286.39	1231.8	1286.73	1042.2	1285.75	577.6	1284.10	1431.5	1288.02	1441.9	1288.19
1255.6	1286.86	1334.7	1287.20	1143.5	1286.15	683.4	1284.36	1524.3	1288.41	1548.4	1288.62
1358.5	1287.21	1434.5	1287.58	1243.0	1286.48	781.1	1284.67				
1454.3	1287.55	1532.9	1287.95	1344.6	1286.94	881.0	1285.16				
1555.1	1287.82	1629.4	1288.16	1443.9	1287.48	978.3	1285.55				
1655.3	1288.15	1711.4	1288.55	1542.8	1287.92	1078.6	1285.92				
				1641.0	1288.47	1179.9	1286.36				
				1742.6	1288.74	1278.8	1286.77				
						1377.9	1287.24				
						1479.0	1287.71				
						1581.1	1288.35				
						1680.3	1289.30				
						1724.4	1289.30				

XSEC 7904		XSEC 8104		XSEC 8304		XSEC 8504		XSEC 8704		XSEC 8904	
STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV
6.3	1284.03	-36.3	1283.16	4.0	1283.28	1.0	1282.99	-1.4	1283.04	12.8	1283.46
18.2	1287.07	-2.5	1283.36	15.4	1284.97	8.4	1283.61	11.7	1283.94	22.4	1286.03
29.1	1287.66	29.2	1286.7	22.8	1285.78	14.8	1285.49	18.7	1286.37	36.5	1286.68
51.8	1288.4	54.7	1287.53	33.5	1286.32	34.5	1286.63	33.1	1287.29	55.8	1287.4
148.2	1286.54	54.7	1287.33	55.4	1287.3	55.3	1287.29	55.1	1287.89	144.2	1285.32
166.4	1286.56	145.3	1285.44	144.6	1285.21	144.7	1284.66	144.9	1284.86	169.6	1285.6
171.5	1285.89	165.7	1285.67	164.1	1285.13	168.7	1284.71	168.8	1284.97	173.1	1284.79
177.7	1283.55	169.6	1285.07	169.3	1284.37	173.3	1283.96	171.7	1284.39	177.2	1283.3
182.4	1284.5	174.3	1283.79	175.2	1282.48	185.0	1280.4	178.4	1282.63	180.3	1284.38
215.2	1283.89	180.6	1284.53	179.2	1283.77	192.4	1281.19	180.8	1283.4	231.9	1283.92
289.2	1283.98	250.1	1284.02	244.4	1284.05	311.6	1283.87	195.3	1283.85	328.6	1284.17
390.9	1284.37	349.9	1284.32	334.7	1284.29	397.3	1284.41	257.2	1283.63	427.1	1284.67
490.7	1284.64	450.5	1284.41	436.2	1284.52	493.8	1284.58	278.1	1283.71	522.9	1284.63
583.9	1284.94	551.0	1284.88	531.6	1285.06	594.9	1284.96	290.0	1284.1	622.0	1285.44
685.2	1285.28	651.1	1285.26	644.9	1285.54	694.7	1285.36	381.6	1284.44	628.4	1284.65
789.2	1285.68	750.5	1285.66	733.3	1285.86	794.2	1285.76	485.9	1284.75	635.3	1285.26
885.3	1285.99	849.1	1286.03	830.5	1286.32	890.8	1286.15	575.2	1284.97	713.3	1285.47
983.7	1286.5	949.0	1286.41	936.4	1286.61	988.8	1286.64	596.4	1284.88	820.8	1285.89
1085.1	1286.99	1051.1	1286.88	1041.3	1287.07	1077.4	1287.04	597.4	1284.61	922.4	1286.37
1168.7	1287.2	1150.6	1287.16	1124.7	1287.21	1175.0	1287.34	600.6	1285.01	1019.1	1286.8
1270.5	1287.44	1249.9	1287.52	1229.3	1287.55	1270.6	1287.62	692.8	1285.51	1121.1	1287.1
1370.2	1288.21	1350.8	1288.13	1337.9	1288.04	1371.9	1288.08	785.5	1285.82	1224.3	1287.49
1468.9	1288.52	1450.7	1288.38	1463.7	1288.52	1495.1	1288.47	878.0	1286.21	1323.9	1287.85
1571.1	1288.97	1552.2	1288.79	1566.6	1288.83	1597.3	1288.88	970.9	1286.54	1428.2	1288.21
1670.0	1289.28	1651.3	1289.45	1651.1	1289.17	1698.8	1289.31	1060.9	1286.94	1529.8	1288.73
		1750.8	1289.85	1726.3	1289.63	1769.5	1269.71	1146.3	1287.26	1545.1	1287.59
								1241.8	1287.55	1564.2	1288.67
								1336.1	1287.98	1627.6	1289.11
								1429.4	1288.46	1727.3	1289.44
								1528.6	1288.77	1832.6	1289.87
								1621.5	1289.05		
								1708.4	1287.62		

XSEC 9104		XSEC 9304		XSEC 9504	
STATION	WLB ELEV	STATION	WLB ELEV	STATION	WLB ELEV
8.8	1283.33	2.2	1283.25	11.0	1285.14
35.1	1287.02	14.2	1284.2	16.7	1286.52
22.0	1286	23.3	1286.02	32.7	1287.07
55.5	1287.49	33.6	1286.81	56.1	1287.77
144.5	1285.81	56.1	1287.62	139.0	1284.06
169.1	1285.51	143.9	1285.42	143.9	1285.65
172.2	1285.13	167.7	1285.56	170.2	1285.29
178.6	1283.15	170.7	1284.83	179.8	1283.29
181.8	1284.2	176.5	1282.76	184.6	1284.33
193.3	1283.92	181.6	1284.4	192.4	1284.12
295.6	1284.12	227.1	1284.05	245.7	1284.2
399.4	1284.59	273.1	1284.25	300.5	1284.3
511.1	1285.11	362.5	1284.97	370.7	1284.58
603.0	1285.45	401.2	1284.68	442.3	1284.87
621.8	1285.07	420.2	1284.53	537.6	1285.2
629.6	1285.38	452.1	1284.94	624.7	1285.51
723.6	1285.67	548.5	1285.34	716.4	1285.8
827.4	1286.05	610.3	1285.25	809.8	1286.26
937.4	1286.42	653.5	1285.62	900.9	1286.71
953.9	1286.72	746.8	1286	992.8	1286.92
993.1	1286.3	834.2	1286.28	1081.4	1287.17
998.9	1285.64	927.2	1286.57	1169.6	1287.53
1017.1	1286.65	1023.3	1286.9	1276.9	1287.85
1128.5	1287.2	1109.1	1287.18	1367.9	1288.16
1231.8	1287.51	1200.8	1287.48	1457.5	1288.46
1326.3	1287.89	1299.1	1287.73	1549.5	1288.89
1429.6	1288.37	1391.4	1288.16	1637.6	1289.13
1532.3	1288.93	1484.9	1288.49	1726.6	1289.5
1634.1	1289.17	1580.5	1288.88		
1743.9	1289.34	1683.7	1289.24		
		1774.6	1289.66		

Station 100 is the centerline of the Arizona Canal.

Benchmarks:
New ADOT BM at NW corner of FWY and AZ Canal (SRPMIC Pt # 1000): 3/100' difference!!! Not shown on WLB maps.
WLB PT # 2415-8A at Pima Road and Az Canal: WLB = 1285.24, SRPMIC = 1284.93 Diff. = 0.19'
WLB PT # 2415-8 at Pima Road and Indian Bend Road: WLB = 1289.88, SRPMIC = 1289.63 Diff. = 0.25'
Therefore, conversion factor between SRPMIC datum and WLB datum = +0.22 ft

APPENDIX B

HEC-2 Input/Output Data

File: COE7

Split-Flow Model For Arizona Canal-IBW Side-Spillway Rating Table

THIS RUN EXECUTED 18OCT98 19:08:55

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

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

```
                                                  *
          ********************                    *
          *  F I N A L  *                         *
          ********************                    * * CAPTION FROM
                                                  *   ORIGINAL DCCO
             APRIL  1991    DeLeuw, Cather & Company   *   HEC-2 MODEL
                                                  *
* * * * * * * * * * * * * * * * * * * * * *
*    C O R R E C T E D        B           * *
* * * * * * * * * * * * * * * * * * * * * *
```

PORTIONS OF THIS MODEL WERE TAKEN FROM DCCO FILE: ACICB.IN

THIS MODEL IS ROBERT L. WARD FILE: COE7.IN

DATUM IS CORPS OF ENGINEERS (COE)

FROM COE DESIGN MEMO NO. 4, PAGE V-6,

SIDE-SPILLWAY

SIDE-SPILLWAY		ARIZONA CANAL		SIDE-SPILLWAY DISCHARGES	
DISTANCE FROM D/S END OF WEIR, FT.	WEIR CREST ELEVATION (S=0.00044) FT.	W.S ELEV. FT.	DISCHARGE CFS	Q CFS	TOTAL Q CFS
0	1280.50	1282.30	2500	0	0
220	1280.60	1282.10	3930	1430	1430
440	1280.69	1281.94	5000	1070	2500
660	1280.79	1281.89	5800	800	3300
880	1280.89	1281.85	6490	690	3990
1100	1280.98	1281.91	7100	610	4600

```
SPLIT FLOW OPTION WEIR METHOD TO DETERMINE FLOWS
OVER THE ARIZONA CANAL NORTH BANK COE SPILLWAY
INTO COE IBW INTERCEPTOR CHANNEL

SPILLWAY INVERT ELEVATIONS TAKEN FROM WLB TOPO
```

```
SPLIT FLOW BEING PERFORMED

SF      SPLIT FLOW FOR COE SPILLWAY

TW      SPILLWAY SECTION U/S END
WS      2   7147.   7197.     -1.     3.0
WC      0 1280.50     50. 1280.85

TW      SPILLWAY CONTINUED
WS      2   7097.   7147.     -1.     3.0
WC      0 1280.20     50. 1280.50

TW      SPILLWAY CONTINUED
WS      2   7047.   7097.     -1.     3.0
WC      0 1280.15     50. 1280.20

TW      SPILLWAY CONTINUED
WS      2   6997.   7047.     -1.     3.0
WC      0 1280.10     50. 1280.15

TW      SPILLWAY CONTINUED
WS      2   6947.   6997.     -1.     3.0
WC      0 1280.10     50. 1280.10

TW      SPILLWAY CONTINUED
WS      2   6897.   6947.     -1.     3.0
WC      0 1280.10     50. 1280.10

TW      SPILLWAY CONTINUED
WS      2   6847.   6897.     -1.     3.0
WC      0 1280.10     50. 1280.10

TW      SPILLWAY CONTINUED
WS      2   6797.   6847.     -1.     3.0
WC      0 1280.10     50. 1280.10

TW      SPILLWAY CONTINUED
WS      2   6747.   6797.     -1.     3.0
WC      0 1280.14     50. 1280.10
```

```
TW      SPILLWAY CONTINUED
WS     2   6697.   6747.     -1.     3.0
WC     0 1280.20     50. 1280.14

TW      SPILLWAY CONTINUED
WS     2   6647.   6697.     -1.     3.0
WC     0 1280.20     50. 1280.20

TW      SPILLWAY CONTINUED
WS     2   6597.   6647.     -1.     3.0
WC     0 1280.20     50. 1280.20

TW      SPILLWAY CONTINUED
WS     2   6547.   6597.     -1.     3.0
WC     0 1280.23     50. 1280.20

TW      SPILLWAY CONTINUED
WS     2   6497.   6547.     -1.     3.0
WC     0 1280.28     50. 1280.23

TW      SPILLWAY CONTINUED
WS     2   6447.   6497.     -1.     3.0
WC     0 1280.30     50. 1280.28

TW      SPILLWAY CONTINUED
WS     2   6397.   6447.     -1.     3.0
WC     0 1280.30     50. 1280.30

TW      SPILLWAY CONTINUED
WS     2   6347.   6397.     -1.     3.0
WC     0 1280.29     50. 1280.30

TW      SPILLWAY CONTINUED
WS     2   6297.   6347.     -1.     3.0
WC     0 1280.25     50. 1280.29

TW      SPILLWAY CONTINUED
WS     2   6247.   6297.     -1.     3.0
WC     0 1280.20     50. 1280.25

TW      SPILLWAY CONTINUED
WS     2   6197.   6247.     -1.     3.0
WC     0 1280.16     50. 1280.20

TW      SPILLWAY CONTINUED
WS     2   6147.   6197.     -1.     3.0
WC     0 1280.11     50. 1280.16

TW      SPILLWAY D/S END
WS     2   6097.   6147.     -1.     3.0
WC     0 1280.50     50. 1280.11
```

```
T1      ARIZONA CANAL AT COE SPILLWAY, REFINED WEIR FLOW ANALYSIS
T2      CORPS OF ENGINEERS DATUM, DCCO XSEC DATA, CANAL "n" = .021
T3      ARIZONA CANAL EXISTING              MODEL COE7.IN,  DEC 1991

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

     0        2                        .00025                                1280.0

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     1        0        -1

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38       43        1        4       26        8       42       17        5       33
    39       66       14

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

    -10      -10

NC   0.030    0.030    0.021      .1       .3
QT       9     2500     3000     3500     4000     4500     5000     5500     6000     7100

NH       2    0.021       92    0.030      519
X1  2500.0        9        0       92
X3      10
GR  1283.3        0   1271.9     11.4   1271.9     81.4   1283.3       92   1280.0      253
GR  1270.4      311   1269.4      386   1270.4      461   1280.0      519

NH       2    0.021       91    0.030      498
X1  2900.0        9        0       91      400      400      400
X3      10
GR  1282.9        0   1272.0     10.9   1272.0       80   1282.9       91   1280.0      249
GR  1270.6      307   1269.6      382   1270.6      440   1280.0      498

NH       2    0.021       91    0.030    476.3
X1  3155.1        9        0       91      255      255      255
X3      10
GR  1282.9        0   1272.1       10   1272.1       80   1282.9       91   1280.5      243
GR  1270.7      303   1269.7      378   1270.7      453   1280.0    476.3

NH       2    0.021       92    0.030      511
X1  3365.0        9        0       92      210      210      210
X3      10
GR  1282.9        0   1272.2       11   1272.2       81   1282.9       92   1280.5      243
GR  1270.8      303   1269.8      378   1270.8      453   1280.0      511
```

```
NH      2     0.021      92     0.030     498
X1   4000.0       9       0        92     635     635     635
X3     10
GR   1283.1       0  1272.4        11  1272.4      81  1283.1      92  1280.6     237
GR   1271.1     294  1270.1       369  1271.1     444  1280.0     498

NH      2     0.021      90     0.030     530
X1   4350.0       9       0        90     350     350     350
X3     10
GR   1282.8       0  1272.5        10  1272.5      80  1282.8      90  1280.7     263
GR   1271.3     319  1270.3       394  1271.3     469  1281.5     530

NH      2     0.021      90     0.030     480
X1   4800.0       9       0        90     450     450     450
X3     10
GR   1282.4       0  1272.7        10  1272.7      80  1282.4      90  1280.9     230
GR   1271.5     277  1270.5       352  1271.5     427  1280.9     480

NH      2     0.021      90     0.030     494
X1   5300.0       9       0        90     500     500     500
X3     10
GR   1283.1       0  1272.9        11  1272.9      81  1283.1      90  1281.0     233
GR   1271.8     287  1270.8       362  1271.8     437  1281.5     494

NH      2     0.021      92     0.030     480
X1   5850.0       9       0        92     550     550     550
X3     10
GR   1283.8       0  1273.1        11  1273.1      81  1283.8      92  1281.4     223
GR   1272.0     273  1271.0       348  1272.0     423  1281.5     480

NH      2     0.021      90     0.030   486.8
X1   5900.0       9       0        90      50      50      50
X3     10
GR   1284.2       0  1273.2        11  1273.2      80  1284.0      90  1281.4   226.6
GR   1272.0     283  1271.0       358  1272.0     433  1281.5   486.8

NH      2     0.021      90     0.030   486.8
X1   6010.0       0       0         0     110     110     110
X3     10


      BEGIN COE SPILLWAY DOWNSTREAM


NC    .021    .021    .021        .1      .3
X1    6097       4       0      88.3      87      87      87
GR   1284.2       0 1273.19        11 1273.19      81  1280.5    88.3
```

X1	6147	0	0	0	50	50	50	.0227272
X1	6197	0	0	0	50	50	50	.0227272
X1	6247	0	0	0	50	50	50	.0227272
X1	6297	0	0	0	50	50	50	.0227272
X1	6347	0	0	0	50	50	50	.0227272
X1	6397	0	0	0	50	50	50	.0227272
X1	6447	0	0	0	50	50	50	.0227272
X1	6497	0	0	0	50	50	50	.0227272
X1	6547	0	0	0	50	50	50	.0227272
X1	6597	0	0	0	50	50	50	.0227272
X1	6647	0	0	0	50	50	50	.0227272
X1	6697	0	0	0	50	50	50	.0227272
X1	6747	0	0	0	50	50	50	.0227272
X1	6797	0	0	0	50	50	50	.0227272
X1	6847	0	0	0	50	50	50	.0227272
X1	6897	0	0	0	50	50	50	.0227272
X1	6947	0	0	0	50	50	50	.0227272
X1	6997	0	0	0	50	50	50	.0227272
X1	7047	0	0	0	50	50	50	.0227272
X1	7097	0	0	0	50	50	50	.0227272
X1	7147	0	0	0	50	50	50	.0227272
X1	7197	0	0	0	50	50	50	.0227272

END COE SPILLWAY UPSTREAM

X1	7217.0	4	0	88.6	20	20	20			
X3	10									
GR	1285.0	0	1273.7	11.3	1273.7	81.3	1281.0	88.6		
X1	7329.0	5	0	92.3	112	112	112			
X3	10									
GR	1285.0	0	1273.7	11.3	1273.8	81.3	1284.0	92.3	1284.8	115

THIS RUN EXECUTED 18OCT98 19:09:05

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

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

ARIZONA CANAL EXISTING

SUMMARY PRINTOUT

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
2500.000	2186.81	1279.27	84.23	3.85	7.37	1271.90	21.00	2.55	.00	.00	.00	2186.81
2500.000	2279.68	1279.47	84.60	3.90	7.57	1271.90	21.00	2.54	.00	.00	.00	2279.68
2500.000	2355.75	1279.63	84.91	3.94	7.73	1271.90	21.00	2.53	.00	.00	.00	2355.75
2500.000	2428.97	1279.78	85.20	3.97	7.88	1271.90	21.00	2.52	.00	.00	.00	2428.97
2500.000	2503.09	1279.93	85.50	4.01	8.03	1271.90	21.00	2.51	.00	.00	.00	2503.09
2500.000	2613.29	1280.14	85.90	4.07	8.24	1271.90	21.00	2.51	.00	.00	.00	2613.29
2500.000	2635.73	1280.18	85.98	4.08	8.28	1271.90	21.00	2.51	.00	.00	.00	2635.73
2500.000	2705.17	1280.30	86.21	4.12	8.40	1271.90	21.00	2.52	.00	.00	.00	2705.17
2500.000	2860.08	1280.57	86.74	4.21	8.67	1271.90	21.00	2.53	.00	.00	.00	2860.08
2900.000	2186.81	1279.37	83.91	3.88	7.37	1272.00	21.00	2.60	.25	400.00	400.00	2186.81
2900.000	2279.68	1279.57	84.30	3.93	7.57	1272.00	21.00	2.59	.25	400.00	400.00	2279.68
2900.000	2355.75	1279.73	84.62	3.97	7.73	1272.00	21.00	2.58	.25	400.00	400.00	2355.75
2900.000	2428.97	1279.88	84.93	4.00	7.88	1272.00	21.00	2.57	.25	400.00	400.00	2428.97
2900.000	2503.09	1280.03	85.24	4.04	8.03	1272.00	21.00	2.55	.25	400.00	400.00	2503.09
2900.000	2613.29	1280.24	85.65	4.10	8.24	1272.00	21.00	2.56	.25	400.00	400.00	2613.29
2900.000	2635.73	1280.28	85.73	4.11	8.28	1272.00	21.00	2.56	.25	400.00	400.00	2635.73
2900.000	2705.17	1280.40	85.98	4.15	8.40	1272.00	21.00	2.57	.25	400.00	400.00	2705.17
2900.000	2860.08	1280.67	86.53	4.24	8.67	1272.00	21.00	2.58	.25	400.00	400.00	2860.08
3155.100	2186.81	1279.44	84.27	3.86	7.34	1272.10	21.00	2.58	.39	255.00	655.00	2186.81
3155.100	2279.68	1279.63	84.65	3.91	7.53	1272.10	21.00	2.57	.39	255.00	655.00	2279.68
3155.100	2355.75	1279.79	84.96	3.95	7.69	1272.10	21.00	2.56	.39	255.00	655.00	2355.75
3155.100	2428.97	1279.95	85.26	3.99	7.85	1272.10	21.00	2.55	.39	255.00	655.00	2428.97
3155.100	2503.09	1280.10	85.56	4.02	8.00	1272.10	21.00	2.54	.39	255.00	655.00	2503.09
3155.100	2613.29	1280.30	85.95	4.08	8.20	1272.10	21.00	2.54	.39	255.00	655.00	2613.29
3155.100	2635.73	1280.34	86.03	4.10	8.24	1272.10	21.00	2.54	.39	255.00	655.00	2635.73
3155.100	2705.17	1280.47	86.27	4.14	8.37	1272.10	21.00	2.55	.39	255.00	655.00	2705.17
3155.100	2860.08	1280.74	86.80	4.22	8.64	1272.10	21.00	2.56	.39	255.00	655.00	2860.08

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
3365.000	2186.81	1279.49	85.00	3.87	7.29	1272.20	21.00	2.61	.48	210.00	865.00	2186.81
3365.000	2279.68	1279.69	85.40	3.92	7.49	1272.20	21.00	2.60	.48	210.00	865.00	2279.68
3365.000	2355.75	1279.85	85.72	3.96	7.65	1272.20	21.00	2.59	.48	210.00	865.00	2355.75
3365.000	2428.97	1280.00	86.04	3.99	7.80	1272.20	21.00	2.58	.48	210.00	865.00	2428.97
3365.000	2503.09	1280.15	86.35	4.03	7.95	1272.20	21.00	2.56	.48	210.00	865.00	2503.09
3365.000	2613.29	1280.36	86.77	4.09	8.16	1272.20	21.00	2.56	.48	210.00	865.00	2613.29
3365.000	2635.73	1280.40	86.86	4.10	8.20	1272.20	21.00	2.57	.48	210.00	865.00	2635.73
3365.000	2705.17	1280.52	87.11	4.14	8.32	1272.20	21.00	2.57	.48	210.00	865.00	2705.17
3365.000	2860.08	1280.80	87.67	4.22	8.60	1272.20	21.00	2.58	.48	210.00	865.00	2860.08
4000.000	2186.81	1279.66	84.93	3.89	7.26	1272.40	21.00	2.66	.32	635.00	1500.00	2186.81
4000.000	2279.68	1279.85	85.32	3.94	7.45	1272.40	21.00	2.64	.32	635.00	1500.00	2279.68
4000.000	2355.75	1280.01	85.65	3.98	7.61	1272.40	21.00	2.63	.32	635.00	1500.00	2355.75
4000.000	2428.97	1280.16	85.96	4.01	7.76	1272.40	21.00	2.62	.32	635.00	1500.00	2428.97
4000.000	2503.09	1280.32	86.27	4.05	7.92	1272.40	21.00	2.60	.32	635.00	1500.00	2503.09
4000.000	2613.29	1280.52	86.70	4.11	8.12	1272.40	21.00	2.61	.32	635.00	1500.00	2613.29
4000.000	2635.73	1280.56	86.78	4.12	8.16	1272.40	21.00	2.61	.32	635.00	1500.00	2635.73
4000.000	2705.17	1280.68	87.03	4.16	8.28	1272.40	21.00	2.61	.32	635.00	1500.00	2705.17
4000.000	2860.08	1280.96	87.60	4.24	8.56	1272.40	21.00	2.62	.32	635.00	1500.00	2860.08
4350.000	2186.81	1279.75	84.08	3.91	7.25	1272.50	21.00	2.69	.29	350.00	1850.00	2186.81
4350.000	2279.68	1279.94	84.45	3.97	7.44	1272.50	21.00	2.68	.29	350.00	1850.00	2279.68
4350.000	2355.75	1280.10	84.76	4.01	7.60	1272.50	21.00	2.67	.29	350.00	1850.00	2355.75
4350.000	2428.97	1280.25	85.05	4.04	7.75	1272.50	21.00	2.66	.29	350.00	1850.00	2428.97
4350.000	2503.09	1280.40	85.35	4.08	7.90	1272.50	21.00	2.64	.29	350.00	1850.00	2503.09
4350.000	2613.29	1280.61	85.75	4.14	8.11	1272.50	21.00	2.64	.29	350.00	1850.00	2613.29
4350.000	2635.73	1280.65	85.82	4.15	8.15	1272.50	21.00	2.65	.29	350.00	1850.00	2635.73
4350.000	2705.17	1280.77	86.06	4.19	8.27	1272.50	21.00	2.65	.29	350.00	1850.00	2705.17
4350.000	2860.08	1281.05	86.60	4.27	8.55	1272.50	21.00	2.66	.29	350.00	1850.00	2860.08
4800.000	2186.81	1279.87	84.79	3.94	7.17	1272.70	21.00	2.77	.44	450.00	2300.00	2186.81
4800.000	2279.68	1280.06	85.18	3.99	7.36	1272.70	21.00	2.75	.44	450.00	2300.00	2279.68
4800.000	2355.75	1280.22	85.50	4.03	7.52	1272.70	21.00	2.74	.44	450.00	2300.00	2355.75
4800.000	2428.97	1280.37	85.82	4.06	7.67	1272.70	21.00	2.72	.44	450.00	2300.00	2428.97
4800.000	2503.09	1280.52	86.13	4.10	7.82	1272.70	21.00	2.71	.44	450.00	2300.00	2503.09
4800.000	2613.29	1280.73	86.55	4.16	8.03	1272.70	21.00	2.71	.44	450.00	2300.00	2613.29
4800.000	2635.73	1280.77	86.63	4.17	8.07	1272.70	21.00	2.71	.44	450.00	2300.00	2635.73
4800.000	2705.17	1280.89	86.89	4.21	8.19	1272.70	21.00	2.71	.44	450.00	2300.00	2705.17
4800.000	2860.08	1281.17	87.46	4.29	8.47	1272.70	21.00	2.71	.44	450.00	2300.00	2860.08
5300.000	2186.81	1280.01	83.94	4.00	7.11	1272.90	21.00	2.87	.40	500.00	2800.00	2186.81
5300.000	2279.68	1280.20	84.31	4.05	7.30	1272.90	21.00	2.86	.40	500.00	2800.00	2279.68
5300.000	2355.75	1280.35	84.62	4.09	7.45	1272.90	21.00	2.84	.40	500.00	2800.00	2355.75
5300.000	2428.97	1280.50	84.91	4.12	7.60	1272.90	21.00	2.83	.40	500.00	2800.00	2428.97
5300.000	2503.09	1280.66	85.21	4.16	7.76	1272.90	21.00	2.81	.40	500.00	2800.00	2503.09
5300.000	2613.29	1280.86	85.61	4.22	7.96	1272.90	21.00	2.81	.40	500.00	2800.00	2613.29
5300.000	2635.73	1280.90	85.69	4.23	8.00	1272.90	21.00	2.81	.40	500.00	2800.00	2635.73
5300.000	2705.17	1281.02	85.93	4.27	8.12	1272.90	21.00	2.81	.40	500.00	2800.00	2705.17
5300.000	2860.08	1281.30	86.47	4.35	8.40	1272.90	21.00	2.81	.40	500.00	2800.00	2860.08

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
5850.000	2186.81	1280.17	84.53	4.01	7.07	1273.10	21.00	2.91	.36	550.00	3350.00	2186.81
5850.000	2279.68	1280.36	84.92	4.06	7.26	1273.10	21.00	2.89	.36	550.00	3350.00	2279.68
5850.000	2355.75	1280.51	85.24	4.09	7.41	1273.10	21.00	2.88	.36	550.00	3350.00	2355.75
5850.000	2428.97	1280.66	85.54	4.13	7.56	1273.10	21.00	2.86	.36	550.00	3350.00	2428.97
5850.000	2503.09	1280.81	85.85	4.17	7.71	1273.10	21.00	2.84	.36	550.00	3350.00	2503.09
5850.000	2613.29	1281.02	86.27	4.23	7.92	1273.10	21.00	2.84	.36	550.00	3350.00	2613.29
5850.000	2635.73	1281.06	86.36	4.24	7.96	1273.10	21.00	2.84	.36	550.00	3350.00	2635.73
5850.000	2705.17	1281.18	86.61	4.28	8.08	1273.10	21.00	2.84	.36	550.00	3350.00	2705.17
5850.000	2860.08	1281.45	87.18	4.36	8.35	1273.10	21.00	2.84	.36	550.00	3350.00	2860.08
5900.000	2186.81	1280.17	82.42	4.15	6.97	1273.20	21.00	3.17	2.00	50.00	3400.00	2186.81
5900.000	2279.68	1280.36	82.78	4.20	7.16	1273.20	21.00	3.15	2.00	50.00	3400.00	2279.68
5900.000	2355.75	1280.51	83.08	4.24	7.31	1273.20	21.00	3.13	2.00	50.00	3400.00	2355.75
5900.000	2428.97	1280.66	83.37	4.27	7.46	1273.20	21.00	3.11	2.00	50.00	3400.00	2428.97
5900.000	2503.09	1280.81	83.66	4.31	7.61	1273.20	21.00	3.09	2.00	50.00	3400.00	2503.09
5900.000	2613.29	1281.02	84.05	4.37	7.82	1273.20	21.00	3.08	2.00	50.00	3400.00	2613.29
5900.000	2635.73	1281.06	84.13	4.38	7.86	1273.20	21.00	3.08	2.00	50.00	3400.00	2635.73
5900.000	2705.17	1281.18	84.37	4.42	7.98	1273.20	21.00	3.08	2.00	50.00	3400.00	2705.17
5900.000	2860.08	1281.45	84.90	4.50	8.25	1273.20	21.00	3.08	2.00	50.00	3400.00	2860.08
6010.000	2186.81	1280.21	82.50	4.12	7.01	1273.20	21.00	3.11	.00	110.00	3510.00	2186.81
6010.000	2279.68	1280.40	82.86	4.17	7.20	1273.20	21.00	3.09	.00	110.00	3510.00	2279.68
6010.000	2355.75	1280.55	83.16	4.21	7.35	1273.20	21.00	3.07	.00	110.00	3510.00	2355.75
6010.000	2428.97	1280.70	83.45	4.25	7.50	1273.20	21.00	3.06	.00	110.00	3510.00	2428.97
6010.000	2503.09	1280.85	83.73	4.28	7.65	1273.20	21.00	3.04	.00	110.00	3510.00	2503.09
6010.000	2613.29	1281.05	84.13	4.35	7.85	1273.20	21.00	3.03	.00	110.00	3510.00	2613.29
6010.000	2635.73	1281.09	84.20	4.36	7.89	1273.20	21.00	3.03	.00	110.00	3510.00	2635.73
6010.000	2705.17	1281.22	84.44	4.40	8.02	1273.20	21.00	3.03	.00	110.00	3510.00	2705.17
6010.000	2860.08	1281.49	84.97	4.48	8.29	1273.20	21.00	3.03	.00	110.00	3510.00	2860.08
6097.000	2186.81	1280.25	84.10	4.02	7.06	1273.19	21.00	2.93	-.12	87.00	3597.00	2186.81
6097.000	2279.68	1280.44	84.48	4.07	7.25	1273.19	21.00	2.92	-.12	87.00	3597.00	2279.68
6097.000	2355.75	1280.59	84.69	4.11	7.40	1273.19	21.00	2.90	-.12	87.00	3597.00	2355.75
6097.000	2428.97	1280.74	84.84	4.15	7.55	1273.19	21.00	2.88	-.12	87.00	3597.00	2428.97
6097.000	2503.09	1280.89	84.99	4.18	7.70	1273.19	21.00	2.87	-.12	87.00	3597.00	2503.09
6097.000	2613.29	1281.09	85.20	4.25	7.90	1273.19	21.00	2.86	-.12	87.00	3597.00	2613.29
6097.000	2635.73	1281.13	85.24	4.26	7.94	1273.19	21.00	2.86	-.12	87.00	3597.00	2635.73
6097.000	2705.17	1281.26	85.36	4.30	8.07	1273.19	21.00	2.86	-.12	87.00	3597.00	2705.17
6097.000	2860.08	1281.53	85.64	4.38	8.34	1273.19	21.00	2.86	-.12	87.00	3597.00	2860.08
6147.000	2188.13	1280.26	84.10	4.02	7.05	1273.21	21.00	2.94	.45	50.00	3647.00	2188.13
6147.000	2289.80	1280.45	84.48	4.09	7.24	1273.21	21.00	2.94	.45	50.00	3647.00	2289.80
6147.000	2381.31	1280.60	84.69	4.16	7.39	1273.21	21.00	2.97	.45	50.00	3647.00	2381.31
6147.000	2473.70	1280.75	84.84	4.23	7.53	1273.21	21.00	3.00	.45	50.00	3647.00	2473.69
6147.000	2569.01	1280.89	84.98	4.30	7.68	1273.21	21.00	3.03	.45	50.00	3647.00	2569.01
6147.000	2698.84	1281.09	85.17	4.40	7.88	1273.21	21.00	3.08	.45	50.00	3647.00	2698.84
6147.000	2749.48	1281.13	85.21	4.46	7.92	1273.21	21.00	3.15	.45	50.00	3647.00	2749.48
6147.000	2844.67	1281.25	85.33	4.54	8.04	1273.21	21.00	3.20	.45	50.00	3647.00	2844.67
6147.000	3061.60	1281.52	85.60	4.71	8.30	1273.21	21.00	3.33	.45	50.00	3647.00	3061.60

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
6197.000	2195.43	1280.27	84.08	4.04	7.04	1273.24	21.00	2.97	.45	50.00	3697.00	2195.43
6197.000	2316.92	1280.46	84.44	4.15	7.22	1273.24	21.00	3.04	.45	50.00	3697.00	2316.92
6197.000	2430.24	1280.61	84.67	4.26	7.37	1273.24	21.00	3.12	.45	50.00	3697.00	2430.24
6197.000	2546.01	1280.75	84.81	4.37	7.51	1273.24	21.00	3.22	.45	50.00	3697.00	2546.01
6197.000	2664.09	1280.89	84.95	4.48	7.66	1273.24	21.00	3.31	.45	50.00	3697.00	2664.09
6197.000	2818.95	1281.09	85.15	4.61	7.85	1273.24	21.00	3.40	.45	50.00	3697.00	2818.95
6197.000	2895.56	1281.12	85.18	4.72	7.89	1273.24	21.00	3.54	.45	50.00	3697.00	2895.56
6197.000	3019.43	1281.24	85.29	4.84	8.00	1273.24	21.00	3.66	.45	50.00	3697.00	3019.43
6197.000	3300.64	1281.49	85.55	5.11	8.26	1273.24	21.00	3.94	.45	50.00	3697.00	3300.64
6247.000	2200.28	1280.29	84.06	4.06	7.03	1273.26	21.00	2.99	.45	50.00	3747.00	2200.28
6247.000	2339.73	1280.47	84.42	4.20	7.21	1273.26	21.00	3.11	.45	50.00	3747.00	2339.73
6247.000	2473.29	1280.62	84.66	4.34	7.36	1273.26	21.00	3.25	.45	50.00	3747.00	2473.29
6247.000	2611.19	1280.75	84.80	4.49	7.50	1273.26	21.00	3.40	.45	50.00	3747.00	2611.19
6247.000	2750.87	1280.89	84.93	4.64	7.64	1273.26	21.00	3.56	.45	50.00	3747.00	2750.87
6247.000	2930.16	1281.09	85.12	4.81	7.83	1273.26	21.00	3.71	.45	50.00	3747.00	2930.16
6247.000	3030.83	1281.11	85.15	4.96	7.86	1273.26	21.00	3.93	.45	50.00	3747.00	3030.83
6247.000	3180.78	1281.23	85.26	5.12	7.97	1273.26	21.00	4.12	.45	50.00	3747.00	3180.77
6247.000	3522.09	1281.47	85.50	5.49	8.21	1273.26	21.00	4.57	.45	50.00	3747.00	3522.09
6297.000	2203.09	1280.30	84.04	4.07	7.02	1273.28	21.00	3.02	.45	50.00	3797.00	2203.09
6297.000	2358.54	1280.48	84.40	4.24	7.20	1273.28	21.00	3.18	.45	50.00	3797.00	2358.54
6297.000	2511.13	1280.63	84.64	4.42	7.34	1273.28	21.00	3.37	.45	50.00	3797.00	2511.13
6297.000	2669.65	1280.76	84.78	4.60	7.48	1273.28	21.00	3.58	.45	50.00	3797.00	2669.65
6297.000	2830.22	1280.90	84.92	4.78	7.62	1273.28	21.00	3.78	.45	50.00	3797.00	2830.22
6297.000	3028.63	1281.09	85.10	4.99	7.81	1273.28	21.00	4.00	.45	50.00	3797.00	3028.63
6297.000	3156.22	1281.11	85.12	5.18	7.83	1273.28	21.00	4.31	.45	50.00	3797.00	3156.22
6297.000	3329.62	1281.22	85.23	5.39	7.94	1273.28	21.00	4.58	.45	50.00	3797.00	3329.62
6297.000	3727.07	1281.45	85.46	5.84	8.17	1273.28	21.00	5.21	.45	50.00	3797.00	3727.07
6347.000	2204.27	1280.32	84.03	4.08	7.01	1273.30	21.00	3.03	.45	50.00	3847.00	2204.27
6347.000	2373.93	1280.50	84.39	4.27	7.19	1273.30	21.00	3.23	.45	50.00	3847.00	2373.93
6347.000	2544.13	1280.64	84.63	4.48	7.33	1273.30	21.00	3.48	.45	50.00	3847.00	2544.13
6347.000	2721.84	1280.77	84.77	4.70	7.47	1273.30	21.00	3.75	.45	50.00	3847.00	2721.84
6347.000	2902.24	1280.90	84.90	4.92	7.60	1273.30	21.00	4.01	.45	50.00	3847.00	2902.24
6347.000	3118.61	1281.09	85.09	5.14	7.79	1273.30	21.00	4.26	.45	50.00	3847.00	3118.61
6347.000	3271.90	1281.11	85.10	5.39	7.81	1273.30	21.00	4.68	.45	50.00	3847.00	3271.90
6347.000	3468.30	1281.21	85.20	5.63	7.91	1273.30	21.00	5.03	.45	50.00	3847.00	3468.29
6347.000	3917.28	1281.43	85.42	6.17	8.13	1273.30	21.00	5.84	.45	50.00	3847.00	3917.28
6397.000	2205.01	1280.33	84.01	4.08	7.01	1273.33	21.00	3.05	.45	50.00	3897.00	2205.01
6397.000	2388.13	1280.51	84.37	4.30	7.18	1273.33	21.00	3.28	.45	50.00	3897.00	2388.13
6397.000	2575.24	1280.65	84.62	4.55	7.32	1273.33	21.00	3.59	.45	50.00	3897.00	2575.24
6397.000	2771.48	1280.78	84.75	4.80	7.45	1273.33	21.00	3.91	.45	50.00	3897.00	2771.48
6397.000	2970.21	1280.91	84.88	5.04	7.58	1273.33	21.00	4.23	.45	50.00	3897.00	2970.21
6397.000	3204.52	1281.10	85.07	5.30	7.77	1273.33	21.00	4.54	.45	50.00	3897.00	3204.52
6397.000	3382.50	1281.11	85.08	5.59	7.78	1273.33	21.00	5.05	.45	50.00	3897.00	3382.50
6397.000	3601.46	1281.21	85.17	5.87	7.88	1273.33	21.00	5.48	.45	50.00	3897.00	3601.46
6397.000	4096.60	1281.42	85.39	6.48	8.10	1273.33	21.00	6.48	.45	50.00	3897.00	4096.60

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
6447.000	2206.14	1280.35	83.99	4.09	7.00	1273.35	21.00	3.06	.45	50.00	3947.00	2206.14
6447.000	2403.15	1280.52	84.35	4.34	7.17	1273.35	21.00	3.34	.45	50.00	3947.00	2403.15
6447.000	2607.23	1280.66	84.61	4.61	7.31	1273.35	21.00	3.70	.45	50.00	3947.00	2607.23
6447.000	2822.13	1280.79	84.74	4.89	7.44	1273.35	21.00	4.08	.45	50.00	3947.00	2822.13
6447.000	3039.47	1280.92	84.87	5.17	7.57	1273.35	21.00	4.46	.45	50.00	3947.00	3039.47
6447.000	3290.38	1281.10	85.05	5.45	7.75	1273.35	21.00	4.82	.45	50.00	3947.00	3290.38
6447.000	3492.24	1281.11	85.05	5.79	7.76	1273.35	21.00	5.43	.45	50.00	3947.00	3492.24
6447.000	3733.11	1281.21	85.15	6.11	7.86	1273.35	21.00	5.95	.45	50.00	3947.00	3733.11
6447.000	4272.92	1281.41	85.36	6.79	8.06	1273.35	21.00	7.15	.45	50.00	3947.00	4272.92
6497.000	2208.54	1280.36	83.98	4.10	6.99	1273.37	21.00	3.08	.45	50.00	3997.00	2208.54
6497.000	2420.59	1280.54	84.33	4.37	7.16	1273.37	21.00	3.40	.45	50.00	3997.00	2420.59
6497.000	2642.15	1280.67	84.59	4.68	7.30	1273.37	21.00	3.81	.45	50.00	3997.00	2642.15
6497.000	2875.78	1280.80	84.73	5.00	7.43	1273.37	21.00	4.26	.45	50.00	3997.00	2875.78
6497.000	3111.94	1280.92	84.85	5.31	7.55	1273.37	21.00	4.71	.45	50.00	3997.00	3111.94
6497.000	3379.03	1281.11	85.04	5.61	7.73	1273.37	21.00	5.12	.45	50.00	3997.00	3379.03
6497.000	3604.26	1281.11	85.03	5.99	7.74	1273.37	21.00	5.83	.45	50.00	3997.00	3604.26
6497.000	3866.25	1281.20	85.13	6.34	7.83	1273.37	21.00	6.45	.45	50.00	3997.00	3866.25
6497.000	4449.99	1281.40	85.32	7.11	8.03	1273.37	21.00	7.86	.45	50.00	3997.00	4449.99
6547.000	2214.25	1280.37	83.96	4.12	6.98	1273.39	21.00	3.11	.45	50.00	4047.00	2214.25
6547.000	2443.65	1280.55	84.30	4.42	7.15	1273.39	21.00	3.49	.45	50.00	4047.00	2443.65
6547.000	2683.57	1280.68	84.57	4.76	7.29	1273.39	21.00	3.96	.45	50.00	4047.00	2683.57
6547.000	2936.47	1280.81	84.71	5.11	7.41	1273.39	21.00	4.47	.45	50.00	4047.00	2936.47
6547.000	3191.81	1280.93	84.84	5.46	7.54	1273.39	21.00	4.99	.45	50.00	4047.00	3191.81
6547.000	3475.30	1281.11	85.02	5.79	7.72	1273.39	21.00	5.46	.45	50.00	4047.00	3475.30
6547.000	3723.52	1281.11	85.01	6.21	7.72	1273.39	21.00	6.28	.45	50.00	4047.00	3723.52
6547.000	4005.70	1281.20	85.10	6.60	7.81	1273.39	21.00	7.00	.45	50.00	4047.00	4005.70
6547.000	4633.11	1281.39	85.29	7.43	8.00	1273.39	21.00	8.64	.45	50.00	4047.00	4633.11
6597.000	2224.43	1280.39	83.94	4.14	6.97	1273.42	21.00	3.15	.45	50.00	4097.00	2224.43
6597.000	2473.25	1280.56	84.28	4.49	7.14	1273.42	21.00	3.59	.45	50.00	4097.00	2473.25
6597.000	2732.81	1280.69	84.55	4.86	7.28	1273.42	21.00	4.12	.45	50.00	4097.00	2732.81
6597.000	3005.60	1280.82	84.70	5.24	7.40	1273.42	21.00	4.71	.45	50.00	4097.00	3005.60
6597.000	3279.77	1280.94	84.82	5.62	7.52	1273.42	21.00	5.31	.45	50.00	4097.00	3279.77
6597.000	3580.06	1281.11	85.00	5.98	7.70	1273.42	21.00	5.84	.45	50.00	4097.00	3580.06
6597.000	3851.39	1281.12	84.99	6.44	7.70	1273.42	21.00	6.79	.45	50.00	4097.00	3851.39
6597.000	4152.71	1281.20	85.08	6.86	7.78	1273.42	21.00	7.60	.45	50.00	4097.00	4152.71
6597.000	4823.29	1281.38	85.26	7.77	7.96	1273.42	21.00	9.50	.45	50.00	4097.00	4823.29
6647.000	2237.29	1280.40	83.93	4.17	6.96	1273.44	21.00	3.20	.45	50.00	4147.00	2237.29
6647.000	2506.40	1280.57	84.26	4.55	7.13	1273.44	21.00	3.71	.45	50.00	4147.00	2506.40
6647.000	2785.71	1280.70	84.52	4.96	7.26	1273.44	21.00	4.31	.45	50.00	4147.00	2785.71
6647.000	3078.88	1280.82	84.68	5.38	7.38	1273.44	21.00	4.98	.45	50.00	4147.00	3078.88
6647.000	3371.63	1280.94	84.81	5.79	7.50	1273.44	21.00	5.65	.45	50.00	4147.00	3371.63
6647.000	3688.65	1281.12	84.98	6.18	7.68	1273.44	21.00	6.25	.45	50.00	4147.00	3688.65
6647.000	3982.17	1281.12	84.97	6.68	7.68	1273.44	21.00	7.33	.45	50.00	4147.00	3982.17
6647.000	4302.34	1281.20	85.05	7.13	7.76	1273.44	21.00	8.25	.45	50.00	4147.00	4302.34
6647.000	5015.37	1281.37	85.22	8.12	7.93	1273.44	21.00	10.41	.45	50.00	4147.00	5015.36

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
6697.000	2251.52	1280.41	83.91	4.20	6.95	1273.46	21.00	3.25	.45	50.00	4197.00	2251.52
6697.000	2540.96	1280.58	84.24	4.62	7.12	1273.46	21.00	3.83	.45	50.00	4197.00	2540.96
6697.000	2840.30	1280.71	84.50	5.07	7.25	1273.46	21.00	4.51	.45	50.00	4197.00	2840.30
6697.000	3153.54	1280.83	84.67	5.53	7.37	1273.46	21.00	5.26	.45	50.00	4197.00	3153.54
6697.000	3464.76	1280.95	84.79	5.97	7.49	1273.46	21.00	6.01	.45	50.00	4197.00	3464.76
6697.000	3798.22	1281.12	84.96	6.38	7.66	1273.46	21.00	6.68	.45	50.00	4197.00	3798.22
6697.000	4113.55	1281.12	84.95	6.92	7.66	1273.46	21.00	7.89	.45	50.00	4197.00	4113.55
6697.000	4451.91	1281.20	85.03	7.40	7.74	1273.46	21.00	8.92	.45	50.00	4197.00	4451.91
6697.000	5205.17	1281.36	85.19	8.46	7.90	1273.46	21.00	11.36	.45	50.00	4197.00	5205.17
6747.000	2270.36	1280.43	83.88	4.25	6.94	1273.49	21.00	3.33	.45	50.00	4247.00	2270.36
6747.000	2581.16	1280.59	84.21	4.70	7.11	1273.49	21.00	3.98	.45	50.00	4247.00	2581.16
6747.000	2901.67	1280.72	84.47	5.19	7.24	1273.49	21.00	4.73	.45	50.00	4247.00	2901.67
6747.000	3233.98	1280.84	84.66	5.68	7.36	1273.49	21.00	5.56	.45	50.00	4247.00	3233.98
6747.000	3564.78	1280.96	84.77	6.15	7.47	1273.49	21.00	6.41	.45	50.00	4247.00	3564.78
6747.000	3917.75	1281.13	84.93	6.60	7.64	1273.49	21.00	7.20	.45	50.00	4247.00	3917.75
6747.000	4251.41	1281.12	84.93	7.17	7.64	1273.49	21.00	8.50	.45	50.00	4247.00	4251.41
6747.000	4607.07	1281.20	85.01	7.69	7.71	1273.49	21.00	9.65	.45	50.00	4247.00	4607.07
6747.000	5400.44	1281.36	85.16	8.82	7.87	1273.49	21.00	12.39	.45	50.00	4247.00	5400.44
6797.000	2296.53	1280.44	83.86	4.30	6.93	1273.51	21.00	3.43	.45	50.00	4297.00	2296.53
6797.000	2630.80	1280.60	84.19	4.80	7.10	1273.51	21.00	4.15	.45	50.00	4297.00	2630.80
6797.000	2973.29	1280.73	84.44	5.32	7.22	1273.51	21.00	5.00	.45	50.00	4297.00	2973.29
6797.000	3325.52	1280.85	84.64	5.85	7.34	1273.51	21.00	5.92	.45	50.00	4297.00	3325.52
6797.000	3676.58	1280.96	84.76	6.36	7.45	1273.51	21.00	6.87	.45	50.00	4297.00	3676.58
6797.000	4047.75	1281.13	84.91	6.84	7.62	1273.51	21.00	7.76	.45	50.00	4297.00	4047.75
6797.000	4400.12	1281.12	84.91	7.45	7.61	1273.51	21.00	9.20	.45	50.00	4297.00	4400.12
6797.000	4774.20	1281.20	84.98	7.99	7.69	1273.51	21.00	10.47	.45	50.00	4297.00	4774.19
6797.000	5605.93	1281.35	85.13	9.19	7.84	1273.51	21.00	13.53	.45	50.00	4297.00	5605.93
6847.000	2326.74	1280.45	83.83	4.37	6.92	1273.53	21.00	3.54	.45	50.00	4347.00	2326.74
6847.000	2685.15	1280.61	84.16	4.91	7.08	1273.53	21.00	4.35	.45	50.00	4347.00	2685.15
6847.000	3049.58	1280.74	84.42	5.47	7.21	1273.53	21.00	5.29	.45	50.00	4347.00	3049.58
6847.000	3422.11	1280.85	84.63	6.04	7.32	1273.53	21.00	6.32	.45	50.00	4347.00	3422.11
6847.000	3793.43	1280.97	84.74	6.58	7.44	1273.53	21.00	7.37	.45	50.00	4347.00	3793.43
6847.000	4182.29	1281.13	84.91	7.08	7.60	1273.53	21.00	8.31	.45	50.00	4347.00	4182.29
6847.000	4554.89	1281.12	84.88	7.73	7.59	1273.53	21.00	9.95	.45	50.00	4347.00	4554.89
6847.000	4945.61	1281.20	84.96	8.31	7.66	1273.53	21.00	11.36	.45	50.00	4347.00	4945.61
6847.000	5814.37	1281.34	85.10	9.57	7.81	1273.53	21.00	14.74	.45	50.00	4347.00	5814.37
6897.000	2358.45	1280.46	83.81	4.44	6.91	1273.55	21.00	3.65	.45	50.00	4397.00	2358.45
6897.000	2741.13	1280.62	84.14	5.03	7.07	1273.55	21.00	4.56	.45	50.00	4397.00	2741.13
6897.000	3127.40	1280.75	84.39	5.62	7.20	1273.55	21.00	5.60	.45	50.00	4397.00	3127.40
6897.000	3520.30	1280.86	84.61	6.22	7.31	1273.55	21.00	6.74	.45	50.00	4397.00	3520.30
6897.000	3911.48	1280.97	84.72	6.80	7.42	1273.55	21.00	7.90	.45	50.00	4397.00	3911.48
6897.000	4317.84	1281.14	84.88	7.34	7.58	1273.55	21.00	8.98	.45	50.00	4397.00	4317.84
6897.000	4709.15	1281.13	84.88	8.00	7.57	1273.55	21.00	10.68	.45	50.00	4397.00	4709.15
6897.000	5117.55	1281.20	84.94	8.63	7.64	1273.55	21.00	12.28	.45	50.00	4397.00	5117.55
6897.000	6021.55	1281.34	85.08	9.95	7.78	1273.55	21.00	15.99	.45	50.00	4397.00	6021.55

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
6947.000	2391.78	1280.47	83.79	4.51	6.90	1273.58	21.00	3.78	.45	50.00	4447.00	2391.78
6947.000	2798.82	1280.63	84.11	5.14	7.06	1273.58	21.00	4.79	.45	50.00	4447.00	2798.82
6947.000	3207.28	1280.76	84.36	5.78	7.18	1273.58	21.00	5.93	.45	50.00	4447.00	3207.28
6947.000	3620.07	1280.87	84.59	6.41	7.29	1273.58	21.00	7.17	.45	50.00	4447.00	3620.07
6947.000	4030.99	1280.98	84.70	7.03	7.40	1273.58	21.00	8.45	.45	50.00	4447.00	4030.99
6947.000	4454.75	1281.14	84.87	7.58	7.57	1273.58	21.00	9.59	.45	50.00	4447.00	4454.75
6947.000	4863.94	1281.13	84.86	8.29	7.56	1273.58	21.00	11.48	.45	50.00	4447.00	4863.94
6947.000	5290.25	1281.20	84.93	8.93	7.63	1273.58	21.00	13.17	.45	50.00	4447.00	5290.25
6947.000	6228.54	1281.34	85.05	10.32	7.76	1273.58	21.00	17.27	.45	50.00	4447.00	6228.54
6997.000	2426.74	1280.48	83.77	4.58	6.89	1273.60	21.00	3.91	.45	50.00	4497.00	2426.74
6997.000	2858.30	1280.65	84.09	5.26	7.05	1273.60	21.00	5.02	.45	50.00	4497.00	2858.30
6997.000	3288.94	1280.77	84.34	5.94	7.17	1273.60	21.00	6.27	.45	50.00	4497.00	3288.94
6997.000	3721.51	1280.88	84.56	6.61	7.28	1273.60	21.00	7.63	.45	50.00	4497.00	3721.51
6997.000	4152.83	1280.99	84.69	7.26	7.39	1273.60	21.00	9.04	.45	50.00	4497.00	4152.83
6997.000	4592.68	1281.15	84.85	7.83	7.55	1273.60	21.00	10.26	.45	50.00	4497.00	4592.68
6997.000	5020.85	1281.14	84.84	8.58	7.54	1273.60	21.00	12.32	.45	50.00	4497.00	5020.85
6997.000	5464.26	1281.21	84.91	9.24	7.61	1273.60	21.00	14.15	.45	50.00	4497.00	5464.26
6997.000	6436.43	1281.35	85.05	10.68	7.75	1273.60	21.00	18.50	.45	50.00	4497.00	6436.43
7047.000	2459.95	1280.50	83.76	4.65	6.88	1273.62	21.00	4.03	.45	50.00	4547.00	2459.95
7047.000	2915.72	1280.66	84.08	5.37	7.04	1273.62	21.00	5.24	.45	50.00	4547.00	2915.72
7047.000	3368.18	1280.78	84.31	6.09	7.16	1273.62	21.00	6.62	.45	50.00	4547.00	3368.18
7047.000	3820.38	1280.89	84.54	6.79	7.27	1273.62	21.00	8.08	.45	50.00	4547.00	3820.38
7047.000	4271.61	1281.00	84.68	7.48	7.38	1273.62	21.00	9.62	.45	50.00	4547.00	4271.61
7047.000	4728.51	1281.16	84.84	8.08	7.54	1273.62	21.00	10.95	.45	50.00	4547.00	4728.50
7047.000	5174.61	1281.15	84.83	8.86	7.53	1273.62	21.00	13.17	.45	50.00	4547.00	5174.61
7047.000	5633.82	1281.22	84.90	9.55	7.60	1273.62	21.00	15.14	.45	50.00	4547.00	5633.82
7047.000	6637.97	1281.36	85.04	11.02	7.74	1273.62	21.00	19.74	.45	50.00	4547.00	6637.97
7097.000	2488.41	1280.51	83.74	4.71	6.87	1273.64	21.00	4.14	.45	50.00	4597.00	2488.41
7097.000	2967.30	1280.67	84.06	5.47	7.03	1273.64	21.00	5.45	.45	50.00	4597.00	2967.30
7097.000	3440.94	1280.80	84.30	6.23	7.15	1273.64	21.00	6.92	.45	50.00	4597.00	3440.94
7097.000	3911.65	1280.91	84.53	6.96	7.26	1273.64	21.00	8.49	.45	50.00	4597.00	3911.65
7097.000	4383.09	1281.01	84.67	7.68	7.37	1273.64	21.00	10.15	.45	50.00	4597.00	4383.09
7097.000	4858.05	1281.18	84.83	8.31	7.53	1273.64	21.00	11.59	.45	50.00	4597.00	4858.05
7097.000	5321.24	1281.17	84.82	9.12	7.52	1273.64	21.00	13.97	.45	50.00	4597.00	5321.24
7097.000	5795.85	1281.24	84.89	9.83	7.59	1273.64	21.00	16.07	.45	50.00	4597.00	5795.85
7097.000	6831.83	1281.38	85.03	11.36	7.73	1273.64	21.00	20.99	.45	50.00	4597.00	6831.83
7147.000	2499.97	1280.53	83.72	4.74	6.86	1273.67	21.00	4.20	.45	50.00	4647.00	2499.97
7147.000	2996.93	1280.69	84.04	5.54	7.03	1273.67	21.00	5.58	.45	50.00	4647.00	2996.93
7147.000	3488.68	1280.82	84.29	6.32	7.15	1273.67	21.00	7.14	.45	50.00	4647.00	3488.68
7147.000	3976.96	1280.93	84.51	7.09	7.27	1273.67	21.00	8.81	.45	50.00	4647.00	3976.96
7147.000	4464.67	1281.04	84.66	7.83	7.37	1273.67	21.00	10.57	.45	50.00	4647.00	4464.67
7147.000	4953.38	1281.20	84.82	8.48	7.54	1273.67	21.00	12.09	.45	50.00	4647.00	4953.38
7147.000	5436.58	1281.20	84.82	9.32	7.53	1273.67	21.00	14.62	.45	50.00	4647.00	5436.58
7147.000	5924.46	1281.27	84.89	10.05	7.61	1273.67	21.00	16.79	.45	50.00	4647.00	5924.45
7147.000	6992.97	1281.43	85.06	11.59	7.76	1273.67	21.00	21.76	.45	50.00	4647.00	6992.96

SECNO	Q	CWSEL	TOPWID	VCH	DEPTH	ELMIN	K*XNCH	10*KS	K*CHSL	XLCH	CUMDS	QCH
7197.000	2500.00	1280.55	83.71	4.74	6.86	1273.69	21.00	4.21	.45	50.00	4697.00	2500.00
7197.000	3000.00	1280.72	84.04	5.54	7.03	1273.69	21.00	5.60	.45	50.00	4697.00	3000.00
7197.000	3500.00	1280.85	84.30	6.34	7.16	1273.69	21.00	7.17	.45	50.00	4697.00	3500.00
7197.000	4000.00	1280.97	84.53	7.12	7.28	1273.69	21.00	8.87	.45	50.00	4697.00	4000.00
7197.000	4500.00	1281.09	84.69	7.86	7.40	1273.69	21.00	10.59	.45	50.00	4697.00	4500.00
7197.000	5000.00	1281.26	84.86	8.52	7.57	1273.69	21.00	12.12	.45	50.00	4697.00	5000.00
7197.000	5500.00	1281.26	84.87	9.36	7.57	1273.69	21.00	14.64	.45	50.00	4697.00	5500.00
7197.000	6000.00	1281.35	84.95	10.09	7.66	1273.69	21.00	16.77	.45	50.00	4697.00	6000.00
7197.000	7100.00	1281.52	85.13	11.65	7.83	1273.69	21.00	21.75	.45	50.00	4697.00	7100.00
7217.000	2500.00	1280.56	83.72	4.74	6.86	1273.70	21.00	4.21	.52	20.00	4717.00	2500.00
7217.000	3000.00	1280.73	84.06	5.54	7.03	1273.70	21.00	5.59	.52	20.00	4717.00	3000.00
7217.000	3500.00	1280.87	84.32	6.33	7.17	1273.70	21.00	7.15	.52	20.00	4717.00	3500.00
7217.000	4000.00	1280.99	84.57	7.11	7.29	1273.70	21.00	8.83	.52	20.00	4717.00	4000.00
7217.000	4500.00	1281.11	84.71	7.85	7.41	1273.70	21.00	10.56	.52	20.00	4717.00	4500.00
7217.000	5000.00	1281.28	84.88	8.51	7.58	1273.70	21.00	12.08	.52	20.00	4717.00	5000.00
7217.000	5500.00	1281.31	84.90	9.32	7.61	1273.70	21.00	14.42	.52	20.00	4717.00	5500.00
7217.000	6000.00	1281.40	85.00	10.03	7.70	1273.70	21.00	16.44	.52	20.00	4717.00	6000.00
7217.000	7100.00	1281.62	85.22	11.50	7.92	1273.70	21.00	20.92	.52	20.00	4717.00	7100.00
7329.000	2500.00	1280.61	84.25	4.73	6.91	1273.70	21.00	4.19	.00	112.00	4829.00	2500.00
7329.000	3000.00	1280.80	84.65	5.50	7.10	1273.70	21.00	5.51	.00	112.00	4829.00	3000.00
7329.000	3500.00	1280.96	84.98	6.27	7.26	1273.70	21.00	6.95	.00	112.00	4829.00	3500.00
7329.000	4000.00	1281.12	85.30	6.99	7.42	1273.70	21.00	8.46	.00	112.00	4829.00	4000.00
7329.000	4500.00	1281.27	85.62	7.69	7.57	1273.70	21.00	9.99	.00	112.00	4829.00	4500.00
7329.000	5000.00	1281.48	86.05	8.30	7.78	1273.70	21.00	11.26	.00	112.00	4829.00	5000.00
7329.000	5500.00	1281.55	86.20	9.04	7.85	1273.70	21.00	13.21	.00	112.00	4829.00	5500.00
7329.000	6000.00	1281.71	86.52	9.64	8.01	1273.70	21.00	14.71	.00	112.00	4829.00	6000.00
7329.000	7100.00	1282.11	87.38	10.79	8.41	1273.70	21.00	17.39	.00	112.00	4829.00	7100.00

SUMMARY OF ERRORS AND SPECIAL NOTES

APPENDIX C

HEC-2 Input/Output Data

File: CANAL12A

Multiple Discharge Model For Arizona Canal

THIS RUN EXECUTED 17OCT98 17:48:10

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

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

MODEL: CANAL12A.IN, UPDATED ON 6/30/98 THROUGH 7/5/98 TO ADD NEW XSECs BETWEEN CANAL STA 2905.79 TO LONGMORE ROAD.

MODEL IS FOR BANKFULL CAPACITY OF THE ARIZONA CANAL WITH NO ADOT SPILLWAY IN-PLACE ALONG THE NORTH BANK OF THE ARIZONA CANAL

DATUM IS CORPS OF ENGINEERS (COE), WITH CANAL "n"=.021

TOPO FOR THIS MODEL IS FROM THE 1989 WLB GROUP, INC. MAPPING FOR ADOT DATA FOR XSECs 4788 - 9504 TAKEN FROM JUNE 1998 GROUND SURVEY PERFORMED BY SRPMIC.

SPECIAL BRIDGE ROUTINES HAVE BEEN ADDED AT PIMA ROAD & AT SRP DE-MOSSING BRIDGE

```
T1      ARIZONA CANAL RATING CURVE MODEL
T2      STARTING CWSEL BASED ON COE7.IN              MODEL: CANAL12A.IN
T3      AZ CANAL, n=.021                 CANAL n=.021

J1  ICHECK    INQ      NINV     IDIR     STRT     METRIC   HVINS    Q        WSEL     FQ

     0        2                          0                                1280.21

J2  NPROF     IPLOT    PRFVS    XSECV    XSECH    FN       ALLDC    IBW      CHNIM    ITRACE

     1        0        -1                                   -1

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

    38       43        1        3       26        4       66       27       28       68
    42       17       18

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

    -10      -10

NC    .025     .025     .021      .1       .3
QT      10     2000     2500     3000     3500     4000     4500     5000     5500     6000
QT    6500
```

```
X1     715       5      49     142
GR    1285      49    1280      59    1273.74      65    1273.74     135    1280     142

X1     803       6      42     145      88        88      88
GR   1284.7     42    1280      57    1273.77      65    1273.77     135    1280     143
GR    1282     145
```

DOWNSTREAM SIDE OF FOOT-BRIDGE AT XSEC 893

```
X1     893       6      45     148      90        90      90
X2                           1283.0   1285.0
GR    1285      45    1280      57    1273.81      65    1273.81     135    1280     143
GR    1284     148
```

UPSTREAM SIDE OF FOOT-BRIDGE AT XSEC 899

```
X1     899       6      45     148       6         6       6
X2                           1283.0   1285.0
GR    1285      45    1280      57    1273.81      65    1273.81     135    1280     143
GR    1284     148
```

DOWNSTREAM SIDE OF PIMA ROAD BRIDGE AT XSEC 980

```
NC                            .3        .5
X1     980       5      48     142      81        81      81
X3                            50                 142
GR    1285      48    1280      58    1273.84      65    1273.84     135    1280     142
```

UPSTREAM SIDE OF PIMA ROAD BRIDGE AT XSEC 1020

```
SB    1.25     1.56     2.5    93.2      70      6.67     703.4     1.0    1273.85  1273.84
X1    1020      17      43     146      40        40      40
X2                      1    1283.54  1288.28
X3                            50                 146
GR    1285      43    1280      59    1273.85      65    1273.85     135    1280     141
GR   1284.5    146    1284     154      1283     164      1282     176    1281.2    202
GR    1281     326    1281     488      1282     704      1283     967    1283     1009
GR    1284    1204    1285    1312

NC                            .1        .3
X1    1102      15      35     149      82       114      82
X3                            35                149.01
GR   1284.9     35    1280      58    1273.89      65    1273.89     135    1280     142
GR   1285.2    149    1284     161      1282     182      1282     208    1281     218
GR    1281     339    1282     650      1283     767      1284     902    1285     1326
```

DOWNSTREAM SIDE OF SRP DE-MOSSING BRIDGE AT XSEC 1245

```
NC                                  .3        .5
X1    1245        17        42      150       143       164       143
X3                                  42                150.01
GR    1285.2      42      1285       50      1280        57   1273.94        65   1273.94       135
GR    1280       144   1284.72      150      1284       156      1283       166      1282       183
GR    1281       213      1281      431      1282       713      1282       726      1283       936
GR    1284      1126      1285     1384
```

UPSTREAM SIDE OF SRP DE-MOSSING BRIDGE AT XSEC 1257

```
SB    1.25      1.56       2.5       92        70       3.5     515.5       1.0   1273.95   1273.94
X1    1257         7        50      150        12        12        12
X2                            1  1281.28   1284.95
X3                                  41               150
GR    1285.3      41      1285       50      1280        57   1273.95        65   1273.95       135
GR    1280       144   1284.72      150

NC                                  .1        .3
X1    1344         7        52      150        87        87        87
GR    1285.6      39      1285       52      1280        57   1273.98        65   1273.98       135
GR    1280       142   1284.88      150

X1    1444         7        52      149       100       100       100
GR    1285.7      38      1285       52      1280        57   1274.02        65   1274.02       135
GR    1280       143   1284.85      149

X1    1544        16        53      149       100       100       100
X3                                  38               149.01
GR    1285.6      38      1285       53      1280        58   1274.05        65   1274.05       135
GR    1280       143   1284.95      149      1284       160      1283       169      1283       175
GR    1281       180      1281      217      1282       539      1283       950      1284      1285
GR    1285      1564

X1    1844        15        52      149       300       287       300
X3                                  37               149.01
GR    1286.4      37      1285       52      1280        57   1274.17        65   1274.17       135
GR    1280       142   1284.92      149      1284       167      1281       184      1281       335
GR    1282       603      1282      733      1283       946      1284      1261      1285      1589

X1    2000         7        52      147       156       156       156
GR    1285.8      34      1285       52      1280        57   1274.23        65   1274.23       135
GR    1280       142   1284.82      147
```

X1	2120	7	50	148	120	120	120			
GR	1285.8	32	1285	50	1280	57	1274.28	65	1274.28	135
GR	1280	141	1284.55	148						
X1	2144	8	51	148	24	24	24			
GR	1285.8	32	1285	51	1280	57	1274.28	65	1274.28	135
GR	1280	141	1284	146	1284.32	148				
X1	2361	7	50	146	217	217	217			
GR	1285.9	34	1285	50	1280	57	1274.37	65	1274.37	135
GR	1280	142	1283.2	146						
X1	2444	7	51	146	83	83	83			
GR	1285.9	32	1285	51	1280	57	1274.4	65	1274.4	135
GR	1280	141	1283.4	146						
X1	2605	9	53	147	161	161	161			
GR	1286.1	34	1286	45	1285	53	1280	58	1274.46	65
GR	1274.5	135	1280	142	1283	146	1283.23	147		
X1	2744	8	53	147	139	139	139			
GR	1286.3	35	1285	53	1280	57	1274.51	65	1274.51	135
GR	1280	142	1283	145	1283.46	147				
X1	2833	9	51	147	89	89	89			
GR	1286.5	37	1286	51	1285	54	1280	57	1274.55	65
GR	1274.5	135	1280	141	1283	144	1283.46	147		
X1	2888	9	52	148	55	55	55			
GR	1286.5	38	1286	52	1285	54	1280	58	1274.57	65
GR	1274.6	135	1280	142	1283	145	1283.6	148		

XSECs 2905 THROUGH 4588 WERE CODED FROM WLB/ADOT TOPO MAPS

X1	2905	9	51	143	17.79	17.79	17.79		1000	
GR	286.55	44	286	51	285	53	280	57	274.57	65
GR	274.57	135	280	141	283	143	283.60	147		
X1	3105	9	51	144	200	200	200		1000	
GR	286.55	45	286	51	285	53	280	57	274.65	65
GR	274.65	135	280	142	282	144	282.50	147		

X1	3305	9	53	143	200	200	200		1000	
GR	286.56	44	286	53	285	54	280	59	274.73	65
GR	274.73	135	280	141	282	143	282.30	145		
X1	3347	9	53	144	41.3	41.3	41.3		1000	
GR	286.58	43	286	53	285	55	280	59	274.74	65
GR	274.74	135	280	142	282	144	282.32	146		
X1	3444	9	53	144	96.91	96.91	96.91		1000	
GR	286.45	42	286	53	285	55	280	59	274.78	65
GR	274.78	135	280	141	282	144	282.37	147		
X1	3488	9	52	144	44	44	44		1000	
GR	286.36	41	286	52	285	54	280	59	274.80	65
GR	274.80	135	280	141	282	144	282.39	147		
X1	3588	9	52	144	100	100	100		1000	
GR	286.36	40	286	52	285	54	280	58	274.83	65
GR	274.83	135	280	142	282	144	282.74	146		
X1	3788	9	52	147	200	200	200		1000	
GR	286.47	38	286	52	285	54	280	58	274.91	65
GR	274.91	135	280	143	282	144	283	147		
X1	3988	8	52	148	200	200	200		1000	
GR	286.55	37	286	52	285	54	280	57	274.99	65
GR	274.99	135	280	143	282.90	148				
X1	4188	9	52	144	200	200	200		1000	
GR	286.77	31	286	52	285	53	280	57	275.06	65
GR	275.06	135	280	142	282	144	282.90	147		
X1	4388	9	52	146	200	200	200		1000	
GR	286.58	35	286	52	285	54	280	57	275.14	65
GR	275.14	135	280	144	283	146	283	148		
X1	4588	9	52	145	200	200	200		1000	
GR	286.71	34	286	52	285	53	280	57	275.21	65
GR	275.21	135	280	144	282	145	283	157		

BANK GEOMETRY FOR XSECs 4788 - 6706 WAS CODED FROM THE JUNE 1998 SRPMIC CANAL BANK SURVEY. A 70-FT CANAL BOTTOMWIDTH WAS ASSUMED FOR ALL XSECs. CANAL INVERT ELEVATIONS WERE BASED ON A CONSTANT 0.00038 ft/ft SLOPE THAT EXTENDS EAST FROM PIMA ROAD.

X1	4788	6	52	154	200	200	200		1000	
X3		10						1295	1285.36	
GR	286.50	31	286.82	52	275.29	65	275.29	135	285.36	154
GR	284.60	167								
X1	4988	6	52	153	200	200	200		1000	
X3		10						1286.2	1285.08	
GR	286.43	29	286.20	52	275.37	65	275.37	135	285.08	153
GR	284.63	167								
X1	5188	6	50	152	200	200	200		1000	
X3		10						1295	1285.97	
GR	286.57	29	287.04	50	275.44	65	275.44	135	285.97	152
GR	285.13	165								
X1	5388	6	50	152	200	200	200		1000	
X3		10						1295	1285.90	
GR	286.62	30	287.00	50	275.52	65	275.52	135	285.90	152
GR	285.15	166								
X1	5588	6	50	151	200	200	200		1000	
X3		10						1295	1285.65	
GR	286.60	29	286.95	50	275.59	65	275.59	135	285.65	151
GR	285.00	164								
X1	5788	6	49	150	200	200	200		1000	
X3		10						1295	1285.30	
GR	285.85	30	286.50	49	275.67	65	275.67	135	285.30	150
GR	284.90	164								
X1	5988	6	50	151	200	200	200		1000	
X3		10						1295	1284.83	
GR	285.74	30	286.60	50	275.75	65	275.75	135	284.83	151
GR	284.20	163								
X1	6188	6	50	152	200	200	200		1000	
X3		10						1295	1285.04	
GR	285.70	32	286.80	50	275.82	65	275.82	135	285.04	152
GR	284.70	163								

```
X1    6388      6     52    153    200    200    200              1000
X3             10                                          1295  1284.68
GR  286.02     37 286.53     52 275.90     65 275.90    135  284.68    153
GR  284.03    164

X1    6490      4     55    155 102.21 102.21 102.21              1000
GR  286.03     55 275.94     65 275.94    135 284.66    155

X1    6600      6     56    153 110.38 110.38 110.38              1000
GR  286.55     38 286.44     56 275.98     65 275.98    135  284.10    153
GR  284.30    172

X1    6706      4     52    147  105.9  105.9  105.9              1000
GR  286.85     52 276.02     65 276.02    135 283.52    147
```

START NEW XSECs WITH JUNE 1998 SRPMIC SURVEY DATA AT XSEC 6822.
THESE SECTIONS ALSO INCLUDE GROUND SHOTS FOR THE NORTH OVERBANK AREA.
AN X3 RECORD IS USED TO EXCLUDE THIS NORTH OVERBANK AREA FROM THE
HYDRAULIC CALCULATIONS.
A 70-FT CANAL BOTTOMWIDTH WAS ASSUMED FOR ALL XSECs.
CANAL INVERT ELEVATIONS WERE BASED ON A CONSTANT 0.00038 ft/ft SLOPE
THAT EXTENDS EAST FROM PIMA ROAD.

```
X1    6822     23   53.7  146.3 115.51 115.51 115.51              1000
X3                                   146.3
GR  287.09   53.7 276.06     65 276.06    135 284.21  146.3  284.04  172.6
GR  283.43  176.9 281.92  181.9 283.01  184.7 282.93  247.1  283.14  329.7
GR  283.24  386.2 283.55  544.4 284.33  648.1 284.81  756.2  285.51  857.1
GR  285.59  954.9 286.06 1051.1 286.39 1143.2 286.86 1255.6  287.21 1358.5
GR  287.55 1454.3 287.82 1555.1 288.15 1655.3

X1    6907     23   54.1  145.9    200    200    200              1000
X3                                   145.9
GR  286.88   54.1 276.09     65 276.09    135 284.94  145.9  284.38  167.8
GR  283.30  174.7 281.99  180.2 283.47  184.5 283.33  297.8  283.32  474.0
GR  283.56  536.1 283.82  632.0 284.25  730.7 285.00  832.8  285.32  929.4
GR  285.79 1031.8 286.20 1131.3 286.73 1231.8 287.20 1334.7  287.58 1434.5
GR  287.95 1532.9 288.16 1629.4 288.55 1711.4

X1    7104     24   53.7  146.3    200    200    200              1000
X3                                   150.3
GR  287.12   53.7 276.17     65 276.17    135 285.92  146.3  286.01  150.3
GR  285.73  168.9 285.01  174.1 282.74  182.3 284.81  189.0  283.81  231.9
GR  283.64  339.8 283.69  540.9 283.95  643.5 284.44  744.1  284.76  844.8
GR  285.28  943.9 285.75 1042.2 286.15 1143.5 286.48 1243.0  286.94 1344.6
GR  287.48 1443.9 287.92 1542.8 288.47 1641.0 288.74 1742.6
```

X1	7304	31	52.6	147.4	200	200	200		1000	
X3						151.0				
GR	287.23	28.8	286.85	52.6	276.25	65	276.25	135	286.44	147.4
GR	286.89	151.0	286.43	151.9	286.67	168.9	286.21	169.4	285.87	174.4
GR	285.37	174.4	283.10	181.6	283.51	182.0	284.50	187.4	284.01	208.5
GR	283.61	282.3	283.64	380.3	283.78	471.4	284.10	577.6	284.36	683.4
GR	284.67	781.1	285.16	881.0	285.55	978.3	285.92	1078.6	286.36	1179.9
GR	286.77	1278.8	287.24	1377.9	287.71	1479.0	288.35	1581.1	289.30	1680.3
GR	289.30	1724.4								

X1	7504	23	51.2	148.8	200	200	200		1000	
X3						168.0				
GR	288.13	10.3	287.85	27.9	287.95	51.2	276.32	65	276.32	135
GR	286.86	148.8	287.06	168.0	286.27	173.0	282.54	181.2	284.09	187.8
GR	283.79	209.2	283.94	290.9	284.04	372.3	284.24	452.2	284.30	535.4
GR	284.78	637.2	285.23	744.6	285.54	862.4	286.09	972.7	286.63	1112.7
GR	287.60	1333.7	288.02	1431.5	288.41	1524.3				

X1	7704	22	51.6	148.4	200	200	200		1000	
X3						168.5				
GR	288.35	51.6	276.40	65	276.40	135	286.44	148.4	286.55	168.5
GR	285.75	172.7	282.56	181.0	283.52	184.6	283.59	207.6	283.83	288.9
GR	284.38	438.5	284.58	525.3	284.78	613.8	285.26	717.7	285.58	818.6
GR	285.95	927.8	286.43	1026.8	286.95	1120.7	287.23	1221.5	287.52	1319.9
GR	288.19	1441.9	288.62	1548.4						

X1	7904	24	51.8	148.2	200	200	200		1000	
X3						166.4				
GR	288.40	51.8	276.47	65	276.47	135	286.54	148.2	286.56	166.4
GR	285.89	171.5	283.55	177.7	284.50	182.4	283.89	215.2	283.98	289.2
GR	284.37	390.9	284.64	490.7	284.94	583.9	285.28	685.2	285.68	789.2
GR	285.99	885.3	286.50	983.7	286.99	1085.1	287.20	1168.7	287.44	1270.5
GR	288.21	1370.2	288.52	1468.9	288.97	1571.1	289.28	1670.0		

X1	8104	25	54.7	145.3	200	200	200		1000	
X3						165.7				
GR	287.53	54.7	287.33	54.7	276.55	65	276.55	135	285.44	145.3
GR	285.67	165.7	285.07	169.6	283.79	174.3	284.53	180.6	284.02	250.1
GR	284.32	349.9	284.41	450.5	284.88	551.0	285.26	651.1	285.66	750.5
GR	286.03	849.1	286.41	949.0	286.88	1051.1	287.18	1150.6	287.52	1249.9
GR	288.13	1350.8	288.38	1450.7	288.79	1552.2	289.45	1651.3	289.85	1750.8

X1	8304	24	55.4	144.6	200	200	200		1000	
X3						144.6				
GR	287.30	55.4	276.63	65	276.63	135	285.21	144.6	285.13	164.1
GR	284.37	169.3	282.48	175.2	283.77	179.2	284.05	244.4	284.29	334.7
GR	284.52	436.2	285.06	531.6	285.54	644.9	285.86	733.3	286.32	830.5
GR	286.61	936.4	287.07	1041.3	287.21	1124.7	287.55	1229.3	288.04	1337.9
GR	288.52	1463.7	288.83	1566.6	289.17	1651.1	289.63	1726.3		
X1	8504	24	55.3	144.7	200	200	200		1000	
X3						168.7				
GR	287.29	55.3	276.70	65	276.70	135	284.66	144.7	284.71	168.7
GR	283.96	173.3	280.40	185.0	281.19	192.4	283.87	311.6	284.41	397.3
GR	284.58	493.8	284.96	594.9	285.36	694.7	285.76	794.2	286.15	890.8
GR	286.64	988.8	287.04	1077.4	287.34	1175.0	287.62	1270.6	288.08	1371.9
GR	288.47	1495.1	288.88	1597.3	289.31	1698.8	289.71	1789.5		
X1	8704	29	55.1	144.9	200	200	200		1000	
X3						168.8				
GR	287.89	55.1	276.78	65	276.78	135	284.86	144.9	284.97	168.8
GR	284.39	171.7	282.63	178.4	283.40	180.8	283.85	195.3	283.63	257.2
GR	283.71	278.1	284.10	290.0	284.44	381.6	284.75	485.9	284.97	575.2
GR	284.88	596.4	284.61	597.4	285.01	600.6	285.51	692.8	285.82	785.5
GR	286.21	878.0	286.54	970.9	286.94	1060.9	287.26	1146.3	287.55	1241.8
GR	287.98	1336.1	288.46	1429.4	288.77	1528.6	289.05	1621.5		
X1	8904	29	55.8	144.2	200	200	200		1000	
X3						169.6				
GR	287.40	55.8	276.85	65	276.85	135	285.32	144.2	285.60	169.6
GR	284.79	173.1	283.30	177.2	284.38	180.3	283.92	231.9	284.17	328.6
GR	284.67	427.1	284.83	522.9	285.44	622.0	284.85	628.4	285.26	635.3
GR	285.47	713.3	285.89	820.8	286.37	922.4	286.80	1019.1	287.10	1121.1
GR	287.49	1224.3	287.85	1323.9	288.21	1428.2	288.73	1529.8	287.59	1545.1
GR	288.67	1564.2	289.11	1627.6	289.44	1727.3	289.87	1832.6		
X1	9104	29	55.5	144.5	200	200	200		1000	
X3						144.5				
GR	287.49	55.5	276.93	65	276.93	135	285.81	144.5	285.51	169.1
GR	285.13	172.2	283.15	178.6	284.20	181.8	283.92	193.3	284.12	295.6
GR	284.59	399.4	285.11	511.1	285.45	603.0	285.07	621.8	285.38	629.6
GR	285.67	723.6	286.05	827.4	286.42	937.4	286.72	953.9	286.30	993.1
GR	285.64	998.9	286.65	1017.1	287.20	1128.5	287.51	1231.8	287.89	1326.3
GR	288.37	1429.6	288.93	1532.3	289.17	1634.1	289.34	1743.9		

X1	9304	29	56.1	143.9	200	200	200		1000	
X3						167.7				
GR	287.62	56.1	277.01	65	277.01	135	285.42	143.9	285.56	167.7
GR	284.83	170.7	282.76	176.5	284.40	181.6	284.05	227.1	284.25	273.1
GR	284.97	362.5	284.68	401.2	284.53	420.2	284.94	452.1	285.34	548.5
GR	285.25	610.3	285.62	653.5	286.00	746.8	286.28	834.2	286.57	927.2
GR	286.90	1023.3	287.18	1109.1	287.48	1200.8	287.73	1299.1	288.16	1391.4
GR	288.49	1484.9	288.88	1580.5	289.24	1683.7	289.66	1774.6		

X1	9504	27	56.1	143.9	200	200	200		1000	
X3						143.9				
GR	287.77	56.1	277.08	65	277.08	135	284.06	139.0	285.65	143.9
GR	285.29	170.2	283.29	179.8	284.33	184.6	284.12	192.4	284.20	245.7
GR	284.30	300.5	284.58	370.7	284.87	442.3	285.20	537.6	285.51	624.7
GR	285.80	716.4	286.26	809.8	286.71	900.9	286.92	992.8	287.17	1081.4
GR	287.53	1169.6	287.85	1276.9	288.16	1367.9	288.46	1457.5	288.89	1549.5
GR	289.13	1637.6	289.50	1726.6						

THIS RUN EXECUTED 17OCT98 17:48:22

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

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

AZ CANAL, n=.021

SUMMARY PRINTOUT

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
715.000	2000.00	1280.21	1280.46	4.03	83.42	.00	.00	.00	.29	1273.74	21.00	.00
715.000	2500.00	1280.54	1280.89	4.77	84.08	.00	.00	.00	.34	1273.74	21.00	.00
715.000	3000.00	1280.71	1281.19	5.57	84.42	.00	.00	.00	.39	1273.74	21.00	.00
715.000	3500.00	1280.84	1281.47	6.37	84.68	.00	.00	.00	.44	1273.74	21.00	.00
715.000	4000.00	1280.96	1281.75	7.15	84.92	.00	.00	.00	.49	1273.74	21.00	.00
715.000	4500.00	1281.08	1282.05	7.90	85.16	.00	.00	.00	.54	1273.74	21.00	.00
715.000	5000.00	1281.24	1282.38	8.57	85.48	.00	.00	.00	.58	1273.74	21.00	.00
715.000	5500.00	1281.24	1282.62	9.43	85.48	.00	.00	.00	.64	1273.74	21.00	.00
715.000	6000.00	1281.33	1282.93	10.15	85.66	.00	.00	.00	.68	1273.74	21.00	.00
715.000	6500.00	1281.40	1283.24	10.89	85.80	.00	.00	.00	.73	1273.74	21.00	.00
803.000	2000.00	1280.25	1280.49	3.94	87.02	88.00	.00	.00	.29	1273.77	21.00	.00
803.000	2500.00	1280.60	1280.93	4.65	88.46	88.00	.00	.00	.33	1273.77	21.00	.00
803.000	3000.00	1280.79	1281.24	5.40	89.32	88.00	.00	.00	.38	1273.77	21.00	.00
803.000	3500.00	1280.95	1281.54	6.14	89.99	88.00	.00	.00	.43	1273.77	21.00	.00
803.000	4000.00	1281.11	1281.84	6.85	90.65	88.00	.00	.00	.48	1273.77	21.00	.00
803.000	4500.00	1281.27	1282.15	7.52	91.33	88.00	.00	.00	.52	1273.77	21.00	.00
803.000	5000.00	1281.48	1282.50	8.09	92.21	88.00	.00	.00	.55	1273.77	21.00	.00
803.000	5500.00	1281.56	1282.76	8.79	92.55	88.00	.00	.00	.60	1273.77	21.00	.00
803.000	6000.00	1281.74	1283.09	9.35	93.30	88.00	.00	.00	.63	1273.77	21.00	.00
803.000	6500.00	1281.92	1283.43	9.86	94.08	88.00	.00	.00	.66	1273.77	21.00	.00
893.000	2000.00	1280.28	1280.52	3.95	87.02	178.00	.00	.00	.29	1273.81	21.00	.00
893.000	2500.00	1280.64	1280.97	4.65	88.32	178.00	.00	.00	.33	1273.81	21.00	.00
893.000	3000.00	1280.84	1281.29	5.39	89.07	178.00	.00	.00	.38	1273.81	21.00	.00
893.000	3500.00	1281.02	1281.60	6.12	89.71	178.00	.00	.00	.43	1273.81	21.00	.00
893.000	4000.00	1281.19	1281.91	6.81	90.33	178.00	.00	.00	.47	1273.81	21.00	.00
893.000	4500.00	1281.38	1282.24	7.45	90.98	178.00	.00	.00	.51	1273.81	21.00	.00
893.000	5000.00	1281.60	1282.60	8.01	91.81	178.00	.00	.00	.54	1273.81	21.00	.00
893.000	5500.00	1281.72	1282.88	8.65	92.27	178.00	.00	.00	.58	1273.81	21.00	.00
893.000	6000.00	1281.92	1283.22	9.17	93.00	178.00	.00	.00	.61	1273.81	21.00	.00
893.000	6500.00	1282.12	1283.57	9.65	93.75	178.00	.00	.00	.63	1273.81	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
899.000	2000.00	1280.28	1280.52	3.94	87.02	184.00	.00	.00	.29	1273.81	21.00	.00
899.000	2500.00	1280.64	1280.97	4.64	88.33	184.00	.00	.00	.33	1273.81	21.00	.00
899.000	3000.00	1280.85	1281.30	5.39	89.09	184.00	.00	.00	.38	1273.81	21.00	.00
899.000	3500.00	1281.02	1281.60	6.11	89.73	184.00	.00	.00	.43	1273.81	21.00	.00
899.000	4000.00	1281.20	1281.92	6.80	90.37	184.00	.00	.00	.47	1273.81	21.00	.00
899.000	4500.00	1281.39	1282.24	7.44	91.04	184.00	.00	.00	.51	1273.81	21.00	.00
899.000	5000.00	1281.61	1282.60	7.99	91.87	184.00	.00	.00	.54	1273.81	21.00	.00
899.000	5500.00	1281.73	1282.89	8.64	92.30	184.00	.00	.00	.58	1273.81	21.00	.00
899.000	6000.00	1281.93	1283.23	9.16	93.03	184.00	.00	.00	.61	1273.81	21.00	.00
899.000	6500.00	1282.14	1283.58	9.64	93.78	184.00	.00	.00	.63	1273.81	21.00	.00
980.000	2000.00	1280.30	1280.55	4.00	84.61	265.00	50.00	142.00	.29	1273.84	21.00	.00
980.000	2500.00	1280.67	1281.01	4.71	85.34	265.00	50.00	142.00	.33	1273.84	21.00	.00
980.000	3000.00	1280.88	1281.35	5.46	85.78	265.00	50.00	142.00	.38	1273.84	21.00	.00
980.000	3500.00	1281.07	1281.67	6.18	86.16	265.00	50.00	142.00	.43	1273.84	21.00	.00
980.000	4000.00	1281.26	1281.99	6.87	86.53	265.00	50.00	142.00	.47	1273.84	21.00	.00
980.000	4500.00	1281.45	1282.33	7.51	86.92	265.00	50.00	142.00	.50	1273.84	21.00	.00
980.000	5000.00	1281.69	1282.70	8.07	87.39	265.00	50.00	142.00	.53	1273.84	21.00	.00
980.000	5500.00	1281.81	1283.00	8.72	87.64	265.00	50.00	142.00	.57	1273.84	21.00	.00
980.000	6000.00	1282.02	1283.35	9.24	88.06	265.00	50.00	142.00	.60	1273.84	21.00	.00
980.000	6500.00	1282.24	1283.71	9.73	88.49	265.00	50.00	142.00	.62	1273.84	21.00	.00
1020.000	2000.00	1280.36	1280.61	4.02	83.55	305.00	50.00	146.00	.29	1273.85	21.00	.00
1020.000	2500.00	1280.75	1281.10	4.71	85.25	305.00	50.00	146.00	.33	1273.85	21.00	.00
1020.000	3000.00	1281.02	1281.47	5.43	86.38	305.00	50.00	146.00	.38	1273.85	21.00	.00
1020.000	3500.00	1281.26	1281.84	6.09	87.44	305.00	50.00	146.00	.42	1273.85	21.00	.00
1020.000	4000.00	1281.52	1282.22	6.70	88.55	305.00	50.00	146.00	.45	1273.85	21.00	.00
1020.000	4500.00	1281.80	1282.61	7.24	89.74	305.00	50.00	146.00	.48	1273.85	21.00	.00
1020.000	5000.00	1282.11	1283.03	7.69	91.11	305.00	50.00	146.00	.51	1273.85	21.00	.00
1020.000	5500.00	1282.36	1283.40	8.18	92.17	305.00	50.00	146.00	.53	1273.85	21.00	.00
1020.000	6000.00	1282.67	1283.81	8.55	93.52	305.00	50.00	146.00	.55	1273.85	21.00	.00
1020.000	6500.00	1283.12	1284.31	8.73	94.47	305.00	50.00	146.00	.55	1273.85	21.00	.00
1102.000	2000.00	1280.39	1280.64	3.97	86.35	387.00	35.00	149.01	.29	1273.89	21.00	.00
1102.000	2500.00	1280.80	1281.13	4.64	88.79	387.00	35.00	149.01	.33	1273.89	21.00	.00
1102.000	3000.00	1281.08	1281.52	5.32	90.48	387.00	35.00	149.01	.38	1273.89	21.00	.00
1102.000	3500.00	1281.35	1281.89	5.94	92.13	387.00	35.00	149.01	.41	1273.89	21.00	.00
1102.000	4000.00	1281.63	1282.28	6.50	93.82	387.00	35.00	149.01	.45	1273.89	21.00	.00
1102.000	4500.00	1281.92	1282.68	7.00	95.62	387.00	35.00	149.01	.48	1273.89	21.00	.00
1102.000	5000.00	1282.26	1283.11	7.40	97.67	387.00	35.00	149.01	.50	1273.89	21.00	.00
1102.000	5500.00	1282.54	1283.49	7.82	99.32	387.00	35.00	149.01	.52	1273.89	21.00	.00
1102.000	6000.00	1282.87	1283.90	8.14	101.36	387.00	35.00	149.01	.53	1273.89	21.00	.00
1102.000	6500.00	1283.34	1284.40	8.29	104.15	387.00	35.00	149.01	.53	1273.89	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
1245.000	2000.00	1280.45	1280.69	3.89	88.18	530.00	42.00	150.01	.28	1273.94	21.00	.00
1245.000	2500.00	1280.88	1281.20	4.53	89.33	530.00	42.00	150.01	.32	1273.94	21.00	.00
1245.000	3000.00	1281.18	1281.60	5.17	90.16	530.00	42.00	150.01	.36	1273.94	21.00	.00
1245.000	3500.00	1281.47	1281.99	5.77	90.94	530.00	42.00	150.01	.39	1273.94	21.00	.00
1245.000	4000.00	1281.78	1282.39	6.31	91.74	530.00	42.00	150.01	.42	1273.94	21.00	.00
1245.000	4500.00	1282.09	1282.81	6.78	92.59	530.00	42.00	150.01	.45	1273.94	21.00	.00
1245.000	5000.00	1282.44	1283.24	7.18	93.53	530.00	42.00	150.01	.46	1273.94	21.00	.00
1245.000	5500.00	1282.73	1283.63	7.60	94.30	530.00	42.00	150.01	.48	1273.94	21.00	.00
1245.000	6000.00	1283.07	1284.05	7.94	95.21	530.00	42.00	150.01	.50	1273.94	21.00	.00
1245.000	6500.00	1283.52	1284.55	8.14	96.39	530.00	42.00	150.01	.50	1273.94	21.00	.00
1257.000	2000.00	1280.48	1280.71	3.87	88.28	542.00	41.00	150.00	.28	1273.95	21.00	.00
1257.000	2500.00	1280.92	1281.23	4.50	89.45	542.00	41.00	150.00	.32	1273.95	21.00	.00
1257.000	3000.00	1281.64	1282.00	4.83	91.39	542.00	41.00	150.00	.33	1273.95	21.00	.00
1257.000	3500.00	1282.17	1282.59	5.23	92.79	542.00	41.00	150.00	.34	1273.95	21.00	.00
1257.000	4000.00	1282.76	1283.23	5.51	94.39	542.00	41.00	150.00	.35	1273.95	21.00	.00
1257.000	4500.00	1283.44	1283.94	5.70	96.18	542.00	41.00	150.00	.35	1273.95	21.00	.00
1257.000	5000.00	1284.20	1284.72	5.78	98.24	542.00	41.00	150.00	.34	1273.95	21.00	.00
* 1257.000	5500.00	1284.87	1285.41	5.91	99.82	542.00	41.00	150.00	.34	1273.95	21.00	.00
* 1257.000	6000.00	1285.50	1286.07	6.04	109.00	542.00	41.00	150.00	.34	1273.95	21.00	.00
* 1257.000	6500.00	1286.16	1286.74	6.13	109.00	542.00	41.00	150.00	.33	1273.95	21.00	.00
1344.000	2000.00	1280.50	1280.74	3.92	86.33	629.00	.00	.00	.28	1273.98	21.00	.00
1344.000	2500.00	1280.95	1281.27	4.56	87.51	629.00	.00	.00	.32	1273.98	21.00	.00
1344.000	3000.00	1281.67	1282.04	4.90	89.42	629.00	.00	.00	.33	1273.98	21.00	.00
1344.000	3500.00	1282.19	1282.63	5.30	90.81	629.00	.00	.00	.35	1273.98	21.00	.00
1344.000	4000.00	1282.79	1283.28	5.59	92.39	629.00	.00	.00	.35	1273.98	21.00	.00
1344.000	4500.00	1283.46	1283.98	5.79	94.14	629.00	.00	.00	.36	1273.98	21.00	.00
1344.000	5000.00	1284.23	1284.76	5.89	96.15	629.00	.00	.00	.35	1273.98	21.00	.00
1344.000	5500.00	1284.89	1285.45	6.02	97.89	629.00	.00	.00	.35	1273.98	21.00	.00
1344.000	6000.00	1285.52	1286.10	6.15	109.22	629.00	.00	.00	.34	1273.98	21.00	.00
1344.000	6500.00	1286.18	1286.78	6.24	111.00	629.00	.00	.00	.34	1273.98	21.00	.00
1444.000	2000.00	1280.53	1280.77	3.90	87.19	729.00	.00	.00	.28	1274.02	21.00	.00
1444.000	2500.00	1280.99	1281.31	4.53	88.20	729.00	.00	.00	.32	1274.02	21.00	.00
1444.000	3000.00	1281.71	1282.08	4.87	89.82	729.00	.00	.00	.33	1274.02	21.00	.00
1444.000	3500.00	1282.24	1282.67	5.27	91.01	729.00	.00	.00	.34	1274.02	21.00	.00
1444.000	4000.00	1282.84	1283.32	5.56	92.34	729.00	.00	.00	.35	1274.02	21.00	.00
1444.000	4500.00	1283.51	1284.03	5.76	93.84	729.00	.00	.00	.35	1274.02	21.00	.00
1444.000	5000.00	1284.27	1284.81	5.86	95.55	729.00	.00	.00	.35	1274.02	21.00	.00
1444.000	5500.00	1284.94	1285.50	5.99	96.93	729.00	.00	.00	.34	1274.02	21.00	.00
1444.000	6000.00	1285.56	1286.14	6.13	108.13	729.00	.00	.00	.34	1274.02	21.00	.00
1444.000	6500.00	1286.22	1286.82	6.23	111.00	729.00	.00	.00	.33	1274.02	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
1544.000	2000.00	1280.56	1280.80	3.93	86.25	829.00	38.00	149.01	.28	1274.05	21.00	.00
1544.000	2500.00	1281.02	1281.35	4.55	87.27	829.00	38.00	149.01	.32	1274.05	21.00	.00
1544.000	3000.00	1281.75	1282.12	4.89	88.88	829.00	38.00	149.01	.33	1274.05	21.00	.00
1544.000	3500.00	1282.28	1282.72	5.29	90.06	829.00	38.00	149.01	.34	1274.05	21.00	.00
1544.000	4000.00	1282.88	1283.37	5.59	91.38	829.00	38.00	149.01	.35	1274.05	21.00	.00
1544.000	4500.00	1283.55	1284.07	5.79	92.87	829.00	38.00	149.01	.35	1274.05	21.00	.00
1544.000	5000.00	1284.31	1284.85	5.89	94.55	829.00	38.00	149.01	.35	1274.05	21.00	.00
1544.000	5500.00	1284.97	1285.54	6.03	95.98	829.00	38.00	149.01	.34	1274.05	21.00	.00
1544.000	6000.00	1285.59	1286.19	6.17	110.99	829.00	38.00	149.01	.34	1274.05	21.00	.00
1544.000	6500.00	1286.25	1286.86	6.27	111.00	829.00	38.00	149.01	.34	1274.05	21.00	.00
1844.000	2000.00	1280.66	1280.90	3.94	86.58	1129.00	37.00	149.01	.29	1274.17	21.00	.00
1844.000	2500.00	1281.14	1281.46	4.54	87.76	1129.00	37.00	149.01	.32	1274.17	21.00	.00
1844.000	3000.00	1281.87	1282.24	4.88	89.52	1129.00	37.00	149.01	.33	1274.17	21.00	.00
1844.000	3500.00	1282.41	1282.85	5.27	90.84	1129.00	37.00	149.01	.34	1274.17	21.00	.00
1844.000	4000.00	1283.02	1283.50	5.57	92.29	1129.00	37.00	149.01	.35	1274.17	21.00	.00
1844.000	4500.00	1283.69	1284.20	5.76	93.91	1129.00	37.00	149.01	.35	1274.17	21.00	.00
1844.000	5000.00	1284.44	1284.97	5.87	95.74	1129.00	37.00	149.01	.35	1274.17	21.00	.00
1844.000	5500.00	1285.10	1285.66	6.01	97.97	1129.00	37.00	149.01	.34	1274.17	21.00	.00
1844.000	6000.00	1285.72	1286.30	6.15	104.59	1129.00	37.00	149.01	.34	1274.17	21.00	.00
1844.000	6500.00	1286.36	1286.97	6.25	111.56	1129.00	37.00	149.01	.34	1274.17	21.00	.00
2000.000	2000.00	1280.70	1280.94	3.94	86.43	1285.00	.00	.00	.29	1274.23	21.00	.00
2000.000	2500.00	1281.20	1281.52	4.54	87.44	1285.00	.00	.00	.32	1274.23	21.00	.00
2000.000	3000.00	1281.93	1282.30	4.88	88.93	1285.00	.00	.00	.33	1274.23	21.00	.00
2000.000	3500.00	1282.48	1282.91	5.27	90.05	1285.00	.00	.00	.34	1274.23	21.00	.00
2000.000	4000.00	1283.09	1283.57	5.56	91.29	1285.00	.00	.00	.35	1274.23	21.00	.00
2000.000	4500.00	1283.75	1284.27	5.76	92.65	1285.00	.00	.00	.35	1274.23	21.00	.00
2000.000	5000.00	1284.50	1285.04	5.88	94.17	1285.00	.00	.00	.34	1274.23	21.00	.00
2000.000	5500.00	1285.16	1285.72	6.02	98.63	1285.00	.00	.00	.34	1274.23	21.00	.00
2000.000	6000.00	1285.77	1286.36	6.17	112.48	1285.00	.00	.00	.34	1274.23	21.00	.00
2000.000	6500.00	1286.42	1287.03	6.27	113.00	1285.00	.00	.00	.34	1274.23	21.00	.00
2120.000	2000.00	1280.74	1280.98	3.97	86.18	1405.00	.00	.00	.29	1274.28	21.00	.00
2120.000	2500.00	1281.24	1281.57	4.57	87.66	1405.00	.00	.00	.32	1274.28	21.00	.00
2120.000	3000.00	1281.98	1282.35	4.90	89.81	1405.00	.00	.00	.33	1274.28	21.00	.00
2120.000	3500.00	1282.53	1282.96	5.28	91.44	1405.00	.00	.00	.35	1274.28	21.00	.00
2120.000	4000.00	1283.14	1283.62	5.57	93.22	1405.00	.00	.00	.35	1274.28	21.00	.00
2120.000	4500.00	1283.81	1284.32	5.76	95.18	1405.00	.00	.00	.35	1274.28	21.00	.00
2120.000	5000.00	1284.55	1285.09	5.86	97.37	1405.00	.00	.00	.35	1274.28	21.00	.00
2120.000	5500.00	1285.21	1285.77	6.00	102.63	1405.00	.00	.00	.35	1274.28	21.00	.00
2120.000	6000.00	1285.83	1286.41	6.13	116.00	1405.00	.00	.00	.34	1274.28	21.00	.00
2120.000	6500.00	1286.48	1287.07	6.22	116.00	1405.00	.00	.00	.34	1274.28	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
2144.000	2000.00	1280.75	1280.99	3.97	85.83	1429.00	.00	.00	.29	1274.28	21.00	.00
2144.000	2500.00	1281.25	1281.58	4.56	87.07	1429.00	.00	.00	.32	1274.28	21.00	.00
2144.000	3000.00	1281.99	1282.36	4.90	88.87	1429.00	.00	.00	.33	1274.28	21.00	.00
2144.000	3500.00	1282.54	1282.97	5.29	90.23	1429.00	.00	.00	.34	1274.28	21.00	.00
2144.000	4000.00	1283.15	1283.63	5.58	91.71	1429.00	.00	.00	.35	1274.28	21.00	.00
2144.000	4500.00	1283.81	1284.33	5.78	93.35	1429.00	.00	.00	.35	1274.28	21.00	.00
2144.000	5000.00	1284.56	1285.10	5.88	96.48	1429.00	.00	.00	.35	1274.28	21.00	.00
2144.000	5500.00	1285.22	1285.78	6.02	102.26	1429.00	.00	.00	.35	1274.28	21.00	.00
2144.000	6000.00	1285.83	1286.42	6.16	116.00	1429.00	.00	.00	.34	1274.28	21.00	.00
2144.000	6500.00	1286.48	1287.09	6.25	116.00	1429.00	.00	.00	.34	1274.28	21.00	.00
2361.000	2000.00	1280.82	1281.06	3.95	87.16	1646.00	.00	.00	.29	1274.37	21.00	.00
2361.000	2500.00	1281.34	1281.66	4.53	88.55	1646.00	.00	.00	.32	1274.37	21.00	.00
2361.000	3000.00	1282.08	1282.45	4.85	90.49	1646.00	.00	.00	.33	1274.37	21.00	.00
2361.000	3500.00	1282.64	1283.07	5.23	91.98	1646.00	.00	.00	.34	1274.37	21.00	.00
2361.000	4000.00	1283.25	1283.73	5.51	93.55	1646.00	.00	.00	.35	1274.37	21.00	.00
2361.000	4500.00	1283.92	1284.43	5.70	94.48	1646.00	.00	.00	.35	1274.37	21.00	.00
2361.000	5000.00	1284.66	1285.19	5.82	95.52	1646.00	.00	.00	.34	1274.37	21.00	.00
2361.000	5500.00	1285.32	1285.87	5.97	101.44	1646.00	.00	.00	.34	1274.37	21.00	.00
2361.000	6000.00	1285.93	1286.51	6.11	112.00	1646.00	.00	.00	.34	1274.37	21.00	.00
2361.000	6500.00	1286.57	1287.17	6.22	112.00	1646.00	.00	.00	.33	1274.37	21.00	.00
2444.000	2000.00	1280.84	1281.09	3.97	86.26	1729.00	.00	.00	.29	1274.40	21.00	.00
2444.000	2500.00	1281.37	1281.69	4.55	87.67	1729.00	.00	.00	.32	1274.40	21.00	.00
2444.000	3000.00	1282.11	1282.48	4.88	89.64	1729.00	.00	.00	.33	1274.40	21.00	.00
2444.000	3500.00	1282.67	1283.10	5.26	91.15	1729.00	.00	.00	.34	1274.40	21.00	.00
2444.000	4000.00	1283.29	1283.76	5.54	92.79	1729.00	.00	.00	.35	1274.40	21.00	.00
2444.000	4500.00	1283.95	1284.46	5.74	93.75	1729.00	.00	.00	.35	1274.40	21.00	.00
2444.000	5000.00	1284.69	1285.22	5.85	94.64	1729.00	.00	.00	.34	1274.40	21.00	.00
2444.000	5500.00	1285.34	1285.90	6.00	102.37	1729.00	.00	.00	.34	1274.40	21.00	.00
2444.000	6000.00	1285.95	1286.54	6.15	114.00	1729.00	.00	.00	.34	1274.40	21.00	.00
2444.000	6500.00	1286.59	1287.20	6.26	114.00	1729.00	.00	.00	.33	1274.40	21.00	.00
2605.000	2000.00	1280.89	1281.14	3.99	86.09	1890.00	.00	.00	.29	1274.46	21.00	.00
2605.000	2500.00	1281.43	1281.76	4.56	87.35	1890.00	.00	.00	.32	1274.46	21.00	.00
2605.000	3000.00	1282.17	1282.54	4.89	89.07	1890.00	.00	.00	.33	1274.46	21.00	.00
2605.000	3500.00	1282.74	1283.17	5.27	90.40	1890.00	.00	.00	.34	1274.46	21.00	.00
2605.000	4000.00	1283.35	1283.83	5.55	92.36	1890.00	.00	.00	.35	1274.46	21.00	.00
2605.000	4500.00	1284.02	1284.53	5.76	93.02	1890.00	.00	.00	.35	1274.46	21.00	.00
2605.000	5000.00	1284.75	1285.29	5.88	93.76	1890.00	.00	.00	.34	1274.46	21.00	.00
2605.000	5500.00	1285.40	1285.97	6.03	97.25	1890.00	.00	.00	.34	1274.46	21.00	.00
2605.000	6000.00	1286.01	1286.61	6.19	103.76	1890.00	.00	.00	.34	1274.46	21.00	.00
2605.000	6500.00	1286.65	1287.26	6.30	113.00	1890.00	.00	.00	.34	1274.46	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
2744.000	2000.00	1280.94	1281.19	3.95	86.69	2029.00	.00	.00	.29	1274.51	21.00	.00
2744.000	2500.00	1281.49	1281.81	4.51	87.68	2029.00	.00	.00	.32	1274.51	21.00	.00
2744.000	3000.00	1282.23	1282.60	4.85	89.01	2029.00	.00	.00	.32	1274.51	21.00	.00
2744.000	3500.00	1282.81	1283.23	5.22	90.04	2029.00	.00	.00	.34	1274.51	21.00	.00
2744.000	4000.00	1283.42	1283.89	5.51	92.54	2029.00	.00	.00	.35	1274.51	21.00	.00
2744.000	4500.00	1284.09	1284.59	5.71	93.26	2029.00	.00	.00	.35	1274.51	21.00	.00
2744.000	5000.00	1284.82	1285.35	5.84	93.85	2029.00	.00	.00	.34	1274.51	21.00	.00
2744.000	5500.00	1285.47	1286.02	5.99	100.35	2029.00	.00	.00	.34	1274.51	21.00	.00
2744.000	6000.00	1286.07	1286.66	6.15	108.75	2029.00	.00	.00	.34	1274.51	21.00	.00
2744.000	6500.00	1286.71	1287.31	6.26	112.00	2029.00	.00	.00	.33	1274.51	21.00	.00
2833.000	2000.00	1280.97	1281.22	3.97	85.56	2118.00	.00	.00	.29	1274.50	21.00	.00
2833.000	2500.00	1281.53	1281.84	4.53	86.44	2118.00	.00	.00	.32	1274.50	21.00	.00
2833.000	3000.00	1282.27	1282.63	4.87	87.63	2118.00	.00	.00	.32	1274.50	21.00	.00
2833.000	3500.00	1282.84	1283.27	5.25	88.55	2118.00	.00	.00	.34	1274.50	21.00	.00
2833.000	4000.00	1283.46	1283.93	5.54	92.08	2118.00	.00	.00	.35	1274.50	21.00	.00
2833.000	4500.00	1284.12	1284.63	5.74	92.47	2118.00	.00	.00	.35	1274.50	21.00	.00
2833.000	5000.00	1284.85	1285.39	5.87	92.91	2118.00	.00	.00	.34	1274.50	21.00	.00
2833.000	5500.00	1285.50	1286.06	6.03	94.50	2118.00	.00	.00	.34	1274.50	21.00	.00
2833.000	6000.00	1286.10	1286.70	6.19	99.02	2118.00	.00	.00	.34	1274.50	21.00	.00
2833.000	6500.00	1286.73	1287.35	6.30	110.00	2118.00	.00	.00	.34	1274.50	21.00	.00
2888.000	2000.00	1280.99	1281.23	3.99	85.78	2173.00	.00	.00	.29	1274.57	21.00	.00
2888.000	2500.00	1281.54	1281.87	4.55	86.78	2173.00	.00	.00	.32	1274.57	21.00	.00
2888.000	3000.00	1282.28	1282.66	4.89	88.12	2173.00	.00	.00	.33	1274.57	21.00	.00
2888.000	3500.00	1282.86	1283.29	5.26	89.15	2173.00	.00	.00	.34	1274.57	21.00	.00
2888.000	4000.00	1283.48	1283.96	5.55	92.19	2173.00	.00	.00	.35	1274.57	21.00	.00
2888.000	4500.00	1284.14	1284.66	5.75	93.31	2173.00	.00	.00	.35	1274.57	21.00	.00
2888.000	5000.00	1284.87	1285.41	5.88	93.90	2173.00	.00	.00	.34	1274.57	21.00	.00
2888.000	5500.00	1285.52	1286.08	6.03	95.04	2173.00	.00	.00	.34	1274.57	21.00	.00
2888.000	6000.00	1286.13	1286.72	6.19	99.49	2173.00	.00	.00	.34	1274.57	21.00	.00
2888.000	6500.00	1286.76	1287.37	6.31	110.00	2173.00	.00	.00	.34	1274.57	21.00	.00
2905.000	2000.00	1280.99	1281.24	3.98	85.45	2190.79	.00	.00	.29	1274.57	21.00	.00
2905.000	2500.00	1281.55	1281.87	4.54	86.27	2190.79	.00	.00	.32	1274.57	21.00	.00
2905.000	3000.00	1282.29	1282.66	4.88	87.36	2190.79	.00	.00	.32	1274.57	21.00	.00
2905.000	3500.00	1282.87	1283.30	5.26	88.21	2190.79	.00	.00	.34	1274.57	21.00	.00
2905.000	4000.00	1283.49	1283.97	5.56	92.04	2190.79	.00	.00	.34	1274.57	21.00	25.00
2905.000	4500.00	1284.15	1284.66	5.77	93.32	2190.79	.00	.00	.34	1274.57	21.00	25.00
2905.000	5000.00	1284.88	1285.42	5.91	93.90	2190.79	.00	.00	.34	1274.57	21.00	25.00
2905.000	5500.00	1285.52	1286.09	6.08	95.05	2190.79	.00	.00	.34	1274.57	21.00	25.00
2905.000	6000.00	1286.13	1286.73	6.24	97.68	2190.79	.00	.00	.34	1274.57	21.00	25.00
2905.000	6500.00	1286.75	1287.38	6.37	103.00	2190.79	.00	.00	.34	1274.57	21.00	25.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
3105.000	2000.00	1281.06	1281.30	3.96	86.90	2390.79	.00	.00	.29	1274.65	21.00	.00
3105.000	2500.00	1281.63	1281.95	4.50	87.93	2390.79	.00	.00	.32	1274.65	21.00	.00
3105.000	3000.00	1282.38	1282.74	4.83	91.11	2390.79	.00	.00	.32	1274.65	21.00	25.00
3105.000	3500.00	1282.96	1283.38	5.20	92.36	2390.79	.00	.00	.33	1274.65	21.00	25.00
3105.000	4000.00	1283.58	1284.05	5.48	92.86	2390.79	.00	.00	.34	1274.65	21.00	25.00
3105.000	4500.00	1284.24	1284.75	5.70	93.39	2390.79	.00	.00	.34	1274.65	21.00	25.00
3105.000	5000.00	1284.97	1285.50	5.84	93.97	2390.79	.00	.00	.34	1274.65	21.00	25.00
3105.000	5500.00	1285.61	1286.17	6.01	95.21	2390.79	.00	.00	.34	1274.65	21.00	25.00
3105.000	6000.00	1286.22	1286.81	6.17	98.29	2390.79	.00	.00	.34	1274.65	21.00	25.00
3105.000	6500.00	1286.84	1287.46	6.30	102.00	2390.79	.00	.00	.33	1274.65	21.00	25.00
3305.000	2000.00	1281.12	1281.37	4.05	84.25	2590.79	.00	.00	.29	1274.73	21.00	.00
3305.000	2500.00	1281.70	1282.03	4.60	85.42	2590.79	.00	.00	.32	1274.73	21.00	.00
3305.000	3000.00	1282.44	1282.82	4.94	88.45	2590.79	.00	.00	.33	1274.73	21.00	25.00
3305.000	3500.00	1283.03	1283.47	5.31	89.04	2590.79	.00	.00	.34	1274.73	21.00	25.00
3305.000	4000.00	1283.65	1284.14	5.61	89.66	2590.79	.00	.00	.35	1274.73	21.00	25.00
3305.000	4500.00	1284.31	1284.84	5.83	90.32	2590.79	.00	.00	.35	1274.73	21.00	25.00
3305.000	5000.00	1285.03	1285.58	5.98	91.04	2590.79	.00	.00	.34	1274.73	21.00	25.00
3305.000	5500.00	1285.67	1286.26	6.16	91.67	2590.79	.00	.00	.34	1274.73	21.00	25.00
3305.000	6000.00	1286.27	1286.89	6.34	96.31	2590.79	.00	.00	.34	1274.73	21.00	25.00
3305.000	6500.00	1286.89	1287.54	6.48	101.00	2590.79	.00	.00	.34	1274.73	21.00	25.00
3347.000	2000.00	1281.14	1281.39	4.02	85.04	2632.09	.00	.00	.29	1274.74	21.00	.00
3347.000	2500.00	1281.72	1282.05	4.57	86.09	2632.09	.00	.00	.32	1274.74	21.00	.00
3347.000	3000.00	1282.47	1282.84	4.90	88.97	2632.09	.00	.00	.33	1274.74	21.00	25.00
3347.000	3500.00	1283.05	1283.49	5.28	89.44	2632.09	.00	.00	.34	1274.74	21.00	25.00
3347.000	4000.00	1283.67	1284.16	5.57	89.93	2632.09	.00	.00	.34	1274.74	21.00	25.00
3347.000	4500.00	1284.33	1284.85	5.80	90.46	2632.09	.00	.00	.34	1274.74	21.00	25.00
3347.000	5000.00	1285.05	1285.60	5.95	91.09	2632.09	.00	.00	.34	1274.74	21.00	25.00
3347.000	5500.00	1285.69	1286.27	6.12	92.37	2632.09	.00	.00	.34	1274.74	21.00	25.00
3347.000	6000.00	1286.29	1286.91	6.29	97.90	2632.09	.00	.00	.34	1274.74	21.00	25.00
3347.000	6500.00	1286.92	1287.56	6.43	103.00	2632.09	.00	.00	.34	1274.74	21.00	25.00
3444.000	2000.00	1281.17	1281.42	4.05	84.69	2729.00	.00	.00	.30	1274.78	21.00	.00
3444.000	2500.00	1281.76	1282.08	4.59	86.05	2729.00	.00	.00	.32	1274.78	21.00	.00
3444.000	3000.00	1282.50	1282.88	4.93	90.00	2729.00	.00	.00	.33	1274.78	21.00	25.00
3444.000	3500.00	1283.09	1283.53	5.29	90.48	2729.00	.00	.00	.34	1274.78	21.00	25.00
3444.000	4000.00	1283.71	1284.20	5.59	90.97	2729.00	.00	.00	.35	1274.78	21.00	25.00
3444.000	4500.00	1284.37	1284.89	5.81	91.50	2729.00	.00	.00	.35	1274.78	21.00	25.00
3444.000	5000.00	1285.09	1285.64	5.96	92.18	2729.00	.00	.00	.34	1274.78	21.00	25.00
3444.000	5500.00	1285.73	1286.31	6.13	93.46	2729.00	.00	.00	.34	1274.78	21.00	25.00
3444.000	6000.00	1286.33	1286.95	6.30	102.09	2729.00	.00	.00	.34	1274.78	21.00	25.00
3444.000	6500.00	1286.95	1287.59	6.43	105.00	2729.00	.00	.00	.34	1274.78	21.00	25.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
3488.000	2000.00	1281.18	1281.43	4.05	84.95	2773.00	.00	.00	.30	1274.80	21.00	.00
3488.000	2500.00	1281.77	1282.10	4.59	86.43	2773.00	.00	.00	.32	1274.80	21.00	.00
3488.000	3000.00	1282.52	1282.89	4.92	90.52	2773.00	.00	.00	.33	1274.80	21.00	25.00
3488.000	3500.00	1283.11	1283.55	5.29	91.11	2773.00	.00	.00	.34	1274.80	21.00	25.00
3488.000	4000.00	1283.73	1284.22	5.58	91.73	2773.00	.00	.00	.35	1274.80	21.00	25.00
3488.000	4500.00	1284.39	1284.91	5.80	92.39	2773.00	.00	.00	.35	1274.80	21.00	25.00
3488.000	5000.00	1285.11	1285.66	5.94	93.21	2773.00	.00	.00	.34	1274.80	21.00	25.00
3488.000	5500.00	1285.75	1286.33	6.11	94.49	2773.00	.00	.00	.34	1274.80	21.00	25.00
3488.000	6000.00	1286.35	1286.96	6.28	105.62	2773.00	.00	.00	.34	1274.80	21.00	25.00
3488.000	6500.00	1286.97	1287.61	6.40	106.00	2773.00	.00	.00	.34	1274.80	21.00	25.00
3588.000	2000.00	1281.22	1281.47	3.99	86.18	2873.00	.00	.00	.29	1274.83	21.00	.00
3588.000	2500.00	1281.82	1282.14	4.51	87.27	2873.00	.00	.00	.32	1274.83	21.00	.00
3588.000	3000.00	1282.57	1282.93	4.84	89.58	2873.00	.00	.00	.32	1274.83	21.00	25.00
3588.000	3500.00	1283.17	1283.59	5.21	90.53	2873.00	.00	.00	.33	1274.83	21.00	25.00
3588.000	4000.00	1283.79	1284.26	5.50	91.03	2873.00	.00	.00	.34	1274.83	21.00	25.00
3588.000	4500.00	1284.45	1284.95	5.72	91.55	2873.00	.00	.00	.34	1274.83	21.00	25.00
3588.000	5000.00	1285.16	1285.70	5.87	92.31	2873.00	.00	.00	.34	1274.83	21.00	25.00
3588.000	5500.00	1285.80	1286.37	6.04	93.59	2873.00	.00	.00	.34	1274.83	21.00	25.00
3588.000	6000.00	1286.40	1287.00	6.21	106.00	2873.00	.00	.00	.34	1274.83	21.00	25.00
3588.000	6500.00	1287.02	1287.65	6.35	106.00	2873.00	.00	.00	.34	1274.83	21.00	25.00
3788.000	2000.00	1281.29	1281.53	3.96	86.67	3073.00	.00	.00	.29	1274.91	21.00	.00
3788.000	2500.00	1281.90	1282.21	4.48	87.47	3073.00	.00	.00	.31	1274.91	21.00	.00
3788.000	3000.00	1282.65	1283.01	4.80	90.06	3073.00	.00	.00	.32	1274.91	21.00	.00
3788.000	3500.00	1283.26	1283.67	5.15	91.60	3073.00	.00	.00	.33	1274.91	21.00	.00
3788.000	4000.00	1283.88	1284.34	5.43	92.10	3073.00	.00	.00	.34	1274.91	21.00	.00
3788.000	4500.00	1284.54	1285.03	5.64	92.63	3073.00	.00	.00	.34	1274.91	21.00	.00
3788.000	5000.00	1285.25	1285.77	5.79	93.49	3073.00	.00	.00	.34	1274.91	21.00	.00
3788.000	5500.00	1285.90	1286.45	5.95	94.77	3073.00	.00	.00	.34	1274.91	21.00	.00
3788.000	6000.00	1286.50	1287.08	6.11	109.00	3073.00	.00	.00	.33	1274.91	21.00	.00
3788.000	6500.00	1287.12	1287.72	6.23	109.00	3073.00	.00	.00	.33	1274.91	21.00	.00
3988.000	2000.00	1281.36	1281.60	3.93	89.15	3273.00	.00	.00	.29	1274.99	21.00	.00
3988.000	2500.00	1281.98	1282.29	4.42	90.60	3273.00	.00	.00	.31	1274.99	21.00	.00
3988.000	3000.00	1282.74	1283.09	4.73	92.35	3273.00	.00	.00	.32	1274.99	21.00	.00
3988.000	3500.00	1283.35	1283.75	5.07	93.00	3273.00	.00	.00	.33	1274.99	21.00	.00
3988.000	4000.00	1283.98	1284.42	5.34	93.38	3273.00	.00	.00	.33	1274.99	21.00	.00
3988.000	4500.00	1284.64	1285.12	5.55	93.78	3273.00	.00	.00	.33	1274.99	21.00	.00
3988.000	5000.00	1285.35	1285.85	5.69	94.68	3273.00	.00	.00	.33	1274.99	21.00	.00
3988.000	5500.00	1285.99	1286.52	5.86	95.96	3273.00	.00	.00	.33	1274.99	21.00	.00
3988.000	6000.00	1286.59	1287.15	6.02	111.00	3273.00	.00	.00	.33	1274.99	21.00	.00
3988.000	6500.00	1287.21	1287.80	6.13	111.00	3273.00	.00	.00	.33	1274.99	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
4188.000	2000.00	1281.42	1281.66	3.96	87.56	3473.00	.00	.00	.29	1275.06	21.00	.00
4188.000	2500.00	1282.05	1282.36	4.45	88.84	3473.00	.00	.00	.31	1275.06	21.00	.00
4188.000	3000.00	1282.81	1283.16	4.77	91.96	3473.00	.00	.00	.32	1275.06	21.00	25.00
4188.000	3500.00	1283.42	1283.83	5.11	92.74	3473.00	.00	.00	.33	1275.06	21.00	25.00
4188.000	4000.00	1284.05	1284.50	5.39	93.25	3473.00	.00	.00	.33	1275.06	21.00	25.00
4188.000	4500.00	1284.71	1285.19	5.61	93.77	3473.00	.00	.00	.33	1275.06	21.00	25.00
4188.000	5000.00	1285.41	1285.93	5.77	94.42	3473.00	.00	.00	.33	1275.06	21.00	25.00
4188.000	5500.00	1286.05	1286.60	5.94	96.67	3473.00	.00	.00	.33	1275.06	21.00	25.00
4188.000	6000.00	1286.65	1287.23	6.11	113.02	3473.00	.00	.00	.33	1275.06	21.00	25.00
4188.000	6500.00	1287.27	1287.87	6.24	116.00	3473.00	.00	.00	.33	1275.06	21.00	25.00
4388.000	2000.00	1281.49	1281.73	3.91	88.88	3673.00	.00	.00	.29	1275.14	21.00	.00
4388.000	2500.00	1282.13	1282.43	4.39	89.69	3673.00	.00	.00	.31	1275.14	21.00	.00
4388.000	3000.00	1282.89	1283.23	4.71	90.65	3673.00	.00	.00	.31	1275.14	21.00	.00
4388.000	3500.00	1283.51	1283.90	5.04	93.10	3673.00	.00	.00	.32	1275.14	21.00	25.00
4388.000	4000.00	1284.14	1284.58	5.32	93.48	3673.00	.00	.00	.33	1275.14	21.00	25.00
4388.000	4500.00	1284.79	1285.27	5.54	93.87	3673.00	.00	.00	.33	1275.14	21.00	25.00
4388.000	5000.00	1285.50	1286.00	5.70	94.99	3673.00	.00	.00	.33	1275.14	21.00	25.00
4388.000	5500.00	1286.14	1286.67	5.86	99.91	3673.00	.00	.00	.33	1275.14	21.00	25.00
4388.000	6000.00	1286.74	1287.30	6.03	113.00	3673.00	.00	.00	.33	1275.14	21.00	25.00
4388.000	6500.00	1287.35	1287.94	6.16	113.00	3673.00	.00	.00	.32	1275.14	21.00	25.00
4588.000	2000.00	1281.55	1281.79	3.90	89.02	3873.00	.00	.00	.29	1275.21	21.00	.00
4588.000	2500.00	1282.21	1282.50	4.38	92.24	3873.00	.00	.00	.31	1275.21	21.00	25.00
4588.000	3000.00	1282.96	1283.30	4.69	101.91	3873.00	.00	.00	.31	1275.21	21.00	25.00
4588.000	3500.00	1283.59	1283.97	5.01	102.86	3873.00	.00	.00	.32	1275.21	21.00	25.00
4588.000	4000.00	1284.22	1284.65	5.27	103.38	3873.00	.00	.00	.32	1275.21	21.00	25.00
4588.000	4500.00	1284.89	1285.34	5.47	103.90	3873.00	.00	.00	.32	1275.21	21.00	25.00
4588.000	5000.00	1285.60	1286.08	5.60	104.60	3873.00	.00	.00	.32	1275.21	21.00	25.00
4588.000	5500.00	1286.24	1286.74	5.75	111.07	3873.00	.00	.00	.32	1275.21	21.00	25.00
4588.000	6000.00	1286.84	1287.37	5.90	123.00	3873.00	.00	.00	.32	1275.21	21.00	25.00
4588.000	6500.00	1287.46	1288.01	6.01	123.00	3873.00	.00	.00	.31	1275.21	21.00	25.00
4788.000	2000.00	1281.61	1281.86	3.97	89.07	4073.00	.00	.00	.29	1275.29	21.00	.00
4788.000	2500.00	1282.27	1282.58	4.44	91.06	4073.00	.00	.00	.32	1275.29	21.00	.00
4788.000	3000.00	1283.03	1283.38	4.74	93.34	4073.00	.00	.00	.32	1275.29	21.00	.00
4788.000	3500.00	1283.65	1284.05	5.06	95.23	4073.00	.00	.00	.33	1275.29	21.00	.00
4788.000	4000.00	1284.29	1284.73	5.31	97.15	4073.00	.00	.00	.34	1275.29	21.00	.00
4788.000	4500.00	1284.95	1285.42	5.50	105.26	4073.00	.00	.00	.34	1275.29	21.00	25.00
4788.000	5000.00	1285.66	1286.15	5.62	113.70	4073.00	.00	.00	.33	1275.29	21.00	25.00
4788.000	5500.00	1286.30	1286.82	5.75	114.42	4073.00	.00	.00	.33	1275.29	21.00	25.00
4788.000	6000.00	1286.91	1287.44	5.87	136.00	4073.00	.00	.00	.33	1275.29	21.00	25.00
4788.000	6500.00	1287.52	1288.07	5.96	136.00	4073.00	.00	.00	.32	1275.29	21.00	25.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
4988.000	2000.00	1281.68	1281.92	3.98	89.26	4273.00	.00	.00	.30	1275.37	21.00	.00
4988.000	2500.00	1282.35	1282.65	4.44	91.30	4273.00	.00	.00	.32	1275.37	21.00	.00
4988.000	3000.00	1283.11	1283.45	4.74	93.62	4273.00	.00	.00	.32	1275.37	21.00	.00
4988.000	3500.00	1283.73	1284.13	5.06	95.53	4273.00	.00	.00	.33	1275.37	21.00	.00
4988.000	4000.00	1284.37	1284.81	5.31	97.48	4273.00	.00	.00	.34	1275.37	21.00	.00
4988.000	4500.00	1285.03	1285.50	5.50	111.85	4273.00	.00	.00	.34	1275.37	21.00	25.00
4988.000	5000.00	1285.74	1286.22	5.61	114.44	4273.00	.00	.00	.33	1275.37	21.00	25.00
4988.000	5500.00	1286.38	1286.89	5.74	132.37	4273.00	.00	.00	.33	1275.37	21.00	25.00
4988.000	6000.00	1286.98	1287.51	5.86	138.00	4273.00	.00	.00	.33	1275.37	21.00	25.00
4988.000	6500.00	1287.60	1288.14	5.94	138.00	4273.00	.00	.00	.32	1275.37	21.00	25.00
5188.000	2000.00	1281.74	1281.99	4.01	88.33	4473.00	.00	.00	.30	1275.44	21.00	.00
5188.000	2500.00	1282.42	1282.73	4.47	90.30	4473.00	.00	.00	.32	1275.44	21.00	.00
5188.000	3000.00	1283.18	1283.53	4.77	92.51	4473.00	.00	.00	.32	1275.44	21.00	.00
5188.000	3500.00	1283.81	1284.21	5.09	94.34	4473.00	.00	.00	.33	1275.44	21.00	.00
5188.000	4000.00	1284.45	1284.89	5.34	96.20	4473.00	.00	.00	.34	1275.44	21.00	.00
5188.000	4500.00	1285.11	1285.58	5.54	98.12	4473.00	.00	.00	.34	1275.44	21.00	.00
5188.000	5000.00	1285.81	1286.30	5.66	110.71	4473.00	.00	.00	.34	1275.44	21.00	25.00
5188.000	5500.00	1286.44	1286.96	5.80	114.24	4473.00	.00	.00	.33	1275.44	21.00	25.00
5188.000	6000.00	1287.04	1287.58	5.92	136.00	4473.00	.00	.00	.33	1275.44	21.00	25.00
5188.000	6500.00	1287.65	1288.21	6.02	136.00	4473.00	.00	.00	.33	1275.44	21.00	25.00
5388.000	2000.00	1281.81	1282.06	4.01	88.52	4673.00	.00	.00	.30	1275.52	21.00	.00
5388.000	2500.00	1282.49	1282.80	4.47	90.53	4673.00	.00	.00	.32	1275.52	21.00	.00
5388.000	3000.00	1283.25	1283.61	4.77	92.77	4673.00	.00	.00	.32	1275.52	21.00	.00
5388.000	3500.00	1283.89	1284.29	5.08	94.64	4673.00	.00	.00	.33	1275.52	21.00	.00
5388.000	4000.00	1284.53	1284.97	5.33	96.52	4673.00	.00	.00	.34	1275.52	21.00	.00
5388.000	4500.00	1285.19	1285.66	5.53	99.11	4673.00	.00	.00	.34	1275.52	21.00	25.00
5388.000	5000.00	1285.88	1286.38	5.66	114.15	4673.00	.00	.00	.34	1275.52	21.00	25.00
5388.000	5500.00	1286.52	1287.04	5.79	115.37	4673.00	.00	.00	.33	1275.52	21.00	25.00
5388.000	6000.00	1287.12	1287.66	5.92	136.00	4673.00	.00	.00	.33	1275.52	21.00	25.00
5388.000	6500.00	1287.72	1288.28	6.01	136.00	4673.00	.00	.00	.33	1275.52	21.00	25.00
5588.000	2000.00	1281.88	1282.13	4.02	88.30	4873.00	.00	.00	.30	1275.59	21.00	.00
5588.000	2500.00	1282.57	1282.88	4.47	90.31	4873.00	.00	.00	.32	1275.59	21.00	.00
5588.000	3000.00	1283.33	1283.68	4.77	92.53	4873.00	.00	.00	.32	1275.59	21.00	.00
5588.000	3500.00	1283.97	1284.37	5.08	94.38	4873.00	.00	.00	.33	1275.59	21.00	.00
5588.000	4000.00	1284.61	1285.05	5.34	96.25	4873.00	.00	.00	.34	1275.59	21.00	.00
5588.000	4500.00	1285.27	1285.74	5.53	103.47	4873.00	.00	.00	.34	1275.59	21.00	25.00
5588.000	5000.00	1285.96	1286.46	5.66	112.69	4873.00	.00	.00	.34	1275.59	21.00	25.00
5588.000	5500.00	1286.59	1287.11	5.79	113.53	4873.00	.00	.00	.33	1275.59	21.00	25.00
5588.000	6000.00	1287.19	1287.73	5.92	135.00	4873.00	.00	.00	.33	1275.59	21.00	25.00
5588.000	6500.00	1287.79	1288.35	6.02	135.00	4873.00	.00	.00	.33	1275.59	21.00	25.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
5788.000	2000.00	1281.95	1282.20	4.01	89.05	5073.00	.00	.00	.30	1275.67	21.00	.00
5788.000	2500.00	1282.65	1282.95	4.45	91.16	5073.00	.00	.00	.32	1275.67	21.00	.00
5788.000	3000.00	1283.41	1283.76	4.75	93.48	5073.00	.00	.00	.32	1275.67	21.00	.00
5788.000	3500.00	1284.05	1284.45	5.05	95.42	5073.00	.00	.00	.33	1275.67	21.00	.00
5788.000	4000.00	1284.69	1285.13	5.30	97.37	5073.00	.00	.00	.34	1275.67	21.00	.00
5788.000	4500.00	1285.35	1285.82	5.49	113.29	5073.00	.00	.00	.34	1275.67	21.00	25.00
5788.000	5000.00	1286.04	1286.53	5.61	119.74	5073.00	.00	.00	.33	1275.67	21.00	25.00
5788.000	5500.00	1286.68	1287.19	5.74	134.00	5073.00	.00	.00	.33	1275.67	21.00	25.00
5788.000	6000.00	1287.27	1287.80	5.85	134.00	5073.00	.00	.00	.33	1275.67	21.00	25.00
5788.000	6500.00	1287.88	1288.42	5.95	134.00	5073.00	.00	.00	.32	1275.67	21.00	25.00
5988.000	2000.00	1282.02	1282.26	4.00	89.70	5273.00	.00	.00	.30	1275.75	21.00	.00
5988.000	2500.00	1282.72	1283.03	4.43	91.92	5273.00	.00	.00	.32	1275.75	21.00	.00
5988.000	3000.00	1283.49	1283.83	4.72	94.32	5273.00	.00	.00	.32	1275.75	21.00	.00
5988.000	3500.00	1284.13	1284.52	5.02	96.35	5273.00	.00	.00	.33	1275.75	21.00	.00
5988.000	4000.00	1284.78	1285.21	5.26	109.29	5273.00	.00	.00	.33	1275.75	21.00	25.00
5988.000	4500.00	1285.44	1285.90	5.44	111.38	5273.00	.00	.00	.33	1275.75	21.00	25.00
5988.000	5000.00	1286.13	1286.61	5.57	121.15	5273.00	.00	.00	.33	1275.75	21.00	25.00
5988.000	5500.00	1286.76	1287.26	5.69	133.00	5273.00	.00	.00	.33	1275.75	21.00	25.00
5988.000	6000.00	1287.35	1287.87	5.81	133.00	5273.00	.00	.00	.32	1275.75	21.00	25.00
5988.000	6500.00	1287.95	1288.48	5.91	133.00	5273.00	.00	.00	.32	1275.75	21.00	25.00
6188.000	2000.00	1282.09	1282.33	3.99	90.11	5473.00	.00	.00	.30	1275.82	21.00	.00
6188.000	2500.00	1282.80	1283.10	4.41	92.39	5473.00	.00	.00	.31	1275.82	21.00	.00
6188.000	3000.00	1283.56	1283.91	4.70	94.85	5473.00	.00	.00	.32	1275.82	21.00	.00
6188.000	3500.00	1284.21	1284.60	5.00	96.93	5473.00	.00	.00	.33	1275.82	21.00	.00
6188.000	4000.00	1284.86	1285.29	5.24	104.09	5473.00	.00	.00	.33	1275.82	21.00	25.00
6188.000	4500.00	1285.52	1285.97	5.42	111.24	5473.00	.00	.00	.33	1275.82	21.00	25.00
6188.000	5000.00	1286.20	1286.68	5.54	120.38	5473.00	.00	.00	.33	1275.82	21.00	25.00
6188.000	5500.00	1286.83	1287.33	5.67	131.00	5473.00	.00	.00	.33	1275.82	21.00	25.00
6188.000	6000.00	1287.42	1287.94	5.80	131.00	5473.00	.00	.00	.32	1275.82	21.00	25.00
6188.000	6500.00	1288.01	1288.55	5.90	131.00	5473.00	.00	.00	.32	1275.82	21.00	25.00
6388.000	2000.00	1282.15	1282.40	3.99	90.47	5673.00	.00	.00	.30	1275.90	21.00	.00
6388.000	2500.00	1282.87	1283.17	4.40	92.82	5673.00	.00	.00	.31	1275.90	21.00	.00
6388.000	3000.00	1283.64	1283.98	4.69	95.33	5673.00	.00	.00	.32	1275.90	21.00	.00
6388.000	3500.00	1284.29	1284.68	4.98	101.86	5673.00	.00	.00	.33	1275.90	21.00	25.00
6388.000	4000.00	1284.94	1285.36	5.21	110.05	5673.00	.00	.00	.33	1275.90	21.00	25.00
6388.000	4500.00	1285.60	1286.05	5.39	110.85	5673.00	.00	.00	.33	1275.90	21.00	25.00
6388.000	5000.00	1286.28	1286.75	5.52	119.18	5673.00	.00	.00	.33	1275.90	21.00	25.00
6388.000	5500.00	1286.90	1287.40	5.65	127.00	5673.00	.00	.00	.32	1275.90	21.00	25.00
6388.000	6000.00	1287.49	1288.00	5.78	127.00	5673.00	.00	.00	.32	1275.90	21.00	25.00
6388.000	6500.00	1288.08	1288.61	5.89	127.00	5673.00	.00	.00	.32	1275.90	21.00	25.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
6490.000	2000.00	1282.19	1282.44	3.99	90.53	5775.21	.00	.00	.30	1275.94	21.00	.00
6490.000	2500.00	1282.91	1283.21	4.40	92.90	5775.21	.00	.00	.31	1275.94	21.00	.00
6490.000	3000.00	1283.68	1284.02	4.69	95.42	5775.21	.00	.00	.32	1275.94	21.00	.00
6490.000	3500.00	1284.33	1284.72	4.98	97.56	5775.21	.00	.00	.33	1275.94	21.00	.00
6490.000	4000.00	1284.98	1285.40	5.21	98.96	5775.21	.00	.00	.33	1275.94	21.00	.00
6490.000	4500.00	1285.63	1286.09	5.41	99.61	5775.21	.00	.00	.33	1275.94	21.00	.00
6490.000	5000.00	1286.31	1286.79	5.56	100.00	5775.21	.00	.00	.33	1275.94	21.00	.00
6490.000	5500.00	1286.93	1287.44	5.72	100.00	5775.21	.00	.00	.32	1275.94	21.00	.00
6490.000	6000.00	1287.51	1288.04	5.88	100.00	5775.21	.00	.00	.32	1275.94	21.00	.00
6490.000	6500.00	1288.09	1288.65	6.03	100.00	5775.21	.00	.00	.32	1275.94	21.00	.00
6600.000	2000.00	1282.22	1282.48	4.02	89.22	5885.59	.00	.00	.30	1275.98	21.00	.00
6600.000	2500.00	1282.95	1283.25	4.44	91.45	5885.59	.00	.00	.32	1275.98	21.00	.00
6600.000	3000.00	1283.72	1284.06	4.73	93.82	5885.59	.00	.00	.32	1275.98	21.00	.00
6600.000	3500.00	1284.37	1284.76	5.03	114.22	5885.59	.00	.00	.33	1275.98	21.00	25.00
6600.000	4000.00	1285.02	1285.45	5.26	114.78	5885.59	.00	.00	.33	1275.98	21.00	25.00
6600.000	4500.00	1285.67	1286.13	5.44	115.34	5885.59	.00	.00	.33	1275.98	21.00	25.00
6600.000	5000.00	1286.35	1286.83	5.56	115.92	5885.59	.00	.00	.32	1275.98	21.00	25.00
6600.000	5500.00	1286.98	1287.48	5.70	134.00	5885.59	.00	.00	.32	1275.98	21.00	25.00
6600.000	6000.00	1287.57	1288.08	5.81	134.00	5885.59	.00	.00	.32	1275.98	21.00	25.00
6600.000	6500.00	1288.17	1288.69	5.92	134.00	5885.59	.00	.00	.32	1275.98	21.00	25.00
6706.000	2000.00	1282.26	1282.51	4.07	87.48	5991.49	.00	.00	.30	1276.02	21.00	.00
6706.000	2500.00	1282.98	1283.30	4.50	89.51	5991.49	.00	.00	.32	1276.02	21.00	.00
6706.000	3000.00	1283.75	1284.11	4.80	91.28	5991.49	.00	.00	.32	1276.02	21.00	.00
6706.000	3500.00	1284.40	1284.81	5.11	92.07	5991.49	.00	.00	.33	1276.02	21.00	.00
6706.000	4000.00	1285.05	1285.49	5.37	92.84	5991.49	.00	.00	.33	1276.02	21.00	.00
6706.000	4500.00	1285.69	1286.18	5.60	93.61	5991.49	.00	.00	.34	1276.02	21.00	.00
6706.000	5000.00	1286.37	1286.88	5.76	94.42	5991.49	.00	.00	.34	1276.02	21.00	.00
6706.000	5500.00	1286.98	1287.53	5.94	95.00	5991.49	.00	.00	.34	1276.02	21.00	.00
6706.000	6000.00	1287.56	1288.14	6.12	95.00	5991.49	.00	.00	.34	1276.02	21.00	.00
6706.000	6500.00	1288.15	1288.76	6.27	95.00	5991.49	.00	.00	.33	1276.02	21.00	.00
6822.000	2000.00	1282.29	1282.56	4.14	85.04	6107.00	.00	146.30	.31	1276.06	21.00	.00
6822.000	2500.00	1283.02	1283.34	4.58	86.79	6107.00	.00	146.30	.32	1276.06	21.00	.00
6822.000	3000.00	1283.78	1284.15	4.89	88.64	6107.00	.00	146.30	.33	1276.06	21.00	.00
6822.000	3500.00	1284.43	1284.86	5.21	89.88	6107.00	.00	146.30	.34	1276.06	21.00	.00
6822.000	4000.00	1285.08	1285.55	5.48	90.54	6107.00	.00	146.30	.34	1276.06	21.00	.00
6822.000	4500.00	1285.72	1286.23	5.71	91.21	6107.00	.00	146.30	.34	1276.06	21.00	.00
6822.000	5000.00	1286.40	1286.93	5.89	91.89	6107.00	.00	146.30	.34	1276.06	21.00	.00
6822.000	5500.00	1287.01	1287.58	6.07	92.53	6107.00	.00	146.30	.34	1276.06	21.00	.00
6822.000	6000.00	1287.59	1288.20	6.25	92.60	6107.00	.00	146.30	.34	1276.06	21.00	.00
6822.000	6500.00	1288.17	1288.81	6.41	92.60	6107.00	.00	146.30	.34	1276.06	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
6907.000	2000.00	1282.36	1282.63	4.14	84.06	6307.00	.00	145.90	.30	1276.09	21.00	.00
6907.000	2500.00	1283.10	1283.42	4.58	85.70	6307.00	.00	145.90	.32	1276.09	21.00	.00
6907.000	3000.00	1283.86	1284.23	4.91	87.42	6307.00	.00	145.90	.33	1276.09	21.00	.00
6907.000	3500.00	1284.51	1284.94	5.23	88.89	6307.00	.00	145.90	.34	1276.09	21.00	.00
6907.000	4000.00	1285.16	1285.63	5.50	90.06	6307.00	.00	145.90	.34	1276.09	21.00	.00
6907.000	4500.00	1285.80	1286.31	5.73	90.71	6307.00	.00	145.90	.34	1276.09	21.00	.00
6907.000	5000.00	1286.47	1287.02	5.91	91.39	6307.00	.00	145.90	.34	1276.09	21.00	.00
6907.000	5500.00	1287.09	1287.67	6.09	91.80	6307.00	.00	145.90	.34	1276.09	21.00	.00
6907.000	6000.00	1287.67	1288.28	6.28	91.80	6307.00	.00	145.90	.34	1276.09	21.00	.00
6907.000	6500.00	1288.25	1288.89	6.44	91.80	6307.00	.00	145.90	.34	1276.09	21.00	.00
7104.000	2000.00	1282.43	1282.70	4.15	83.73	6507.00	.00	150.30	.31	1276.17	21.00	.00
7104.000	2500.00	1283.17	1283.50	4.60	85.34	6507.00	.00	150.30	.32	1276.17	21.00	.00
7104.000	3000.00	1283.94	1284.31	4.92	87.02	6507.00	.00	150.30	.33	1276.17	21.00	.00
7104.000	3500.00	1284.59	1285.02	5.24	88.46	6507.00	.00	150.30	.34	1276.17	21.00	.00
7104.000	4000.00	1285.24	1285.71	5.52	89.88	6507.00	.00	150.30	.34	1276.17	21.00	.00
7104.000	4500.00	1285.89	1286.40	5.74	91.29	6507.00	.00	150.30	.35	1276.17	21.00	.00
7104.000	5000.00	1286.55	1287.10	5.92	96.02	6507.00	.00	150.30	.34	1276.17	21.00	25.00
7104.000	5500.00	1287.17	1287.75	6.09	96.60	6507.00	.00	150.30	.34	1276.17	21.00	25.00
7104.000	6000.00	1287.75	1288.36	6.27	96.60	6507.00	.00	150.30	.34	1276.17	21.00	25.00
7104.000	6500.00	1288.33	1288.97	6.43	96.60	6507.00	.00	150.30	.34	1276.17	21.00	25.00
7304.000	2000.00	1282.51	1282.77	4.13	84.93	6707.00	.00	151.00	.30	1276.25	21.00	.00
7304.000	2500.00	1283.25	1283.58	4.56	86.71	6707.00	.00	151.00	.32	1276.25	21.00	.00
7304.000	3000.00	1284.02	1284.39	4.87	88.54	6707.00	.00	151.00	.33	1276.25	21.00	.00
7304.000	3500.00	1284.68	1285.10	5.19	90.11	6707.00	.00	151.00	.33	1276.25	21.00	.00
7304.000	4000.00	1285.33	1285.80	5.45	91.67	6707.00	.00	151.00	.34	1276.25	21.00	.00
7304.000	4500.00	1285.98	1286.48	5.67	93.21	6707.00	.00	151.00	.34	1276.25	21.00	.00
7304.000	5000.00	1286.65	1287.18	5.84	96.17	6707.00	.00	151.00	.34	1276.25	21.00	25.00
7304.000	5500.00	1287.27	1287.83	6.01	122.20	6707.00	.00	151.00	.34	1276.25	21.00	25.00
7304.000	6000.00	1287.85	1288.44	6.15	122.20	6707.00	.00	151.00	.34	1276.25	21.00	25.00
7304.000	6500.00	1288.45	1289.05	6.27	122.20	6707.00	.00	151.00	.34	1276.25	21.00	25.00
7504.000	2000.00	1282.58	1282.85	4.10	85.63	6907.00	.00	168.00	.30	1276.32	21.00	.00
7504.000	2500.00	1283.34	1283.65	4.53	87.50	6907.00	.00	168.00	.32	1276.32	21.00	.00
7504.000	3000.00	1284.11	1284.47	4.84	89.42	6907.00	.00	168.00	.32	1276.32	21.00	.00
7504.000	3500.00	1284.77	1285.18	5.15	91.08	6907.00	.00	168.00	.33	1276.32	21.00	.00
7504.000	4000.00	1285.42	1285.88	5.41	92.70	6907.00	.00	168.00	.34	1276.32	21.00	.00
7504.000	4500.00	1286.07	1286.56	5.62	94.32	6907.00	.00	168.00	.34	1276.32	21.00	.00
7504.000	5000.00	1286.74	1287.26	5.79	95.98	6907.00	.00	168.00	.34	1276.32	21.00	.00
7504.000	5500.00	1287.36	1287.90	5.95	116.09	6907.00	.00	168.00	.34	1276.32	21.00	25.00
7504.000	6000.00	1287.94	1288.52	6.10	140.58	6907.00	.00	168.00	.34	1276.32	21.00	25.00
7504.000	6500.00	1288.54	1289.13	6.20	157.70	6907.00	.00	168.00	.33	1276.32	21.00	25.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
7704.000	2000.00	1282.65	1282.92	4.12	85.36	7107.00	.00	168.50	.30	1276.40	21.00	.00
7704.000	2500.00	1283.41	1283.73	4.54	87.22	7107.00	.00	168.50	.32	1276.40	21.00	.00
7704.000	3000.00	1284.18	1284.55	4.84	89.12	7107.00	.00	168.50	.32	1276.40	21.00	.00
7704.000	3500.00	1284.85	1285.26	5.15	90.76	7107.00	.00	168.50	.33	1276.40	21.00	.00
7704.000	4000.00	1285.50	1285.96	5.41	92.36	7107.00	.00	168.50	.34	1276.40	21.00	.00
7704.000	4500.00	1286.15	1286.64	5.63	93.95	7107.00	.00	168.50	.34	1276.40	21.00	.00
7704.000	5000.00	1286.82	1287.34	5.79	115.18	7107.00	.00	168.50	.34	1276.40	21.00	25.00
7704.000	5500.00	1287.43	1287.98	5.95	115.87	7107.00	.00	168.50	.34	1276.40	21.00	25.00
7704.000	6000.00	1288.02	1288.59	6.10	116.52	7107.00	.00	168.50	.34	1276.40	21.00	25.00
7704.000	6500.00	1288.61	1289.20	6.21	116.90	7107.00	.00	168.50	.33	1276.40	21.00	25.00
7904.000	2000.00	1282.72	1282.99	4.12	85.12	7307.00	.00	166.40	.30	1276.47	21.00	.00
7904.000	2500.00	1283.49	1283.81	4.54	86.96	7307.00	.00	166.40	.32	1276.47	21.00	.00
7904.000	3000.00	1284.26	1284.62	4.85	88.83	7307.00	.00	166.40	.32	1276.47	21.00	.00
7904.000	3500.00	1284.93	1285.34	5.16	90.45	7307.00	.00	166.40	.33	1276.47	21.00	.00
7904.000	4000.00	1285.58	1286.04	5.42	92.03	7307.00	.00	166.40	.34	1276.47	21.00	.00
7904.000	4500.00	1286.23	1286.72	5.64	93.60	7307.00	.00	166.40	.34	1276.47	21.00	.00
7904.000	5000.00	1286.89	1287.42	5.80	112.93	7307.00	.00	166.40	.34	1276.47	21.00	25.00
7904.000	5500.00	1287.51	1288.06	5.96	113.62	7307.00	.00	166.40	.34	1276.47	21.00	25.00
7904.000	6000.00	1288.09	1288.67	6.11	114.26	7307.00	.00	166.40	.34	1276.47	21.00	25.00
7904.000	6500.00	1288.68	1289.27	6.23	114.60	7307.00	.00	166.40	.34	1276.47	21.00	25.00
8104.000	2000.00	1282.79	1283.06	4.18	83.20	7507.00	.00	165.70	.31	1276.55	21.00	.00
8104.000	2500.00	1283.56	1283.89	4.61	84.82	7507.00	.00	165.70	.32	1276.55	21.00	.00
8104.000	3000.00	1284.33	1284.70	4.93	86.46	7507.00	.00	165.70	.33	1276.55	21.00	.00
8104.000	3500.00	1285.00	1285.43	5.24	87.88	7507.00	.00	165.70	.34	1276.55	21.00	.00
8104.000	4000.00	1285.65	1286.12	5.52	108.26	7507.00	.00	165.70	.34	1276.55	21.00	25.00
8104.000	4500.00	1286.30	1286.81	5.72	110.03	7507.00	.00	165.70	.34	1276.55	21.00	25.00
8104.000	5000.00	1286.97	1287.50	5.88	110.66	7507.00	.00	165.70	.34	1276.55	21.00	25.00
8104.000	5500.00	1287.58	1288.14	6.04	111.00	7507.00	.00	165.70	.34	1276.55	21.00	25.00
8104.000	6000.00	1288.16	1288.75	6.19	111.00	7507.00	.00	165.70	.34	1276.55	21.00	25.00
8104.000	6500.00	1288.74	1289.35	6.33	111.00	7507.00	.00	165.70	.33	1276.55	21.00	25.00
8304.000	2000.00	1282.86	1283.14	4.21	82.58	7707.00	.00	144.60	.31	1276.63	21.00	.00
8304.000	2500.00	1283.63	1283.96	4.63	84.13	7707.00	.00	144.60	.32	1276.63	21.00	.00
8304.000	3000.00	1284.40	1284.79	4.96	85.69	7707.00	.00	144.60	.33	1276.63	21.00	.00
8304.000	3500.00	1285.08	1285.51	5.28	87.05	7707.00	.00	144.60	.34	1276.63	21.00	.00
8304.000	4000.00	1285.73	1286.21	5.55	87.79	7707.00	.00	144.60	.34	1276.63	21.00	.00
8304.000	4500.00	1286.38	1286.90	5.78	88.37	7707.00	.00	144.60	.34	1276.63	21.00	.00
8304.000	5000.00	1287.03	1287.59	5.98	88.96	7707.00	.00	144.60	.34	1276.63	21.00	.00
8304.000	5500.00	1287.64	1288.23	6.18	89.20	7707.00	.00	144.60	.35	1276.63	21.00	.00
8304.000	6000.00	1288.21	1288.84	6.38	89.20	7707.00	.00	144.60	.35	1276.63	21.00	.00
8304.000	6500.00	1288.78	1289.45	6.56	89.20	7707.00	.00	144.60	.35	1276.63	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
8504.000	2000.00	1282.94	1283.21	4.18	83.31	7907.00	.00	168.70	.31	1276.70	21.00	.00
8504.000	2500.00	1283.71	1284.04	4.60	84.96	7907.00	.00	168.70	.32	1276.70	21.00	.00
8504.000	3000.00	1284.49	1284.86	4.92	86.61	7907.00	.00	168.70	.33	1276.70	21.00	.00
8504.000	3500.00	1285.17	1285.59	5.23	111.45	7907.00	.00	168.70	.33	1276.70	21.00	25.00
8504.000	4000.00	1285.83	1286.29	5.45	112.07	7907.00	.00	168.70	.33	1276.70	21.00	25.00
8504.000	4500.00	1286.49	1286.98	5.64	112.67	7907.00	.00	168.70	.33	1276.70	21.00	25.00
8504.000	5000.00	1287.16	1287.67	5.78	113.28	7907.00	.00	168.70	.33	1276.70	21.00	25.00
8504.000	5500.00	1287.78	1288.31	5.92	113.40	7907.00	.00	168.70	.33	1276.70	21.00	25.00
8504.000	6000.00	1288.37	1288.93	6.07	113.40	7907.00	.00	168.70	.33	1276.70	21.00	25.00
8504.000	6500.00	1288.96	1289.54	6.19	113.40	7907.00	.00	168.70	.33	1276.70	21.00	25.00
8704.000	2000.00	1283.01	1283.29	4.19	83.19	8107.00	.00	168.80	.31	1276.78	21.00	.00
8704.000	2500.00	1283.79	1284.12	4.61	84.84	8107.00	.00	168.80	.32	1276.78	21.00	.00
8704.000	3000.00	1284.57	1284.94	4.92	86.48	8107.00	.00	168.80	.33	1276.78	21.00	.00
8704.000	3500.00	1285.25	1285.67	5.23	111.35	8107.00	.00	168.80	.33	1276.78	21.00	25.00
8704.000	4000.00	1285.91	1286.37	5.46	111.94	8107.00	.00	168.80	.34	1276.78	21.00	25.00
8704.000	4500.00	1286.57	1287.06	5.65	112.52	8107.00	.00	168.80	.33	1276.78	21.00	25.00
8704.000	5000.00	1287.23	1287.74	5.80	113.12	8107.00	.00	168.80	.33	1276.78	21.00	25.00
8704.000	5500.00	1287.85	1288.39	5.94	113.67	8107.00	.00	168.80	.33	1276.78	21.00	25.00
8704.000	6000.00	1288.44	1289.00	6.08	113.70	8107.00	.00	168.80	.33	1276.78	21.00	25.00
8704.000	6500.00	1289.03	1289.61	6.21	113.70	8107.00	.00	168.80	.33	1276.78	21.00	25.00
8904.000	2000.00	1283.09	1283.36	4.21	82.21	8307.00	.00	169.60	.31	1276.85	21.00	.00
8904.000	2500.00	1283.87	1284.20	4.63	83.74	8307.00	.00	169.60	.32	1276.85	21.00	.00
8904.000	3000.00	1284.64	1285.02	4.96	85.27	8307.00	.00	169.60	.33	1276.85	21.00	.00
8904.000	3500.00	1285.32	1285.75	5.27	87.21	8307.00	.00	169.60	.34	1276.85	21.00	.00
8904.000	4000.00	1285.98	1286.46	5.53	112.57	8307.00	.00	169.60	.34	1276.85	21.00	25.00
8904.000	4500.00	1286.63	1287.14	5.73	113.14	8307.00	.00	169.60	.34	1276.85	21.00	25.00
8904.000	5000.00	1287.30	1287.83	5.88	113.71	8307.00	.00	169.60	.34	1276.85	21.00	25.00
8904.000	5500.00	1287.91	1288.47	6.03	113.80	8307.00	.00	169.60	.33	1276.85	21.00	25.00
8904.000	6000.00	1288.50	1289.08	6.18	113.80	8307.00	.00	169.60	.33	1276.85	21.00	25.00
8904.000	6500.00	1289.09	1289.69	6.30	113.80	8307.00	.00	169.60	.33	1276.85	21.00	25.00
9104.000	2000.00	1283.16	1283.44	4.22	82.27	8507.00	.00	144.50	.31	1276.93	21.00	.00
9104.000	2500.00	1283.94	1284.28	4.63	83.81	8507.00	.00	144.50	.32	1276.93	21.00	.00
9104.000	3000.00	1284.72	1285.10	4.96	85.34	8507.00	.00	144.50	.33	1276.93	21.00	.00
9104.000	3500.00	1285.40	1285.84	5.27	86.69	8507.00	.00	144.50	.34	1276.93	21.00	.00
9104.000	4000.00	1286.06	1286.54	5.55	87.71	8507.00	.00	144.50	.34	1276.93	21.00	.00
9104.000	4500.00	1286.71	1287.23	5.78	88.30	8507.00	.00	144.50	.34	1276.93	21.00	.00
9104.000	5000.00	1287.36	1287.91	5.98	88.89	8507.00	.00	144.50	.34	1276.93	21.00	.00
9104.000	5500.00	1287.97	1288.56	6.18	89.00	8507.00	.00	144.50	.34	1276.93	21.00	.00
9104.000	6000.00	1288.54	1289.17	6.38	89.00	8507.00	.00	144.50	.35	1276.93	21.00	.00
9104.000	6500.00	1289.12	1289.79	6.55	89.00	8507.00	.00	144.50	.35	1276.93	21.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
9304.000	2000.00	1283.23	1283.51	4.23	81.81	8707.00	.00	167.70	.31	1277.01	21.00	.00
9304.000	2500.00	1284.02	1284.36	4.65	83.30	8707.00	.00	167.70	.32	1277.01	21.00	.00
9304.000	3000.00	1284.80	1285.18	4.98	84.78	8707.00	.00	167.70	.33	1277.01	21.00	.00
9304.000	3500.00	1285.48	1285.92	5.29	97.17	8707.00	.00	167.70	.34	1277.01	21.00	25.00
9304.000	4000.00	1286.14	1286.62	5.55	110.36	8707.00	.00	167.70	.34	1277.01	21.00	25.00
9304.000	4500.00	1286.80	1287.31	5.76	110.90	8707.00	.00	167.70	.34	1277.01	21.00	25.00
9304.000	5000.00	1287.46	1288.00	5.90	111.47	8707.00	.00	167.70	.34	1277.01	21.00	25.00
9304.000	5500.00	1288.08	1288.64	6.05	111.60	8707.00	.00	167.70	.34	1277.01	21.00	25.00
9304.000	6000.00	1288.68	1289.26	6.20	111.60	8707.00	.00	167.70	.33	1277.01	21.00	25.00
9304.000	6500.00	1289.27	1289.87	6.33	111.60	8707.00	.00	167.70	.33	1277.01	21.00	25.00
9504.000	2000.00	1283.30	1283.59	4.32	78.75	8907.00	.00	143.90	.31	1277.08	21.00	.00
9504.000	2500.00	1284.09	1284.44	4.75	79.97	8907.00	.00	143.90	.33	1277.08	21.00	.00
9504.000	3000.00	1284.87	1285.27	5.09	83.02	8907.00	.00	143.90	.34	1277.08	21.00	.00
9504.000	3500.00	1285.56	1286.01	5.41	85.70	8907.00	.00	143.90	.35	1277.08	21.00	.00
9504.000	4000.00	1286.21	1286.71	5.68	86.51	8907.00	.00	143.90	.35	1277.08	21.00	.00
9504.000	4500.00	1286.86	1287.40	5.93	87.04	8907.00	.00	143.90	.35	1277.08	21.00	.00
9504.000	5000.00	1287.51	1288.09	6.13	87.58	8907.00	.00	143.90	.35	1277.08	21.00	.00
9504.000	5500.00	1288.12	1288.74	6.32	87.80	8907.00	.00	143.90	.35	1277.08	21.00	.00
9504.000	6000.00	1288.70	1289.36	6.51	87.80	8907.00	.00	143.90	.35	1277.08	21.00	.00
9504.000	6500.00	1289.29	1289.98	6.69	87.80	8907.00	.00	143.90	.35	1277.08	21.00	.00

SUMMARY OF ERRORS AND SPECIAL NOTES

```
WARNING SECNO=   1257.000  PROFILE=  8  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1257.000  PROFILE=  9  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1257.000  PROFILE= 10  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

APPENDIX D

HEC-2 Input/Output Data

File: PIMACH2

Multiple Discharge Model For Outfall Channels & North Overbank

THIS RUN EXECUTED 18OCT98 19:24:27

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

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

MODEL: PIMACH2.IN - USES COE BACKWATER WEST OF PIMA ROAD
SPECIAL CULVERT ROUTINE AT PIMA ROAD
GROUTED RIPRAP OUTLET WEST OF PIMA ROAD

EVANS-KUHN CHANNEL CONNECTED TO ADOT PIMA OUTFALL CHANNEL AND
THE N-S FREEWAY CHANNEL.

THIS MODEL IS BASED ON THE THE FINAL CHANNEL DESIGN PREPARED BY SRPMIC
AND PUBLISHED IN:
PIMA OUTFALL CHANNEL DRAINAGE REPORT, VOLUME 1
Project No. 93E130
SRPMIC, JANUARY 7, 1998

THIS MODEL WAS CODED BY ROBERT L. WARD, P.E. IN JUNE-JULY 1998 USING
DESIGN DATA FROM THE ABOVE DRAINAGE REPORT.

CROSS-SECTIONAL GEOMETRY FOR EVANS-KUHN CHANNEL WAS DEVELOPED BY R.WARD
ON THE BASIS OF TYPICAL SECTION A-A SHOWN ON SHEET 4 of 25, "96th STREET
STORM DRAIN & ARIZONA CANAL OUTFALL CHANNEL", 7/1/92, EVANS, KUHN & ASSC
THE CONCRETE SIDE-SLOPE WAS HELD CONSTANT AT 2:1 INSTEAD OF USING A
VARIABLE SLOPE.

TOPO FOR THIS MODEL IS FROM THE 1989 WLB GROUP, INC. MAPPING FOR ADOT,
AS SUPPLEMENTED BY GROUND SURVEYS BY SRPMIC IN JUNE 1998.

STARTING CWSEL IS BASED ON IBW INTERCEPTOR CHANNEL BACKWATER
AS ORIGINALLY DETERMINED BY RLW IN 1993. ADJUSTMENTS HAVE BEEN MADE TO
REFLECT JULY 1998 SRPMIC GROUTED RIPRAP OUTLET DESIGN.

T1 ADOT/PIMA OUTFALL CHANNEL ALONG NORTH BANK OF THE ARIZONA CANAL
T2 7-10'x 8' CBC (NO DEBRIS) IN-PLACE AT PIMA RD - USES SRPMIC GEOMETRY
T3 MODEL PIMACH2.IN - SPECIAL CULVERT

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	2			0				1275.41	
J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	1	0	-1				-1			

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38	43	1	3	26	4	66	27	28	68

```
 42        17        18

5  LPRNT    NUMSEC                 ********REQUESTED SECTION NUMBERS********

 -10       -10

QT      13      1000      1500      2000      2500      3000      3500      4000      4500      5000
T     5500      6000      6500      7000

NC    .018      .018      .018        .1        .3

      HEC-2 XSECs ARE REFERENCED TO CHANNEL STATIONING
      FOR EXAMPLE, XSEC 19485 = CHANNEL STA 194+85

X1    19485         8     959.5    1040.5                                      1000
R       285     959.5    270.77     959.5    270.46    979.75    270.22      1000    269.98   1020.25
GR   269.70  1030.375    270.30    1040.5       285    1040.5

X1    19465         7     959.5    1040.5                     19.89            1000
GR      285     959.5    270.66     959.5    270.36    979.75    270.05      1000    269.75   1020.25
GR   270.55    1040.5       285    1040.5

X1    19445         8     959.5    1040.5                     19.89            1000
GR      285     959.5    270.54     959.5    270.24    979.75    269.95      1000    269.79   1010.10
GR   270.00   1020.25    270.80    1040.5       285    1040.5

X1    19425         7     959.5    1040.5                     19.89            1000
GR      285     959.5    270.41     959.5    270.13    979.75    269.83     999.4    270.45   1020.25
GR   271.06    1040.5       285    1040.5

X1    19405         8     959.5    1040.5                     19.89            1000
GR      285     959.5    270.28     959.5    270.01    979.75    269.88    988.77    270.19      1000
GR   270.75   1020.25    271.31    1040.5       285    1040.5

X1    19385         8     959.5    1040.5                     19.89            1000
GR      285     959.5    270.17     959.5    269.93    978.25    269.97    979.75    270.50      1000
GR   271.03   1020.25    271.56    1040.5       285    1040.5

      DOWNSTREAM SIDE OF NEW BOX CULVERT AT STA 193+65.64
      PGL INVERT ELEV=1270.80
      NO DEBRIS ON INTERIOR CELL WALLS
```

```
NC                                  .3        .5

X1    19365       6     959.5    1040.5                          19.91                 1000
GR      285   959.5    270.06     959.5    269.98    968.60    270.80       1000    271.61    1040.50
GR      285  1040.5

SC    7.016      .2       3.0         0         8        10       170       12.3   1271.04    1270.80

      UPSTREAM SIDE OF NEW BOX CULVERT AT STA 191+95.64
      PGL INVERT ELEV=1271.04

X1    19195       4    962.20   1037.80                          170               1270.28
X2                         2   1279.04    1284.9
BT        2     950    1284.9                1050    1284.9
GR       15   962.2         0     962.2     1.512    1037.8        15     1037.8

      PT IMMEDIATELY UPSTREAM OF CBC INLET, LOCATION OF 100-FT CHANNEL
      TRANSITION INTO CBC - STA 190+95.64

X1    19095       4       920      1076                          100               1270.18
GR       15     920         0       950         2      1050        15       1076

NC                                  .1        .3

X1    19000       4       920      1076                        95.64               1270.31
GR       15     920         0       950         2      1050        15       1076

X1    18900       4       920      1076                          100               1270.45
GR       15     920         0       950         2      1050        15       1076

X1    18800       4       920      1076                          100               1270.59
GR       15     920         0       950         2      1050        15       1076

X1    18700       4       920      1076                          100               1270.73
GR       15     920         0       950         2      1050        15       1076

X1    18600       4       920      1076                          100               1270.87
GR       15     920         0       950         2      1050        15       1076

X1    18500       4       920      1076                          100               1271.01
GR       15     920         0       950         2      1050        15       1076
```

```
X1    18400     4     920     1076                    100          1271.15
GR       15   920       0      950     2     1050     15     1076

X1    18300     4     920     1076                    100          1271.29
GR       15   920       0      950     2     1050     15     1076

X1    18200     4     920     1076                    100          1271.43
GR       15   920       0      950     2     1050     15     1076

X1    18100     4     920     1076                    100          1271.57
GR       15   920       0      950     2     1050     15     1076

X1    18000     4     920     1076                    100          1271.71
GR       15   920       0      950     2     1050     15     1076

X1    17900     4     920     1076                    100          1271.85
GR       15   920       0      950     2     1050     15     1076

     DOWNSTREAM END OF SIDE-SLOPE TRANSITION FROM 2:1 TO 1:1 @ STA 178+00.00

X1    17800     4     920     1076                    100          1271.99
GR       15   920       0      950     2     1050     15     1076

     UPSTREAM END OF SIDE-SLOPE TRANSITION FROM 2:1 TO 1:1 @ STA 177+00.00

X1    17700     4     935     1063                    100          1272.13
GR       15   935       0      950     2     1050     15     1063

X1    17600     4     935     1063                    100          1272.27
GR       15   935       0      950     2     1050     15     1063

     SLOPE BREAK AT STA 175+77.40 TO MATCH EXTENDED EKA CHANNEL SLOPE
     TO CORRECT 0.74 FT DIFFERENCE IN CHANNEL HEIGHTS BETWEEN ADOT'S
     CHANNEL AND THE EKA CHANNEL.

X1    17577     4     935     1063                   22.6          1272.30
GR       15   935       0      950     2     1050     15     1063
```

```
X1    17500      4     935    1063                        100          1272.33
GR       15    935       0     950       2     1050       15     1063

X1    17400      4     935    1063                        100          1272.36
GR       15    935       0     950       2     1050       15     1063

X1    17300      4     935    1063                        100          1272.40
GR       15    935       0     950       2     1050       15     1063

X1    17200      4     935    1063                        100          1272.44
GR       15    935       0     950       2     1050       15     1063

  EXP/CONTRACTION COEFFICIENT INCREASED TO .4/.6 TO SIMULATE
  TURBULENCE FROM N-S CHANNEL FLOWS AND TRANSITION FROM EKA GEOMETRY.

  DOWNSTREAM END OF RETAINING WALL THAT SEPARATES THE N-S CHANNEL FROM
  E-W CHANNEL IS AT STA 170+00.

NC                              .4       .6

X1    17100      4     935    1063                        100          1272.47
GR       15    935       0     950       2     1050       15     1063

X1    17000      4     970    1015                        100          1272.51
GR       15    970       0     985      .6     1015       15     1015

  TRANSITION FROM ADOT CHANNEL GEOMETRY TO EKA CHANNEL GEOMETRY
  BETWEEN STA 169+58.7 & STA 168+61.79

NC                              .2       .4

X1    16958      4     970    1015                       41.3          1272.52
GR       15    970       0     985      .6     1015       15     1015

X1    16861      4     970    1030                      96.91          1273.56
GR       15    970       0     985       0     1015       15     1030

  DOWNSTREAM END OF EKA CHANNEL GEOMETRY AT ADOT STATION 168+61.79.
  THIS LOCATION IS ALSO EKA STATION 10+56

  BEGIN SRPMIC CHANNEL, DESIGNED BY EKA.
  THE FOLLOWING XSEC NUMBERS REFLECT EKA CHANNEL STATIONING.
  FOR EXAMPLE, XSEC 1100 IS EKA STATION 11+00.
```

NC				.1	.3					
NH	4	.028	967.5	.018	1032.5	.028	1046.5	.025	1061.5	
X1	1100	11	961.5	1061.5			44		1273.58	
GR	14	961.5	8	967.5	8	969	0	985	0	1015
GR	8	1031	8	1032.5	14	1038.5	13	1042.5	14	1046.5
GR	14.3	1061.5								
X1	1200						100		.036	
X1	1300						100		.036	
X1	1400						100		.036	
X1	1500						100		.036	
X1	1600						100		.036	
X1	1700						100		.036	
X1	1800						100		.036	
X1	1900						100		.036	
X1	2000						100		.036	
X1	2100						100		.036	
X1	2200						100		.036	
X1	2300						100		.036	
X1	2400						100		.036	

X1	2500	100	.036
X1	2600	100	.036
X1	2700	100	.036
X1	2800	100	.036
X1	2900	100	.036
X1	3000	100	.036
X1	3100	100	.036
X1	3200	100	.036
X1	3300	100	.036
X1	3400	100	.036
X1	3500	100	.036
X1	3600	100	.036
X1	3700	100	.036
X1	3800	100	.036
X1	3900	100	.036
X1	4000	100	.036

```
NC    .028     .025     .018      .3       .5

X1    4102        7    969.5    1029                        102.21              1274.66
GR      10    963.5        7   969.5        7      971         0       985         0      1015
GR       7     1029        7  1063.5

X1    4212        8      971    1029                        110.38              1280.60
GR     3.7    970.4      3.5     971        0      985         0      1000         1      1000
GR       1     1015      4.5    1029      4.5   1070.4

X1    4318        5   957.42 1042.58    105.9    105.9     105.9              1280.75
GR    2.77   957.42        0   968.5        0   1031.5      2.77   1042.58      2.77   1057.42
```

RETURN TO NATURAL FLOODPLAIN GEOMETRY AT XSEC 6822.
XSEC 6822 IS JUST EAST OF THE 96th ST CHANNEL & CORRESPONDS TO STA 44+34
ALONG THE EKA CHANNEL CONTROL LINE.
THIS XSEC IS AT STA 68+22 ALONG THE ARIZONA CANAL CENTERLINE.

ALL THE FOLLOWING XSEC NUMBERS ARE REFERENCED TO THE ARIZONA CANAL
CENTERLINE. STATION 1000 IS AT THE INTERSECTION WITH PIMA ROAD.

X4 RECORDS HAVE BEEN ADDED TO DEFINE A RIGHT BANK AT STATION 400. THIS
WAS DONE TO ADDRESS RIGHT OVERBANK REACH LENGTHS.

```
NC   0.021    0.053    0.053      0.3      0.5

X1    6822       23    146.3      400   115.51   115.51    115.51                 1000
X3                            146.3
X4       1  1283.27      400
GR  287.09     53.7   276.06       65   276.06      135    284.21    146.3    284.04     172.6
GR  283.43    176.9   281.92    181.9   283.01    184.7    282.93    247.1    283.14     329.7
GR  283.24    386.2   283.55    544.4   284.33    648.1    284.81    756.2    285.51     857.1
GR  285.59    954.9   286.06   1051.1   286.39   1143.2    286.86   1255.6    287.21    1358.5
GR  287.55   1454.3   287.82   1555.1   288.15   1655.3

NC                        .1       .3
X1    6907       23    145.9      400       85       85        85                 1000
X3                            145.9
X4       1  1283.32      400
GR  286.88     54.1   276.09       65   276.09      135    284.94    145.9    284.38     167.8
GR  283.30    174.7   281.99    180.2   283.47    184.5    283.33    297.8    283.32     474.0
GR  283.56    536.1   283.82    632.0   284.25    730.7    285.00    832.8    285.32     929.4
GR  285.79   1031.8   286.20   1131.3   286.73   1231.8    287.20   1334.7    287.58    1434.5
GR  287.95   1532.9   288.16   1629.4   288.55   1711.4
```

X1	7104	24	150.3	400	200	197	197		1000	
X3				150.3						
X4	1	1283.65	400							
GR	287.12	53.7	276.17	65	276.17	135	285.92	146.3	286.01	150.3
GR	285.73	168.9	285.01	174.1	282.74	182.3	284.81	189.0	283.81	231.9
GR	283.64	339.8	283.69	540.9	283.95	643.5	284.44	744.1	284.76	844.8
GR	285.28	943.9	285.75	1042.2	286.15	1143.5	286.48	1243.0	286.94	1344.6
GR	287.48	1443.9	287.92	1542.8	288.47	1641.0	288.74	1742.6		
X1	7304	31	151.0	400	200	207	202		1000	
X3				151.0						
X4	1	1283.67	400							
GR	287.23	28.8	286.85	52.6	276.25	65	276.25	135	286.44	147.4
GR	286.89	151.0	286.43	151.9	286.67	168.9	286.21	169.4	285.87	174.4
GR	285.37	174.4	283.10	181.6	283.51	182.0	284.50	187.4	284.01	208.5
GR	283.61	282.3	283.64	380.3	283.78	471.4	284.10	577.6	284.36	683.4
GR	284.67	781.1	285.16	881.0	285.55	978.3	285.92	1078.6	286.36	1179.9
GR	286.77	1278.8	287.24	1377.9	287.71	1479.0	288.35	1581.1	289.30	1680.3
GR	289.30	1724.4								
X1	7504	23	168.0	400	200	251	213		1000	
X3				168.0						
X4	1	1284.11	400							
GR	288.13	10.3	287.85	27.9	287.95	51.2	276.32	65	276.32	135
GR	286.86	148.8	287.06	168.0	286.27	173.0	282.54	181.2	284.09	187.8
GR	283.79	209.2	283.94	290.9	284.04	372.3	284.24	452.2	284.30	535.4
GR	284.78	637.2	285.23	744.6	285.54	862.4	286.09	972.7	286.63	1112.7
GR	287.60	1333.7	288.02	1431.5	288.41	1524.3				
X1	7704	22	168.5	400	200	276	220		1000	
X3				168.5						
X4	1	1284.24	400							
GR	288.35	51.6	276.40	65	276.40	135	286.44	148.4	286.55	168.5
GR	285.75	172.7	282.56	181.0	283.52	184.6	283.59	207.6	283.83	288.9
GR	284.38	438.5	284.58	525.3	284.78	613.8	285.26	717.7	285.58	818.6
GR	285.95	927.8	286.43	1026.8	286.95	1120.7	287.23	1221.5	287.52	1319.9
GR	288.19	1441.9	288.62	1548.4						
X1	7904	24	166.4	400	200	263	217		1000	
X3				166.4						
X4	1	1284.39	400							
GR	288.40	51.8	276.47	65	276.47	135	286.54	148.2	286.56	166.4
GR	285.89	171.5	283.55	177.7	284.50	182.4	283.89	215.2	283.98	289.2
GR	284.37	390.9	284.64	490.7	284.94	583.9	285.28	685.2	285.68	789.2
GR	285.99	885.3	286.50	983.7	286.99	1085.1	287.20	1168.7	287.44	1270.5
GR	288.21	1370.2	288.52	1468.9	288.97	1571.1	289.28	1670.0		

X1	8104	25	165.7	400	200	261	216		1000	
X3				165.7						
X4	1	1284.36	400							
GR	287.53	54.7	287.33	54.7	276.55	65	276.55	135	285.44	145.3
GR	285.67	165.7	285.07	169.6	283.79	174.3	284.53	180.6	284.02	250.1
GR	284.32	349.9	284.41	450.5	284.88	551.0	285.26	651.1	285.66	750.5
GR	286.03	849.1	286.41	949.0	286.88	1051.1	287.18	1150.6	287.52	1249.9
GR	288.13	1350.8	288.38	1450.7	288.79	1552.2	289.45	1651.3	289.85	1750.8

X1	8304	24	144.6	400	200	251	213		1000	
X3				144.6						
X4	1	1284.44	400							
GR	287.30	55.4	276.63	65	276.63	135	285.21	144.6	285.13	164.1
GR	284.37	169.3	282.48	175.2	283.77	179.2	284.05	244.4	284.29	334.7
GR	284.52	436.2	285.06	531.6	285.54	644.9	285.86	733.3	286.32	830.5
GR	286.61	936.4	287.07	1041.3	287.21	1124.7	287.55	1229.3	288.04	1337.9
GR	288.52	1463.7	288.83	1566.6	289.17	1651.1	289.63	1726.3		

X1	8504	24	168.7	400	200	207	200		1000	
X3				168.7						
X4	1	1284.41	400							
GR	287.29	55.3	276.70	65	276.70	135	284.66	144.7	284.71	168.7
GR	283.96	173.3	280.40	185.0	281.19	192.4	283.87	311.6	284.41	397.3
GR	284.58	493.8	284.96	594.9	285.36	694.7	285.76	794.2	286.15	890.8
GR	286.64	988.8	287.04	1077.4	287.34	1175.0	287.62	1270.6	288.08	1371.9
GR	288.47	1495.1	288.88	1597.3	289.31	1698.8	289.71	1789.5		

X1	8704	29	168.8	400	200	202	201		1000	
X3				168.8						
X4	1	1284.49	400							
GR	287.89	55.1	276.78	65	276.78	135	284.86	144.9	284.97	168.8
GR	284.39	171.7	282.63	178.4	283.40	180.8	283.85	195.3	283.63	257.2
GR	283.71	278.1	284.10	290.0	284.44	381.6	284.75	485.9	284.97	575.2
GR	284.88	596.4	284.61	597.4	285.01	600.6	285.51	692.8	285.82	785.5
GR	286.21	878.0	286.54	970.9	286.94	1060.9	287.26	1146.3	287.55	1241.8
GR	287.98	1336.1	288.46	1429.4	288.77	1528.6	289.05	1621.5		

X1	8904	29	169.6	400	200	200	200		1000	
X3				169.6						
X4	1	1284.53	400							
GR	287.40	55.8	276.85	65	276.85	135	285.32	144.2	285.60	169.6
GR	284.79	173.1	283.30	177.2	284.38	180.3	283.92	231.9	284.17	328.6
GR	284.67	427.1	284.83	522.9	285.44	622.0	284.85	628.4	285.26	635.3
GR	285.47	713.3	285.89	820.8	286.37	922.4	286.80	1019.1	287.10	1121.1
GR	287.49	1224.3	287.85	1323.9	288.21	1428.2	288.73	1529.8	287.59	1545.1
GR	288.67	1564.2	289.11	1627.6	289.44	1727.3	289.87	1832.6		

X1	9104	29	144.5	400	200	200	200		1000	
X3				144.5						
X4	1	1284.59	400							
GR	287.49	55.5	276.93	65	276.93	135	285.81	144.5	285.51	169.1
GR	285.13	172.2	283.15	178.6	284.20	181.8	283.92	193.3	284.12	295.6
GR	284.59	399.4	285.11	511.1	285.45	603.0	285.07	621.8	285.38	629.6
GR	285.67	723.6	286.05	827.4	286.42	937.4	286.72	953.9	286.30	993.1
GR	285.64	998.9	286.65	1017.1	287.20	1128.5	287.51	1231.8	287.89	1326.3
GR	288.37	1429.6	288.93	1532.3	289.17	1634.1	289.34	1743.9		

X1	9304	29	167.7	400	200	200	200		1000	
X3				167.7						
X4	1	1284.69	400							
GR	287.62	56.1	277.01	65	277.01	135	285.42	143.9	285.56	167.7
GR	284.83	170.7	282.76	176.5	284.40	181.6	284.05	227.1	284.25	273.1
GR	284.97	362.5	284.68	401.2	284.53	420.2	284.94	452.1	285.34	548.5
GR	285.25	610.3	285.62	653.5	286.00	746.8	286.28	834.2	286.57	927.2
GR	286.90	1023.3	287.18	1109.1	287.48	1200.8	287.73	1299.1	288.16	1391.4
GR	288.49	1484.9	288.88	1580.5	289.24	1683.7	289.66	1774.6		

X1	9504	27	143.9	400	200	200	200		1000	
X3				143.9						
X4	1	1284.70	400							
GR	287.77	56.1	277.08	65	277.08	135	284.06	139.0	285.65	143.9
GR	285.29	170.2	283.29	179.8	284.33	184.6	284.12	192.4	284.20	245.7
GR	284.30	300.5	284.58	370.7	284.87	442.3	285.20	537.6	285.51	624.7
GR	285.80	716.4	286.26	809.8	286.71	900.9	286.92	992.8	287.17	1081.4
GR	287.53	1169.6	287.85	1276.9	288.16	1367.9	288.46	1457.5	288.89	1549.5
GR	289.13	1637.6	289.50	1726.6						

THIS RUN EXECUTED 18OCT98 19:24:34

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

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

MODEL PIMACH2.IN - SPEC

SUMMARY PRINTOUT

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
19485.000	1000.00	1275.41	1275.50	2.39	81.00	.00	.00	.00	.19	1269.70	18.00	.00
19485.000	1500.00	1276.18	1276.33	3.12	81.00	.00	.00	.00	.23	1269.70	18.00	.00
19485.000	2000.00	1276.83	1277.05	3.75	81.00	.00	.00	.00	.26	1269.70	18.00	.00
19485.000	2500.00	1277.42	1277.71	4.30	81.00	.00	.00	.00	.28	1269.70	18.00	.00
19485.000	3000.00	1277.97	1278.33	4.79	81.00	.00	.00	.00	.30	1269.70	18.00	.00
19485.000	3500.00	1278.40	1278.84	5.30	81.00	.00	.00	.00	.33	1269.70	18.00	.00
19485.000	4000.00	1278.90	1279.41	5.70	81.00	.00	.00	.00	.34	1269.70	18.00	.00
19485.000	4500.00	1279.33	1279.91	6.11	81.00	.00	.00	.00	.36	1269.70	18.00	.00
19485.000	5000.00	1279.74	1280.40	6.50	81.00	.00	.00	.00	.37	1269.70	18.00	.00
19485.000	5500.00	1280.15	1280.88	6.85	81.00	.00	.00	.00	.38	1269.70	18.00	.00
19485.000	6000.00	1280.47	1281.28	7.24	81.00	.00	.00	.00	.40	1269.70	18.00	.00
19485.000	6500.00	1280.86	1281.75	7.56	81.00	.00	.00	.00	.41	1269.70	18.00	.00
19485.000	7000.00	1281.21	1282.17	7.88	81.00	.00	.00	.00	.42	1269.70	18.00	.00
19465.000	1000.00	1275.41	1275.50	2.37	81.00	19.89	.00	.00	.18	1269.75	18.00	.00
19465.000	1500.00	1276.19	1276.33	3.09	81.00	19.89	.00	.00	.22	1269.75	18.00	.00
19465.000	2000.00	1276.84	1277.05	3.72	81.00	19.89	.00	.00	.25	1269.75	18.00	.00
19465.000	2500.00	1277.43	1277.71	4.27	81.00	19.89	.00	.00	.28	1269.75	18.00	.00
19465.000	3000.00	1277.98	1278.33	4.76	81.00	19.89	.00	.00	.30	1269.75	18.00	.00
19465.000	3500.00	1278.41	1278.84	5.26	81.00	19.89	.00	.00	.32	1269.75	18.00	.00
19465.000	4000.00	1278.91	1279.41	5.67	81.00	19.89	.00	.00	.34	1269.75	18.00	.00
19465.000	4500.00	1279.35	1279.92	6.07	81.00	19.89	.00	.00	.35	1269.75	18.00	.00
19465.000	5000.00	1279.76	1280.40	6.46	81.00	19.89	.00	.00	.37	1269.75	18.00	.00
19465.000	5500.00	1280.17	1280.89	6.81	81.00	19.89	.00	.00	.38	1269.75	18.00	.00
19465.000	6000.00	1280.49	1281.29	7.20	81.00	19.89	.00	.00	.40	1269.75	18.00	.00
19465.000	6500.00	1280.88	1281.76	7.51	81.00	19.89	.00	.00	.41	1269.75	18.00	.00
19465.000	7000.00	1281.23	1282.19	7.83	81.00	19.89	.00	.00	.41	1269.75	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
19445.000	1000.00	1275.42	1275.50	2.36	81.00	39.78	.00	.00	.18	1269.79	18.00	.00
19445.000	1500.00	1276.19	1276.34	3.09	81.00	39.78	.00	.00	.22	1269.79	18.00	.00
19445.000	2000.00	1276.84	1277.06	3.71	81.00	39.78	.00	.00	.25	1269.79	18.00	.00
19445.000	2500.00	1277.43	1277.72	4.26	81.00	39.78	.00	.00	.28	1269.79	18.00	.00
19445.000	3000.00	1277.99	1278.34	4.75	81.00	39.78	.00	.00	.30	1269.79	18.00	.00
19445.000	3500.00	1278.42	1278.85	5.25	81.00	39.78	.00	.00	.32	1269.79	18.00	.00
19445.000	4000.00	1278.92	1279.42	5.66	81.00	39.78	.00	.00	.34	1269.79	18.00	.00
19445.000	4500.00	1279.35	1279.93	6.07	81.00	39.78	.00	.00	.35	1269.79	18.00	.00
19445.000	5000.00	1279.77	1280.41	6.45	81.00	39.78	.00	.00	.37	1269.79	18.00	.00
19445.000	5500.00	1280.18	1280.90	6.80	81.00	39.78	.00	.00	.38	1269.79	18.00	.00
19445.000	6000.00	1280.50	1281.30	7.19	81.00	39.78	.00	.00	.39	1269.79	18.00	.00
19445.000	6500.00	1280.89	1281.77	7.50	81.00	39.78	.00	.00	.40	1269.79	18.00	.00
19445.000	7000.00	1281.25	1282.20	7.82	81.00	39.78	.00	.00	.41	1269.79	18.00	.00
19425.000	1000.00	1275.42	1275.51	2.41	81.00	59.67	.00	.00	.19	1269.83	18.00	.00
19425.000	1500.00	1276.19	1276.34	3.14	81.00	59.67	.00	.00	.23	1269.83	18.00	.00
19425.000	2000.00	1276.84	1277.06	3.77	81.00	59.67	.00	.00	.26	1269.83	18.00	.00
19425.000	2500.00	1277.43	1277.72	4.32	81.00	59.67	.00	.00	.28	1269.83	18.00	.00
19425.000	3000.00	1277.99	1278.35	4.81	81.00	59.67	.00	.00	.31	1269.83	18.00	.00
19425.000	3500.00	1278.42	1278.86	5.31	81.00	59.67	.00	.00	.33	1269.83	18.00	.00
19425.000	4000.00	1278.92	1279.43	5.72	81.00	59.67	.00	.00	.34	1269.83	18.00	.00
19425.000	4500.00	1279.35	1279.94	6.13	81.00	59.67	.00	.00	.36	1269.83	18.00	.00
19425.000	5000.00	1279.77	1280.42	6.51	81.00	59.67	.00	.00	.37	1269.83	18.00	.00
19425.000	5500.00	1280.18	1280.91	6.86	81.00	59.67	.00	.00	.38	1269.83	18.00	.00
19425.000	6000.00	1280.50	1281.32	7.25	81.00	59.67	.00	.00	.40	1269.83	18.00	.00
19425.000	6500.00	1280.89	1281.78	7.56	81.00	59.67	.00	.00	.41	1269.83	18.00	.00
19425.000	7000.00	1281.24	1282.21	7.88	81.00	59.67	.00	.00	.42	1269.83	18.00	.00
19405.000	1000.00	1275.42	1275.51	2.47	81.00	79.56	.00	.00	.19	1269.88	18.00	.00
19405.000	1500.00	1276.19	1276.35	3.20	81.00	79.56	.00	.00	.23	1269.88	18.00	.00
19405.000	2000.00	1276.84	1277.07	3.84	81.00	79.56	.00	.00	.27	1269.88	18.00	.00
19405.000	2500.00	1277.43	1277.73	4.39	81.00	79.56	.00	.00	.29	1269.88	18.00	.00
19405.000	3000.00	1277.98	1278.36	4.89	81.00	79.56	.00	.00	.31	1269.88	18.00	.00
19405.000	3500.00	1278.42	1278.87	5.39	81.00	79.56	.00	.00	.34	1269.88	18.00	.00
19405.000	4000.00	1278.92	1279.44	5.80	81.00	79.56	.00	.00	.35	1269.88	18.00	.00
19405.000	4500.00	1279.35	1279.95	6.21	81.00	79.56	.00	.00	.37	1269.88	18.00	.00
19405.000	5000.00	1279.76	1280.44	6.60	81.00	79.56	.00	.00	.38	1269.88	18.00	.00
19405.000	5500.00	1280.17	1280.92	6.95	81.00	79.56	.00	.00	.39	1269.88	18.00	.00
19405.000	6000.00	1280.50	1281.33	7.34	81.00	79.56	.00	.00	.41	1269.88	18.00	.00
19405.000	6500.00	1280.89	1281.80	7.65	81.00	79.56	.00	.00	.42	1269.88	18.00	.00
19405.000	7000.00	1281.24	1282.23	7.97	81.00	79.56	.00	.00	.43	1269.88	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
19385.000	1000.00	1275.41	1275.51	2.56	81.00	99.45	.00	.00	.20	1269.93	18.00	.00
19385.000	1500.00	1276.18	1276.35	3.30	81.00	99.45	.00	.00	.25	1269.93	18.00	.00
19385.000	2000.00	1276.84	1277.08	3.95	81.00	99.45	.00	.00	.28	1269.93	18.00	.00
19385.000	2500.00	1277.43	1277.74	4.51	81.00	99.45	.00	.00	.30	1269.93	18.00	.00
19385.000	3000.00	1277.98	1278.37	5.00	81.00	99.45	.00	.00	.32	1269.93	18.00	.00
19385.000	3500.00	1278.41	1278.88	5.52	81.00	99.45	.00	.00	.35	1269.93	18.00	.00
19385.000	4000.00	1278.91	1279.46	5.93	81.00	99.45	.00	.00	.36	1269.93	18.00	.00
19385.000	4500.00	1279.34	1279.96	6.34	81.00	99.45	.00	.00	.38	1269.93	18.00	.00
19385.000	5000.00	1279.75	1280.45	6.73	81.00	99.45	.00	.00	.39	1269.93	18.00	.00
19385.000	5500.00	1280.16	1280.94	7.08	81.00	99.45	.00	.00	.40	1269.93	18.00	.00
19385.000	6000.00	1280.48	1281.35	7.48	81.00	99.45	.00	.00	.42	1269.93	18.00	.00
19385.000	6500.00	1280.87	1281.82	7.79	81.00	99.45	.00	.00	.43	1269.93	18.00	.00
19385.000	7000.00	1281.23	1282.25	8.11	81.00	99.45	.00	.00	.44	1269.93	18.00	.00
19365.000	1000.00	1275.41	1275.52	2.65	81.00	119.36	.00	.00	.22	1269.98	18.00	.00
19365.000	1500.00	1276.18	1276.36	3.41	81.00	119.36	.00	.00	.26	1269.98	18.00	.00
19365.000	2000.00	1276.83	1277.09	4.06	81.00	119.36	.00	.00	.29	1269.98	18.00	.00
19365.000	2500.00	1277.42	1277.76	4.63	81.00	119.36	.00	.00	.32	1269.98	18.00	.00
19365.000	3000.00	1277.97	1278.38	5.13	81.00	119.36	.00	.00	.34	1269.98	18.00	.00
19365.000	3500.00	1278.41	1278.90	5.64	81.00	119.36	.00	.00	.36	1269.98	18.00	.00
19365.000	4000.00	1278.91	1279.48	6.05	81.00	119.36	.00	.00	.37	1269.98	18.00	.00
19365.000	4500.00	1279.34	1279.99	6.47	81.00	119.36	.00	.00	.39	1269.98	18.00	.00
19365.000	5000.00	1279.75	1280.48	6.86	81.00	119.36	.00	.00	.40	1269.98	18.00	.00
19365.000	5500.00	1280.16	1280.97	7.22	81.00	119.36	.00	.00	.41	1269.98	18.00	.00
19365.000	6000.00	1280.48	1281.38	7.61	81.00	119.36	.00	.00	.43	1269.98	18.00	.00
19365.000	6500.00	1280.87	1281.85	7.93	81.00	119.36	.00	.00	.44	1269.98	18.00	.00
19365.000	7000.00	1281.22	1282.28	8.25	81.00	119.36	.00	.00	.45	1269.98	18.00	.00
19195.000	1000.00	1275.52	1275.66	2.95	75.60	289.36	.00	.00	.25	1270.28	18.00	.00
19195.000	1500.00	1276.36	1276.57	3.73	75.60	289.36	.00	.00	.28	1270.28	18.00	.00
19195.000	2000.00	1277.08	1277.37	4.38	75.60	289.36	.00	.00	.31	1270.28	18.00	.00
19195.000	2500.00	1277.74	1278.11	4.93	75.60	289.36	.00	.00	.34	1270.28	18.00	.00
19195.000	3000.00	1278.36	1278.81	5.42	75.60	289.36	.00	.00	.35	1270.28	18.00	.00
19195.000	3500.00	1278.87	1279.41	5.91	75.60	289.36	.00	.00	.37	1270.28	18.00	.00
19195.000	4000.00	1279.61	1280.20	6.17	75.60	289.36	.00	.00	.37	1270.28	18.00	.00
19195.000	4500.00	1280.34	1280.98	6.39	75.60	289.36	.00	.00	.37	1270.28	18.00	.00
19195.000	5000.00	1281.10	1281.77	6.57	75.60	289.36	.00	.00	.36	1270.28	18.00	.00
19195.000	5500.00	1281.92	1282.61	6.68	75.60	289.36	.00	.00	.36	1270.28	18.00	.00
19195.000	6000.00	1282.68	1283.40	6.82	75.60	289.36	.00	.00	.35	1270.28	18.00	.00
19195.000	6500.00	1283.56	1284.30	6.86	75.60	289.36	.00	.00	.34	1270.28	18.00	.00
19195.000	7000.00	1284.39	1285.14	6.93	75.60	289.36	.00	.00	.33	1270.28	18.00	.00

	SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
*	19095.000	1000.00	1275.62	1275.69	2.06	117.78	389.36	.00	.00	.18	1270.18	18.00	.00
*	19095.000	1500.00	1276.53	1276.62	2.53	121.38	389.36	.00	.00	.20	1270.18	18.00	.00
*	19095.000	2000.00	1277.31	1277.44	2.90	124.53	389.36	.00	.00	.22	1270.18	18.00	.00
*	19095.000	2500.00	1278.04	1278.20	3.19	127.45	389.36	.00	.00	.23	1270.18	18.00	.00
*	19095.000	3000.00	1278.73	1278.92	3.44	130.21	389.36	.00	.00	.23	1270.18	18.00	.00
*	19095.000	3500.00	1279.32	1279.53	3.69	132.57	389.36	.00	.00	.24	1270.18	18.00	.00
*	19095.000	4000.00	1280.11	1280.34	3.79	135.74	389.36	.00	.00	.24	1270.18	18.00	.00
*	19095.000	4500.00	1280.89	1281.12	3.87	138.84	389.36	.00	.00	.24	1270.18	18.00	.00
*	19095.000	5000.00	1281.68	1281.92	3.93	142.03	389.36	.00	.00	.23	1270.18	18.00	.00
*	19095.000	5500.00	1282.52	1282.77	3.95	145.38	389.36	.00	.00	.22	1270.18	18.00	.00
*	19095.000	6000.00	1283.31	1283.56	3.97	148.54	389.36	.00	.00	.22	1270.18	18.00	.00
*	19095.000	6500.00	1284.22	1284.46	3.95	152.15	389.36	.00	.00	.21	1270.18	18.00	.00
*	19095.000	7000.00	1285.07	1285.31	3.94	155.55	389.36	.00	.00	.21	1270.18	18.00	.00
	19000.000	1000.00	1275.63	1275.70	2.12	117.28	485.00	.00	.00	.19	1270.31	18.00	.00
	19000.000	1500.00	1276.53	1276.64	2.59	120.89	485.00	.00	.00	.21	1270.31	18.00	.00
	19000.000	2000.00	1277.32	1277.46	2.96	124.04	485.00	.00	.00	.22	1270.31	18.00	.00
	19000.000	2500.00	1278.05	1278.22	3.26	126.96	485.00	.00	.00	.23	1270.31	18.00	.00
	19000.000	3000.00	1278.74	1278.93	3.51	129.72	485.00	.00	.00	.24	1270.31	18.00	.00
	19000.000	3500.00	1279.33	1279.55	3.75	132.08	485.00	.00	.00	.25	1270.31	18.00	.00
	19000.000	4000.00	1280.12	1280.35	3.85	135.25	485.00	.00	.00	.24	1270.31	18.00	.00
	19000.000	4500.00	1280.90	1281.14	3.93	138.35	485.00	.00	.00	.24	1270.31	18.00	.00
	19000.000	5000.00	1281.69	1281.94	3.98	141.53	485.00	.00	.00	.24	1270.31	18.00	.00
	19000.000	5500.00	1282.53	1282.78	4.00	144.89	485.00	.00	.00	.23	1270.31	18.00	.00
	19000.000	6000.00	1283.32	1283.57	4.02	148.05	485.00	.00	.00	.22	1270.31	18.00	.00
	19000.000	6500.00	1284.22	1284.47	4.00	151.66	485.00	.00	.00	.21	1270.31	18.00	.00
	19000.000	7000.00	1285.07	1285.32	3.98	155.05	485.00	.00	.00	.21	1270.31	18.00	.00
	18900.000	1000.00	1275.64	1275.71	2.20	116.74	585.00	.00	.00	.20	1270.45	18.00	.00
	18900.000	1500.00	1276.54	1276.65	2.67	120.35	585.00	.00	.00	.22	1270.45	18.00	.00
	18900.000	2000.00	1277.33	1277.47	3.04	123.50	585.00	.00	.00	.23	1270.45	18.00	.00
	18900.000	2500.00	1278.06	1278.23	3.33	126.42	585.00	.00	.00	.24	1270.45	18.00	.00
	18900.000	3000.00	1278.75	1278.95	3.58	129.18	585.00	.00	.00	.25	1270.45	18.00	.00
	18900.000	3500.00	1279.34	1279.57	3.83	131.54	585.00	.00	.00	.26	1270.45	18.00	.00
	18900.000	4000.00	1280.13	1280.37	3.92	134.71	585.00	.00	.00	.25	1270.45	18.00	.00
	18900.000	4500.00	1280.91	1281.15	4.00	137.80	585.00	.00	.00	.25	1270.45	18.00	.00
	18900.000	5000.00	1281.70	1281.95	4.04	140.99	585.00	.00	.00	.24	1270.45	18.00	.00
	18900.000	5500.00	1282.54	1282.79	4.06	144.34	585.00	.00	.00	.23	1270.45	18.00	.00
	18900.000	6000.00	1283.33	1283.59	4.08	147.50	585.00	.00	.00	.23	1270.45	18.00	.00
	18900.000	6500.00	1284.23	1284.48	4.05	151.10	585.00	.00	.00	.22	1270.45	18.00	.00
	18900.000	7000.00	1285.08	1285.33	4.03	154.50	585.00	.00	.00	.21	1270.45	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
18800.000	1000.00	1275.65	1275.73	2.27	116.21	685.00	.00	.00	.21	1270.59	18.00	.00
18800.000	1500.00	1276.55	1276.67	2.74	119.83	685.00	.00	.00	.23	1270.59	18.00	.00
18800.000	2000.00	1277.34	1277.49	3.11	122.98	685.00	.00	.00	.24	1270.59	18.00	.00
18800.000	2500.00	1278.07	1278.25	3.41	125.90	685.00	.00	.00	.25	1270.59	18.00	.00
18800.000	3000.00	1278.76	1278.97	3.65	128.66	685.00	.00	.00	.25	1270.59	18.00	.00
18800.000	3500.00	1279.35	1279.59	3.90	131.03	685.00	.00	.00	.26	1270.59	18.00	.00
18800.000	4000.00	1280.14	1280.39	3.99	134.19	685.00	.00	.00	.26	1270.59	18.00	.00
18800.000	4500.00	1280.91	1281.17	4.06	137.28	685.00	.00	.00	.25	1270.59	18.00	.00
18800.000	5000.00	1281.71	1281.97	4.10	140.46	685.00	.00	.00	.25	1270.59	18.00	.00
18800.000	5500.00	1282.55	1282.81	4.11	143.81	685.00	.00	.00	.24	1270.59	18.00	.00
18800.000	6000.00	1283.33	1283.60	4.13	146.96	685.00	.00	.00	.23	1270.59	18.00	.00
18800.000	6500.00	1284.23	1284.50	4.10	150.57	685.00	.00	.00	.22	1270.59	18.00	.00
18800.000	7000.00	1285.08	1285.34	4.08	153.96	685.00	.00	.00	.22	1270.59	18.00	.00
18700.000	1000.00	1275.66	1275.74	2.35	115.69	785.00	.00	.00	.22	1270.73	18.00	.00
18700.000	1500.00	1276.56	1276.69	2.82	119.31	785.00	.00	.00	.24	1270.73	18.00	.00
18700.000	2000.00	1277.35	1277.51	3.19	122.47	785.00	.00	.00	.25	1270.73	18.00	.00
18700.000	2500.00	1278.08	1278.27	3.49	125.39	785.00	.00	.00	.26	1270.73	18.00	.00
18700.000	3000.00	1278.77	1278.99	3.73	128.15	785.00	.00	.00	.26	1270.73	18.00	.00
18700.000	3500.00	1279.36	1279.61	3.97	130.51	785.00	.00	.00	.27	1270.73	18.00	.00
18700.000	4000.00	1280.15	1280.41	4.06	133.67	785.00	.00	.00	.26	1270.73	18.00	.00
18700.000	4500.00	1280.92	1281.19	4.13	136.76	785.00	.00	.00	.26	1270.73	18.00	.00
18700.000	5000.00	1281.72	1281.99	4.17	139.94	785.00	.00	.00	.25	1270.73	18.00	.00
18700.000	5500.00	1282.55	1282.83	4.17	143.28	785.00	.00	.00	.24	1270.73	18.00	.00
18700.000	6000.00	1283.34	1283.61	4.19	146.43	785.00	.00	.00	.24	1270.73	18.00	.00
18700.000	6500.00	1284.24	1284.51	4.15	150.03	785.00	.00	.00	.23	1270.73	18.00	.00
18700.000	7000.00	1285.09	1285.35	4.13	153.42	785.00	.00	.00	.22	1270.73	18.00	.00
18600.000	1000.00	1275.67	1275.76	2.44	115.17	885.00	.00	.00	.23	1270.87	18.00	.00
18600.000	1500.00	1276.57	1276.71	2.91	118.79	885.00	.00	.00	.25	1270.87	18.00	.00
18600.000	2000.00	1277.37	1277.53	3.27	121.95	885.00	.00	.00	.26	1270.87	18.00	.00
18600.000	2500.00	1278.10	1278.29	3.56	124.88	885.00	.00	.00	.27	1270.87	18.00	.00
18600.000	3000.00	1278.79	1279.01	3.81	127.63	885.00	.00	.00	.27	1270.87	18.00	.00
18600.000	3500.00	1279.38	1279.63	4.05	130.00	885.00	.00	.00	.28	1270.87	18.00	.00
18600.000	4000.00	1280.16	1280.43	4.13	133.15	885.00	.00	.00	.27	1270.87	18.00	.00
18600.000	4500.00	1280.94	1281.21	4.20	136.24	885.00	.00	.00	.26	1270.87	18.00	.00
18600.000	5000.00	1281.73	1282.01	4.23	139.41	885.00	.00	.00	.26	1270.87	18.00	.00
18600.000	5500.00	1282.56	1282.84	4.23	142.76	885.00	.00	.00	.25	1270.87	18.00	.00
18600.000	6000.00	1283.35	1283.63	4.25	145.91	885.00	.00	.00	.24	1270.87	18.00	.00
18600.000	6500.00	1284.25	1284.52	4.20	149.50	885.00	.00	.00	.23	1270.87	18.00	.00
18600.000	7000.00	1285.09	1285.37	4.18	152.89	885.00	.00	.00	.22	1270.87	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
18500.000	1000.00	1275.68	1275.78	2.53	114.65	985.00	.00	.00	.24	1271.01	18.00	.00
18500.000	1500.00	1276.59	1276.73	3.00	118.28	985.00	.00	.00	.26	1271.01	18.00	.00
18500.000	2000.00	1277.38	1277.55	3.36	121.45	985.00	.00	.00	.27	1271.01	18.00	.00
18500.000	2500.00	1278.11	1278.32	3.65	124.37	985.00	.00	.00	.27	1271.01	18.00	.00
18500.000	3000.00	1278.80	1279.03	3.89	127.13	985.00	.00	.00	.28	1271.01	18.00	.00
18500.000	3500.00	1279.39	1279.66	4.13	129.49	985.00	.00	.00	.28	1271.01	18.00	.00
18500.000	4000.00	1280.18	1280.45	4.21	132.64	985.00	.00	.00	.28	1271.01	18.00	.00
18500.000	4500.00	1280.95	1281.23	4.27	135.72	985.00	.00	.00	.27	1271.01	18.00	.00
18500.000	5000.00	1281.74	1282.03	4.30	138.89	985.00	.00	.00	.26	1271.01	18.00	.00
18500.000	5500.00	1282.57	1282.86	4.29	142.23	985.00	.00	.00	.25	1271.01	18.00	.00
18500.000	6000.00	1283.36	1283.65	4.30	145.38	985.00	.00	.00	.24	1271.01	18.00	.00
18500.000	6500.00	1284.26	1284.54	4.26	148.97	985.00	.00	.00	.23	1271.01	18.00	.00
18500.000	7000.00	1285.10	1285.38	4.23	152.35	985.00	.00	.00	.23	1271.01	18.00	.00
18400.000	1000.00	1275.69	1275.80	2.63	114.15	1085.00	.00	.00	.25	1271.15	18.00	.00
18400.000	1500.00	1276.60	1276.75	3.09	117.78	1085.00	.00	.00	.27	1271.15	18.00	.00
18400.000	2000.00	1277.39	1277.58	3.45	120.94	1085.00	.00	.00	.28	1271.15	18.00	.00
18400.000	2500.00	1278.12	1278.34	3.73	123.86	1085.00	.00	.00	.28	1271.15	18.00	.00
18400.000	3000.00	1278.81	1279.06	3.97	126.62	1085.00	.00	.00	.29	1271.15	18.00	.00
18400.000	3500.00	1279.41	1279.68	4.21	128.99	1085.00	.00	.00	.29	1271.15	18.00	.00
18400.000	4000.00	1280.19	1280.47	4.28	132.13	1085.00	.00	.00	.28	1271.15	18.00	.00
18400.000	4500.00	1280.96	1281.25	4.34	135.21	1085.00	.00	.00	.28	1271.15	18.00	.00
18400.000	5000.00	1281.75	1282.04	4.37	138.37	1085.00	.00	.00	.27	1271.15	18.00	.00
18400.000	5500.00	1282.58	1282.88	4.36	141.71	1085.00	.00	.00	.26	1271.15	18.00	.00
18400.000	6000.00	1283.37	1283.66	4.36	144.85	1085.00	.00	.00	.25	1271.15	18.00	.00
18400.000	6500.00	1284.26	1284.55	4.32	148.44	1085.00	.00	.00	.24	1271.15	18.00	.00
18400.000	7000.00	1285.11	1285.39	4.29	151.82	1085.00	.00	.00	.23	1271.15	18.00	.00
18300.000	1000.00	1275.71	1275.83	2.73	113.65	1185.00	.00	.00	.27	1271.29	18.00	.00
18300.000	1500.00	1276.62	1276.78	3.18	117.28	1185.00	.00	.00	.28	1271.29	18.00	.00
18300.000	2000.00	1277.41	1277.60	3.54	120.44	1185.00	.00	.00	.29	1271.29	18.00	.00
18300.000	2500.00	1278.14	1278.37	3.82	123.36	1185.00	.00	.00	.29	1271.29	18.00	.00
18300.000	3000.00	1278.83	1279.08	4.05	126.12	1185.00	.00	.00	.29	1271.29	18.00	.00
18300.000	3500.00	1279.42	1279.71	4.29	128.49	1185.00	.00	.00	.30	1271.29	18.00	.00
18300.000	4000.00	1280.20	1280.50	4.36	131.63	1185.00	.00	.00	.29	1271.29	18.00	.00
18300.000	4500.00	1280.97	1281.27	4.41	134.70	1185.00	.00	.00	.28	1271.29	18.00	.00
18300.000	5000.00	1281.76	1282.07	4.43	137.86	1185.00	.00	.00	.27	1271.29	18.00	.00
18300.000	5500.00	1282.59	1282.90	4.42	141.19	1185.00	.00	.00	.26	1271.29	18.00	.00
18300.000	6000.00	1283.38	1283.68	4.43	144.33	1185.00	.00	.00	.25	1271.29	18.00	.00
18300.000	6500.00	1284.27	1284.57	4.37	147.91	1185.00	.00	.00	.24	1271.29	18.00	.00
18300.000	7000.00	1285.12	1285.41	4.34	151.29	1185.00	.00	.00	.23	1271.29	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
18200.000	1000.00	1275.73	1275.85	2.83	113.17	1285.00	.00	.00	.28	1271.43	18.00	.00
18200.000	1500.00	1276.64	1276.80	3.28	116.80	1285.00	.00	.00	.29	1271.43	18.00	.00
18200.000	2000.00	1277.43	1277.63	3.63	119.95	1285.00	.00	.00	.30	1271.43	18.00	.00
18200.000	2500.00	1278.16	1278.39	3.91	122.87	1285.00	.00	.00	.30	1271.43	18.00	.00
18200.000	3000.00	1278.84	1279.11	4.14	125.62	1285.00	.00	.00	.30	1271.43	18.00	.00
18200.000	3500.00	1279.44	1279.73	4.38	127.99	1285.00	.00	.00	.31	1271.43	18.00	.00
18200.000	4000.00	1280.22	1280.52	4.44	131.12	1285.00	.00	.00	.30	1271.43	18.00	.00
18200.000	4500.00	1280.98	1281.30	4.49	134.19	1285.00	.00	.00	.29	1271.43	18.00	.00
18200.000	5000.00	1281.77	1282.09	4.50	137.34	1285.00	.00	.00	.28	1271.43	18.00	.00
18200.000	5500.00	1282.60	1282.92	4.49	140.67	1285.00	.00	.00	.27	1271.43	18.00	.00
18200.000	6000.00	1283.39	1283.70	4.49	143.80	1285.00	.00	.00	.26	1271.43	18.00	.00
18200.000	6500.00	1284.28	1284.58	4.43	147.38	1285.00	.00	.00	.25	1271.43	18.00	.00
18200.000	7000.00	1285.12	1285.42	4.39	150.76	1285.00	.00	.00	.24	1271.43	18.00	.00
18100.000	1000.00	1275.75	1275.89	2.95	112.70	1385.00	.00	.00	.30	1271.57	18.00	.00
18100.000	1500.00	1276.66	1276.83	3.38	116.32	1385.00	.00	.00	.31	1271.57	18.00	.00
18100.000	2000.00	1277.45	1277.66	3.73	119.48	1385.00	.00	.00	.31	1271.57	18.00	.00
18100.000	2500.00	1278.18	1278.42	4.00	122.40	1385.00	.00	.00	.31	1271.57	18.00	.00
18100.000	3000.00	1278.86	1279.14	4.23	125.13	1385.00	.00	.00	.31	1271.57	18.00	.00
18100.000	3500.00	1279.45	1279.76	4.46	127.50	1385.00	.00	.00	.32	1271.57	18.00	.00
18100.000	4000.00	1280.23	1280.55	4.52	130.62	1385.00	.00	.00	.31	1271.57	18.00	.00
18100.000	4500.00	1281.00	1281.32	4.56	133.68	1385.00	.00	.00	.30	1271.57	18.00	.00
18100.000	5000.00	1281.78	1282.11	4.58	136.83	1385.00	.00	.00	.29	1271.57	18.00	.00
18100.000	5500.00	1282.61	1282.94	4.56	140.15	1385.00	.00	.00	.27	1271.57	18.00	.00
18100.000	6000.00	1283.40	1283.72	4.55	143.28	1385.00	.00	.00	.26	1271.57	18.00	.00
18100.000	6500.00	1284.29	1284.60	4.49	146.86	1385.00	.00	.00	.25	1271.57	18.00	.00
18100.000	7000.00	1285.13	1285.44	4.45	150.23	1385.00	.00	.00	.24	1271.57	18.00	.00
18000.000	1000.00	1275.77	1275.92	3.06	112.23	1485.00	.00	.00	.32	1271.71	18.00	.00
18000.000	1500.00	1276.68	1276.87	3.49	115.85	1485.00	.00	.00	.32	1271.71	18.00	.00
18000.000	2000.00	1277.47	1277.70	3.83	119.01	1485.00	.00	.00	.32	1271.71	18.00	.00
18000.000	2500.00	1278.20	1278.46	4.10	121.92	1485.00	.00	.00	.32	1271.71	18.00	.00
18000.000	3000.00	1278.88	1279.17	4.32	124.66	1485.00	.00	.00	.32	1271.71	18.00	.00
18000.000	3500.00	1279.47	1279.80	4.55	127.03	1485.00	.00	.00	.33	1271.71	18.00	.00
18000.000	4000.00	1280.25	1280.58	4.60	130.13	1485.00	.00	.00	.31	1271.71	18.00	.00
18000.000	4500.00	1281.01	1281.35	4.64	133.18	1485.00	.00	.00	.30	1271.71	18.00	.00
18000.000	5000.00	1281.80	1282.13	4.65	136.32	1485.00	.00	.00	.29	1271.71	18.00	.00
18000.000	5500.00	1282.63	1282.96	4.62	139.64	1485.00	.00	.00	.28	1271.71	18.00	.00
18000.000	6000.00	1283.41	1283.74	4.62	142.76	1485.00	.00	.00	.27	1271.71	18.00	.00
18000.000	6500.00	1284.30	1284.62	4.55	146.33	1485.00	.00	.00	.26	1271.71	18.00	.00
18000.000	7000.00	1285.14	1285.45	4.51	149.70	1485.00	.00	.00	.25	1271.71	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
17900.000	1000.00	1275.80	1275.96	3.19	111.77	1585.00	.00	.00	.34	1271.85	18.00	.00
17900.000	1500.00	1276.70	1276.91	3.60	115.38	1585.00	.00	.00	.33	1271.85	18.00	.00
17900.000	2000.00	1277.49	1277.73	3.93	118.54	1585.00	.00	.00	.33	1271.85	18.00	.00
17900.000	2500.00	1278.22	1278.49	4.20	121.44	1585.00	.00	.00	.33	1271.85	18.00	.00
17900.000	3000.00	1278.90	1279.20	4.41	124.19	1585.00	.00	.00	.33	1271.85	18.00	.00
17900.000	3500.00	1279.49	1279.83	4.64	126.55	1585.00	.00	.00	.34	1271.85	18.00	.00
17900.000	4000.00	1280.27	1280.61	4.69	129.64	1585.00	.00	.00	.32	1271.85	18.00	.00
17900.000	4500.00	1281.03	1281.38	4.72	132.68	1585.00	.00	.00	.31	1271.85	18.00	.00
17900.000	5000.00	1281.81	1282.16	4.73	135.82	1585.00	.00	.00	.30	1271.85	18.00	.00
17900.000	5500.00	1282.64	1282.98	4.69	139.13	1585.00	.00	.00	.29	1271.85	18.00	.00
17900.000	6000.00	1283.42	1283.76	4.68	142.25	1585.00	.00	.00	.27	1271.85	18.00	.00
17900.000	6500.00	1284.31	1284.64	4.61	145.81	1585.00	.00	.00	.26	1271.85	18.00	.00
17900.000	7000.00	1285.15	1285.47	4.56	149.17	1585.00	.00	.00	.25	1271.85	18.00	.00
17800.000	1000.00	1275.83	1276.00	3.30	111.38	1685.00	.00	.00	.35	1271.99	18.00	.00
17800.000	1500.00	1276.73	1276.95	3.72	114.93	1685.00	.00	.00	.35	1271.99	18.00	.00
17800.000	2000.00	1277.52	1277.77	4.04	118.07	1685.00	.00	.00	.35	1271.99	18.00	.00
17800.000	2500.00	1278.24	1278.53	4.30	120.98	1685.00	.00	.00	.35	1271.99	18.00	.00
17800.000	3000.00	1278.92	1279.24	4.51	123.71	1685.00	.00	.00	.34	1271.99	18.00	.00
17800.000	3500.00	1279.52	1279.86	4.74	126.08	1685.00	.00	.00	.34	1271.99	18.00	.00
17800.000	4000.00	1280.29	1280.64	4.78	129.17	1685.00	.00	.00	.33	1271.99	18.00	.00
17800.000	4500.00	1281.05	1281.40	4.81	132.19	1685.00	.00	.00	.32	1271.99	18.00	.00
17800.000	5000.00	1281.83	1282.18	4.80	135.31	1685.00	.00	.00	.31	1271.99	18.00	.00
17800.000	5500.00	1282.65	1283.00	4.77	138.61	1685.00	.00	.00	.29	1271.99	18.00	.00
17800.000	6000.00	1283.43	1283.78	4.75	141.73	1685.00	.00	.00	.28	1271.99	18.00	.00
17800.000	6500.00	1284.32	1284.66	4.67	145.29	1685.00	.00	.00	.27	1271.99	18.00	.00
17800.000	7000.00	1285.16	1285.49	4.62	148.65	1685.00	.00	.00	.26	1271.99	18.00	.00
17700.000	1000.00	1275.86	1276.06	3.56	105.45	1785.00	.00	.00	.38	1272.13	18.00	.00
17700.000	1500.00	1276.75	1277.00	4.00	107.23	1785.00	.00	.00	.38	1272.13	18.00	.00
17700.000	2000.00	1277.53	1277.82	4.35	108.80	1785.00	.00	.00	.37	1272.13	18.00	.00
17700.000	2500.00	1278.25	1278.58	4.63	110.24	1785.00	.00	.00	.37	1272.13	18.00	.00
17700.000	3000.00	1278.92	1279.29	4.88	111.60	1785.00	.00	.00	.37	1272.13	18.00	.00
17700.000	3500.00	1279.51	1279.92	5.15	112.75	1785.00	.00	.00	.37	1272.13	18.00	.00
17700.000	4000.00	1280.27	1280.69	5.22	114.28	1785.00	.00	.00	.36	1272.13	18.00	.00
17700.000	4500.00	1281.02	1281.45	5.28	115.78	1785.00	.00	.00	.34	1272.13	18.00	.00
17700.000	5000.00	1281.80	1282.23	5.30	117.33	1785.00	.00	.00	.33	1272.13	18.00	.00
17700.000	5500.00	1282.62	1283.05	5.29	118.97	1785.00	.00	.00	.32	1272.13	18.00	.00
17700.000	6000.00	1283.39	1283.82	5.30	120.52	1785.00	.00	.00	.30	1272.13	18.00	.00
17700.000	6500.00	1284.27	1284.70	5.24	122.29	1785.00	.00	.00	.29	1272.13	18.00	.00
17700.000	7000.00	1285.11	1285.53	5.21	123.96	1785.00	.00	.00	.28	1272.13	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
17600.000	1000.00	1275.91	1276.12	3.68	105.27	1885.00	.00	.00	.40	1272.27	18.00	.00
17600.000	1500.00	1276.79	1277.05	4.11	107.04	1885.00	.00	.00	.39	1272.27	18.00	.00
17600.000	2000.00	1277.56	1277.87	4.46	108.58	1885.00	.00	.00	.39	1272.27	18.00	.00
17600.000	2500.00	1278.27	1278.63	4.76	109.99	1885.00	.00	.00	.38	1272.27	18.00	.00
17600.000	3000.00	1278.95	1279.34	5.00	111.34	1885.00	.00	.00	.38	1272.27	18.00	.00
17600.000	3500.00	1279.53	1279.96	5.26	112.51	1885.00	.00	.00	.38	1272.27	18.00	.00
17600.000	4000.00	1280.29	1280.73	5.32	114.03	1885.00	.00	.00	.37	1272.27	18.00	.00
17600.000	4500.00	1281.04	1281.49	5.37	115.53	1885.00	.00	.00	.35	1272.27	18.00	.00
17600.000	5000.00	1281.81	1282.27	5.39	117.07	1885.00	.00	.00	.34	1272.27	18.00	.00
17600.000	5500.00	1282.63	1283.08	5.37	118.71	1885.00	.00	.00	.32	1272.27	18.00	.00
17600.000	6000.00	1283.40	1283.85	5.38	120.25	1885.00	.00	.00	.31	1272.27	18.00	.00
17600.000	6500.00	1284.29	1284.72	5.31	122.02	1885.00	.00	.00	.30	1272.27	18.00	.00
17600.000	7000.00	1285.12	1285.55	5.28	123.69	1885.00	.00	.00	.28	1272.27	18.00	.00
17577.000	1000.00	1275.92	1276.13	3.72	105.22	1907.60	.00	.00	.41	1272.30	18.00	.00
17577.000	1500.00	1276.80	1277.06	4.14	106.98	1907.60	.00	.00	.40	1272.30	18.00	.00
17577.000	2000.00	1277.57	1277.88	4.49	108.53	1907.60	.00	.00	.39	1272.30	18.00	.00
17577.000	2500.00	1278.28	1278.64	4.78	109.96	1907.60	.00	.00	.39	1272.30	18.00	.00
17577.000	3000.00	1278.96	1279.35	5.02	111.30	1907.60	.00	.00	.38	1272.30	18.00	.00
17577.000	3500.00	1279.54	1279.97	5.28	112.47	1907.60	.00	.00	.38	1272.30	18.00	.00
17577.000	4000.00	1280.30	1280.74	5.34	113.99	1907.60	.00	.00	.37	1272.30	18.00	.00
17577.000	4500.00	1281.05	1281.50	5.39	115.49	1907.60	.00	.00	.35	1272.30	18.00	.00
17577.000	5000.00	1281.82	1282.27	5.40	117.03	1907.60	.00	.00	.34	1272.30	18.00	.00
17577.000	5500.00	1282.64	1283.09	5.38	118.67	1907.60	.00	.00	.32	1272.30	18.00	.00
17577.000	6000.00	1283.41	1283.86	5.39	120.21	1907.60	.00	.00	.31	1272.30	18.00	.00
17577.000	6500.00	1284.29	1284.73	5.33	121.98	1907.60	.00	.00	.30	1272.30	18.00	.00
17577.000	7000.00	1285.12	1285.56	5.29	123.64	1907.60	.00	.00	.29	1272.30	18.00	.00
17500.000	1000.00	1275.98	1276.19	3.66	105.31	2007.60	.00	.00	.40	1272.33	18.00	.00
17500.000	1500.00	1276.85	1277.11	4.10	107.04	2007.60	.00	.00	.39	1272.33	18.00	.00
17500.000	2000.00	1277.62	1277.93	4.46	108.58	2007.60	.00	.00	.39	1272.33	18.00	.00
17500.000	2500.00	1278.33	1278.68	4.75	110.00	2007.60	.00	.00	.38	1272.33	18.00	.00
17500.000	3000.00	1279.00	1279.39	5.00	111.34	2007.60	.00	.00	.38	1272.33	18.00	.00
17500.000	3500.00	1279.58	1280.01	5.26	112.50	2007.60	.00	.00	.38	1272.33	18.00	.00
17500.000	4000.00	1280.34	1280.78	5.33	114.01	2007.60	.00	.00	.37	1272.33	18.00	.00
17500.000	4500.00	1281.08	1281.53	5.38	115.50	2007.60	.00	.00	.35	1272.33	18.00	.00
17500.000	5000.00	1281.85	1282.30	5.40	117.04	2007.60	.00	.00	.34	1272.33	18.00	.00
17500.000	5500.00	1282.66	1283.11	5.39	118.65	2007.60	.00	.00	.32	1272.33	18.00	.00
17500.000	6000.00	1283.43	1283.88	5.40	120.18	2007.60	.00	.00	.31	1272.33	18.00	.00
17500.000	6500.00	1284.31	1284.75	5.33	121.95	2007.60	.00	.00	.30	1272.33	18.00	.00
17500.000	7000.00	1285.14	1285.58	5.30	123.61	2007.60	.00	.00	.29	1272.33	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
17400.000	1000.00	1276.04	1276.25	3.62	105.37	2107.60	.00	.00	.39	1272.36	18.00	.00
17400.000	1500.00	1276.91	1277.16	4.08	107.09	2107.60	.00	.00	.39	1272.36	18.00	.00
17400.000	2000.00	1277.67	1277.97	4.44	108.61	2107.60	.00	.00	.38	1272.36	18.00	.00
17400.000	2500.00	1278.37	1278.72	4.74	110.03	2107.60	.00	.00	.38	1272.36	18.00	.00
17400.000	3000.00	1279.04	1279.43	4.99	111.36	2107.60	.00	.00	.38	1272.36	18.00	.00
17400.000	3500.00	1279.63	1280.05	5.25	112.53	2107.60	.00	.00	.38	1272.36	18.00	.00
17400.000	4000.00	1280.37	1280.81	5.32	114.03	2107.60	.00	.00	.37	1272.36	18.00	.00
17400.000	4500.00	1281.11	1281.56	5.38	115.51	2107.60	.00	.00	.35	1272.36	18.00	.00
17400.000	5000.00	1281.88	1282.33	5.41	117.02	2107.60	.00	.00	.34	1272.36	18.00	.00
17400.000	5500.00	1282.69	1283.14	5.39	118.64	2107.60	.00	.00	.32	1272.36	18.00	.00
17400.000	6000.00	1283.45	1283.91	5.40	120.17	2107.60	.00	.00	.31	1272.36	18.00	.00
17400.000	6500.00	1284.33	1284.77	5.34	121.93	2107.60	.00	.00	.30	1272.36	18.00	.00
17400.000	7000.00	1285.16	1285.60	5.30	123.59	2107.60	.00	.00	.29	1272.36	18.00	.00
17300.000	1000.00	1276.10	1276.30	3.59	105.40	2207.60	.00	.00	.39	1272.40	18.00	.00
17300.000	1500.00	1276.96	1277.21	4.06	107.11	2207.60	.00	.00	.39	1272.40	18.00	.00
17300.000	2000.00	1277.71	1278.02	4.43	108.63	2207.60	.00	.00	.38	1272.40	18.00	.00
17300.000	2500.00	1278.42	1278.77	4.74	110.04	2207.60	.00	.00	.38	1272.40	18.00	.00
17300.000	3000.00	1279.08	1279.47	4.99	111.37	2207.60	.00	.00	.38	1272.40	18.00	.00
17300.000	3500.00	1279.67	1280.09	5.25	112.53	2207.60	.00	.00	.38	1272.40	18.00	.00
17300.000	4000.00	1280.41	1280.85	5.32	114.02	2207.60	.00	.00	.37	1272.40	18.00	.00
17300.000	4500.00	1281.15	1281.60	5.38	115.49	2207.60	.00	.00	.35	1272.40	18.00	.00
17300.000	5000.00	1281.91	1282.36	5.42	116.99	2207.60	.00	.00	.34	1272.40	18.00	.00
17300.000	5500.00	1282.71	1283.17	5.40	118.61	2207.60	.00	.00	.33	1272.40	18.00	.00
17300.000	6000.00	1283.48	1283.93	5.41	120.14	2207.60	.00	.00	.31	1272.40	18.00	.00
17300.000	6500.00	1284.35	1284.80	5.35	121.89	2207.60	.00	.00	.30	1272.40	18.00	.00
17300.000	7000.00	1285.18	1285.62	5.32	123.55	2207.60	.00	.00	.29	1272.40	18.00	.00
17200.000	1000.00	1276.16	1276.35	3.57	105.43	2307.60	.00	.00	.39	1272.44	18.00	.00
17200.000	1500.00	1277.01	1277.26	4.05	107.13	2307.60	.00	.00	.38	1272.44	18.00	.00
17200.000	2000.00	1277.76	1278.06	4.43	108.64	2307.60	.00	.00	.38	1272.44	18.00	.00
17200.000	2500.00	1278.46	1278.81	4.73	110.04	2307.60	.00	.00	.38	1272.44	18.00	.00
17200.000	3000.00	1279.12	1279.51	4.99	111.37	2307.60	.00	.00	.38	1272.44	18.00	.00
17200.000	3500.00	1279.71	1280.13	5.25	112.53	2307.60	.00	.00	.38	1272.44	18.00	.00
17200.000	4000.00	1280.45	1280.89	5.33	114.01	2307.60	.00	.00	.37	1272.44	18.00	.00
17200.000	4500.00	1281.18	1281.63	5.39	115.48	2307.60	.00	.00	.35	1272.44	18.00	.00
17200.000	5000.00	1281.94	1282.39	5.43	116.97	2307.60	.00	.00	.34	1272.44	18.00	.00
17200.000	5500.00	1282.74	1283.19	5.41	118.58	2307.60	.00	.00	.33	1272.44	18.00	.00
17200.000	6000.00	1283.50	1283.96	5.42	120.10	2307.60	.00	.00	.31	1272.44	18.00	.00
17200.000	6500.00	1284.37	1284.82	5.36	121.85	2307.60	.00	.00	.30	1272.44	18.00	.00
17200.000	7000.00	1285.20	1285.64	5.33	123.50	2307.60	.00	.00	.29	1272.44	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
17100.000	1000.00	1276.21	1276.41	3.54	105.48	2407.60	.00	.00	.38	1272.47	18.00	.00
17100.000	1500.00	1277.06	1277.31	4.03	107.17	2407.60	.00	.00	.38	1272.47	18.00	.00
17100.000	2000.00	1277.81	1278.11	4.41	108.67	2407.60	.00	.00	.38	1272.47	18.00	.00
17100.000	2500.00	1278.51	1278.85	4.72	110.07	2407.60	.00	.00	.38	1272.47	18.00	.00
17100.000	3000.00	1279.17	1279.55	4.97	111.39	2407.60	.00	.00	.38	1272.47	18.00	.00
17100.000	3500.00	1279.75	1280.17	5.24	112.55	2407.60	.00	.00	.38	1272.47	18.00	.00
17100.000	4000.00	1280.48	1280.92	5.32	114.02	2407.60	.00	.00	.37	1272.47	18.00	.00
17100.000	4500.00	1281.21	1281.66	5.39	115.48	2407.60	.00	.00	.35	1272.47	18.00	.00
17100.000	5000.00	1281.97	1282.42	5.42	116.99	2407.60	.00	.00	.34	1272.47	18.00	.00
17100.000	5500.00	1282.76	1283.22	5.41	118.57	2407.60	.00	.00	.33	1272.47	18.00	.00
17100.000	6000.00	1283.52	1283.98	5.42	120.09	2407.60	.00	.00	.31	1272.47	18.00	.00
17100.000	6500.00	1284.39	1284.84	5.36	121.83	2407.60	.00	.00	.30	1272.47	18.00	.00
17100.000	7000.00	1285.22	1285.66	5.33	123.48	2407.60	.00	.00	.29	1272.47	18.00	.00
* 17000.000	1000.00	1275.97	1277.50	9.92	33.46	2507.60	.00	.00	1.01	1272.51	18.00	.00
* 17000.000	1500.00	1276.94	1278.89	11.20	34.43	2507.60	.00	.00	1.00	1272.51	18.00	.00
* 17000.000	2000.00	1277.77	1280.12	12.30	35.26	2507.60	.00	.00	1.01	1272.51	18.00	.00
* 17000.000	2500.00	1278.56	1281.23	13.11	36.05	2507.60	.00	.00	1.00	1272.51	18.00	.00
* 17000.000	3000.00	1279.28	1282.25	13.82	36.77	2507.60	.00	.00	1.00	1272.51	18.00	.00
* 17000.000	3500.00	1279.97	1283.20	14.43	37.46	2507.60	.00	.00	1.00	1272.51	18.00	.00
* 17000.000	4000.00	1280.59	1284.10	15.04	38.08	2507.60	.00	.00	1.00	1272.51	18.00	.00
* 17000.000	4500.00	1281.17	1284.95	15.62	38.66	2507.60	.00	.00	1.01	1272.51	18.00	.00
* 17000.000	5000.00	1281.78	1285.77	16.03	39.27	2507.60	.00	.00	1.00	1272.51	18.00	.00
* 17000.000	5500.00	1282.35	1286.55	16.44	39.84	2507.60	.00	.00	1.00	1272.51	18.00	.00
* 17000.000	6000.00	1282.85	1287.29	16.93	40.34	2507.60	.00	.00	1.01	1272.51	18.00	.00
* 17000.000	6500.00	1283.36	1288.02	17.31	40.85	2507.60	.00	.00	1.01	1272.51	18.00	.00
* 17000.000	7000.00	1283.87	1288.71	17.67	41.36	2507.60	.00	.00	1.01	1272.51	18.00	.00
* 16958.000	1000.00	1276.76	1277.72	7.86	34.24	2548.90	.00	.00	.72	1272.52	18.00	.00
16958.000	1500.00	1277.86	1279.14	9.07	35.34	2548.90	.00	.00	.74	1272.52	18.00	.00
16958.000	2000.00	1278.85	1280.39	9.96	36.33	2548.90	.00	.00	.75	1272.52	18.00	.00
16958.000	2500.00	1279.72	1281.51	10.75	37.19	2548.90	.00	.00	.76	1272.52	18.00	.00
16958.000	3000.00	1280.52	1282.54	11.41	38.00	2548.90	.00	.00	.76	1272.52	18.00	.00
16958.000	3500.00	1281.27	1283.51	12.00	38.75	2548.90	.00	.00	.77	1272.52	18.00	.00
16958.000	4000.00	1282.00	1284.43	12.50	39.47	2548.90	.00	.00	.77	1272.52	18.00	.00
16958.000	4500.00	1282.71	1285.30	12.92	40.18	2548.90	.00	.00	.77	1272.52	18.00	.00
16958.000	5000.00	1283.33	1286.12	13.39	40.80	2548.90	.00	.00	.78	1272.52	18.00	.00
16958.000	5500.00	1283.97	1286.91	13.75	41.45	2548.90	.00	.00	.78	1272.52	18.00	.00
16958.000	6000.00	1284.61	1287.68	14.07	42.09	2548.90	.00	.00	.78	1272.52	18.00	.00
16958.000	6500.00	1285.19	1288.41	14.40	42.67	2548.90	.00	.00	.78	1272.52	18.00	.00
16958.000	7000.00	1285.76	1289.12	14.72	43.24	2548.90	.00	.00	.78	1272.52	18.00	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
16861.000	1000.00	1276.75	1278.13	9.43	36.39	2645.81	.00	.00	.97	1273.56	18.00	.00
16861.000	1500.00	1277.91	1279.47	10.04	38.70	2645.81	.00	.00	.90	1273.56	18.00	.00
16861.000	2000.00	1278.95	1280.67	10.50	40.77	2645.81	.00	.00	.86	1273.56	18.00	.00
16861.000	2500.00	1279.89	1281.73	10.87	42.66	2645.81	.00	.00	.82	1273.56	18.00	.00
16861.000	3000.00	1280.92	1282.77	10.89	44.74	2645.81	.00	.00	.77	1273.56	18.00	.00
16861.000	3500.00	1281.88	1283.76	10.99	46.62	2645.81	.00	.00	.74	1273.56	18.00	.00
16861.000	4000.00	1282.82	1284.70	11.00	48.52	2645.81	.00	.00	.71	1273.56	18.00	.00
16861.000	4500.00	1283.70	1285.60	11.06	50.28	2645.81	.00	.00	.68	1273.56	18.00	.00
16861.000	5000.00	1284.51	1286.44	11.15	51.90	2645.81	.00	.00	.67	1273.56	18.00	.00
16861.000	5500.00	1285.29	1287.25	11.24	53.46	2645.81	.00	.00	.65	1273.56	18.00	.00
16861.000	6000.00	1286.06	1288.04	11.30	55.00	2645.81	.00	.00	.64	1273.56	18.00	.00
16861.000	6500.00	1286.79	1288.80	11.37	56.46	2645.81	.00	.00	.63	1273.56	18.00	.00
* 16861.000	7000.00	1287.49	1289.53	11.44	57.86	2645.81	.00	.00	.62	1273.56	18.00	.00
* 1100.000	1000.00	1277.65	1278.29	6.44	46.28	2689.81	.00	.00	.62	1273.58	18.00	.00
* 1100.000	1500.00	1278.87	1279.63	6.99	51.15	2689.81	.00	.00	.60	1273.58	18.00	.00
* 1100.000	2000.00	1280.00	1280.82	7.28	55.66	2689.81	.00	.00	.58	1273.58	18.00	.00
* 1100.000	2500.00	1281.00	1281.88	7.51	59.69	2689.81	.00	.00	.56	1273.58	18.00	.00
* 1100.000	3000.00	1282.03	1282.91	7.56	65.88	2689.81	.00	.00	.54	1273.58	18.20	.00
* 1100.000	3500.00	1283.02	1283.90	7.56	67.86	2689.81	.00	.00	.51	1273.58	18.62	.00
* 1100.000	4000.00	1283.95	1284.84	7.58	69.74	2689.81	.00	.00	.49	1273.58	18.99	.00
* 1100.000	4500.00	1284.84	1285.74	7.63	71.51	2689.81	.00	.00	.47	1273.58	19.31	.00
* 1100.000	5000.00	1285.66	1286.58	7.69	73.16	2689.81	.00	.00	.45	1273.58	19.59	.00
* 1100.000	5500.00	1286.45	1287.39	7.76	74.75	2689.81	.00	.00	.44	1273.58	19.84	.00
1100.000	6000.00	1287.24	1288.18	7.80	81.59	2689.81	.00	.00	.45	1273.58	20.59	.00
1100.000	6500.00	1288.01	1288.95	7.75	100.00	2689.81	.00	.00	.47	1273.58	21.50	.00
1100.000	7000.00	1288.76	1289.68	7.66	100.00	2689.81	.00	.00	.45	1273.58	21.50	.00
1200.000	1000.00	1277.83	1278.42	6.18	46.85	2789.81	.00	.00	.59	1273.62	18.00	.00
1200.000	1500.00	1279.03	1279.74	6.79	51.64	2789.81	.00	.00	.58	1273.62	18.00	.00
1200.000	2000.00	1280.13	1280.92	7.14	56.04	2789.81	.00	.00	.56	1273.62	18.00	.00
1200.000	2500.00	1281.12	1281.97	7.40	60.02	2789.81	.00	.00	.55	1273.62	18.00	.00
1200.000	3000.00	1282.14	1283.00	7.46	66.04	2789.81	.00	.00	.53	1273.62	18.23	.00
1200.000	3500.00	1283.11	1283.98	7.49	67.99	2789.81	.00	.00	.50	1273.62	18.65	.00
1200.000	4000.00	1284.03	1284.91	7.53	69.83	2789.81	.00	.00	.48	1273.62	19.01	.00
1200.000	4500.00	1284.91	1285.81	7.59	71.59	2789.81	.00	.00	.46	1273.62	19.32	.00
1200.000	5000.00	1285.73	1286.64	7.66	73.23	2789.81	.00	.00	.45	1273.62	19.60	.00
1200.000	5500.00	1286.52	1287.45	7.74	74.81	2789.81	.00	.00	.44	1273.62	19.85	.00
1200.000	6000.00	1287.31	1288.25	7.76	81.98	2789.81	.00	.00	.45	1273.62	20.63	.00
1200.000	6500.00	1288.11	1289.03	7.69	100.00	2789.81	.00	.00	.47	1273.62	21.50	.00
1200.000	7000.00	1288.85	1289.75	7.62	100.00	2789.81	.00	.00	.44	1273.62	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
1300.000	1000.00	1277.98	1278.53	5.98	47.30	2889.81	.00	.00	.56	1273.65	18.00	.00
1300.000	1500.00	1279.16	1279.85	6.64	52.04	2889.81	.00	.00	.56	1273.65	18.00	.00
1300.000	2000.00	1280.25	1281.01	7.02	56.37	2889.81	.00	.00	.55	1273.65	18.00	.00
1300.000	2500.00	1281.23	1282.06	7.31	60.30	2889.81	.00	.00	.54	1273.65	18.00	.00
1300.000	3000.00	1282.23	1283.08	7.39	66.16	2889.81	.00	.00	.53	1273.65	18.26	.00
1300.000	3500.00	1283.20	1284.06	7.44	68.09	2889.81	.00	.00	.50	1273.65	18.67	.00
1300.000	4000.00	1284.11	1284.98	7.49	69.92	2889.81	.00	.00	.48	1273.65	19.02	.00
1300.000	4500.00	1284.98	1285.87	7.56	71.66	2889.81	.00	.00	.46	1273.65	19.33	.00
1300.000	5000.00	1285.80	1286.71	7.63	73.30	2889.81	.00	.00	.45	1273.65	19.61	.00
1300.000	5500.00	1286.59	1287.51	7.71	74.87	2889.81	.00	.00	.44	1273.65	19.86	.00
1300.000	6000.00	1287.39	1288.32	7.73	82.36	2889.81	.00	.00	.45	1273.65	20.67	.00
1300.000	6500.00	1288.21	1289.11	7.64	100.00	2889.81	.00	.00	.46	1273.65	21.50	.00
1300.000	7000.00	1288.93	1289.82	7.58	100.00	2889.81	.00	.00	.44	1273.65	21.50	.00
1400.000	1000.00	1278.11	1278.63	5.83	47.68	2989.81	.00	.00	.54	1273.69	18.00	.00
1400.000	1500.00	1279.29	1279.94	6.51	52.39	2989.81	.00	.00	.55	1273.69	18.00	.00
1400.000	2000.00	1280.36	1281.10	6.92	56.68	2989.81	.00	.00	.54	1273.69	18.00	.00
1400.000	2500.00	1281.33	1282.14	7.22	60.57	2989.81	.00	.00	.53	1273.69	18.00	.00
1400.000	3000.00	1282.33	1283.16	7.31	66.29	2989.81	.00	.00	.52	1273.69	18.29	.00
1400.000	3500.00	1283.28	1284.13	7.38	68.19	2989.81	.00	.00	.49	1273.69	18.69	.00
1400.000	4000.00	1284.19	1285.05	7.45	70.00	2989.81	.00	.00	.47	1273.69	19.04	.00
1400.000	4500.00	1285.06	1285.94	7.52	71.74	2989.81	.00	.00	.46	1273.69	19.35	.00
1400.000	5000.00	1285.87	1286.77	7.61	73.37	2989.81	.00	.00	.45	1273.69	19.62	.00
1400.000	5500.00	1286.66	1287.57	7.69	74.93	2989.81	.00	.00	.44	1273.69	19.87	.00
1400.000	6000.00	1287.46	1288.39	7.70	82.75	2989.81	.00	.00	.45	1273.69	20.70	.00
1400.000	6500.00	1288.30	1289.19	7.59	100.00	2989.81	.00	.00	.46	1273.69	21.50	.00
1400.000	7000.00	1289.01	1289.89	7.54	100.00	2989.81	.00	.00	.44	1273.69	21.50	.00
1500.000	1000.00	1278.22	1278.73	5.70	48.00	3089.81	.00	.00	.53	1273.72	18.00	.00
1500.000	1500.00	1279.40	1280.03	6.39	52.70	3089.81	.00	.00	.53	1273.72	18.00	.00
1500.000	2000.00	1280.47	1281.19	6.82	56.96	3089.81	.00	.00	.53	1273.72	18.00	.00
1500.000	2500.00	1281.43	1282.22	7.15	60.82	3089.81	.00	.00	.52	1273.72	18.00	.00
1500.000	3000.00	1282.43	1283.24	7.25	66.40	3089.81	.00	.00	.51	1273.72	18.31	.00
1500.000	3500.00	1283.37	1284.20	7.33	68.28	3089.81	.00	.00	.49	1273.72	18.71	.00
1500.000	4000.00	1284.27	1285.12	7.41	70.08	3089.81	.00	.00	.47	1273.72	19.05	.00
1500.000	4500.00	1285.13	1286.00	7.49	71.81	3089.81	.00	.00	.46	1273.72	19.36	.00
1500.000	5000.00	1285.94	1286.83	7.58	73.43	3089.81	.00	.00	.45	1273.72	19.63	.00
1500.000	5500.00	1286.72	1287.63	7.66	74.99	3089.81	.00	.00	.44	1273.72	19.87	.00
1500.000	6000.00	1287.54	1288.45	7.67	83.13	3089.81	.00	.00	.44	1273.72	20.74	.00
1500.000	6500.00	1288.39	1289.27	7.54	100.00	3089.81	.00	.00	.45	1273.72	21.50	.00
1500.000	7000.00	1289.09	1289.97	7.51	100.00	3089.81	.00	.00	.43	1273.72	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
1600.000	1000.00	1278.33	1278.82	5.59	48.29	3189.81	.00	.00	.51	1273.76	18.00	.00
1600.000	1500.00	1279.51	1280.12	6.29	52.99	3189.81	.00	.00	.52	1273.76	18.00	.00
1600.000	2000.00	1280.57	1281.27	6.74	57.22	3189.81	.00	.00	.52	1273.76	18.00	.00
1600.000	2500.00	1281.53	1282.30	7.07	61.06	3189.81	.00	.00	.52	1273.76	18.00	.00
1600.000	3000.00	1282.52	1283.32	7.18	66.51	3189.81	.00	.00	.51	1273.76	18.34	.00
1600.000	3500.00	1283.45	1284.27	7.29	68.37	3189.81	.00	.00	.48	1273.76	18.72	.00
1600.000	4000.00	1284.34	1285.19	7.37	70.16	3189.81	.00	.00	.47	1273.76	19.07	.00
1600.000	4500.00	1285.20	1286.06	7.46	71.88	3189.81	.00	.00	.45	1273.76	19.37	.00
1600.000	5000.00	1286.01	1286.89	7.55	73.49	3189.81	.00	.00	.44	1273.76	19.64	.00
1600.000	5500.00	1286.79	1287.69	7.64	75.25	3189.81	.00	.00	.45	1273.76	19.90	.00
1600.000	6000.00	1287.61	1288.52	7.64	83.51	3189.81	.00	.00	.44	1273.76	20.77	.00
1600.000	6500.00	1288.47	1289.35	7.50	100.00	3189.81	.00	.00	.45	1273.76	21.50	.00
1600.000	7000.00	1289.17	1290.04	7.48	100.00	3189.81	.00	.00	.43	1273.76	21.50	.00
1700.000	1000.00	1278.43	1278.90	5.49	48.55	3289.81	.00	.00	.50	1273.80	18.00	.00
1700.000	1500.00	1279.61	1280.21	6.20	53.25	3289.81	.00	.00	.51	1273.80	18.00	.00
1700.000	2000.00	1280.66	1281.35	6.66	57.46	3289.81	.00	.00	.51	1273.80	18.00	.00
1700.000	2500.00	1281.62	1282.38	7.01	61.28	3289.81	.00	.00	.51	1273.80	18.00	.00
1700.000	3000.00	1282.60	1283.39	7.13	66.61	3289.81	.00	.00	.50	1273.80	18.36	.00
1700.000	3500.00	1283.53	1284.34	7.24	68.46	3289.81	.00	.00	.48	1273.80	18.74	.00
1700.000	4000.00	1284.42	1285.25	7.34	70.24	3289.81	.00	.00	.46	1273.80	19.08	.00
1700.000	4500.00	1285.27	1286.13	7.43	71.94	3289.81	.00	.00	.45	1273.80	19.38	.00
1700.000	5000.00	1286.07	1286.95	7.53	73.55	3289.81	.00	.00	.44	1273.80	19.65	.00
1700.000	5500.00	1286.85	1287.75	7.62	75.54	3289.81	.00	.00	.45	1273.80	19.94	.00
1700.000	6000.00	1287.69	1288.58	7.61	83.88	3289.81	.00	.00	.44	1273.80	20.81	.00
1700.000	6500.00	1288.56	1289.42	7.45	100.00	3289.81	.00	.00	.44	1273.80	21.50	.00
1700.000	7000.00	1289.24	1290.10	7.44	100.00	3289.81	.00	.00	.43	1273.80	21.50	.00
1800.000	1000.00	1278.53	1278.98	5.41	48.78	3389.81	.00	.00	.49	1273.83	18.00	.00
1800.000	1500.00	1279.70	1280.29	6.12	53.48	3389.81	.00	.00	.50	1273.83	18.00	.00
1800.000	2000.00	1280.75	1281.43	6.59	57.68	3389.81	.00	.00	.51	1273.83	18.00	.00
1800.000	2500.00	1281.71	1282.45	6.94	61.49	3389.81	.00	.00	.51	1273.83	18.00	.00
1800.000	3000.00	1282.69	1283.46	7.07	66.71	3389.81	.00	.00	.49	1273.83	18.38	.00
1800.000	3500.00	1283.60	1284.41	7.20	68.54	3389.81	.00	.00	.48	1273.83	18.76	.00
1800.000	4000.00	1284.49	1285.32	7.30	70.31	3389.81	.00	.00	.46	1273.83	19.09	.00
1800.000	4500.00	1285.34	1286.19	7.40	72.01	3389.81	.00	.00	.45	1273.83	19.39	.00
1800.000	5000.00	1286.14	1287.01	7.50	73.61	3389.81	.00	.00	.44	1273.83	19.66	.00
1800.000	5500.00	1286.92	1287.81	7.59	75.83	3389.81	.00	.00	.45	1273.83	19.97	.00
1800.000	6000.00	1287.76	1288.65	7.58	84.26	3389.81	.00	.00	.44	1273.83	20.84	.00
1800.000	6500.00	1288.64	1289.50	7.41	100.00	3389.81	.00	.00	.44	1273.83	21.50	.00
1800.000	7000.00	1289.32	1290.17	7.41	100.00	3389.81	.00	.00	.43	1273.83	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
1900.000	1000.00	1278.62	1279.06	5.33	48.99	3489.81	.00	.00	.48	1273.87	18.00	.00
1900.000	1500.00	1279.79	1280.36	6.05	53.70	3489.81	.00	.00	.50	1273.87	18.00	.00
1900.000	2000.00	1280.84	1281.50	6.53	57.90	3489.81	.00	.00	.50	1273.87	18.00	.00
1900.000	2500.00	1281.79	1282.53	6.89	61.68	3489.81	.00	.00	.50	1273.87	18.00	.00
1900.000	3000.00	1282.77	1283.54	7.02	66.80	3489.81	.00	.00	.49	1273.87	18.40	.00
1900.000	3500.00	1283.68	1284.48	7.16	68.62	3489.81	.00	.00	.47	1273.87	18.77	.00
1900.000	4000.00	1284.56	1285.38	7.27	70.38	3489.81	.00	.00	.46	1273.87	19.11	.00
1900.000	4500.00	1285.41	1286.25	7.37	72.07	3489.81	.00	.00	.45	1273.87	19.40	.00
1900.000	5000.00	1286.21	1287.07	7.48	73.67	3489.81	.00	.00	.44	1273.87	19.67	.00
1900.000	5500.00	1286.98	1287.87	7.57	76.11	3489.81	.00	.00	.44	1273.87	20.01	.00
1900.000	6000.00	1287.83	1288.72	7.55	84.62	3489.81	.00	.00	.43	1273.87	20.88	.00
1900.000	6500.00	1288.72	1289.57	7.38	100.00	3489.81	.00	.00	.44	1273.87	21.50	.00
1900.000	7000.00	1289.39	1290.24	7.38	100.00	3489.81	.00	.00	.42	1273.87	21.50	.00
2000.000	1000.00	1278.70	1279.13	5.27	49.19	3589.81	.00	.00	.47	1273.90	18.00	.00
2000.000	1500.00	1279.88	1280.44	5.98	53.91	3589.81	.00	.00	.49	1273.90	18.00	.00
2000.000	2000.00	1280.93	1281.58	6.46	58.09	3589.81	.00	.00	.49	1273.90	18.00	.00
2000.000	2500.00	1281.87	1282.60	6.83	61.87	3589.81	.00	.00	.49	1273.90	18.00	.00
2000.000	3000.00	1282.85	1283.61	6.97	66.89	3589.81	.00	.00	.48	1273.90	18.42	.00
2000.000	3500.00	1283.76	1284.54	7.12	68.70	3589.81	.00	.00	.47	1273.90	18.79	.00
2000.000	4000.00	1284.63	1285.44	7.24	70.45	3589.81	.00	.00	.46	1273.90	19.12	.00
2000.000	4500.00	1285.47	1286.31	7.35	72.13	3589.81	.00	.00	.44	1273.90	19.42	.00
2000.000	5000.00	1286.27	1287.13	7.45	73.73	3589.81	.00	.00	.44	1273.90	19.68	.00
2000.000	5500.00	1287.05	1287.93	7.55	76.40	3589.81	.00	.00	.44	1273.90	20.04	.00
2000.000	6000.00	1287.90	1288.78	7.52	84.99	3589.81	.00	.00	.43	1273.90	20.91	.00
2000.000	6500.00	1288.80	1289.64	7.34	100.00	3589.81	.00	.00	.43	1273.90	21.50	.00
2000.000	7000.00	1289.47	1290.31	7.36	100.00	3589.81	.00	.00	.42	1273.90	21.50	.00
2100.000	1000.00	1278.78	1279.20	5.20	49.37	3689.81	.00	.00	.46	1273.94	18.00	.00
2100.000	1500.00	1279.97	1280.51	5.92	54.10	3689.81	.00	.00	.48	1273.94	18.00	.00
2100.000	2000.00	1281.01	1281.65	6.41	58.28	3689.81	.00	.00	.49	1273.94	18.00	.00
2100.000	2500.00	1281.96	1282.67	6.78	65.02	3689.81	.00	.00	.50	1273.94	18.01	.00
2100.000	3000.00	1282.93	1283.67	6.93	66.97	3689.81	.00	.00	.48	1273.94	18.44	.00
2100.000	3500.00	1283.83	1284.61	7.08	68.77	3689.81	.00	.00	.47	1273.94	18.80	.00
2100.000	4000.00	1284.70	1285.51	7.21	70.52	3689.81	.00	.00	.45	1273.94	19.13	.00
2100.000	4500.00	1285.54	1286.37	7.32	72.19	3689.81	.00	.00	.44	1273.94	19.43	.00
2100.000	5000.00	1286.33	1287.19	7.43	73.78	3689.81	.00	.00	.43	1273.94	19.69	.00
2100.000	5500.00	1287.11	1287.99	7.53	76.68	3689.81	.00	.00	.44	1273.94	20.07	.00
2100.000	6000.00	1287.98	1288.85	7.49	86.74	3689.81	.00	.00	.43	1273.94	20.99	.00
2100.000	6500.00	1288.88	1289.71	7.30	100.00	3689.81	.00	.00	.43	1273.94	21.50	.00
2100.000	7000.00	1289.54	1290.37	7.33	100.00	3689.81	.00	.00	.42	1273.94	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
2200.000	1000.00	1278.86	1279.27	5.15	49.53	3789.81	.00	.00	.46	1273.98	18.00	.00
2200.000	1500.00	1280.05	1280.58	5.87	54.28	3789.81	.00	.00	.48	1273.98	18.00	.00
2200.000	2000.00	1281.09	1281.72	6.36	58.45	3789.81	.00	.00	.48	1273.98	18.00	.00
2200.000	2500.00	1282.04	1282.74	6.72	65.13	3789.81	.00	.00	.50	1273.98	18.03	.00
2200.000	3000.00	1283.01	1283.74	6.88	67.05	3789.81	.00	.00	.48	1273.98	18.45	.00
2200.000	3500.00	1283.90	1284.67	7.05	68.85	3789.81	.00	.00	.46	1273.98	18.82	.00
2200.000	4000.00	1284.77	1285.57	7.18	70.58	3789.81	.00	.00	.45	1273.98	19.14	.00
2200.000	4500.00	1285.60	1286.43	7.30	72.25	3789.81	.00	.00	.44	1273.98	19.44	.00
2200.000	5000.00	1286.40	1287.25	7.41	73.84	3789.81	.00	.00	.43	1273.98	19.70	.00
2200.000	5500.00	1287.17	1288.05	7.50	76.96	3789.81	.00	.00	.44	1273.98	20.10	.00
2200.000	6000.00	1288.05	1288.92	7.46	88.69	3789.81	.00	.00	.44	1273.98	21.07	.00
2200.000	6500.00	1288.96	1289.78	7.27	100.00	3789.81	.00	.00	.43	1273.98	21.50	.00
2200.000	7000.00	1289.61	1290.44	7.30	100.00	3789.81	.00	.00	.42	1273.98	21.50	.00
2300.000	1000.00	1278.94	1279.34	5.10	49.69	3889.81	.00	.00	.45	1274.01	18.00	.00
2300.000	1500.00	1280.12	1280.65	5.81	54.44	3889.81	.00	.00	.47	1274.01	18.00	.00
2300.000	2000.00	1281.17	1281.79	6.31	58.62	3889.81	.00	.00	.48	1274.01	18.00	.00
2300.000	2500.00	1282.12	1282.81	6.66	65.22	3889.81	.00	.00	.49	1274.01	18.05	.00
2300.000	3000.00	1283.08	1283.81	6.84	67.13	3889.81	.00	.00	.47	1274.01	18.47	.00
2300.000	3500.00	1283.97	1284.74	7.01	68.92	3889.81	.00	.00	.46	1274.01	18.83	.00
2300.000	4000.00	1284.84	1285.63	7.15	70.64	3889.81	.00	.00	.45	1274.01	19.15	.00
2300.000	4500.00	1285.67	1286.49	7.27	72.31	3889.81	.00	.00	.44	1274.01	19.44	.00
2300.000	5000.00	1286.46	1287.31	7.39	73.89	3889.81	.00	.00	.43	1274.01	19.70	.00
2300.000	5500.00	1287.24	1288.11	7.48	77.24	3889.81	.00	.00	.44	1274.01	20.13	.00
2300.000	6000.00	1288.13	1288.98	7.43	90.71	3889.81	.00	.00	.44	1274.01	21.16	.00
2300.000	6500.00	1289.04	1289.85	7.24	100.00	3889.81	.00	.00	.43	1274.01	21.50	.00
2300.000	7000.00	1289.68	1290.50	7.28	100.00	3889.81	.00	.00	.41	1274.01	21.50	.00
2400.000	1000.00	1279.01	1279.40	5.05	49.83	3989.81	.00	.00	.45	1274.05	18.00	.00
2400.000	1500.00	1280.20	1280.72	5.77	54.60	3989.81	.00	.00	.47	1274.05	18.00	.00
2400.000	2000.00	1281.24	1281.85	6.26	58.78	3989.81	.00	.00	.47	1274.05	18.00	.00
2400.000	2500.00	1282.20	1282.88	6.62	65.30	3989.81	.00	.00	.48	1274.05	18.07	.00
2400.000	3000.00	1283.15	1283.87	6.80	67.21	3989.81	.00	.00	.47	1274.05	18.49	.00
2400.000	3500.00	1284.04	1284.80	6.98	68.98	3989.81	.00	.00	.46	1274.05	18.84	.00
2400.000	4000.00	1284.90	1285.69	7.12	70.70	3989.81	.00	.00	.45	1274.05	19.17	.00
2400.000	4500.00	1285.73	1286.55	7.25	72.36	3989.81	.00	.00	.44	1274.05	19.45	.00
2400.000	5000.00	1286.52	1287.36	7.37	73.94	3989.81	.00	.00	.43	1274.05	19.71	.00
2400.000	5500.00	1287.30	1288.17	7.46	77.52	3989.81	.00	.00	.44	1274.05	20.16	.00
2400.000	6000.00	1288.21	1289.05	7.39	92.85	3989.81	.00	.00	.44	1274.05	21.24	.00
2400.000	6500.00	1289.11	1289.92	7.21	100.00	3989.81	.00	.00	.42	1274.05	21.50	.00
2400.000	7000.00	1289.75	1290.56	7.25	100.00	3989.81	.00	.00	.41	1274.05	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
2500.000	1000.00	1279.08	1279.47	5.01	49.97	4089.81	.00	.00	.44	1274.08	18.00	.00
2500.000	1500.00	1280.27	1280.78	5.72	54.75	4089.81	.00	.00	.46	1274.08	18.00	.00
2500.000	2000.00	1281.32	1281.92	6.22	58.93	4089.81	.00	.00	.47	1274.08	18.00	.00
2500.000	2500.00	1282.28	1282.95	6.57	65.39	4089.81	.00	.00	.48	1274.08	18.09	.00
2500.000	3000.00	1283.23	1283.94	6.77	67.28	4089.81	.00	.00	.46	1274.08	18.50	.00
2500.000	3500.00	1284.11	1284.86	6.95	69.05	4089.81	.00	.00	.45	1274.08	18.86	.00
2500.000	4000.00	1284.97	1285.75	7.10	70.76	4089.81	.00	.00	.44	1274.08	19.18	.00
2500.000	4500.00	1285.80	1286.61	7.22	72.42	4089.81	.00	.00	.43	1274.08	19.46	.00
2500.000	5000.00	1286.58	1287.42	7.35	73.99	4089.81	.00	.00	.43	1274.08	19.72	.00
2500.000	5500.00	1287.36	1288.22	7.44	77.79	4089.81	.00	.00	.43	1274.08	20.19	.00
2500.000	6000.00	1288.29	1289.13	7.35	95.07	4089.81	.00	.00	.44	1274.08	21.32	.00
2500.000	6500.00	1289.18	1289.98	7.18	100.00	4089.81	.00	.00	.42	1274.08	21.50	.00
2500.000	7000.00	1289.81	1290.62	7.23	100.00	4089.81	.00	.00	.41	1274.08	21.50	.00
2600.000	1000.00	1279.15	1279.53	4.97	50.09	4189.81	.00	.00	.44	1274.12	18.00	.00
2600.000	1500.00	1280.34	1280.85	5.68	54.89	4189.81	.00	.00	.46	1274.12	18.00	.00
2600.000	2000.00	1281.39	1281.98	6.18	59.07	4189.81	.00	.00	.47	1274.12	18.00	.00
2600.000	2500.00	1282.35	1283.02	6.52	65.47	4189.81	.00	.00	.48	1274.12	18.11	.00
2600.000	3000.00	1283.30	1284.00	6.73	67.35	4189.81	.00	.00	.46	1274.12	18.52	.00
2600.000	3500.00	1284.18	1284.92	6.92	69.11	4189.81	.00	.00	.45	1274.12	18.87	.00
2600.000	4000.00	1285.03	1285.81	7.07	70.82	4189.81	.00	.00	.44	1274.12	19.19	.00
2600.000	4500.00	1285.86	1286.66	7.20	72.47	4189.81	.00	.00	.43	1274.12	19.47	.00
2600.000	5000.00	1286.64	1287.48	7.33	74.04	4189.81	.00	.00	.43	1274.12	19.73	.00
2600.000	5500.00	1287.43	1288.28	7.42	78.07	4189.81	.00	.00	.43	1274.12	20.22	.00
2600.000	6000.00	1288.37	1289.20	7.31	97.39	4189.81	.00	.00	.44	1274.12	21.41	.00
2600.000	6500.00	1289.26	1290.05	7.15	100.00	4189.81	.00	.00	.42	1274.12	21.50	.00
2600.000	7000.00	1289.88	1290.69	7.20	100.00	4189.81	.00	.00	.41	1274.12	21.50	.00
2700.000	1000.00	1279.21	1279.59	4.93	50.21	4289.81	.00	.00	.43	1274.16	18.00	.00
2700.000	1500.00	1280.41	1280.91	5.64	55.03	4289.81	.00	.00	.45	1274.16	18.00	.00
2700.000	2000.00	1281.46	1282.04	6.14	59.21	4289.81	.00	.00	.46	1274.16	18.00	.00
2700.000	2500.00	1282.43	1283.08	6.48	65.54	4289.81	.00	.00	.47	1274.16	18.12	.00
2700.000	3000.00	1283.37	1284.06	6.70	67.41	4289.81	.00	.00	.46	1274.16	18.53	.00
2700.000	3500.00	1284.24	1284.98	6.89	69.17	4289.81	.00	.00	.45	1274.16	18.88	.00
2700.000	4000.00	1285.10	1285.87	7.05	70.88	4289.81	.00	.00	.44	1274.16	19.20	.00
2700.000	4500.00	1285.92	1286.72	7.18	72.52	4289.81	.00	.00	.43	1274.16	19.48	.00
2700.000	5000.00	1286.70	1287.53	7.31	74.09	4289.81	.00	.00	.42	1274.16	19.74	.00
2700.000	5500.00	1287.49	1288.34	7.40	78.34	4289.81	.00	.00	.43	1274.16	20.25	.00
2700.000	6000.00	1288.45	1289.27	7.27	99.80	4289.81	.00	.00	.45	1274.16	21.49	.00
2700.000	6500.00	1289.33	1290.11	7.12	100.00	4289.81	.00	.00	.42	1274.16	21.50	.00
2700.000	7000.00	1289.95	1290.75	7.18	100.00	4289.81	.00	.00	.41	1274.16	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
2800.000	1000.00	1279.28	1279.65	4.90	50.33	4389.81	.00	.00	.43	1274.19	18.00	.00
2800.000	1500.00	1280.48	1280.97	5.60	55.15	4389.81	.00	.00	.45	1274.19	18.00	.00
2800.000	2000.00	1281.53	1282.11	6.10	59.34	4389.81	.00	.00	.46	1274.19	18.00	.00
2800.000	2500.00	1282.50	1283.14	6.44	65.61	4389.81	.00	.00	.47	1274.19	18.14	.00
2800.000	3000.00	1283.43	1284.12	6.67	67.48	4389.81	.00	.00	.45	1274.19	18.54	.00
2800.000	3500.00	1284.31	1285.04	6.86	69.23	4389.81	.00	.00	.45	1274.19	18.89	.00
2800.000	4000.00	1285.16	1285.93	7.02	70.93	4389.81	.00	.00	.44	1274.19	19.21	.00
2800.000	4500.00	1285.98	1286.78	7.16	72.58	4389.81	.00	.00	.43	1274.19	19.49	.00
2800.000	5000.00	1286.76	1287.59	7.29	74.14	4389.81	.00	.00	.42	1274.19	19.74	.00
2800.000	5500.00	1287.55	1288.40	7.38	78.61	4389.81	.00	.00	.43	1274.19	20.28	.00
2800.000	6000.00	1288.54	1289.35	7.23	100.00	4389.81	.00	.00	.44	1274.19	21.50	.00
2800.000	6500.00	1289.40	1290.18	7.10	100.00	4389.81	.00	.00	.41	1274.19	21.50	.00
2800.000	7000.00	1290.01	1290.81	7.16	100.00	4389.81	.00	.00	.40	1274.19	21.50	.00
2900.000	1000.00	1279.34	1279.71	4.87	50.44	4489.81	.00	.00	.42	1274.23	18.00	.00
2900.000	1500.00	1280.55	1281.03	5.57	55.27	4489.81	.00	.00	.44	1274.23	18.00	.00
2900.000	2000.00	1281.59	1282.17	6.07	59.46	4489.81	.00	.00	.45	1274.23	18.00	.00
2900.000	2500.00	1282.57	1283.21	6.41	65.68	4489.81	.00	.00	.46	1274.23	18.15	.00
2900.000	3000.00	1283.50	1284.18	6.63	67.54	4489.81	.00	.00	.45	1274.23	18.56	.00
2900.000	3500.00	1284.37	1285.10	6.84	69.29	4489.81	.00	.00	.44	1274.23	18.90	.00
2900.000	4000.00	1285.22	1285.98	7.00	70.99	4489.81	.00	.00	.43	1274.23	19.22	.00
2900.000	4500.00	1286.04	1286.83	7.14	72.63	4489.81	.00	.00	.43	1274.23	19.50	.00
2900.000	5000.00	1286.82	1287.64	7.27	74.19	4489.81	.00	.00	.42	1274.23	19.75	.00
2900.000	5500.00	1287.62	1288.46	7.35	78.88	4489.81	.00	.00	.43	1274.23	20.31	.00
2900.000	6000.00	1288.62	1289.42	7.19	100.00	4489.81	.00	.00	.44	1274.23	21.50	.00
2900.000	6500.00	1289.47	1290.24	7.07	100.00	4489.81	.00	.00	.41	1274.23	21.50	.00
2900.000	7000.00	1290.08	1290.87	7.14	100.00	4489.81	.00	.00	.40	1274.23	21.50	.00
3000.000	1000.00	1279.40	1279.76	4.84	50.54	4589.81	.00	.00	.42	1274.26	18.00	.00
3000.000	1500.00	1280.61	1281.09	5.54	55.39	4589.81	.00	.00	.44	1274.26	18.00	.00
3000.000	2000.00	1281.66	1282.23	6.04	59.58	4589.81	.00	.00	.45	1274.26	18.00	.00
3000.000	2500.00	1282.64	1283.27	6.37	65.75	4589.81	.00	.00	.46	1274.26	18.17	.00
3000.000	3000.00	1283.57	1284.24	6.60	67.60	4589.81	.00	.00	.45	1274.26	18.57	.00
3000.000	3500.00	1284.44	1285.16	6.81	69.35	4589.81	.00	.00	.44	1274.26	18.91	.00
3000.000	4000.00	1285.28	1286.04	6.98	71.04	4589.81	.00	.00	.43	1274.26	19.22	.00
3000.000	4500.00	1286.10	1286.89	7.12	72.67	4589.81	.00	.00	.43	1274.26	19.51	.00
3000.000	5000.00	1286.88	1287.70	7.25	74.23	4589.81	.00	.00	.42	1274.26	19.76	.00
3000.000	5500.00	1287.68	1288.52	7.33	79.15	4589.81	.00	.00	.43	1274.26	20.34	.00
3000.000	6000.00	1288.70	1289.49	7.15	100.00	4589.81	.00	.00	.43	1274.26	21.50	.00
3000.000	6500.00	1289.53	1290.30	7.05	100.00	4589.81	.00	.00	.41	1274.26	21.50	.00
3000.000	7000.00	1290.14	1290.93	7.12	100.00	4589.81	.00	.00	.40	1274.26	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
3100.000	1000.00	1279.46	1279.82	4.81	50.63	4689.81	.00	.00	.42	1274.30	18.00	.00
3100.000	1500.00	1280.68	1281.15	5.51	55.50	4689.81	.00	.00	.44	1274.30	18.00	.00
3100.000	2000.00	1281.73	1282.29	6.01	59.69	4689.81	.00	.00	.45	1274.30	18.00	.00
3100.000	2500.00	1282.71	1283.33	6.34	65.81	4689.81	.00	.00	.46	1274.30	18.18	.00
3100.000	3000.00	1283.63	1284.30	6.58	67.66	4689.81	.00	.00	.45	1274.30	18.58	.00
3100.000	3500.00	1284.50	1285.22	6.79	69.40	4689.81	.00	.00	.44	1274.30	18.92	.00
3100.000	4000.00	1285.35	1286.10	6.96	71.09	4689.81	.00	.00	.43	1274.30	19.23	.00
3100.000	4500.00	1286.16	1286.94	7.10	72.72	4689.81	.00	.00	.42	1274.30	19.51	.00
3100.000	5000.00	1286.94	1287.75	7.24	74.28	4689.81	.00	.00	.42	1274.30	19.76	.00
3100.000	5500.00	1287.74	1288.57	7.31	79.41	4689.81	.00	.00	.43	1274.30	20.37	.00
3100.000	6000.00	1288.78	1289.57	7.11	100.00	4689.81	.00	.00	.43	1274.30	21.50	.00
3100.000	6500.00	1289.60	1290.37	7.02	100.00	4689.81	.00	.00	.41	1274.30	21.50	.00
3100.000	7000.00	1290.20	1290.99	7.10	100.00	4689.81	.00	.00	.40	1274.30	21.50	.00
3200.000	1000.00	1279.52	1279.87	4.78	50.72	4789.81	.00	.00	.42	1274.34	18.00	.00
3200.000	1500.00	1280.74	1281.20	5.48	55.60	4789.81	.00	.00	.43	1274.34	18.00	.00
3200.000	2000.00	1281.79	1282.34	5.98	59.80	4789.81	.00	.00	.45	1274.34	18.00	.00
3200.000	2500.00	1282.77	1283.39	6.31	65.87	4789.81	.00	.00	.45	1274.34	18.20	.00
3200.000	3000.00	1283.70	1284.36	6.55	67.71	4789.81	.00	.00	.44	1274.34	18.59	.00
3200.000	3500.00	1284.56	1285.27	6.76	69.45	4789.81	.00	.00	.44	1274.34	18.93	.00
3200.000	4000.00	1285.41	1286.15	6.93	71.14	4789.81	.00	.00	.43	1274.34	19.24	.00
3200.000	4500.00	1286.22	1287.00	7.08	72.77	4789.81	.00	.00	.42	1274.34	19.52	.00
3200.000	5000.00	1287.00	1287.81	7.22	74.32	4789.81	.00	.00	.42	1274.34	19.77	.00
3200.000	5500.00	1287.80	1288.63	7.29	79.67	4789.81	.00	.00	.42	1274.34	20.40	.00
3200.000	6000.00	1288.86	1289.64	7.08	100.00	4789.81	.00	.00	.43	1274.34	21.50	.00
3200.000	6500.00	1289.67	1290.43	7.00	100.00	4789.81	.00	.00	.40	1274.34	21.50	.00
3200.000	7000.00	1290.27	1291.05	7.08	100.00	4789.81	.00	.00	.40	1274.34	21.50	.00
3300.000	1000.00	1279.58	1279.93	4.76	50.81	4889.81	.00	.00	.41	1274.37	18.00	.00
3300.000	1500.00	1280.80	1281.26	5.45	55.70	4889.81	.00	.00	.43	1274.37	18.00	.00
3300.000	2000.00	1281.85	1282.40	5.95	59.91	4889.81	.00	.00	.44	1274.37	18.00	.00
3300.000	2500.00	1282.84	1283.45	6.28	65.93	4889.81	.00	.00	.45	1274.37	18.21	.00
3300.000	3000.00	1283.76	1284.42	6.52	67.77	4889.81	.00	.00	.44	1274.37	18.60	.00
3300.000	3500.00	1284.63	1285.33	6.74	69.50	4889.81	.00	.00	.43	1274.37	18.94	.00
3300.000	4000.00	1285.47	1286.21	6.91	71.19	4889.81	.00	.00	.43	1274.37	19.25	.00
3300.000	4500.00	1286.28	1287.05	7.06	72.81	4889.81	.00	.00	.42	1274.37	19.53	.00
3300.000	5000.00	1287.06	1287.86	7.20	74.36	4889.81	.00	.00	.42	1274.37	19.78	.00
3300.000	5500.00	1287.87	1288.69	7.27	79.94	4889.81	.00	.00	.42	1274.37	20.42	.00
3300.000	6000.00	1288.93	1289.70	7.04	100.00	4889.81	.00	.00	.43	1274.37	21.50	.00
3300.000	6500.00	1289.73	1290.49	6.98	100.00	4889.81	.00	.00	.40	1274.37	21.50	.00
3300.000	7000.00	1290.33	1291.10	7.06	100.00	4889.81	.00	.00	.40	1274.37	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
3400.000	1000.00	1279.63	1279.98	4.73	50.89	4989.81	.00	.00	.41	1274.41	18.00	.00
3400.000	1500.00	1280.86	1281.32	5.42	55.80	4989.81	.00	.00	.43	1274.41	18.00	.00
3400.000	2000.00	1281.91	1282.46	5.92	60.01	4989.81	.00	.00	.44	1274.41	18.00	.00
3400.000	2500.00	1282.90	1283.51	6.25	65.98	4989.81	.00	.00	.45	1274.41	18.22	.00
3400.000	3000.00	1283.82	1284.48	6.50	67.82	4989.81	.00	.00	.44	1274.41	18.61	.00
3400.000	3500.00	1284.69	1285.39	6.72	69.55	4989.81	.00	.00	.43	1274.41	18.95	.00
3400.000	4000.00	1285.53	1286.26	6.89	71.23	4989.81	.00	.00	.43	1274.41	19.26	.00
3400.000	4500.00	1286.34	1287.11	7.05	72.86	4989.81	.00	.00	.42	1274.41	19.54	.00
3400.000	5000.00	1287.11	1287.91	7.19	74.41	4989.81	.00	.00	.41	1274.41	19.78	.00
3400.000	5500.00	1287.93	1288.75	7.25	80.19	4989.81	.00	.00	.42	1274.41	20.45	.00
3400.000	6000.00	1289.01	1289.77	7.01	100.00	4989.81	.00	.00	.42	1274.41	21.50	.00
3400.000	6500.00	1289.80	1290.55	6.96	100.00	4989.81	.00	.00	.40	1274.41	21.50	.00
3400.000	7000.00	1290.39	1291.16	7.04	100.00	4989.81	.00	.00	.39	1274.41	21.50	.00
3500.000	1000.00	1279.69	1280.03	4.71	50.97	5089.81	.00	.00	.41	1274.44	18.00	.00
3500.000	1500.00	1280.92	1281.37	5.40	55.89	5089.81	.00	.00	.43	1274.44	18.00	.00
3500.000	2000.00	1281.97	1282.51	5.90	60.11	5089.81	.00	.00	.44	1274.44	18.00	.00
3500.000	2500.00	1282.97	1283.57	6.22	66.04	5089.81	.00	.00	.44	1274.44	18.23	.00
3500.000	3000.00	1283.88	1284.53	6.47	67.87	5089.81	.00	.00	.44	1274.44	18.62	.00
3500.000	3500.00	1284.75	1285.44	6.69	69.60	5089.81	.00	.00	.43	1274.44	18.96	.00
3500.000	4000.00	1285.58	1286.32	6.87	71.28	5089.81	.00	.00	.42	1274.44	19.27	.00
3500.000	4500.00	1286.40	1287.16	7.03	72.90	5089.81	.00	.00	.42	1274.44	19.54	.00
3500.000	5000.00	1287.17	1287.97	7.17	74.45	5089.81	.00	.00	.41	1274.44	19.79	.00
3500.000	5500.00	1287.99	1288.80	7.23	80.46	5089.81	.00	.00	.42	1274.44	20.48	.00
3500.000	6000.00	1289.08	1289.84	6.98	100.00	5089.81	.00	.00	.42	1274.44	21.50	.00
3500.000	6500.00	1289.86	1290.61	6.93	100.00	5089.81	.00	.00	.40	1274.44	21.50	.00
3500.000	7000.00	1290.45	1291.22	7.02	100.00	5089.81	.00	.00	.39	1274.44	21.50	.00
3600.000	1000.00	1279.74	1280.08	4.69	51.05	5189.81	.00	.00	.40	1274.48	18.00	.00
3600.000	1500.00	1280.98	1281.42	5.37	55.98	5189.81	.00	.00	.42	1274.48	18.00	.00
3600.000	2000.00	1282.03	1282.57	5.87	60.20	5189.81	.00	.00	.44	1274.48	18.00	.00
3600.000	2500.00	1283.03	1283.62	6.19	66.09	5189.81	.00	.00	.44	1274.48	18.25	.00
3600.000	3000.00	1283.94	1284.59	6.45	67.92	5189.81	.00	.00	.43	1274.48	18.63	.00
3600.000	3500.00	1284.81	1285.50	6.67	69.65	5189.81	.00	.00	.43	1274.48	18.97	.00
3600.000	4000.00	1285.64	1286.37	6.86	71.32	5189.81	.00	.00	.42	1274.48	19.28	.00
3600.000	4500.00	1286.45	1287.22	7.01	72.94	5189.81	.00	.00	.42	1274.48	19.55	.00
3600.000	5000.00	1287.23	1288.02	7.15	74.49	5189.81	.00	.00	.41	1274.48	19.80	.00
3600.000	5500.00	1288.05	1288.86	7.21	80.71	5189.81	.00	.00	.42	1274.48	20.50	.00
3600.000	6000.00	1289.15	1289.91	6.95	100.00	5189.81	.00	.00	.42	1274.48	21.50	.00
3600.000	6500.00	1289.92	1290.67	6.91	100.00	5189.81	.00	.00	.40	1274.48	21.50	.00
3600.000	7000.00	1290.51	1291.27	7.01	100.00	5189.81	.00	.00	.39	1274.48	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
3700.000	1000.00	1279.80	1280.14	4.67	51.12	5289.81	.00	.00	.40	1274.52	18.00	.00
3700.000	1500.00	1281.03	1281.48	5.35	56.06	5289.81	.00	.00	.42	1274.52	18.00	.00
3700.000	2000.00	1282.09	1282.62	5.85	60.29	5289.81	.00	.00	.43	1274.52	18.00	.00
3700.000	2500.00	1283.09	1283.68	6.17	66.14	5289.81	.00	.00	.44	1274.52	18.26	.00
3700.000	3000.00	1284.00	1284.64	6.43	67.97	5289.81	.00	.00	.43	1274.52	18.64	.00
3700.000	3500.00	1284.87	1285.55	6.65	69.70	5289.81	.00	.00	.43	1274.52	18.98	.00
3700.000	4000.00	1285.70	1286.43	6.84	71.37	5289.81	.00	.00	.42	1274.52	19.28	.00
3700.000	4500.00	1286.51	1287.27	6.99	72.98	5289.81	.00	.00	.42	1274.52	19.56	.00
3700.000	5000.00	1287.28	1288.07	7.14	74.53	5289.81	.00	.00	.41	1274.52	19.80	.00
3700.000	5500.00	1288.11	1288.92	7.19	80.97	5289.81	.00	.00	.42	1274.52	20.53	.00
3700.000	6000.00	1289.23	1289.97	6.92	100.00	5289.81	.00	.00	.41	1274.52	21.50	.00
3700.000	6500.00	1289.99	1290.73	6.89	100.00	5289.81	.00	.00	.40	1274.52	21.50	.00
3700.000	7000.00	1290.57	1291.33	6.99	100.00	5289.81	.00	.00	.39	1274.52	21.50	.00
3800.000	1000.00	1279.85	1280.19	4.65	51.19	5389.81	.00	.00	.40	1274.55	18.00	.00
3800.000	1500.00	1281.09	1281.53	5.33	56.15	5389.81	.00	.00	.42	1274.55	18.00	.00
3800.000	2000.00	1282.15	1282.68	5.83	60.38	5389.81	.00	.00	.43	1274.55	18.00	.00
3800.000	2500.00	1283.15	1283.73	6.14	66.19	5389.81	.00	.00	.44	1274.55	18.27	.00
3800.000	3000.00	1284.06	1284.70	6.41	68.02	5389.81	.00	.00	.43	1274.55	18.65	.00
3800.000	3500.00	1284.92	1285.61	6.63	69.74	5389.81	.00	.00	.42	1274.55	18.99	.00
3800.000	4000.00	1285.76	1286.48	6.82	71.41	5389.81	.00	.00	.42	1274.55	19.29	.00
3800.000	4500.00	1286.57	1287.32	6.98	73.02	5389.81	.00	.00	.41	1274.55	19.56	.00
3800.000	5000.00	1287.34	1288.13	7.12	74.57	5389.81	.00	.00	.41	1274.55	19.81	.00
3800.000	5500.00	1288.18	1288.97	7.18	81.22	5389.81	.00	.00	.42	1274.55	20.55	.00
3800.000	6000.00	1289.30	1290.03	6.90	100.00	5389.81	.00	.00	.41	1274.55	21.50	.00
3800.000	6500.00	1290.05	1290.78	6.88	100.00	5389.81	.00	.00	.39	1274.55	21.50	.00
3800.000	7000.00	1290.63	1291.39	6.97	100.00	5389.81	.00	.00	.39	1274.55	21.50	.00
3900.000	1000.00	1279.90	1280.24	4.63	51.26	5489.81	.00	.00	.40	1274.59	18.00	.00
3900.000	1500.00	1281.15	1281.58	5.31	56.22	5489.81	.00	.00	.42	1274.59	18.00	.00
3900.000	2000.00	1282.21	1282.73	5.81	60.46	5489.81	.00	.00	.43	1274.59	18.00	.00
3900.000	2500.00	1283.21	1283.79	6.12	66.24	5489.81	.00	.00	.43	1274.59	18.28	.00
3900.000	3000.00	1284.12	1284.75	6.38	68.06	5489.81	.00	.00	.43	1274.59	18.66	.00
3900.000	3500.00	1284.98	1285.66	6.61	69.78	5489.81	.00	.00	.42	1274.59	19.00	.00
3900.000	4000.00	1285.82	1286.53	6.80	71.45	5489.81	.00	.00	.42	1274.59	19.30	.00
3900.000	4500.00	1286.62	1287.37	6.96	73.06	5489.81	.00	.00	.41	1274.59	19.57	.00
3900.000	5000.00	1287.39	1288.18	7.11	74.61	5489.81	.00	.00	.41	1274.59	19.82	.00
3900.000	5500.00	1288.24	1289.03	7.16	81.47	5489.81	.00	.00	.41	1274.59	20.58	.00
3900.000	6000.00	1289.36	1290.10	6.87	100.00	5489.81	.00	.00	.41	1274.59	21.50	.00
3900.000	6500.00	1290.11	1290.84	6.86	100.00	5489.81	.00	.00	.39	1274.59	21.50	.00
3900.000	7000.00	1290.69	1291.44	6.96	100.00	5489.81	.00	.00	.39	1274.59	21.50	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
4000.000	1000.00	1279.95	1280.29	4.61	51.32	5589.81	.00	.00	.40	1274.62	18.00	.00
4000.000	1500.00	1281.20	1281.63	5.29	56.30	5589.81	.00	.00	.42	1274.62	18.00	.00
4000.000	2000.00	1282.26	1282.78	5.79	60.54	5589.81	.00	.00	.43	1274.62	18.00	.00
4000.000	2500.00	1283.27	1283.84	6.10	66.28	5589.81	.00	.00	.43	1274.62	18.29	.00
4000.000	3000.00	1284.18	1284.81	6.36	68.11	5589.81	.00	.00	.43	1274.62	18.67	.00
4000.000	3500.00	1285.04	1285.71	6.60	69.83	5589.81	.00	.00	.42	1274.62	19.00	.00
4000.000	4000.00	1285.87	1286.59	6.79	71.49	5589.81	.00	.00	.42	1274.62	19.30	.00
4000.000	4500.00	1286.68	1287.43	6.95	73.10	5589.81	.00	.00	.41	1274.62	19.58	.00
4000.000	5000.00	1287.45	1288.23	7.10	74.64	5589.81	.00	.00	.41	1274.62	19.82	.00
4000.000	5500.00	1288.30	1289.09	7.14	81.72	5589.81	.00	.00	.41	1274.62	20.60	.00
4000.000	6000.00	1289.43	1290.16	6.85	100.00	5589.81	.00	.00	.41	1274.62	21.50	.00
4000.000	6500.00	1290.17	1290.90	6.84	100.00	5589.81	.00	.00	.39	1274.62	21.50	.00
4000.000	7000.00	1290.75	1291.50	6.94	100.00	5589.81	.00	.00	.39	1274.62	21.50	.00
4102.000	1000.00	1280.01	1280.34	4.60	51.38	5692.02	.00	.00	.39	1274.66	18.00	.00
4102.000	1500.00	1281.26	1281.69	5.27	56.37	5692.02	.00	.00	.41	1274.66	18.00	.00
4102.000	2000.00	1282.35	1282.84	5.66	95.38	5692.02	.00	.00	.41	1274.66	18.00	25.00
4102.000	2500.00	1283.41	1283.91	5.82	97.50	5692.02	.00	.00	.39	1274.66	18.00	25.00
4102.000	3000.00	1284.36	1284.88	5.97	99.41	5692.02	.00	.00	.37	1274.66	18.00	25.00
4102.000	3500.00	1285.26	1285.80	6.11	100.00	5692.02	.00	.00	.36	1274.66	18.00	25.00
4102.000	4000.00	1286.12	1286.67	6.24	100.00	5692.02	.00	.00	.35	1274.66	18.00	25.00
4102.000	4500.00	1286.95	1287.52	6.36	100.00	5692.02	.00	.00	.35	1274.66	18.00	25.00
4102.000	5000.00	1287.74	1288.32	6.49	100.00	5692.02	.00	.00	.34	1274.66	18.00	25.00
4102.000	5500.00	1288.59	1289.18	6.57	100.00	5692.02	.00	.00	.33	1274.66	18.00	25.00
4102.000	6000.00	1289.66	1290.24	6.50	100.00	5692.02	.00	.00	.32	1274.66	18.00	25.00
4102.000	6500.00	1290.37	1290.97	6.64	100.00	5692.02	.00	.00	.31	1274.66	18.00	25.00
4102.000	7000.00	1290.93	1291.56	6.84	100.00	5692.02	.00	.00	.32	1274.66	18.00	25.00
4212.000	1000.00	1283.91	1285.05	8.54	52.51	5802.40	.00	.00	1.01	1280.60	18.00	.00
4212.000	1500.00	1284.64	1286.06	9.57	56.76	5802.40	.00	.00	1.01	1280.60	18.00	.00
4212.000	2000.00	1285.48	1286.90	9.64	100.00	5802.40	.00	.00	.90	1280.60	18.00	25.00
4212.000	2500.00	1286.00	1287.55	10.20	100.00	5802.40	.00	.00	.89	1280.60	18.00	25.00
4212.000	3000.00	1286.43	1288.13	10.81	100.00	5802.40	.00	.00	.90	1280.60	18.00	25.00
4212.000	3500.00	1286.81	1288.67	11.38	100.00	5802.40	.00	.00	.91	1280.60	18.00	25.00
4212.000	4000.00	1287.20	1289.18	11.81	100.00	5802.40	.00	.00	.91	1280.60	18.00	25.00
4212.000	4500.00	1287.52	1289.67	12.34	100.00	5802.40	.00	.00	.92	1280.60	18.00	25.00
4212.000	5000.00	1287.83	1290.13	12.84	100.00	5802.40	.00	.00	.93	1280.60	18.00	25.00
4212.000	5500.00	1288.12	1290.58	13.31	100.00	5802.40	.00	.00	.94	1280.60	18.00	25.00
4212.000	6000.00	1288.92	1291.07	12.54	100.00	5802.40	.00	.00	.84	1280.60	18.00	25.00
4212.000	6500.00	1289.75	1291.66	11.89	100.00	5802.40	.00	.00	.75	1280.60	18.00	25.00
4212.000	7000.00	1290.36	1292.20	11.71	100.00	5802.40	.00	.00	.71	1280.60	18.00	25.00

	SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
*	4318.000	1000.00	1285.29	1285.40	2.73	100.00	5908.30	.00	.00	.24	1280.75	18.00	25.00
*	4318.000	1500.00	1286.33	1286.49	3.24	100.00	5908.30	.00	.00	.25	1280.75	18.00	25.00
*	4318.000	2000.00	1287.11	1287.32	3.74	100.00	5908.30	.00	.00	.27	1280.75	18.00	25.00
*	4318.000	2500.00	1287.73	1287.99	4.22	100.00	5908.30	.00	.00	.29	1280.75	18.00	25.00
*	4318.000	3000.00	1288.29	1288.61	4.65	100.00	5908.30	.00	.00	.31	1280.75	18.00	25.00
*	4318.000	3500.00	1288.80	1289.18	5.05	100.00	5908.30	.00	.00	.32	1280.75	18.00	25.00
*	4318.000	4000.00	1289.27	1289.71	5.43	100.00	5908.30	.00	.00	.34	1280.75	18.00	25.00
*	4318.000	4500.00	1289.74	1290.23	5.78	100.00	5908.30	.00	.00	.35	1280.75	18.00	25.00
*	4318.000	5000.00	1290.18	1290.73	6.10	100.00	5908.30	.00	.00	.36	1280.75	18.00	25.00
*	4318.000	5500.00	1290.60	1291.21	6.41	100.00	5908.30	.00	.00	.37	1280.75	18.00	25.00
*	4318.000	6000.00	1290.90	1291.58	6.77	100.00	5908.30	.00	.00	.38	1280.75	18.00	25.00
*	4318.000	6500.00	1291.36	1292.08	7.00	100.00	5908.30	.00	.00	.39	1280.75	18.00	25.00
*	4318.000	7000.00	1291.82	1292.59	7.21	100.00	5908.30	.00	.00	.39	1280.75	18.00	25.00
*	6822.000	1000.00	1285.44	1285.46	1.39	542.70	6023.81	146.30	1655.30	.17	1276.06	53.00	53.00
	6822.000	1500.00	1286.55	1286.56	1.11	877.22	6023.81	146.30	1655.30	.11	1276.06	53.00	53.00
	6822.000	2000.00	1287.39	1287.40	1.01	1104.78	6023.81	146.30	1655.30	.09	1276.06	53.00	53.00
	6822.000	2500.00	1288.08	1288.09	.95	1330.87	6023.81	146.30	1655.30	.08	1276.06	53.00	53.00
*	6822.000	3000.00	1288.71	1288.72	.91	1351.62	6023.81	146.30	1655.30	.07	1276.06	53.00	53.00
*	6822.000	3500.00	1289.30	1289.31	.88	1351.71	6023.81	146.30	1655.30	.06	1276.06	53.00	53.00
*	6822.000	4000.00	1289.85	1289.86	.86	1351.80	6023.81	146.30	1655.30	.06	1276.06	53.00	53.00
*	6822.000	4500.00	1290.38	1290.39	.85	1351.88	6023.81	146.30	1655.30	.06	1276.06	53.00	53.00
*	6822.000	5000.00	1290.90	1290.91	.84	1351.97	6023.81	146.30	1655.30	.05	1276.06	53.00	53.00
*	6822.000	5500.00	1291.39	1291.40	.83	1352.04	6023.81	146.30	1655.30	.05	1276.06	53.00	53.00
*	6822.000	6000.00	1291.79	1291.79	.84	1352.11	6023.81	146.30	1655.30	.05	1276.06	53.00	53.00
*	6822.000	6500.00	1292.30	1292.31	.83	1352.19	6023.81	146.30	1655.30	.05	1276.06	53.00	53.00
*	6822.000	7000.00	1292.82	1292.83	.82	1352.27	6023.81	146.30	1655.30	.05	1276.06	53.00	53.00
	6907.000	1000.00	1285.52	1285.54	1.27	650.51	6108.81	145.90	1711.40	.21	1276.09	53.00	53.00
	6907.000	1500.00	1286.58	1286.59	1.02	879.42	6108.81	145.90	1711.40	.13	1276.09	53.00	53.00
	6907.000	2000.00	1287.41	1287.42	.93	1067.15	6108.81	145.90	1711.40	.11	1276.09	53.00	53.00
	6907.000	2500.00	1288.10	1288.10	.89	1279.49	6108.81	145.90	1711.40	.10	1276.09	53.00	53.00
	6907.000	3000.00	1288.73	1288.73	.86	1390.25	6108.81	145.90	1711.40	.09	1276.09	53.00	53.00
	6907.000	3500.00	1289.31	1289.32	.83	1390.36	6108.81	145.90	1711.40	.08	1276.09	53.00	53.00
	6907.000	4000.00	1289.86	1289.87	.82	1390.45	6108.81	145.90	1711.40	.07	1276.09	53.00	53.00
	6907.000	4500.00	1290.39	1290.40	.81	1390.55	6108.81	145.90	1711.40	.07	1276.09	53.00	53.00
	6907.000	5000.00	1290.90	1290.91	.80	1390.64	6108.81	145.90	1711.40	.07	1276.09	53.00	53.00
	6907.000	5500.00	1291.40	1291.41	.79	1390.72	6108.81	145.90	1711.40	.06	1276.09	53.00	53.00
	6907.000	6000.00	1291.79	1291.80	.80	1390.79	6108.81	145.90	1711.40	.06	1276.09	53.00	53.00
	6907.000	6500.00	1292.31	1292.31	.79	1390.88	6108.81	145.90	1711.40	.06	1276.09	53.00	53.00
	6907.000	7000.00	1292.82	1292.83	.78	1390.97	6108.81	145.90	1711.40	.06	1276.09	53.00	53.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
7104.000	1000.00	1285.70	1285.72	1.31	660.60	6305.81	150.30	1742.60	.20	1276.17	53.00	53.00
7104.000	1500.00	1286.65	1286.66	1.04	927.38	6305.81	150.30	1742.60	.13	1276.17	53.00	53.00
7104.000	2000.00	1287.45	1287.46	.94	1086.82	6305.81	150.30	1742.60	.10	1276.17	53.00	53.00
7104.000	2500.00	1288.13	1288.14	.89	1228.68	6305.81	150.30	1742.60	.09	1276.17	53.00	53.00
7104.000	3000.00	1288.75	1288.76	.86	1392.22	6305.81	150.30	1742.60	.08	1276.17	53.00	53.00
7104.000	3500.00	1289.33	1289.34	.83	1392.34	6305.81	150.30	1742.60	.07	1276.17	53.00	53.00
7104.000	4000.00	1289.87	1289.88	.82	1392.45	6305.81	150.30	1742.60	.07	1276.17	53.00	53.00
7104.000	4500.00	1290.41	1290.41	.80	1392.55	6305.81	150.30	1742.60	.06	1276.17	53.00	53.00
7104.000	5000.00	1290.92	1290.92	.80	1392.66	6305.81	150.30	1742.60	.06	1276.17	53.00	53.00
7104.000	5500.00	1291.41	1291.42	.79	1392.75	6305.81	150.30	1742.60	.06	1276.17	53.00	53.00
7104.000	6000.00	1291.80	1291.81	.80	1392.83	6305.81	150.30	1742.60	.06	1276.17	53.00	53.00
7104.000	6500.00	1292.32	1292.32	.79	1392.94	6305.81	150.30	1742.60	.06	1276.17	53.00	53.00
7104.000	7000.00	1292.83	1292.84	.78	1393.04	6305.81	150.30	1742.60	.05	1276.17	53.00	53.00
7304.000	1000.00	1285.86	1285.88	1.05	797.67	6507.81	151.00	1724.40	.14	1276.25	53.00	53.00
7304.000	1500.00	1286.72	1286.73	.90	1024.71	6507.81	151.00	1724.40	.10	1276.25	53.00	53.00
7304.000	2000.00	1287.49	1287.50	.84	1190.18	6507.81	151.00	1724.40	.08	1276.25	53.00	53.00
7304.000	2500.00	1288.16	1288.17	.81	1308.61	6507.81	151.00	1724.40	.07	1276.25	53.00	53.00
7304.000	3000.00	1288.77	1288.78	.78	1383.67	6507.81	151.00	1724.40	.07	1276.25	53.00	53.00
7304.000	3500.00	1289.35	1289.36	.77	1482.81	6507.81	151.00	1724.40	.06	1276.25	53.00	53.00
7304.000	4000.00	1289.89	1289.90	.76	1482.86	6507.81	151.00	1724.40	.06	1276.25	53.00	53.00
7304.000	4500.00	1290.42	1290.43	.75	1482.91	6507.81	151.00	1724.40	.05	1276.25	53.00	53.00
7304.000	5000.00	1290.93	1290.94	.75	1482.95	6507.81	151.00	1724.40	.05	1276.25	53.00	53.00
7304.000	5500.00	1291.42	1291.43	.74	1483.00	6507.81	151.00	1724.40	.05	1276.25	53.00	53.00
7304.000	6000.00	1291.81	1291.82	.75	1483.03	6507.81	151.00	1724.40	.05	1276.25	53.00	53.00
7304.000	6500.00	1292.33	1292.33	.74	1483.08	6507.81	151.00	1724.40	.05	1276.25	53.00	53.00
7304.000	7000.00	1292.84	1292.85	.74	1483.13	6507.81	151.00	1724.40	.05	1276.25	53.00	53.00
7504.000	1000.00	1286.01	1286.03	1.30	703.66	6720.81	168.00	1524.30	.17	1276.32	53.00	53.00
7504.000	1500.00	1286.80	1286.82	1.16	901.54	6720.81	168.00	1524.30	.13	1276.32	53.00	53.00
7504.000	2000.00	1287.54	1287.55	1.06	1071.80	6720.81	168.00	1524.30	.11	1276.32	53.00	53.00
7504.000	2500.00	1288.19	1288.20	1.00	1224.50	6720.81	168.00	1524.30	.09	1276.32	53.00	53.00
7504.000	3000.00	1288.80	1288.81	.96	1276.77	6720.81	168.00	1524.30	.08	1276.32	53.00	53.00
7504.000	3500.00	1289.38	1289.39	.92	1276.81	6720.81	168.00	1524.30	.07	1276.32	53.00	53.00
7504.000	4000.00	1289.91	1289.92	.91	1276.86	6720.81	168.00	1524.30	.07	1276.32	53.00	53.00
7504.000	4500.00	1290.44	1290.45	.89	1276.90	6720.81	168.00	1524.30	.07	1276.32	53.00	53.00
7504.000	5000.00	1290.95	1290.95	.88	1276.94	6720.81	168.00	1524.30	.06	1276.32	53.00	53.00
7504.000	5500.00	1291.44	1291.45	.87	1276.98	6720.81	168.00	1524.30	.06	1276.32	53.00	53.00
7504.000	6000.00	1291.83	1291.84	.88	1277.01	6720.81	168.00	1524.30	.06	1276.32	53.00	53.00
7504.000	6500.00	1292.34	1292.35	.87	1277.05	6720.81	168.00	1524.30	.06	1276.32	53.00	53.00
7504.000	7000.00	1292.85	1292.86	.86	1277.09	6720.81	168.00	1524.30	.05	1276.32	53.00	53.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
7704.000	1000.00	1286.22	1286.25	1.54	664.82	6940.81	168.50	1548.40	.24	1276.40	53.00	53.00
7704.000	1500.00	1286.92	1286.94	1.42	798.19	6940.81	168.50	1548.40	.19	1276.40	53.00	53.00
7704.000	2000.00	1287.62	1287.64	1.29	1020.40	6940.81	168.50	1548.40	.16	1276.40	53.00	53.00
7704.000	2500.00	1288.25	1288.26	1.20	1136.95	6940.81	168.50	1548.40	.14	1276.40	53.00	53.00
7704.000	3000.00	1288.85	1288.86	1.12	1231.03	6940.81	168.50	1548.40	.12	1276.40	53.00	53.00
7704.000	3500.00	1289.41	1289.42	1.07	1231.11	6940.81	168.50	1548.40	.11	1276.40	53.00	53.00
7704.000	4000.00	1289.94	1289.95	1.04	1231.19	6940.81	168.50	1548.40	.10	1276.40	53.00	53.00
7704.000	4500.00	1290.46	1290.47	1.01	1231.27	6940.81	168.50	1548.40	.09	1276.40	53.00	53.00
7704.000	5000.00	1290.97	1290.98	.98	1231.34	6940.81	168.50	1548.40	.09	1276.40	53.00	53.00
7704.000	5500.00	1291.46	1291.47	.97	1231.42	6940.81	168.50	1548.40	.09	1276.40	53.00	53.00
7704.000	6000.00	1291.85	1291.86	.97	1231.48	6940.81	168.50	1548.40	.08	1276.40	53.00	53.00
7704.000	6500.00	1292.36	1292.37	.95	1231.55	6940.81	168.50	1548.40	.08	1276.40	53.00	53.00
7704.000	7000.00	1292.87	1292.88	.94	1231.63	6940.81	168.50	1548.40	.08	1276.40	53.00	53.00
7904.000	1000.00	1286.42	1286.44	1.24	701.51	7157.81	166.40	1670.00	.15	1276.47	53.00	53.00
7904.000	1500.00	1287.06	1287.07	1.26	842.08	7157.81	166.40	1670.00	.13	1276.47	53.00	53.00
7904.000	2000.00	1287.71	1287.72	1.19	1038.26	7157.81	166.40	1670.00	.11	1276.47	53.00	53.00
7904.000	2500.00	1288.31	1288.33	1.13	1135.65	7157.81	166.40	1670.00	.10	1276.47	53.00	53.00
7904.000	3000.00	1288.89	1288.91	1.08	1286.00	7157.81	166.40	1670.00	.09	1276.47	53.00	53.00
7904.000	3500.00	1289.45	1289.46	1.03	1404.28	7157.81	166.40	1670.00	.08	1276.47	53.00	53.00
7904.000	4000.00	1289.97	1289.99	1.00	1404.33	7157.81	166.40	1670.00	.07	1276.47	53.00	53.00
7904.000	4500.00	1290.49	1290.50	.97	1404.39	7157.81	166.40	1670.00	.07	1276.47	53.00	53.00
7904.000	5000.00	1290.99	1291.00	.95	1404.44	7157.81	166.40	1670.00	.07	1276.47	53.00	53.00
7904.000	5500.00	1291.48	1291.49	.93	1404.48	7157.81	166.40	1670.00	.06	1276.47	53.00	53.00
7904.000	6000.00	1291.87	1291.88	.93	1404.52	7157.81	166.40	1670.00	.06	1276.47	53.00	53.00
7904.000	6500.00	1292.38	1292.39	.91	1404.57	7157.81	166.40	1670.00	.06	1276.47	53.00	53.00
7904.000	7000.00	1292.89	1292.90	.89	1404.62	7157.81	166.40	1670.00	.05	1276.47	53.00	53.00
8104.000	1000.00	1286.57	1286.59	1.21	717.58	7373.81	165.70	1750.80	.16	1276.55	53.00	53.00
8104.000	1500.00	1287.17	1287.19	1.24	883.61	7373.81	165.70	1750.80	.14	1276.55	53.00	53.00
8104.000	2000.00	1287.79	1287.81	1.19	1028.23	7373.81	165.70	1750.80	.13	1276.55	53.00	53.00
8104.000	2500.00	1288.38	1288.39	1.14	1181.93	7373.81	165.70	1750.80	.11	1276.55	53.00	53.00
8104.000	3000.00	1288.94	1288.96	1.09	1308.74	7373.81	165.70	1750.80	.10	1276.55	53.00	53.00
8104.000	3500.00	1289.49	1289.50	1.04	1394.35	7373.81	165.70	1750.80	.09	1276.55	53.00	53.00
8104.000	4000.00	1290.01	1290.02	1.01	1485.07	7373.81	165.70	1750.80	.08	1276.55	53.00	53.00
8104.000	4500.00	1290.52	1290.53	.97	1485.12	7373.81	165.70	1750.80	.08	1276.55	53.00	53.00
8104.000	5000.00	1291.02	1291.03	.94	1485.17	7373.81	165.70	1750.80	.07	1276.55	53.00	53.00
8104.000	5500.00	1291.50	1291.51	.92	1485.22	7373.81	165.70	1750.80	.07	1276.55	53.00	53.00
8104.000	6000.00	1291.89	1291.90	.92	1485.26	7373.81	165.70	1750.80	.07	1276.55	53.00	53.00
8104.000	6500.00	1292.39	1292.40	.90	1485.31	7373.81	165.70	1750.80	.06	1276.55	53.00	53.00
8104.000	7000.00	1292.90	1292.91	.88	1485.36	7373.81	165.70	1750.80	.06	1276.55	53.00	53.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
8304.000	1000.00	1286.70	1286.72	1.21	713.81	7586.81	144.60	1726.30	.15	1276.63	53.00	53.00
8304.000	1500.00	1287.28	1287.30	1.28	901.05	7586.81	144.60	1726.30	.15	1276.63	53.00	53.00
8304.000	2000.00	1287.87	1287.89	1.25	1053.95	7586.81	144.60	1726.30	.13	1276.63	53.00	53.00
8304.000	2500.00	1288.44	1288.46	1.19	1195.46	7586.81	144.60	1726.30	.12	1276.63	53.00	53.00
8304.000	3000.00	1288.99	1289.01	1.13	1360.06	7586.81	144.60	1726.30	.11	1276.63	53.00	53.00
8304.000	3500.00	1289.53	1289.54	1.08	1463.42	7586.81	144.60	1726.30	.10	1276.63	53.00	53.00
8304.000	4000.00	1290.04	1290.05	1.04	1480.77	7586.81	144.60	1726.30	.09	1276.63	53.00	53.00
8304.000	4500.00	1290.55	1290.56	1.00	1480.83	7586.81	144.60	1726.30	.08	1276.63	53.00	53.00
8304.000	5000.00	1291.04	1291.05	.97	1480.88	7586.81	144.60	1726.30	.08	1276.63	53.00	53.00
8304.000	5500.00	1291.52	1291.53	.94	1480.92	7586.81	144.60	1726.30	.07	1276.63	53.00	53.00
8304.000	6000.00	1291.91	1291.92	.94	1480.96	7586.81	144.60	1726.30	.07	1276.63	53.00	53.00
8304.000	6500.00	1292.41	1292.42	.92	1481.01	7586.81	144.60	1726.30	.07	1276.63	53.00	53.00
8304.000	7000.00	1292.92	1292.93	.89	1481.07	7586.81	144.60	1726.30	.06	1276.63	53.00	53.00
8504.000	1000.00	1286.77	1286.78	.86	752.50	7786.81	168.70	1789.50	.08	1276.70	53.00	53.00
8504.000	1500.00	1287.35	1287.36	.99	913.19	7786.81	168.70	1789.50	.08	1276.70	53.00	53.00
8504.000	2000.00	1287.93	1287.94	1.03	1075.49	7786.81	168.70	1789.50	.08	1276.70	53.00	53.00
8504.000	2500.00	1288.48	1288.50	1.04	1235.15	7786.81	168.70	1789.50	.08	1276.70	53.00	53.00
8504.000	3000.00	1289.03	1289.04	1.03	1369.03	7786.81	168.70	1789.50	.07	1276.70	53.00	53.00
8504.000	3500.00	1289.56	1289.57	1.00	1491.20	7786.81	168.70	1789.50	.07	1276.70	53.00	53.00
8504.000	4000.00	1290.06	1290.07	.98	1524.83	7786.81	168.70	1789.50	.07	1276.70	53.00	53.00
8504.000	4500.00	1290.57	1290.58	.96	1524.88	7786.81	168.70	1789.50	.06	1276.70	53.00	53.00
8504.000	5000.00	1291.06	1291.07	.94	1524.92	7786.81	168.70	1789.50	.06	1276.70	53.00	53.00
8504.000	5500.00	1291.54	1291.55	.92	1524.97	7786.81	168.70	1789.50	.06	1276.70	53.00	53.00
8504.000	6000.00	1291.92	1291.93	.92	1525.01	7786.81	168.70	1789.50	.06	1276.70	53.00	53.00
8504.000	6500.00	1292.42	1292.43	.90	1525.06	7786.81	168.70	1789.50	.05	1276.70	53.00	53.00
8504.000	7000.00	1292.93	1292.94	.88	1525.11	7786.81	168.70	1789.50	.05	1276.70	53.00	53.00
8704.000	1000.00	1286.81	1286.83	1.02	759.70	7987.81	168.80	1621.50	.11	1276.78	53.00	53.00
8704.000	1500.00	1287.40	1287.41	1.11	918.02	7987.81	168.80	1621.50	.11	1276.78	53.00	53.00
8704.000	2000.00	1287.97	1287.98	1.11	1062.27	7987.81	168.80	1621.50	.10	1276.78	53.00	53.00
8704.000	2500.00	1288.52	1288.53	1.10	1178.26	7987.81	168.80	1621.50	.09	1276.78	53.00	53.00
8704.000	3000.00	1289.06	1289.07	1.07	1348.85	7987.81	168.80	1621.50	.09	1276.78	53.00	53.00
8704.000	3500.00	1289.58	1289.59	1.04	1348.91	7987.81	168.80	1621.50	.08	1276.78	53.00	53.00
8704.000	4000.00	1290.09	1290.10	1.01	1348.96	7987.81	168.80	1621.50	.08	1276.78	53.00	53.00
8704.000	4500.00	1290.59	1290.60	.99	1349.01	7987.81	168.80	1621.50	.07	1276.78	53.00	53.00
8704.000	5000.00	1291.08	1291.09	.97	1349.06	7987.81	168.80	1621.50	.07	1276.78	53.00	53.00
8704.000	5500.00	1291.55	1291.56	.96	1349.11	7987.81	168.80	1621.50	.06	1276.78	53.00	53.00
8704.000	6000.00	1291.94	1291.95	.96	1349.15	7987.81	168.80	1621.50	.06	1276.78	53.00	53.00
8704.000	6500.00	1292.44	1292.45	.94	1349.21	7987.81	168.80	1621.50	.06	1276.78	53.00	53.00
8704.000	7000.00	1292.94	1292.95	.92	1349.26	7987.81	168.80	1621.50	.06	1276.78	53.00	53.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
8904.000	1000.00	1286.89	1286.90	1.05	776.83	8187.81	169.60	1832.60	.13	1276.85	53.00	53.00
8904.000	1500.00	1287.46	1287.47	1.12	946.63	8187.81	169.60	1832.60	.13	1276.85	53.00	53.00
8904.000	2000.00	1288.02	1288.04	1.11	1117.87	8187.81	169.60	1832.60	.12	1276.85	53.00	53.00
8904.000	2500.00	1288.56	1288.58	1.09	1258.18	8187.81	169.60	1832.60	.11	1276.85	53.00	53.00
8904.000	3000.00	1289.09	1289.11	1.05	1356.95	8187.81	169.60	1832.60	.10	1276.85	53.00	53.00
8904.000	3500.00	1289.61	1289.62	1.01	1501.12	8187.81	169.60	1832.60	.09	1276.85	53.00	53.00
8904.000	4000.00	1290.11	1290.12	.98	1565.07	8187.81	169.60	1832.60	.08	1276.85	53.00	53.00
8904.000	4500.00	1290.61	1290.62	.95	1565.12	8187.81	169.60	1832.60	.08	1276.85	53.00	53.00
8904.000	5000.00	1291.10	1291.10	.92	1565.17	8187.81	169.60	1832.60	.07	1276.85	53.00	53.00
8904.000	5500.00	1291.57	1291.58	.90	1565.21	8187.81	169.60	1832.60	.07	1276.85	53.00	53.00
8904.000	6000.00	1291.95	1291.96	.90	1565.25	8187.81	169.60	1832.60	.07	1276.85	53.00	53.00
8904.000	6500.00	1292.45	1292.46	.87	1565.30	8187.81	169.60	1832.60	.06	1276.85	53.00	53.00
8904.000	7000.00	1292.95	1292.96	.85	1565.35	8187.81	169.60	1832.60	.06	1276.85	53.00	53.00
9104.000	1000.00	1286.96	1286.97	.97	823.10	8387.81	144.50	1743.90	.11	1276.93	53.00	53.00
9104.000	1500.00	1287.52	1287.54	1.05	979.42	8387.81	144.50	1743.90	.10	1276.93	53.00	53.00
9104.000	2000.00	1288.07	1288.09	1.06	1110.26	8387.81	144.50	1743.90	.10	1276.93	53.00	53.00
9104.000	2500.00	1288.61	1288.62	1.05	1217.20	8387.81	144.50	1743.90	.09	1276.93	53.00	53.00
9104.000	3000.00	1289.13	1289.14	1.03	1361.22	8387.81	144.50	1743.90	.08	1276.93	53.00	53.00
9104.000	3500.00	1289.64	1289.65	1.00	1488.21	8387.81	144.50	1743.90	.08	1276.93	53.00	53.00
9104.000	4000.00	1290.14	1290.15	.97	1488.26	8387.81	144.50	1743.90	.07	1276.93	53.00	53.00
9104.000	4500.00	1290.63	1290.64	.95	1488.32	8387.81	144.50	1743.90	.07	1276.93	53.00	53.00
9104.000	5000.00	1291.11	1291.12	.92	1488.37	8387.81	144.50	1743.90	.06	1276.93	53.00	53.00
9104.000	5500.00	1291.59	1291.60	.91	1488.42	8387.81	144.50	1743.90	.06	1276.93	53.00	53.00
9104.000	6000.00	1291.97	1291.98	.91	1488.47	8387.81	144.50	1743.90	.06	1276.93	53.00	53.00
9104.000	6500.00	1292.46	1292.47	.89	1488.52	8387.81	144.50	1743.90	.06	1276.93	53.00	53.00
9104.000	7000.00	1292.97	1292.98	.87	1488.58	8387.81	144.50	1743.90	.05	1276.93	53.00	53.00
9304.000	1000.00	1287.03	1287.04	.96	856.34	8587.81	167.70	1774.60	.11	1277.01	53.00	53.00
9304.000	1500.00	1287.59	1287.60	1.03	1037.03	8587.81	167.70	1774.60	.11	1277.01	53.00	53.00
9304.000	2000.00	1288.13	1288.14	1.04	1178.13	8587.81	167.70	1774.60	.10	1277.01	53.00	53.00
9304.000	2500.00	1288.65	1288.66	1.03	1317.66	8587.81	167.70	1774.60	.10	1277.01	53.00	53.00
9304.000	3000.00	1289.16	1289.17	1.00	1455.77	8587.81	167.70	1774.60	.09	1277.01	53.00	53.00
9304.000	3500.00	1289.67	1289.68	.97	1568.38	8587.81	167.70	1774.60	.08	1277.01	53.00	53.00
9304.000	4000.00	1290.16	1290.17	.94	1568.40	8587.81	167.70	1774.60	.08	1277.01	53.00	53.00
9304.000	4500.00	1290.65	1290.66	.91	1568.42	8587.81	167.70	1774.60	.07	1277.01	53.00	53.00
9304.000	5000.00	1291.13	1291.14	.89	1568.44	8587.81	167.70	1774.60	.07	1277.01	53.00	53.00
9304.000	5500.00	1291.60	1291.61	.87	1568.46	8587.81	167.70	1774.60	.06	1277.01	53.00	53.00
9304.000	6000.00	1291.98	1291.99	.87	1568.47	8587.81	167.70	1774.60	.06	1277.01	53.00	53.00
9304.000	6500.00	1292.48	1292.49	.85	1568.49	8587.81	167.70	1774.60	.06	1277.01	53.00	53.00
9304.000	7000.00	1292.98	1292.99	.83	1568.51	8587.81	167.70	1774.60	.05	1277.01	53.00	53.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
9504.000	1000.00	1287.09	1287.10	.95	838.42	8787.81	143.90	1726.60	.11	1277.08	53.00	53.00
9504.000	1500.00	1287.64	1287.66	1.04	993.24	8787.81	143.90	1726.60	.11	1277.08	53.00	53.00
9504.000	2000.00	1288.18	1288.19	1.06	1157.57	8787.81	143.90	1726.60	.10	1277.08	53.00	53.00
9504.000	2500.00	1288.69	1288.70	1.05	1291.51	8787.81	143.90	1726.60	.10	1277.08	53.00	53.00
9504.000	3000.00	1289.20	1289.21	1.03	1438.86	8787.81	143.90	1726.60	.09	1277.08	53.00	53.00
9504.000	3500.00	1289.70	1289.71	1.00	1511.45	8787.81	143.90	1726.60	.08	1277.08	53.00	53.00
9504.000	4000.00	1290.18	1290.19	.97	1511.49	8787.81	143.90	1726.60	.08	1277.08	53.00	53.00
9504.000	4500.00	1290.67	1290.68	.94	1511.52	8787.81	143.90	1726.60	.07	1277.08	53.00	53.00
9504.000	5000.00	1291.15	1291.16	.92	1511.56	8787.81	143.90	1726.60	.07	1277.08	53.00	53.00
9504.000	5500.00	1291.62	1291.63	.90	1511.59	8787.81	143.90	1726.60	.06	1277.08	53.00	53.00
9504.000	6000.00	1292.00	1292.01	.91	1511.62	8787.81	143.90	1726.60	.06	1277.08	53.00	53.00
9504.000	6500.00	1292.49	1292.50	.89	1511.65	8787.81	143.90	1726.60	.06	1277.08	53.00	53.00
9504.000	7000.00	1292.99	1293.00	.87	1511.69	8787.81	143.90	1726.60	.06	1277.08	53.00	53.00

SUMMARY OF ERRORS AND SPECIAL NOTES

```
WARNING SECNO=  19095.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  5  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  6  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  7  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  8  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE=  9  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE= 10  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE= 11  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE= 12  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=  19095.000  PROFILE= 13  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  17000.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  5  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  6  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  7  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  8  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE=  9  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE= 10  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE= 11  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE= 11  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE= 12  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE= 12  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  17000.000  PROFILE= 13  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  17000.000  PROFILE= 13  MINIMUM SPECIFIC ENERGY

WARNING SECNO=  16958.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  16861.000  PROFILE= 13  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   1100.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO=   1100.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE=  5  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE=  6  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE=  7  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE=  8  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE=  9  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   1100.000  PROFILE= 10  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4102.000  PROFILE= 10  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4102.000  PROFILE= 11  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4102.000  PROFILE= 12  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4102.000  PROFILE= 13  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   4212.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  2  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  3  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  3  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  4  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  4  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  5  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  5  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  6  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  6  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  7  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  7  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  8  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  8  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE=  9  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  9  MINIMUM SPECIFIC ENERGY
CAUTION SECNO=   4212.000  PROFILE= 10  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE= 10  MINIMUM SPECIFIC ENERGY
WARNING SECNO=   4212.000  PROFILE= 11  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4212.000  PROFILE= 12  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4212.000  PROFILE= 13  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   4318.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  4  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  5  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  6  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  7  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  8  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE=  9  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE= 10  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE= 11  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE= 12  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   4318.000  PROFILE= 13  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

```
WARNING SECNO=   6822.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE=  5  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE=  6  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE=  7  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE=  8  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE=  9  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE= 10  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE= 11  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE= 12  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   6822.000  PROFILE= 13  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   8504.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   8504.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=   8504.000  PROFILE=  3  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

APPENDIX E

Manual Split-Flow Calculations

100-Year, 7-Hour Storm

Appendix E
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 7-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
9504	n/a	6,299 (CP 1987)	4950	1287.45	1349	1287.47	1287.77	1285.65	
9304	n/a	6299	4960	1287.41	1339	1287.41	1287.62	1285.56	Spill to Canal
9104	n/a	6,299	4970	1287.32	1329	1287.33	1287.49	1285.81	
8904	n/a	6,299	4970	1287.26	1329	1287.27	1287.40	1285.60	
8704	n/a	6,299	4970	1287.19	1329	1287.2	1287.89	1284.97	
8504	n/a	6,299	4980	1287.13	1319	1287.14	1287.29	1284.71	Spill to Canal
8304	n/a	6,299	5000	1287.03	1299	1287.05	1287.30	1285.21	Spill to Canal
8104	n/a	6,299	4980	1286.94	1319	1286.95	1287.53	1285.67	Spill to North
7904	n/a	6,299	4970	1286.85	1329	1286.84	1288.40	1286.56	Spill to North
7704	n/a	6,299	4930	1286.73	1369	1286.74	1288.35	1286.55	Spill to North

Appendix E
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 7-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
7504	n/a	6,299	4930	1286.65	1369	1286.59	1288.13	1287.06	Divided Flow
7304	n/a	6,299	4930	1286.56	1369	1286.49	1287.23	1286.89	Divided Flow
7104	n/a	6,299	4910	1286.43	1389	1286.44	1287.12	1286.01	Spill to North
6907	n/a	6,299	4910	1286.35	1389	1286.34	1286.88	1284.94	
6822	n/a	6,299	4910	1286.28	1389	1286.3	1287.09	1284.21	
6706.49	EKA 4318.49	6,299	4860	1286.18	1439	1286.2	1286.85	1283.52	Spill to North
6600.59	EKA 4212.59	6,299	4320	1285.44	1979	1285.44	1286.55	1284.30	Spill to North
6490.21	EKA 4102.21	6,910 (CP 1994)	3754	1284.66	3156	1284.64	1286.03	1284.66	Canal spills North to top of north bank elevation
6388	EKA 4000	6,910	3754	1284.62	3156	1284.45	1286.53	1284.68	Divided Flow
6188	EKA 3800	6,910	3754	1284.54	3156	1284.33	1286.80	1285.04	Divided Flow

Appendix E
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 7-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
5988	EKA 3600	6,910	3754	1284.46	3156	1284.21	1286.60	1284.83	Divided Flow
5788	EKA 3400	6,910	3754	1284.38	3156	1284.09	1286.50	1285.30	Divided Flow
5588	EKA 3200	6,910	3754	1284.3	3156	1283.97	1286.95	1285.65	Divided Flow
5388	EKA 3000	6,910	3754	1284.22	3156	1283.84	1287.00	1285.90	Divided Flow
5188	EKA 2800	6,910	3754	1284.14	3156	1283.7	1287.04	1285.97	Divided Flow
4988	EKA 2600	6,913 (CP 2002)	3754	1284.06	3159	1283.58	1286.43	1285.08	Divided Flow
4788	EKA 2400	6,913	3754	1283.98	3159	1283.43	1286.82	1285.36	Divided Flow
4588	EKA 2200	6,913	3550	1283.65	3363	1283.66	1286.71	1283.00	Spill to North
4388	EKA 2000	6,913	3530	1283.55	3383	1283.55	1286.58	1283.00	Spill to North
4188	EKA 1800	6,913	3500	1283.42	3413	1283.44	1286.77	1282.90	Spill to North

Appendix E
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 7-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
3988	EKA 1600	6,931 (CP 542)	3490	1283.34	3441	1283.34	1286.55	1282.90	Spill to North
3788	EKA 1400	6,931 (CP 546T)	3460	1283.21	3471	1283.22	1286.47	1283.00	Spill to North
3588	EKA 1200	6,931	3440	1283.1	3491	1283.09	1286.36	1282.74	Spill to North
3488	EKA 1100	6,931	3430	1283.03	3501	1283.02	1286.36	1282.39	Spill to North
3444	EKA 1056	6,931	3060	1282.57	3871	1282.58	1286.45	1282.37	Spill to North
3347.09	ADOT 169+58.7	6,931	2900	1282.32	4031	1282.04	1286.58	1282.32	Canal spills North to top of north bank elevation
3305.79	ADOT 170+00	6,931	2900	1282.29	4031	1280.63	1286.56	1282.30	Divided Flow
3105.79	ADOT 172+00	(CP 547)	2900	1282.23			1286.55	1282.50	Divided Flow (see Figure 4.5)
2905.79	ADOT 174+00	(CP 547)	2900	1282.14			1286.55	1283.60	Divided Flow (see Figure 4.5)

APPENDIX F

Manual Split-Flow Calculations

100-Year, 12-Hour Storm

Appendix F
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 12-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
9504	n/a	6,892 (CP 1987)	5,213	1,287.77	1,620	1,287.77	1,287.77	1,285.65	Spill 59 cfs over south bank
9304	n/a	6833	5,129	1,287.62	1,528	1,287.62	1,287.62	1,285.56	Spill 176 cfs over south bank
9104	n/a	6,657	5,107	1,287.49	1,473	1,287.49	1,287.49	1,285.81	Spill 77 cfs over south bank
8904	n/a	6,580	5,082	1,287.40	1,447	1,287.40	1,287.40	1,285.60	Spill 51 cfs over south bank
8704	n/a	6,529	5,082	1,287.33	1,447	1,287.34	1,287.89	1,284.97	
8504	n/a	6,529	5,090	1,287.27	1,439	1,287.28	1,287.29	1,284.71	
8304	n/a	6,529	5,125	1,287.18	1,404	1,287.17	1,287.30	1,285.21	
8104	n/a	6,529	5,100	1,287.09	1,429	1,287.08	1,287.53	1,285.67	
7904	n/a	6,529	5,090	1,287.00	1,439	1,286.98	1,288.40	1,286.56	
7704	n/a	6,529	5,050	1,286.88	1,479	1,286.89	1,288.35	1,286.55	

Appendix F
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 12-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
7504	n/a	6,529	5,050	1,286.80	1,479	1,286.77	1,288.13	1,287.06	Divided Flow
7304	n/a	6,529	5,050	1,286.71	1,479	1,286.68	1,287.23	1,286.89	Divided Flow
7104	n/a	6,529	5,050	1,286.61	1,479	1,286.61	1,287.12	1,286.01	
6907	n/a	6,529	5,050	1,286.53	1,479	1,286.54	1,286.88	1,284.94	
6822	n/a	6,529	5,060	1,286.47	1,469	1,286.48	1,287.09	1,284.21	
6706.49	EKA 4318.49	6,529	5,000	1,286.37	1,529	1,286.38	1,286.85	1,283.52	
6600.59	EKA 4212.59	6,529	4,430	1,285.58	2,099	1,285.58	1,286.55	1,284.30	
6490.21	EKA 4102.21	7,145 (CP 1994)	3,885	1,284.83	3,260	1,284.83	1,286.03	1,284.66	
6388	EKA 4000	7,145	3,830	1,284.72	3,315	1,284.72	1,286.53	1,284.68	
6188	EKA 3800	7,145	3,830	1,284.64	3,315	1,284.60	1,286.80	1,285.04	Divided Flow

Appendix F
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 12-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
5988	EKA 3600	7,145	3,830	1,284.56	3,315	1,284.49	1,286.60	1,284.83	Divided Flow
5788	EKA 3400	7,145	3,830	1,284.47	3,315	1,284.37	1,286.50	1,285.30	Divided Flow
5588	EKA 3200	7,145	3,830	1,284.39	3,315	1,284.24	1,286.95	1,285.65	Divided Flow
5388	EKA 3000	7,145	3,830	1,284.31	3,315	1,284.12	1,287.00	1,285.90	Divided Flow
5188	EKA 2800	7,145	3,830	1,284.23	3,315	1,283.98	1,287.04	1,285.97	Divided Flow
4988	EKA 2600	7,144 (CP 2002)	3,830	1,284.15	3,314	1,283.85	1,286.43	1,285.08	Divided Flow
4788	EKA 2400	7,144	3,830	1,284.07	3,314	1,283.71	1,286.82	1,285.36	Divided Flow
4588	EKA 2200	7,144	3,685	1,283.82	3,459	1,283.83	1,286.71	1,283.00	Spill to North
4388	EKA 2000	7,144	3,670	1,283.72	3,474	1,283.71	1,286.58	1,283.00	Spill to North
4188	EKA 1800	7,144	3,640	1,283.60	3,504	1,283.61	1,286.77	1,282.90	Spill to North

Appendix F
Calculation Sheet For Manual Split-Flow Analysis
Arizona Canal Drainage Channel, 100-Year, 12-Hour Storm
Pima Road to Longmore Road

Arizona Canal Station	ADOT/EKA Channel Station	Total Flow Reaching This Point (cfs)	Flow Distribution				Maximum Canal Bank Elevation (ft, MSL)		Comments
			Canal		Channel/Overbank				
			Discharge (cfs)	Elevation (ft, MSL)	Discharge (cfs)	Elevation (ft, MSL)	South Side	North Side	
3988	EKA 1600	7,156 (CP 542)	3,620	1,283.50	3,536	1,283.51	1,286.55	1,282.90	Spill to North
3788	EKA 1400	7,157 (CP 546T)	3,600	1,283.38	3,557	1,283.38	1,286.47	1,283.00	Spill to North
3588	EKA 1200	7,157	3,570	1,283.26	3,587	1,283.27	1,286.36	1,282.74	Spill to North
3488	EKA 1100	7,157	3,570	1,283.20	3,587	1,283.18	1,286.36	1,282.39	
3444	EKA 1056	7,157	3,200	1,282.74	3,957	1,282.74	1,286.45	1,282.37	Spill to North
3347.09	ADOT 169+58.7	7,157	2,915	1,282.34	4,242	1,282.34	1,286.58	1,282.32	Spill to North
3305.79	ADOT 170+00	7,157	2,905	1,282.30	4,252	1,280.88	1,286.56	1,282.30	Canal spills north to top of north bank elevation
3105.79	ADOT 172+00		2,905	1,282.24			1,286.55	1,282.50	Divided Flow (see Figure 4.5)
2905.79	ADOT 174+00		2,905	1,282.15			1,286.55	1,283.60	Divided Flow (see Figure 4.5)

APPENDIX G

HEC-1 Output Summary

File: PF4A

100-Year, 7-Hour Storm

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN 09 1992               *
*           VERSION 4.0.3E             *
*                                      *
*  RUN DATE  09/16/98  TIME  20:23:45  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
****************************************
```

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

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID      ************************************************************
  2           ID      *                                                          *
  3           ID      *                    ROBERT L. WARD, P.E.                  *
  4           ID      *                    CONSULTING ENGINEER                   *
  5           ID      *                                                          *
  6           ID      *                       PIMA FREEWAY                       *
  7           ID      *                (NORTH OF THE ARIZONA CANAL)              *
  8           ID      *                                                          *
  9           ID      *      SCOTTSDALE PAVILIONS & PIMA FREEWAY ARE IN-PLACE    *
 10           ID      *                                                          *
 11           ID      *          HYDROLOGY ANALYSIS FOR OFFSITE DRAINAGE         *
 12           ID      *                     100 YEAR EVENT                       *
 13           ID      *          7 HOUR COE QUEEN CREEK STORM DISTRIBUTION       *
 14           ID      *                       ARF=0.948                          *
 15           ID      *                                                          *
 16           ID      *      USES % IMPERVIOUS COVER TO SIMULATE DEVELOPMENT     *
 17           ID      *          INCLUDES RETENTION/DETENTION BASINS FOR         *
 18           ID      *               RESIDENTIAL & COMMERCIAL AREAS             *
 19           ID      *                                                          *
 20           ID      *                                                          *
 21           ID      *          THIS MODEL INCLUDES THE ADDITIONAL AREA         *
 22           ID      *        PREVIOUSLY MODELED BY THE CORP OF ENGINEERS       *
 23           ID      *                                                          *
 24           ID      *  SEE SECTION 4.3.4 OF THE MAY 1989 SLA FINAL HYDROLOGY RPT, *
 25           ID      *  OUTER LOOP HWY, CAMELBACK WALK CHANNEL TO ARIZONA CANAL,  *
 26           ID      *  FOR DISCUSSION ON ONSITE RETENTION/DETENTION ASSUMPTIONS  *
 27           ID      *                                                          *
 28           ID      *                                                          *
 29           ID      *     ALL CURVE NUMBERS ARE FOR 24-HOUR STORM DURATION     *
 30           ID      *     NORMAL DEPTH STORAGE ROUTING ALONG ARIZONA CANAL     *
 31           ID      *       INCLUDES CAP CROSS-DRAINAGE AT EAST BOUNDARY       *
 32           ID      *  BASE MODEL USES APRIL 1989 HYDROLOGIC REVISIONS BY R. WARD *
 33           ID      *  MARCH 1989 HIGHWAY ALIGNMENT HAS BEEN REVISED TO MID 1989 *
 34           ID      *                    HIGHWAY ALIGNMENT.                    *
 35           ID      *                                                          *
 36           ID      *                       MODEL PF4A.7I                      *
 37           ID      *                  (Base Model Was OL1L.12I)               *
 38           ID      *                                                          *
 39           ID      *      THIS MODEL SIMULATES THE IMPACT TO THE PIMA FWY     *
 40           ID      *      OF A NORTH/SOUTH CHANNEL ALONG AN EXTENSION OF      *
 41           ID      *      96th STREET FROM THE NORTH BOUNDARY OF THE SRPMIC   *
 42           ID      *      TO THE ARIZONA CANAL.                               *
 43           ID      *      THIS MODEL ALSO SIMULATES THE IMPACT OF THE PROPOSED *
 44           ID      *      EVANS-KUHN CHANNEL ALONG THE NORTH BANK OF THE ARIZONA*
 45           ID      *      CANAL BETWEEN 96th ST & THE PIMA FREEWAY            *
 46           ID      *                                                          *
 47           ID      *  DAM 1 ROUTING SEQUENCE HAS BEEN CORRECTED ON 7/29/96 TO *
 48           ID      *  ONLY DETAIN RUNOFF FROM SUB-BASINS 185 & 195.           *
 49           ID      *                                                          *
 50           ID      *  ADOT BERM HAS BEEN REMOVED & THE EVANS-KUHN CHANNEL HAS *
 51           ID      *  BEEN CONNECTED DIRECTLY TO THE ADOT CHANNEL             *
 52           ID      *                                                          *
 53           ID      *  DIVERT HAS BEEN ADDED AT CP 1987 TO REFLECT MANUAL      *
 54           ID      *  SPLIT-FLOW CALCULATIONS.  MAXIMUM CANAL & OVERBANK      *
 55           ID      *  CAPACITY AT THIS LOCATION ID 6,529 cfs.                 *
```

```
      LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

        56          ID        *                                                        *
        57          ID        *   SEPARATE CHANNEL & CANAL ROUTING OPERATIONS BEGIN AT  *
        58          ID        *   CP 546T TO REFLECT SPLIT-FLOW CALCULATIONS.           *
        59          ID        *   CANAL "n"=.021                                        *
        60          ID        *   DIVERT AT 545E HAS BEEN CHANGED TO PUT 50% TO NORTH-SOUTH *
        61          ID        *   ADOT CHANNEL & 50% TO CP 546T.                        *
        62          ID        *                                                        *
        63          ID        *   13 DETENTION BASINS HAVE BEEN REMOVED THAT WERE ADJACENT *
        64          ID        *   TO THE OUTER LOOP.  MODIFIED PULS CHANNEL ROUTING     *
        65          ID        *   OPERATIONS ARE USED IN-PLACE OF THE BASINS.           *
        66          ID        *   CHANNEL GEOMETRY IS BASED ON AVERAGED, APPROXIMATE XSEC *
        67          ID        *   GEOMETRY USED BY MKE FOR FINAL DESIGN                 *
        68          ID        *                                                        *
        69          ID        *                CP 103 IS ROUTED TO SUB 360.            *
        70          ID        *  ALL SUB-BASIN DATA & ROUTING OPERATIONS HAVE BEEN REVISED *
        71          ID        *  TO REFLECT THE HIGHWAY ALIGNMENT CHANGE MADE BY DCCO IN *
        72          ID        *  MID-1989.   ADDITIONAL ONSITE DRAINAGE HAS BEEN ROUTED *
        73          ID        *THROUGH 12,365' OF PIPE AND INSERTED IN THE MODEL AT CP 503B *
        74          ID        *     WHICH IS AT THE NORTH SIDE OF VIA DE VENTURA        *
        75          ID        *                                                        *
        76          ID        * NORTH-SOUTH CHANNEL ROUTING OPERATIONS ARE REFERENCED TO *
        77          ID        * OUTER LOOP HIGHWAY STATIONING FROM THE HIGHWAY GENERAL PLAN *
        78          ID        *                                                        *
        79          ID        * NORTH-SOUTH DRAINAGE CHANNEL GEOMETRY HAS BEEN REVISED TO *
        80          ID        * REFLECT MKE FINAL DESIGN (SOIL-CEMENT)                 *
        81          ID        *                                                        *
        82          ID        * CITY OF SCOTTSDALE HEC-1 MODELS HAVE BEEN INSERTED FOR *
        83          ID        * STONEGATE & FOR THE AREA CAPTURED BY SCOTTSDALE RANCH LAKE. *
        84          ID        *                                                        *
        85          ID        * HEC-1 MODELS FOR CAP CACTUS ROAD DETENTION BASIN AND THE *
        86          ID        * TWO CAP PIPE OVERCHUTES SOUTH OF SHEA BLVD ARE INCLUDED IN *
        87          ID        * THE FORM OF HYDROGRAPHS WHICH ARE INPUT ON QI RECORDS.  *
        88          ID        ************************************************************
        89          IT       5 14JUN96       0     300
        90          IO       5
*** NOLIST ***

 90 IO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT           HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE     14JUN96  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     15JUN96  ENDING DATE
                     NDTIME       0055  ENDING TIME
                      ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

        ENGLISH UNITS
            DRAINAGE AREA        SQUARE MILES
```

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	165	20.	5.08	4.	1.	1.	0.01		
ROUTED TO	156	20.	5.17	4.	1.	1.	0.01		
HYDROGRAPH AT	284310	27.	5.08	5.	1.	1.	0.02		
ROUTED TO	284310	0.	5.08	0.	0.	0.	0.02	4.10	12.17
ROUTED TO	284320	0.	6.92	0.	0.	0.	0.02		
HYDROGRAPH AT	4320A	90.	5.08	17.	4.	4.	0.06		
2 COMBINED AT	284320	90.	5.08	17.	4.	4.	0.08		
HYDROGRAPH AT	160	123.	5.17	24.	6.	6.	0.10		
ROUTED TO	161	122.	5.17	24.	6.	6.	0.10		
HYDROGRAPH AT	155	37.	5.08	8.	2.	2.	0.03		
3 COMBINED AT	157	178.	5.17	36.	9.	9.	0.14		
ROUTED TO	151	178.	5.17	36.	9.	9.	0.14		
HYDROGRAPH AT	150	62.	5.08	13.	3.	3.	0.04		
HYDROGRAPH AT	150A	28.	5.17	6.	1.	1.	0.02		
ROUTED TO	151.1	27.	5.25	6.	1.	1.	0.02		
3 COMBINED AT	152	267.	5.17	54.	14.	14.	0.20		
ROUTED TO	121	262.	5.17	54.	14.	14.	0.20		
HYDROGRAPH AT	70	8.	5.33	1.	0.	0.	0.01		
ROUTED TO	122	8.	5.33	1.	0.	0.	0.01		
HYDROGRAPH AT	120	21.	5.17	4.	1.	1.	0.01		
3 COMBINED AT	123	288.	5.17	60.	16.	15.	0.23		
HYDROGRAPH AT	75	290.	5.25	61.	16.	15.	0.23		
ROUTED TO	DAM75	290.	5.25	61.	16.	15.	0.23	102.39	5.25
HYDROGRAPH AT	85	293.	5.25	62.	16.	15.	0.23		
ROUTED TO	DAM85	292.	5.25	61.	16.	15.	0.23	102.39	5.25
HYDROGRAPH AT	80	10.	5.00	2.	1.	0.	0.01		

ROUTED TO	DAM80	10.	5.08	2.	0.	0.	0.01	102.04	5.08
ROUTED TO	87	10.	5.08	2.	0.	0.	0.01		
2 COMBINED AT	88	301.	5.25	63.	16.	16.	0.24		
ROUTED TO	96	299.	5.25	63.	16.	16.	0.24		
HYDROGRAPH AT	95	19.	5.17	4.	1.	1.	0.01		
2 COMBINED AT	97	317.	5.25	67.	17.	17.	0.25		
ROUTED TO	91	314.	5.25	67.	17.	17.	0.25		
HYDROGRAPH AT	90	19.	5.17	4.	1.	1.	0.02		
2 COMBINED AT	92	332.	5.25	71.	18.	18.	0.27		
HYDROGRAPH AT	110	24.	5.08	5.	1.	1.	0.02		
ROUTED TO	101	24.	5.17	5.	1.	1.	0.02		
HYDROGRAPH AT	100	48.	5.08	10.	2.	2.	0.00		
ROUTED TO	DAM100	48.	5.08	9.	2.	2.	0.00	102.11	5.08
3 COMBINED AT	102	394.	5.25	85.	22.	21.	0.29		
ROUTED TO	103	394.	5.25	85.	22.	21.	0.29		
DIVERSION TO	103B	0.	5.25	0.	0.	0.	0.29		
HYDROGRAPH AT	103A	394.	5.25	85.	22.	21.	0.29		
ROUTED TO	361	386.	5.25	85.	22.	21.	0.29	2.97	5.25
HYDROGRAPH AT	360	12.	5.83	3.	1.	1.	0.03		
2 COMBINED AT	362	393.	5.33	88.	23.	22.	0.32		
ROUTED TO	411	394.	5.33	88.	23.	22.	0.32	3.02	5.33
ROUTED TO	410B	395.	5.33	88.	23.	22.	0.32	3.02	5.33
HYDROGRAPH AT	410	22.	5.33	4.	1.	1.	0.03		
ROUTED TO	410A	22.	5.33	4.	1.	1.	0.03	0.24	5.33
2 COMBINED AT	410C	417.	5.33	92.	24.	23.	0.35		
ROUTED TO	421	411.	5.33	92.	24.	23.	0.35	3.04	5.33
HYDROGRAPH AT	140	37.	5.17	8.	2.	2.	0.03		
ROUTED TO	DAM140	38.	5.17	6.	2.	2.	0.03	102.10	5.17
HYDROGRAPH AT	130	79.	5.17	15.	4.	4.	0.06		
HYDROGRAPH AT	420	96.	5.33	25.	7.	6.	0.14		

ROUTED TO	420A	95.	5.33	25.	7.	6.	0.14	1.25	5.33
2 COMBINED AT	423	506.	5.33	116.	31.	29.	0.49		
ROUTED TO	401	505.	5.42	116.	31.	29.	0.49	3.37	5.42
HYDROGRAPH AT	240	66.	5.17	12.	3.	3.	0.06		
ROUTED TO	246	65.	5.25	12.	3.	3.	0.06		
HYDROGRAPH AT	245	25.	5.17	5.	1.	1.	0.02		
2 COMBINED AT	247	89.	5.17	17.	4.	4.	0.09		
ROUTED TO	248	89.	5.25	17.	4.	4.	0.09		
HYDROGRAPH AT	284010	133.	5.17	26.	7.	6.	0.09		
HYDROGRAPH AT	255	31.	5.17	6.	2.	1.	0.03		
ROUTED TO	236	31.	5.25	6.	2.	1.	0.03		
HYDROGRAPH AT	235	15.	5.17	3.	1.	1.	0.01		
2 COMBINED AT	237	44.	5.25	9.	2.	2.	0.04		
ROUTED TO	181	44.	5.33	9.	2.	2.	0.04		
3 COMBINED AT	182	258.	5.17	52.	13.	13.	0.22		
ROUTED TO	191	257.	5.25	52.	13.	13.	0.22		
HYDROGRAPH AT	195	62.	5.00	12.	3.	3.	0.04		
ROUTED TO	186	62.	5.08	12.	3.	3.	0.04		
HYDROGRAPH AT	185	38.	5.00	7.	2.	2.	0.02		
2 COMBINED AT	187	99.	5.08	19.	5.	5.	0.06		
ROUTED TO	188	97.	5.08	19.	5.	5.	0.06		
ROUTED TO	DAM1	0.	0.00	0.	0.	0.	0.06	101.75	15.17
2 COMBINED AT	189	257.	5.25	52.	13.	13.	0.28		
HYDROGRAPH AT	190	13.	6.00	4.	1.	1.	0.03		
2 COMBINED AT	192	262.	5.25	55.	14.	14.	0.32		
ROUTED TO	211	258.	5.25	55.	14.	14.	0.32		
HYDROGRAPH AT	210	26.	5.17	5.	1.	1.	0.02		
2 COMBINED AT	212	282.	5.25	60.	16.	15.	0.34		
DIVERSION TO	429	282.	0.00	60.	16.	15.	0.34		
HYDROGRAPH AT	213	0.	0.00	0.	0.	0.	0.34		

HYDROGRAPH AT	405	10.	5.33	2.	0.	0.	0.35		
HYDROGRAPH AT	200	33.	5.33	6.	2.	2.	0.04		
ROUTED TO	DAM200	33.	5.33	6.	2.	1.	0.04	102.09	5.33
HYDROGRAPH AT	415	37.	5.33	7.	2.	2.	0.05		
HYDROGRAPH AT	135	34.	5.17	8.	2.	2.	0.03		
HYDROGRAPH AT	425	43.	5.25	9.	2.	2.	0.04		
3 COMBINED AT	426	87.	5.25	17.	5.	4.	0.44		
HYDROGRAPH AT	400	133.	5.50	32.	8.	8.	0.54		
ROUTED TO	400A	133.	5.50	32.	8.	8.	0.54	1.64	5.50
2 COMBINED AT	402	635.	5.42	148.	39.	38.	1.02		
ROUTED TO	431	625.	5.50	148.	39.	38.	1.02	3.71	5.50
HYDROGRAPH AT	430C	69.	5.50	16.	4.	4.	0.10		
2 COMBINED AT	432	694.	5.50	164.	43.	42.	1.12		
ROUTED TO	433	692.	5.50	164.	43.	42.	1.12	3.71	5.50
HYDROGRAPH AT	430A	62.	5.50	13.	3.	3.	0.08		
HYDROGRAPH AT	440A	41.	5.75	12.	3.	3.	0.07		
3 COMBINED AT	441	790.	5.50	188.	50.	48.	1.26		
ROUTED TO	501	790.	5.50	188.	50.	48.	1.26	3.99	5.50
HYDROGRAPH AT	500A	21.	5.50	5.	1.	1.	0.03		
HYDROGRAPH AT	503A	125.	6.67	15.	6.	6.	0.00		
ROUTED TO	503B	125.	6.92	15.	6.	6.	0.00		
3 COMBINED AT	503C	811.	5.50	206.	57.	55.	1.30		
ROUTED TO	500B1	811.	5.50	206.	57.	55.	1.30	2.36	5.50
HYDROGRAPH AT	500B	13.	5.42	3.	1.	1.	0.02		
2 COMBINED AT	500B2	824.	5.50	209.	58.	55.	1.31		
ROUTED TO	560A1	820.	5.50	209.	58.	55.	1.31	2.03	5.50
HYDROGRAPH AT	560A	16.	5.25	3.	1.	1.	0.02		
2 COMBINED AT	560A2	833.	5.50	212.	58.	56.	1.33		
ROUTED TO	560B1	834.	5.58	212.	58.	56.	1.33	3.40	5.58
HYDROGRAPH AT	560B	16.	5.33	3.	1.	1.	0.02		

2 COMBINED AT	560B2	848.	5.58	215.	59.	57.	1.36		
ROUTED TO	560C1	847.	5.58	215.	59.	57.	1.36	3.42	5.58
HYDROGRAPH AT	560C	25.	5.50	5.	1.	1.	0.04		
2 COMBINED AT	560C2	871.	5.58	221.	60.	58.	1.40		
ROUTED TO	551	856.	5.67	221.	60.	58.	1.40	3.44	5.67
HYDROGRAPH AT	495A	20.	5.42	4.	1.	1.	0.03		
HYDROGRAPH AT	550A	110.	5.83	30.	8.	8.	0.18		
2 COMBINED AT	552	961.	5.67	251.	68.	66.	1.58		
HYDROGRAPH AT	540A	49.	5.58	12.	3.	3.	0.07		
2 COMBINED AT	540A1	1008.	5.67	263.	72.	69.	1.65		
ROUTED TO	545A1	1010.	5.67	263.	72.	69.	1.65	3.63	5.67
HYDROGRAPH AT	545A	9.	5.17	2.	0.	0.	0.01		
2 COMBINED AT	545A2	1014.	5.67	264.	72.	69.	1.66		
ROUTED TO	545B1	1017.	5.67	264.	72.	69.	1.66	4.07	5.67
HYDROGRAPH AT	545B	10.	5.25	2.	0.	0.	0.01		
2 COMBINED AT	545B2	1022.	5.67	266.	72.	70.	1.67		
ROUTED TO	545C1	1019.	5.67	266.	72.	70.	1.67	4.07	5.67
HYDROGRAPH AT	545C	10.	5.33	2.	1.	1.	0.01		
2 COMBINED AT	545C2	1026.	5.67	268.	73.	70.	1.68		
ROUTED TO	545D1	1021.	5.75	268.	73.	70.	1.68	3.84	5.75
HYDROGRAPH AT	545D	24.	5.42	5.	1.	1.	0.03		
2 COMBINED AT	545D2	1039.	5.75	274.	74.	72.	1.71		
ROUTED TO	545E1	1040.	5.75	274.	74.	72.	1.71	3.88	5.75
HYDROGRAPH AT	545E	25.	5.50	6.	2.	1.	0.03		
DIVERSION TO	545EDV	12.	5.50	3.	1.	1.	0.03		
HYDROGRAPH AT	545EW	12.	5.50	3.	1.	1.	0.03		
2 COMBINED AT	545E2	1050.	5.75	277.	75.	72.	1.74		
HYDROGRAPH AT	1270	9.	6.83	4.	1.	1.	0.03		
HYDROGRAPH AT	1280	18.	6.92	8.	2.	2.	0.06		
HYDROGRAPH AT	1350	27.	6.92	12.	3.	3.	0.09		

HYDROGRAPH AT	1360	36.	6.92	16.	5.	4.	0.12
HYDROGRAPH AT	1440	44.	7.00	20.	6.	5.	0.15
HYDROGRAPH AT	1450	53.	7.00	25.	7.	7.	0.18
HYDROGRAPH AT	1520	61.	7.00	29.	8.	8.	0.22
HYDROGRAPH AT	1530	69.	7.08	33.	9.	9.	0.25
HYDROGRAPH AT	1600	86.	7.08	40.	11.	11.	0.31
ROUTED TO	1591	85.	7.25	40.	11.	11.	0.31
HYDROGRAPH AT	1260	9.	6.92	4.	1.	1.	0.03
HYDROGRAPH AT	1290	18.	7.00	9.	2.	2.	0.06
HYDROGRAPH AT	1340	27.	7.00	13.	4.	3.	0.10
HYDROGRAPH AT	1370	36.	7.00	17.	5.	5.	0.13
HYDROGRAPH AT	1430	45.	7.00	21.	6.	6.	0.16
HYDROGRAPH AT	1460	53.	7.08	25.	7.	7.	0.19
HYDROGRAPH AT	1510	62.	7.08	29.	8.	8.	0.22
HYDROGRAPH AT	1540	70.	7.08	34.	9.	9.	0.26
HYDROGRAPH AT	1590	87.	7.17	42.	12.	11.	0.32
2 COMBINED AT	1592	172.	7.25	82.	23.	22.	0.63
ROUTED TO	1581	171.	7.33	82.	23.	22.	0.63
HYDROGRAPH AT	1250	9.	6.83	4.	1.	1.	0.03
HYDROGRAPH AT	1300	18.	6.83	8.	2.	2.	0.06
HYDROGRAPH AT	1330	27.	6.92	12.	3.	3.	0.09
HYDROGRAPH AT	1380	35.	6.92	16.	4.	4.	0.12
HYDROGRAPH AT	1420	44.	6.92	20.	6.	5.	0.15
HYDROGRAPH AT	1470	52.	7.00	24.	7.	6.	0.18
HYDROGRAPH AT	1500	61.	7.00	28.	8.	8.	0.21
HYDROGRAPH AT	1550	69.	7.00	32.	9.	9.	0.24
HYDROGRAPH AT	1580	85.	7.00	40.	11.	11.	0.30
2 COMBINED AT	1582	252.	7.25	121.	34.	33.	0.93
ROUTED TO	1571	252.	7.33	121.	34.	33.	0.93
HYDROGRAPH AT	1240	9.	6.83	4.	1.	1.	0.03

HYDROGRAPH AT	1310	18.	6.83	8.	2.	2.	0.06		
HYDROGRAPH AT	1320	28.	6.83	13.	4.	3.	0.09		
HYDROGRAPH AT	1400	29.	6.83	14.	4.	4.	0.10		
HYDROGRAPH AT	1390	8.	6.50	3.	1.	1.	0.02		
ROUTED TO	1391	8.	6.58	3.	1.	1.	0.02		
2 COMBINED AT	1392	37.	6.75	17.	5.	5.	0.13		
HYDROGRAPH AT	1410	46.	6.75	22.	6.	6.	0.16		
HYDROGRAPH AT	1480	55.	6.83	26.	7.	7.	0.19		
HYDROGRAPH AT	1490	64.	6.83	30.	8.	8.	0.22		
HYDROGRAPH AT	1560	73.	6.83	34.	9.	9.	0.25		
HYDROGRAPH AT	1570	92.	6.92	43.	12.	11.	0.31		
2 COMBINED AT	1572	331.	7.17	161.	46.	44.	1.25		
ROUTED TO	1611	331.	7.25	161.	46.	44.	1.25		
HYDROGRAPH AT	1610	67.	7.17	32.	9.	9.	0.25		
2 COMBINED AT	1612	398.	7.25	194.	55.	53.	1.50		
ROUTED TO	1621	398.	7.25	194.	55.	53.	1.50		
HYDROGRAPH AT	1620	77.	7.08	36.	10.	10.	0.25		
HYDROGRAPH AT	1630	48.	6.42	18.	5.	5.	0.11		
HYDROGRAPH AT	1640	54.	6.75	23.	6.	6.	0.14		
3 COMBINED AT	1622	521.	7.17	252.	72.	69.	1.89		
ROUTED TO	1887	412.	8.00	232.	71.	69.	1.89	387.24	8.00
HYDROGRAPH AT	1950	14.	6.50	6.	2.	1.	0.04		
HYDROGRAPH AT	1945	27.	6.83	12.	3.	3.	0.08		
ROUTED TO	1951	27.	6.92	12.	3.	3.	0.08		
2 COMBINED AT	1952	40.	6.75	18.	5.	5.	0.12		
HYDROGRAPH AT	1940	85.	6.67	38.	11.	10.	0.24		
HYDROGRAPH AT	1920	80.	6.75	34.	10.	9.	0.20		
ROUTED TO	1941	80.	6.83	34.	10.	9.	0.20		
2 COMBINED AT	1942	164.	6.75	73.	20.	19.	0.43		
HYDROGRAPH AT	1925	189.	6.83	84.	23.	23.	0.50		

HYDROGRAPH AT	1930	209.	7.08	96.	27.	26.	0.57		
HYDROGRAPH AT	1910	55.	6.75	24.	7.	6.	0.14		
HYDROGRAPH AT	1900	102.	6.75	46.	13.	12.	0.27		
HYDROGRAPH AT	1890	137.	6.92	63.	18.	17.	0.36		
ROUTED TO	1931	137.	6.92	63.	18.	17.	0.36		
2 COMBINED AT	1932	345.	7.00	159.	45.	43.	0.93		
HYDROGRAPH AT	1885	361.	7.25	169.	48.	46.	1.00		
HYDROGRAPH AT	1850	58.	6.67	25.	7.	7.	0.14		
HYDROGRAPH AT	1860	104.	6.75	46.	13.	12.	0.26		
HYDROGRAPH AT	1870	167.	7.08	78.	22.	21.	0.44		
ROUTED TO	1886	167.	7.08	78.	22.	21.	0.44		
HYDROGRAPH AT	1880	26.	6.42	10.	3.	3.	0.05		
4 COMBINED AT	1888	890.	7.50	483.	144.	139.	3.38		
ROUTED TO	1984	888.	7.67	482.	144.	139.	3.38	388.56	7.67
HYDROGRAPH AT	1840	12.	6.83	6.	2.	1.	0.03		
HYDROGRAPH AT	1670	28.	6.42	11.	3.	3.	0.08		
ROUTED TO	1681	28.	6.58	11.	3.	3.	0.08		
HYDROGRAPH AT	1680	28.	6.42	11.	3.	3.	0.08		
2 COMBINED AT	1682	56.	6.50	21.	6.	5.	0.15		
ROUTED TO	1751	56.	6.58	21.	6.	5.	0.15		
HYDROGRAPH AT	1226	437.	5.00	357.	133.	129.	0.00		
DIVERSION TO	1228	371.	5.00	304.	113.	110.	0.00		
HYDROGRAPH AT	1227	66.	5.00	54.	20.	19.	0.00		
HYDROGRAPH AT	1225	128.	5.17	64.	23.	22.	0.08		
HYDROGRAPH AT	1230	502.	5.50	146.	43.	42.	0.72		
ROUTED TO	1221	499.	5.67	146.	43.	42.	0.72		
HYDROGRAPH AT	310510	5.	5.33	1.	0.	0.	0.01		
HYDROGRAPH AT	1217A	558.	5.25	96.	24.	23.	0.74		
HYDROGRAPH AT	1220	959.	5.50	181.	46.	44.	1.41		
ROUTED TO	1222	935.	5.58	181.	46.	44.	1.41		

2 COMBINED AT	1223	1428.	5.58	326.	89.	85.	2.13
HYDROGRAPH AT	1750	1422.	5.75	336.	91.	88.	2.20
2 COMBINED AT	1752	1438.	5.75	357.	97.	93.	2.36
ROUTED TO	1761	1418.	5.83	357.	97.	93.	2.36
HYDROGRAPH AT	1760	22.	6.17	7.	2.	2.	0.05
2 COMBINED AT	1762	1434.	5.83	364.	99.	95.	2.41
ROUTED TO	1771	1428.	5.83	364.	99.	95.	2.41
HYDROGRAPH AT	1770	17.	6.08	5.	1.	1.	0.04
2 COMBINED AT	1772	1442.	5.83	370.	100.	97.	2.44
ROUTED TO	1841	1416.	5.92	369.	100.	96.	2.44
2 COMBINED AT	1842	1425.	5.92	375.	102.	98.	2.47
HYDROGRAPH AT	1830	1477.	6.00	395.	107.	103.	2.59
HYDROGRAPH AT	1660	31.	6.58	12.	3.	3.	0.09
ROUTED TO	1691	31.	6.75	12.	3.	3.	0.09
HYDROGRAPH AT	1690	31.	6.58	13.	3.	3.	0.09
2 COMBINED AT	1692	62.	6.67	25.	7.	7.	0.18
ROUTED TO	1741	62.	6.83	25.	7.	7.	0.18
HYDROGRAPH AT	1740	31.	6.58	13.	3.	3.	0.09
2 COMBINED AT	1742	92.	6.75	37.	10.	10.	0.27
ROUTED TO	1781	92.	6.92	37.	10.	10.	0.27
HYDROGRAPH AT	1780	37.	6.42	14.	4.	4.	0.09
2 COMBINED AT	1782	125.	6.75	51.	14.	13.	0.36
ROUTED TO	1831	125.	6.92	51.	14.	13.	0.36
2 COMBINED AT	1832	1512.	6.00	445.	121.	117.	2.95
HYDROGRAPH AT	1820	1538.	6.08	463.	126.	122.	3.06
HYDROGRAPH AT	1650	31.	6.58	12.	3.	3.	0.09
ROUTED TO	1701	31.	6.75	12.	3.	3.	0.09
HYDROGRAPH AT	1700	31.	6.58	13.	3.	3.	0.09
2 COMBINED AT	1702	62.	6.67	25.	7.	7.	0.18
ROUTED TO	1731	62.	6.83	25.	7.	7.	0.18

HYDROGRAPH AT	1730	31.	6.58	13.	3.	3.	0.09
2 COMBINED AT	1732	92.	6.75	37.	10.	10.	0.27
ROUTED TO	1791	92.	6.92	37.	10.	10.	0.27
HYDROGRAPH AT	1790	35.	6.50	14.	4.	4.	0.09
2 COMBINED AT	1792	123.	6.75	51.	14.	13.	0.36
ROUTED TO	1822	123.	6.92	51.	14.	13.	0.36
2 COMBINED AT	1823	1581.	6.08	513.	140.	135.	3.43
HYDROGRAPH AT	1810	1626.	6.08	534.	146.	140.	3.54
HYDROGRAPH AT	1210	490.	5.67	118.	30.	29.	0.93
ROUTED TO	1201	487.	5.83	118.	30.	29.	0.93
HYDROGRAPH AT	310210	25.	5.42	6.	2.	1.	0.04
HYDROGRAPH AT	310220	14.	5.33	3.	1.	1.	0.02
2 COMBINED AT	310220	39.	5.33	9.	2.	2.	0.06
HYDROGRAPH AT	310310	20.	5.33	5.	1.	1.	0.03
HYDROGRAPH AT	310410	4.	5.33	1.	0.	0.	0.01
3 COMBINED AT	31B	63.	5.33	14.	4.	4.	0.09
HYDROGRAPH AT	1204A	612.	5.25	117.	29.	28.	0.74
HYDROGRAPH AT	1200	900.	5.67	188.	47.	46.	1.31
2 COMBINED AT	1202	1331.	5.67	306.	78.	75.	2.24
ROUTED TO	1191	1330.	5.75	305.	78.	75.	2.24
HYDROGRAPH AT	300010	15.	5.33	3.	1.	1.	0.02
HYDROGRAPH AT	310010	31.	5.33	7.	2.	2.	0.05
HYDROGRAPH AT	310110	16.	5.33	4.	1.	1.	0.02
ROUTED TO	310120	15.	5.33	4.	1.	1.	0.02
ROUTED TO	310130	15.	5.42	4.	1.	1.	0.02
HYDROGRAPH AT	310130	21.	5.33	5.	1.	1.	0.03
2 COMBINED AT	310130	36.	5.33	8.	2.	2.	0.05
3 COMBINED AT	31A	82.	5.33	19.	5.	5.	0.12
HYDROGRAPH AT	1187A	217.	5.33	47.	12.	11.	0.33
HYDROGRAPH AT	1190	575.	5.83	138.	35.	34.	1.05

2 COMBINED AT	1192	1889.	5.83	443.	113.	109.	3.29		
ROUTED TO	1181	1870.	5.83	443.	113.	109.	3.29		
HYDROGRAPH AT	2530B	98.	5.17	17.	4.	4.	0.10		
ROUTED TO	1173	24.	6.17	19.	13.	13.	0.10	1500.13	6.17
ROUTED TO	300720	24.	6.25	20.	14.	14.	0.10		
HYDROGRAPH AT	300720	17.	5.33	4.	1.	1.	0.03		
2 COMBINED AT	300720	40.	5.33	24.	15.	15.	0.13		
ROUTED TO	300730	40.	5.42	24.	16.	16.	0.13		
HYDROGRAPH AT	300730	14.	5.33	3.	1.	1.	0.02		
2 COMBINED AT	300730	53.	5.42	27.	17.	16.	0.15		
ROUTED TO	300740	53.	5.42	27.	17.	17.	0.15		
HYDROGRAPH AT	300740	51.	5.08	11.	3.	3.	0.04		
2 COMBINED AT	300740	95.	5.25	37.	19.	19.	0.19		
HYDROGRAPH AT	300810	47.	5.33	11.	3.	3.	0.07		
ROUTED TO	300740	47.	5.42	11.	3.	3.	0.07		
2 COMBINED AT	300740	138.	5.33	48.	22.	22.	0.26		
ROUTED TO	300750	137.	5.33	48.	22.	22.	0.26		
HYDROGRAPH AT	300750	30.	5.08	6.	2.	1.	0.02		
2 COMBINED AT	300750	160.	5.33	54.	24.	23.	0.28		
HYDROGRAPH AT	300910	16.	5.33	4.	1.	1.	0.02		
ROUTED TO	300750	16.	5.50	4.	1.	1.	0.02		
2 COMBINED AT	300750	173.	5.33	57.	25.	24.	0.30		
ROUTED TO	300760	172.	5.42	57.	25.	24.	0.30		
HYDROGRAPH AT	300760	63.	5.08	13.	3.	3.	0.05		
2 COMBINED AT	300760	221.	5.25	70.	28.	27.	0.35		
ROUTED TO	300770	221.	5.33	70.	28.	27.	0.35		
HYDROGRAPH AT	300770	22.	5.25	5.	1.	1.	0.03		
2 COMBINED AT	300770	243.	5.33	74.	29.	29.	0.38		
HYDROGRAPH AT	301010	30.	5.33	7.	2.	2.	0.05		
ROUTED TO	301020	30.	5.42	7.	2.	2.	0.05		

ROUTED TO	301030	30.	5.42	7.	2.	2.	0.05		
HYDROGRAPH AT	301030	16.	5.42	4.	1.	1.	0.02		
2 COMBINED AT	301030	45.	5.42	11.	3.	3.	0.07		
ROUTED TO	301040	45.	5.50	11.	3.	3.	0.07		
HYDROGRAPH AT	301040	34.	5.33	8.	2.	2.	0.05		
2 COMBINED AT	301040	77.	5.50	18.	5.	5.	0.12		
ROUTED TO	300770	76.	5.50	18.	5.	5.	0.12		
2 COMBINED AT	300770	307.	5.33	93.	34.	33.	0.50		
ROUTED TO	300770	305.	5.42	87.	30.	29.	0.50	4.77	5.42
HYDROGRAPH AT	1177A	373.	5.42	105.	34.	33.	0.65		
HYDROGRAPH AT	1180	706.	5.92	189.	56.	54.	1.35		
HYDROGRAPH AT	1000	10.	5.33	2.	1.	1.	0.01		
ROUTED TO	1042	10.	5.33	2.	1.	1.	0.01		
HYDROGRAPH AT	1060A	38.	6.00	14.	4.	4.	0.06		
ROUTED TO	1051	38.	6.08	14.	4.	4.	0.06		
HYDROGRAPH AT	1050	18.	5.08	3.	1.	1.	0.01		
2 COMBINED AT	1052	43.	6.00	17.	5.	4.	0.07		
ROUTED TO	1041	43.	6.17	17.	5.	4.	0.07		
HYDROGRAPH AT	1040	41.	5.17	8.	2.	2.	0.03		
3 COMBINED AT	1043	80.	5.25	27.	7.	7.	0.11		
ROUTED TO	DAM8	78.	5.42	21.	5.	5.	0.11	102.16	5.42
ROUTED TO	1011	78.	5.50	22.	6.	5.	0.11		
HYDROGRAPH AT	1010	44.	5.17	8.	2.	2.	0.04		
2 COMBINED AT	1012	106.	5.50	29.	8.	7.	0.15		
HYDROGRAPH AT	1110	109.	5.50	31.	8.	8.	0.16		
HYDROGRAPH AT	1020	41.	5.08	8.	2.	2.	0.03		
HYDROGRAPH AT	1120	62.	5.25	12.	3.	3.	0.07		
2 COMBINED AT	1121	151.	5.50	42.	11.	11.	0.23		
DIVERSION TO	2223	60.	5.50	17.	4.	4.	0.23		
HYDROGRAPH AT	2222	90.	5.50	25.	7.	6.	0.23		

ROUTED TO	1131	87.	5.58	25.	7.	6.	0.23
HYDROGRAPH AT	1070	43.	5.25	9.	2.	2.	0.04
ROUTED TO	1031	43.	5.25	9.	2.	2.	0.04
HYDROGRAPH AT	1030	34.	5.25	7.	2.	2.	0.03
2 COMBINED AT	1032	77.	5.25	15.	4.	4.	0.07
HYDROGRAPH AT	1130	118.	5.33	23.	6.	6.	0.13
2 COMBINED AT	1132	192.	5.50	48.	13.	12.	0.36
DIVERSION TO	3334	96.	5.50	24.	6.	6.	0.36
HYDROGRAPH AT	3333	96.	5.50	24.	6.	6.	0.36
ROUTED TO	1151	95.	5.58	24.	6.	6.	0.36
HYDROGRAPH AT	1080A	93.	5.17	18.	5.	4.	0.09
HYDROGRAPH AT	1090	148.	5.17	28.	7.	7.	0.14
HYDROGRAPH AT	1150	253.	5.50	57.	15.	14.	0.37
2 COMBINED AT	1152	348.	5.50	81.	21.	20.	0.74
DIVERSION TO	4445	174.	5.50	41.	11.	10.	0.74
HYDROGRAPH AT	4444	174.	5.50	41.	11.	10.	0.74
ROUTED TO	1161	173.	5.67	41.	11.	10.	0.74
HYDROGRAPH AT	1159	1117.	5.83	437.	111.	107.	2.25
ROUTED TO	300120	1117.	5.83	437.	111.	107.	2.25
HYDROGRAPH AT	300120	25.	5.33	6.	1.	1.	0.04
2 COMBINED AT	300120	1131.	5.83	442.	112.	108.	2.29
ROUTED TO	300130	1131.	5.83	442.	112.	108.	2.29
ROUTED TO	300140	1130.	5.83	442.	112.	108.	2.29
HYDROGRAPH AT	300140	17.	5.42	4.	1.	1.	0.03
2 COMBINED AT	300140	1141.	5.83	446.	113.	109.	2.31
ROUTED TO	300150	1140.	5.83	446.	113.	109.	2.31
ROUTED TO	300160	1138.	5.92	446.	113.	109.	2.31
HYDROGRAPH AT	300160	44.	5.33	10.	3.	2.	0.06
2 COMBINED AT	300160	1163.	5.83	455.	116.	112.	2.37
HYDROGRAPH AT	300310	8.	5.33	2.	0.	0.	0.01

ROUTED TO	300160	8.	5.58	2.	0.	0.	0.01		
2 COMBINED AT	300160	1170.	5.83	457.	116.	112.	2.38		
ROUTED TO	300170	1169.	5.83	457.	116.	112.	2.38		
ROUTED TO	300180	1168.	5.92	457.	116.	112.	2.38		
HYDROGRAPH AT	300180	6.	5.42	1.	0.	0.	0.01		
2 COMBINED AT	300180	1172.	5.92	458.	117.	113.	2.39		
ROUTED TO	300190	1171.	5.92	458.	117.	113.	2.39		
ROUTED TO	300200	1170.	5.92	458.	117.	113.	2.39		
HYDROGRAPH AT	300200	56.	5.25	12.	3.	3.	0.06		
2 COMBINED AT	300200	1193.	5.92	467.	120.	116.	2.46		
HYDROGRAPH AT	300410	44.	5.42	10.	3.	3.	0.07		
ROUTED TO	300410	39.	5.58	8.	2.	2.	0.07	2.41	5.58
ROUTED TO	300420	39.	5.58	8.	2.	2.	0.07		
HYDROGRAPH AT	300420	27.	5.33	6.	2.	2.	0.04		
2 COMBINED AT	300420	62.	5.58	14.	4.	4.	0.11		
ROUTED TO	300420	0.	5.58	0.	0.	0.	0.11	3.23	24.92
ROUTED TO	300200	0.	5.67	0.	0.	0.	0.11		
2 COMBINED AT	300200	1193.	5.92	467.	120.	116.	2.56		
HYDROGRAPH AT	290410	83.	5.42	20.	5.	5.	0.13		
ROUTED TO	290420	83.	5.50	20.	5.	5.	0.13		
ROUTED TO	290430	82.	5.50	20.	5.	5.	0.13		
HYDROGRAPH AT	290430	28.	5.08	7.	2.	2.	0.04		
2 COMBINED AT	290430	104.	5.50	26.	7.	7.	0.17		
2 COMBINED AT	30A	1265.	5.83	492.	127.	122.	2.74		
HYDROGRAPH AT	1155A	1306.	5.92	512.	132.	127.	2.89		
HYDROGRAPH AT	1160	1406.	6.08	547.	141.	136.	3.20		
HYDROGRAPH AT	300510	29.	5.42	7.	2.	2.	0.04		
ROUTED TO	300520	29.	5.42	7.	2.	2.	0.04		
ROUTED TO	300530	28.	5.50	7.	2.	2.	0.04		
HYDROGRAPH AT	300530	49.	5.25	11.	3.	3.	0.06		

2 COMBINED AT	300530	71.	5.25	17.	4.	4.	0.10		
ROUTED TO	300540	70.	5.33	17.	4.	4.	0.10		
HYDROGRAPH AT	300540	28.	5.25	6.	2.	2.	0.03		
2 COMBINED AT	300540	96.	5.25	23.	6.	6.	0.13		
ROUTED TO	300550	96.	5.25	23.	6.	6.	0.13		
HYDROGRAPH AT	300550	50.	5.25	11.	3.	3.	0.06		
2 COMBINED AT	300550	146.	5.25	34.	9.	9.	0.19		
ROUTED TO	300560	143.	5.33	34.	9.	9.	0.19		
HYDROGRAPH AT	300560	36.	5.08	8.	2.	2.	0.03		
2 COMBINED AT	300560	176.	5.25	42.	11.	10.	0.22		
ROUTED TO	300560	135.	5.58	23.	6.	6.	0.22	4.32	5.58
HYDROGRAPH AT	300610	34.	5.25	7.	2.	2.	0.04		
ROUTED TO	300620	34.	5.25	7.	2.	2.	0.04		
HYDROGRAPH AT	300630	67.	5.25	15.	4.	4.	0.08		
ROUTED TO	300630	23.	6.08	5.	1.	1.	0.08	4.11	6.08
2 COMBINED AT	30B	138.	5.58	28.	7.	7.	0.30		
HYDROGRAPH AT	1165A	191.	5.75	53.	13.	13.	0.48		
HYDROGRAPH AT	1170	293.	5.58	85.	22.	21.	0.74		
ROUTED TO	1162	288.	5.67	85.	22.	21.	0.74		
3 COMBINED AT	1163	1760.	6.17	672.	174.	167.	4.67		
DIVERSION TO	5556	880.	6.17	336.	87.	84.	4.67		
HYDROGRAPH AT	5555	880.	6.17	336.	87.	84.	4.67		
ROUTED TO	1182	878.	6.17	336.	87.	84.	4.67		
2 COMBINED AT	1183	1569.	5.92	525.	143.	137.	6.02		
ROUTED TO	1184	1561.	6.00	525.	142.	137.	6.02		
2 COMBINED AT	1185	3398.	5.92	967.	255.	246.	9.31		
ROUTED TO	1646	3376.	5.92	968.	255.	246.	9.31		
HYDROGRAPH AT	1645	48.	6.08	16.	4.	4.	0.09		
2 COMBINED AT	1647	3421.	5.92	983.	259.	250.	9.40		
ROUTED TO	1711	3388.	6.00	984.	259.	250.	9.40		

HYDROGRAPH AT	1710	39.	6.42	15.	4.	4.	0.09		
2 COMBINED AT	1712	3419.	6.00	999.	263.	254.	9.49		
ROUTED TO	1721	3416.	6.00	999.	263.	254.	9.49		
HYDROGRAPH AT	1720	43.	6.33	16.	4.	4.	0.09		
2 COMBINED AT	1722	3454.	6.00	1015.	268.	258.	9.59		
ROUTED TO	1801	3435.	6.00	1015.	268.	258.	9.59		
HYDROGRAPH AT	1800	48.	6.25	18.	5.	5.	0.09		
2 COMBINED AT	1802	3480.	6.00	1032.	272.	262.	9.68		
ROUTED TO	1811	3453.	6.08	1033.	272.	262.	9.68		
2 COMBINED AT	1812	5079.	6.08	1566.	418.	403.	13.22		
ROUTED TO	1813	5063.	6.08	1566.	418.	403.	13.22		
2 COMBINED AT	1985	5203.	6.08	2037.	562.	542.	16.60		
ROUTED TO	1986	4710.	6.42	2029.	562.	541.	16.60	394.49	6.42
HYDROGRAPH AT	3334	96.	5.50	24.	6.	6.	0.00		
HYDROGRAPH AT	1135	165.	5.50	40.	10.	10.	0.11		
ROUTED TO	1136	164.	5.58	40.	10.	10.	0.11		
HYDROGRAPH AT	4445	174.	5.50	41.	11.	10.	0.00		
HYDROGRAPH AT	1140	253.	5.67	61.	16.	15.	0.14		
2 COMBINED AT	1141	412.	5.67	101.	26.	25.	0.25		
ROUTED TO	1971	410.	5.75	101.	26.	25.	0.25		
HYDROGRAPH AT	5556	880.	6.17	336.	87.	84.	0.00		
ROUTED TO	1972	879.	6.33	335.	87.	84.	0.00		
HYDROGRAPH AT	1970	255.	6.00	77.	20.	19.	0.51		
3 COMBINED AT	1973	1452.	6.00	511.	133.	128.	0.76		
HYDROGRAPH AT	1980	1657.	6.17	591.	155.	149.	1.23		
2 COMBINED AT	1987	6299.	6.33	2611.	717.	690.	17.83		
DIVERSION TO	1987B	0.	6.33	0.	0.	0.	17.83		
HYDROGRAPH AT	1987A	6299.	6.33	2611.	717.	690.	17.83		
ROUTED TO	1991	5933.	6.67	2605.	716.	690.	17.83	395.56	6.67
HYDROGRAPH AT	1960	235.	5.92	69.	18.	17.	0.38		

HYDROGRAPH AT	1990	443.	6.00	137.	36.	34.	0.76
HYDROGRAPH AT	429	282.	5.25	60.	16.	15.	0.00
HYDROGRAPH AT	430B	285.	5.33	62.	16.	16.	0.01
HYDROGRAPH AT	440B	296.	5.42	67.	17.	17.	0.05
ROUTED TO	495B1	296.	5.42	67.	17.	17.	0.05
HYDROGRAPH AT	280010	10.	5.17	2.	1.	0.	0.01
ROUTED TO	280020	10.	5.17	2.	1.	0.	0.01
ROUTED TO	280030	10.	5.17	2.	1.	0.	0.01
ROUTED TO	280040	10.	5.17	2.	1.	0.	0.01
HYDROGRAPH AT	280040	30.	5.08	6.	1.	1.	0.02
2 COMBINED AT	280040	40.	5.08	8.	2.	2.	0.03
ROUTED TO	280050	40.	5.08	8.	2.	2.	0.03
ROUTED TO	280060	39.	5.17	8.	2.	2.	0.03
HYDROGRAPH AT	280060	2.	5.00	0.	0.	0.	0.00
2 COMBINED AT	280060	40.	5.17	8.	2.	2.	0.03
ROUTED TO	280070	40.	5.17	8.	2.	2.	0.03
ROUTED TO	280080	40.	5.17	8.	2.	2.	0.03
HYDROGRAPH AT	280080	22.	5.08	4.	1.	1.	0.01
2 COMBINED AT	280080	62.	5.17	12.	3.	3.	0.04
HYDROGRAPH AT	280410	14.	5.00	3.	1.	1.	0.01
ROUTED TO	280420	14.	5.08	3.	1.	1.	0.01
ROUTED TO	280080	14.	5.08	3.	1.	1.	0.01
2 COMBINED AT	280080	75.	5.17	15.	4.	4.	0.05
ROUTED TO	280090	75.	5.17	15.	4.	4.	0.05
ROUTED TO	280100	75.	5.17	15.	4.	4.	0.05
HYDROGRAPH AT	280100	35.	5.08	7.	2.	2.	0.02
2 COMBINED AT	280100	108.	5.17	22.	6.	5.	0.07
ROUTED TO	280110	108.	5.17	22.	6.	5.	0.07
HYDROGRAPH AT	280510	44.	5.08	8.	2.	2.	0.03
ROUTED TO	280520	43.	5.17	8.	2.	2.	0.03

HYDROGRAPH AT	280520	38.	5.08	8.	2.	2.	0.03		
2 COMBINED AT	280520	81.	5.17	17.	4.	4.	0.06		
ROUTED TO	280530	81.	5.17	17.	4.	4.	0.06		
HYDROGRAPH AT	280530	9.	5.08	2.	0.	0.	0.01		
2 COMBINED AT	280530	90.	5.17	18.	5.	5.	0.06		
ROUTED TO	280540	90.	5.17	18.	5.	5.	0.06		
ROUTED TO	280110	89.	5.17	18.	5.	5.	0.06		
2 COMBINED AT	280110	197.	5.17	40.	10.	10.	0.14		
ROUTED TO	280120	194.	5.17	40.	10.	10.	0.14		
HYDROGRAPH AT	280120	12.	5.42	3.	1.	1.	0.02		
2 COMBINED AT	280120	203.	5.17	43.	11.	11.	0.16		
HYDROGRAPH AT	280610	41.	5.42	9.	2.	2.	0.06		
ROUTED TO	280610	10.	6.67	3.	1.	1.	0.06	4.17	6.67
ROUTED TO	280620	10.	6.75	3.	1.	1.	0.06		
HYDROGRAPH AT	280620	35.	5.33	8.	2.	2.	0.03		
2 COMBINED AT	280620	35.	5.33	10.	3.	3.	0.09		
HYDROGRAPH AT	280810	66.	5.08	13.	3.	3.	0.04		
ROUTED TO	280820	65.	5.08	13.	3.	3.	0.04		
ROUTED TO	280620	64.	5.17	13.	3.	3.	0.04		
2 COMBINED AT	280620	96.	5.17	23.	6.	6.	0.13		
ROUTED TO	280630	95.	5.17	23.	6.	6.	0.13		
HYDROGRAPH AT	280910	3.	5.08	1.	0.	0.	0.00		
ROUTED TO	280920	3.	5.08	1.	0.	0.	0.00		
ROUTED TO	280630	3.	5.08	1.	0.	0.	0.00		
2 COMBINED AT	280630	98.	5.17	23.	6.	6.	0.14		
ROUTED TO	280640	97.	5.25	23.	6.	6.	0.14		
HYDROGRAPH AT	281010	34.	5.08	7.	2.	2.	0.02		
ROUTED TO	280640	34.	5.08	7.	2.	2.	0.02		
2 COMBINED AT	280640	130.	5.17	30.	8.	8.	0.16		
ROUTED TO	280650	128.	5.25	30.	8.	8.	0.16		

HYDROGRAPH AT	280650	15.	5.50	3.	1.	1.	0.02
2 COMBINED AT	280650	140.	5.25	33.	9.	8.	0.18
ROUTED TO	280660	139.	5.25	33.	9.	8.	0.18
HYDROGRAPH AT	280660	9.	5.42	2.	1.	1.	0.01
2 COMBINED AT	280660	147.	5.25	35.	9.	9.	0.20
HYDROGRAPH AT	281110	30.	5.08	6.	2.	2.	0.02
ROUTED TO	281120	30.	5.17	6.	2.	2.	0.02
HYDROGRAPH AT	281120	29.	5.00	6.	1.	1.	0.02
2 COMBINED AT	281120	57.	5.08	12.	3.	3.	0.04
HYDROGRAPH AT	281210	43.	5.42	10.	3.	3.	0.07
ROUTED TO	281120	43.	5.42	10.	3.	3.	0.07
2 COMBINED AT	281120	89.	5.25	22.	6.	5.	0.11
HYDROGRAPH AT	281310	16.	5.50	4.	1.	1.	0.03
ROUTED TO	281320	16.	5.50	4.	1.	1.	0.03
ROUTED TO	281120	16.	5.58	4.	1.	1.	0.03
2 COMBINED AT	281120	100.	5.33	26.	7.	6.	0.14
ROUTED TO	281130	100.	5.33	26.	7.	6.	0.14
HYDROGRAPH AT	281130	55.	5.08	11.	3.	3.	0.04
2 COMBINED AT	281130	144.	5.25	36.	9.	9.	0.17
ROUTED TO	281140	144.	5.25	36.	9.	9.	0.17
HYDROGRAPH AT	281140	22.	5.17	5.	1.	1.	0.02
2 COMBINED AT	281140	165.	5.25	41.	11.	10.	0.19
ROUTED TO	280660	165.	5.25	41.	11.	10.	0.19
2 COMBINED AT	280660	311.	5.25	76.	20.	19.	0.39
2 COMBINED AT	280120	514.	5.25	119.	31.	30.	0.55
ROUTED TO	280120	512.	5.25	119.	31.	30.	0.55
ROUTED TO	280130	509.	5.25	119.	31.	30.	0.55
HYDROGRAPH AT	280130	17.	5.58	5.	1.	1.	0.04
2 COMBINED AT	280130	524.	5.25	124.	32.	31.	0.59
ROUTED TO	280140	522.	5.25	124.	32.	31.	0.59

ROUTED TO	280150	518.	5.33	124.	32.	31.	0.59
HYDROGRAPH AT	280150	18.	5.58	5.	1.	1.	0.05
2 COMBINED AT	280150	536.	5.33	130.	34.	32.	0.64
ROUTED TO	280160	534.	5.33	130.	34.	32.	0.64
HYDROGRAPH AT	280160	11.	5.25	3.	1.	1.	0.02
2 COMBINED AT	280160	544.	5.33	133.	34.	33.	0.66
HYDROGRAPH AT	281410	59.	5.08	11.	3.	3.	0.04
ROUTED TO	281420	57.	5.17	11.	3.	3.	0.04
HYDROGRAPH AT	281420	33.	5.08	6.	2.	2.	0.02
2 COMBINED AT	281420	89.	5.08	18.	4.	4.	0.06
ROUTED TO	281430	89.	5.17	18.	4.	4.	0.06
HYDROGRAPH AT	281430	55.	5.25	12.	3.	3.	0.06
2 COMBINED AT	281430	143.	5.17	30.	8.	7.	0.12
ROUTED TO	281440	142.	5.25	30.	8.	7.	0.12
HYDROGRAPH AT	281440	55.	5.25	12.	3.	3.	0.06
2 COMBINED AT	281440	197.	5.25	42.	11.	10.	0.19
ROUTED TO	281450	196.	5.25	42.	11.	10.	0.19
HYDROGRAPH AT	281450	38.	5.25	8.	2.	2.	0.04
2 COMBINED AT	281450	234.	5.25	50.	13.	12.	0.23
ROUTED TO	280160	233.	5.25	50.	13.	12.	0.23
2 COMBINED AT	280160	772.	5.33	183.	47.	46.	0.89
ROUTED TO	280170	771.	5.33	183.	47.	46.	0.89
ROUTED TO	280180	767.	5.33	183.	47.	46.	0.89
HYDROGRAPH AT	281510	26.	5.08	5.	1.	1.	0.02
ROUTED TO	281520	26.	5.17	5.	1.	1.	0.02
ROUTED TO	281530	26.	5.17	5.	1.	1.	0.02
HYDROGRAPH AT	281530	63.	5.17	13.	3.	3.	0.05
2 COMBINED AT	281530	89.	5.17	18.	5.	4.	0.06
HYDROGRAPH AT	281710	49.	5.08	9.	2.	2.	0.03
ROUTED TO	281720	48.	5.08	9.	2.	2.	0.03

ROUTED TO	281530	48.	5.17	9.	2.	2.	0.03		
2 COMBINED AT	281530	136.	5.17	27.	7.	7.	0.09		
ROUTED TO	281540	134.	5.25	27.	7.	7.	0.09		
HYDROGRAPH AT	281540	49.	5.08	10.	3.	2.	0.04		
2 COMBINED AT	281540	181.	5.17	37.	10.	9.	0.13		
ROUTED TO	281540	180.	5.25	35.	9.	8.	0.13	2.54	5.25
ROUTED TO	281550	180.	5.25	35.	9.	8.	0.13		
HYDROGRAPH AT	281550	14.	5.08	3.	1.	1.	0.01		
2 COMBINED AT	281550	193.	5.25	37.	9.	9.	0.14		
HYDROGRAPH AT	281810	7.	5.08	1.	0.	0.	0.00		
ROUTED TO	281810	0.	6.50	0.	0.	0.	0.00	1.85	10.67
ROUTED TO	281550	0.	7.75	0.	0.	0.	0.00		
2 COMBINED AT	281550	193.	5.25	37.	9.	9.	0.14		
ROUTED TO	281560	192.	5.25	37.	9.	9.	0.14		
HYDROGRAPH AT	281560	12.	5.17	3.	1.	1.	0.01		
2 COMBINED AT	281560	204.	5.25	40.	10.	10.	0.15		
HYDROGRAPH AT	281910	41.	5.25	9.	2.	2.	0.05		
ROUTED TO	281560	41.	5.33	9.	2.	2.	0.05		
2 COMBINED AT	281560	244.	5.25	49.	12.	12.	0.20		
ROUTED TO	281570	243.	5.25	49.	12.	12.	0.20		
HYDROGRAPH AT	281570	30.	5.17	6.	2.	2.	0.02		
2 COMBINED AT	281570	274.	5.25	55.	14.	14.	0.22		
ROUTED TO	281580	270.	5.33	55.	14.	14.	0.22		
HYDROGRAPH AT	281580	11.	5.33	3.	1.	1.	0.01		
2 COMBINED AT	281580	281.	5.33	58.	15.	14.	0.24		
ROUTED TO	280180	281.	5.33	58.	15.	14.	0.24		
2 COMBINED AT	280180	1048.	5.33	241.	62.	60.	1.13		
ROUTED TO	280190	1044.	5.33	241.	62.	60.	1.13		
HYDROGRAPH AT	282010	74.	5.33	17.	4.	4.	0.09		
ROUTED TO	280190	74.	5.33	17.	4.	4.	0.09		

2 COMBINED AT	280190	1118.	5.33	258.	67.	64.	1.22		
ROUTED TO	280200	1103.	5.42	258.	67.	64.	1.22		
HYDROGRAPH AT	CACTUS	184.	7.75	183.	165.	164.	5.14		
HYDROGRAPH AT	282110	0.	5.58	0.	0.	0.	0.00		
2 COMBINED AT	282110	184.	7.75	183.	165.	164.	5.14		
ROUTED TO	282120	184.	7.83	183.	165.	164.	5.14		
HYDROGRAPH AT	282120	13.	5.25	3.	1.	1.	0.01		
2 COMBINED AT	282120	184.	7.83	183.	166.	164.	5.16		
ROUTED TO	282130	184.	7.83	183.	166.	164.	5.16		
ROUTED TO	282140	184.	7.92	183.	166.	164.	5.16		
HYDROGRAPH AT	282140	9.	5.25	2.	0.	0.	0.01		
2 COMBINED AT	282140	185.	7.92	183.	166.	165.	5.17		
ROUTED TO	282150	185.	7.92	183.	166.	165.	5.17		
HYDROGRAPH AT	282310	45.	5.08	10.	2.	2.	0.04		
ROUTED TO	282310	5.	7.00	1.	0.	0.	0.04	4.04	7.00
ROUTED TO	282320	5.	7.08	1.	0.	0.	0.04		
HYDROGRAPH AT	282320	34.	5.25	8.	2.	2.	0.04		
2 COMBINED AT	282320	34.	5.25	8.	2.	2.	0.08		
HYDROGRAPH AT	282410	33.	5.17	7.	2.	2.	0.03		
ROUTED TO	282320	33.	5.17	7.	2.	2.	0.03		
2 COMBINED AT	282320	67.	5.25	16.	4.	4.	0.12		
ROUTED TO	282320	65.	5.33	12.	3.	3.	0.12	2.36	5.33
ROUTED TO	282330	64.	5.33	12.	3.	3.	0.12		
HYDROGRAPH AT	282330	6.	5.25	1.	0.	0.	0.01		
2 COMBINED AT	282330	70.	5.33	13.	3.	3.	0.12		
ROUTED TO	282150	69.	5.33	13.	3.	3.	0.12		
2 COMBINED AT	282150	228.	5.33	193.	170.	168.	5.29		
ROUTED TO	282160	228.	5.42	193.	170.	168.	5.29		
HYDROGRAPH AT	282160	92.	5.25	20.	5.	5.	0.12		
2 COMBINED AT	282160	310.	5.33	209.	175.	173.	5.41		

ROUTED TO	282170	310.	5.42	209.	175.	173.	5.41
ROUTED TO	282180	310.	5.42	209.	175.	173.	5.41
HYDROGRAPH AT	282180	5.	5.33	1.	0.	0.	0.01
2 COMBINED AT	282180	314.	5.42	210.	175.	173.	5.41
ROUTED TO	282190	314.	5.42	210.	175.	173.	5.41
HYDROGRAPH AT	282510	90.	5.42	22.	6.	5.	0.13
ROUTED TO	282520	89.	5.42	22.	6.	5.	0.13
ROUTED TO	282530	88.	5.50	22.	6.	5.	0.13
HYDROGRAPH AT	282530	36.	5.25	8.	2.	2.	0.05
2 COMBINED AT	282530	118.	5.42	29.	8.	7.	0.17
ROUTED TO	282190	118.	5.42	29.	8.	7.	0.17
2 COMBINED AT	282190	432.	5.42	237.	183.	181.	5.59
ROUTED TO	282200	427.	5.50	237.	182.	180.	5.59
HYDROGRAPH AT	282200	70.	5.33	15.	4.	4.	0.09
2 COMBINED AT	282200	493.	5.42	252.	186.	184.	5.68
HYDROGRAPH AT	282610	47.	5.25	10.	3.	2.	0.06
ROUTED TO	282620	47.	5.33	10.	3.	2.	0.06
HYDROGRAPH AT	282620	118.	5.33	27.	7.	7.	0.16
2 COMBINED AT	282620	165.	5.33	37.	9.	9.	0.22
ROUTED TO	282630	164.	5.33	37.	9.	9.	0.22
ROUTED TO	282640	163.	5.42	37.	9.	9.	0.22
HYDROGRAPH AT	282640	17.	5.25	4.	1.	1.	0.02
2 COMBINED AT	282640	178.	5.42	40.	10.	10.	0.24
ROUTED TO	282650	178.	5.42	40.	10.	10.	0.24
ROUTED TO	282200	177.	5.42	40.	10.	10.	0.24
2 COMBINED AT	282200	671.	5.42	291.	197.	194.	5.91
ROUTED TO	282210	668.	5.42	291.	197.	194.	5.91
ROUTED TO	282220	664.	5.50	291.	197.	194.	5.91
HYDROGRAPH AT	282220	82.	5.33	18.	5.	4.	0.10
2 COMBINED AT	282220	732.	5.50	307.	201.	199.	6.02

HYDROGRAPH AT	282710	160.	5.33	35.	9.	9.	0.20		
ROUTED TO	282720	158.	5.42	35.	9.	9.	0.20		
HYDROGRAPH AT	282720	115.	5.33	25.	6.	6.	0.15		
2 COMBINED AT	282720	271.	5.33	60.	15.	15.	0.35		
ROUTED TO	282220	267.	5.42	60.	15.	15.	0.35		
2 COMBINED AT	282220	998.	5.42	365.	217.	213.	6.37		
ROUTED TO	282230	987.	5.42	365.	217.	213.	6.37		
HYDROGRAPH AT	282230	202.	5.33	44.	11.	11.	0.26		
2 COMBINED AT	282230	1177.	5.42	407.	228.	224.	6.63		
ROUTED TO	282240	1174.	5.42	407.	228.	224.	6.63		
HYDROGRAPH AT	282810	52.	5.08	11.	3.	3.	0.05		
ROUTED TO	282820	52.	5.17	11.	3.	3.	0.05		
HYDROGRAPH AT	282820	75.	5.25	16.	4.	4.	0.09		
2 COMBINED AT	282820	126.	5.25	28.	7.	7.	0.14		
ROUTED TO	282830	126.	5.25	28.	7.	7.	0.14		
ROUTED TO	282840	126.	5.25	28.	7.	7.	0.14		
HYDROGRAPH AT	282840	17.	5.25	4.	1.	1.	0.02		
2 COMBINED AT	282840	142.	5.25	31.	8.	8.	0.16		
HYDROGRAPH AT	283010	29.	5.25	6.	2.	2.	0.03		
ROUTED TO	283010	25.	5.33	4.	1.	1.	0.03	4.19	5.33
ROUTED TO	283020	25.	5.42	4.	1.	1.	0.03		
HYDROGRAPH AT	283020	8.	5.25	2.	0.	0.	0.01		
2 COMBINED AT	283020	31.	5.42	6.	1.	1.	0.04		
ROUTED TO	283020	29.	5.50	5.	1.	1.	0.04	2.53	5.50
ROUTED TO	283030	28.	5.58	5.	1.	1.	0.04		
HYDROGRAPH AT	283030	96.	5.17	20.	5.	5.	0.08		
2 COMBINED AT	283030	96.	5.17	25.	7.	6.	0.12		
ROUTED TO	283040	96.	5.25	25.	7.	6.	0.12		
HYDROGRAPH AT	283040	32.	5.33	7.	2.	2.	0.04		
2 COMBINED AT	283040	127.	5.25	32.	8.	8.	0.16		

ROUTED TO	283050	127.	5.25	32.	8.	8.	0.16		
ROUTED TO	282840	126.	5.33	32.	8.	8.	0.16		
2 COMBINED AT	282840	269.	5.25	63.	16.	16.	0.32		
ROUTED TO	282840	113.	6.08	23.	6.	6.	0.32	20.96	6.08
ROUTED TO	282850	112.	6.08	23.	6.	6.	0.32		
HYDROGRAPH AT	282850	37.	5.33	8.	2.	2.	0.05		
2 COMBINED AT	282850	126.	6.08	31.	8.	8.	0.37		
ROUTED TO	282860	125.	6.17	31.	8.	8.	0.37		
HYDROGRAPH AT	282860	14.	5.33	3.	1.	1.	0.02		
2 COMBINED AT	282860	131.	6.17	34.	9.	9.	0.38		
HYDROGRAPH AT	283110	58.	5.25	13.	3.	3.	0.07		
ROUTED TO	283120	58.	5.33	13.	3.	3.	0.07		
HYDROGRAPH AT	283120	36.	5.25	8.	2.	2.	0.05		
2 COMBINED AT	283120	93.	5.25	20.	5.	5.	0.12		
ROUTED TO	283120	23.	6.42	6.	1.	1.	0.12	14.40	6.42
ROUTED TO	282860	23.	6.50	6.	1.	1.	0.12		
2 COMBINED AT	282860	134.	6.33	39.	10.	10.	0.50		
ROUTED TO	282870	133.	6.33	39.	10.	10.	0.50		
HYDROGRAPH AT	282870	24.	5.25	5.	1.	1.	0.03		
2 COMBINED AT	282870	140.	6.33	44.	12.	11.	0.54		
ROUTED TO	282880	140.	6.33	44.	12.	11.	0.54		
ROUTED TO	282890	140.	6.33	44.	12.	11.	0.54		
HYDROGRAPH AT	282890	98.	5.25	21.	5.	5.	0.13		
2 COMBINED AT	282890	170.	5.33	65.	17.	16.	0.66		
ROUTED TO	282900	169.	6.25	65.	17.	16.	0.66		
HYDROGRAPH AT	282900	37.	5.25	8.	2.	2.	0.05		
2 COMBINED AT	282900	204.	5.33	73.	19.	18.	0.71		
ROUTED TO	282910	200.	5.33	73.	19.	18.	0.71		
HYDROGRAPH AT	282910	54.	5.25	12.	3.	3.	0.07		
2 COMBINED AT	282910	253.	5.33	84.	22.	21.	0.78		

ROUTED TO	282230	251.	5.33	84.	22.	21.	0.78
2 COMBINED AT	282230	1421.	5.42	490.	250.	246.	7.41
ROUTED TO	282240	1419.	5.42	490.	250.	246.	7.41
HYDROGRAPH AT	283210	14.	5.33	3.	1.	1.	0.02
ROUTED TO	283220	14.	5.42	3.	1.	1.	0.02
HYDROGRAPH AT	283220	41.	5.25	9.	2.	2.	0.05
2 COMBINED AT	283220	53.	5.33	12.	3.	3.	0.07
ROUTED TO	283230	53.	5.33	12.	3.	3.	0.07
ROUTED TO	283240	53.	5.33	12.	3.	3.	0.07
HYDROGRAPH AT	283240	55.	5.25	12.	3.	3.	0.07
2 COMBINED AT	283240	106.	5.33	24.	6.	6.	0.14
ROUTED TO	283250	106.	5.33	24.	6.	6.	0.14
ROUTED TO	283260	105.	5.42	24.	6.	6.	0.14
HYDROGRAPH AT	283260	119.	5.25	26.	7.	6.	0.15
2 COMBINED AT	283260	223.	5.33	49.	13.	12.	0.29
ROUTED TO	283270	222.	5.33	49.	13.	12.	0.29
ROUTED TO	283280	221.	5.42	49.	13.	12.	0.29
HYDROGRAPH AT	283280	8.	5.50	2.	1.	1.	0.02
2 COMBINED AT	283280	229.	5.42	52.	13.	13.	0.31
ROUTED TO	282240	228.	5.42	52.	13.	13.	0.31
2 COMBINED AT	282240	1647.	5.42	541.	264.	259.	7.71
ROUTED TO	280200	1634.	5.50	541.	263.	258.	7.71
HYDROGRAPH AT	280200	398.	5.08	79.	20.	20.	0.30
3 COMBINED AT	280200	2961.	5.42	867.	350.	342.	9.23
ROUTED TO	280210	2956.	5.42	867.	350.	342.	9.23
HYDROGRAPH AT	280210	95.	5.08	19.	5.	5.	0.07
2 COMBINED AT	280210	3013.	5.42	885.	355.	347.	9.30
HYDROGRAPH AT	283410	7.	5.58	2.	1.	1.	0.02
ROUTED TO	283420	7.	5.67	2.	1.	1.	0.02
HYDROGRAPH AT	283420	23.	5.58	7.	2.	2.	0.06

2 COMBINED AT	283420	30.	5.67	9.	2.	2.	0.08		
ROUTED TO	283430	30.	5.67	9.	2.	2.	0.08		
HYDROGRAPH AT	283430	30.	5.67	9.	2.	2.	0.08		
2 COMBINED AT	283430	60.	5.67	18.	5.	5.	0.16		
ROUTED TO	283440	60.	5.75	18.	5.	5.	0.16		
HYDROGRAPH AT	283440	30.	5.17	8.	2.	2.	0.05		
2 COMBINED AT	283440	82.	5.42	25.	7.	6.	0.21		
HYDROGRAPH AT	283610	35.	5.08	9.	2.	2.	0.05		
ROUTED TO	283620	35.	5.08	9.	2.	2.	0.05		
ROUTED TO	283440	35.	5.08	9.	2.	2.	0.05		
2 COMBINED AT	283440	113.	5.33	34.	9.	9.	0.26		
ROUTED TO	283450	113.	5.33	34.	9.	9.	0.26		
HYDROGRAPH AT	283450	1.	5.00	0.	0.	0.	0.00		
2 COMBINED AT	283450	114.	5.33	34.	9.	9.	0.26		
ROUTED TO	283460	114.	5.33	34.	9.	9.	0.26		
ROUTED TO	283470	113.	5.33	34.	9.	9.	0.26		
HYDROGRAPH AT	283470	20.	5.17	4.	1.	1.	0.02		
2 COMBINED AT	283470	130.	5.33	39.	10.	10.	0.28		
ROUTED TO	283480	130.	5.33	39.	10.	10.	0.28		
ROUTED TO	280210	129.	5.33	39.	10.	10.	0.28		
2 COMBINED AT	280210	3142.	5.42	924.	365.	357.	9.58		
ROUTED TO	280220	3125.	5.42	924.	365.	357.	9.58		
HYDROGRAPH AT	280220	54.	5.08	11.	3.	3.	0.04		
2 COMBINED AT	280220	3161.	5.42	935.	368.	359.	9.62		
ROUTED TO	PARK	621.	7.58	326.	199.	191.	9.62	1374.27	7.58
ROUTED TO	291	620.	7.58	326.	198.	191.	9.62		
HYDROGRAPH AT	290	25.	5.00	5.	1.	1.	0.02		
ROUTED TO	DAM6	15.	5.33	2.	0.	0.	0.02	102.05	5.33
HYDROGRAPH AT	295	45.	5.08	9.	2.	2.	0.03		
ROUTED TO	291.1	45.	5.08	9.	2.	2.	0.03		

3 COMBINED AT	292	622.	7.58	327.	201.	194.	9.67		
ROUTED TO	331	622.	7.67	327.	201.	194.	9.67		
HYDROGRAPH AT	330	29.	5.08	6.	1.	1.	0.02		
ROUTED TO	DAM2	29.	5.25	3.	1.	1.	0.02	102.08	5.25
2 COMBINED AT	332	623.	7.67	327.	202.	194.	9.69		
ROUTED TO	231	623.	7.67	327.	201.	194.	9.69		
HYDROGRAPH AT	230	54.	5.08	10.	3.	3.	0.04		
2 COMBINED AT	232	624.	7.67	328.	204.	197.	9.73		
ROUTED TO	233	624.	7.67	328.	204.	197.	9.73		
HYDROGRAPH AT	220	625.	7.67	333.	208.	200.	9.81		
HYDROGRAPH AT	445	625.	7.75	336.	208.	201.	9.84		
HYDROGRAPH AT	310	23.	5.42	6.	2.	1.	0.03		
ROUTED TO	DAM4	0.	5.83	0.	0.	0.	0.03	101.66	12.17
ROUTED TO	312	0.	6.08	0.	0.	0.	0.03		
HYDROGRAPH AT	320	27.	5.00	5.	1.	1.	0.02		
2 COMBINED AT	322	27.	5.00	5.	1.	1.	0.05		
ROUTED TO	DAM3	21.	5.33	2.	1.	1.	0.05	102.06	5.33
HYDROGRAPH AT	260	58.	5.33	11.	3.	3.	0.09		
ROUTED TO	451	56.	5.33	11.	3.	3.	0.09		
HYDROGRAPH AT	450	71.	5.42	15.	4.	4.	0.12		
2 COMBINED AT	452	630.	7.67	348.	212.	204.	9.95		
HYDROGRAPH AT	455	632.	7.83	357.	213.	206.	10.02		
HYDROGRAPH AT	280	87.	5.17	18.	5.	4.	0.06		
ROUTED TO	DAM5	45.	5.58	7.	2.	2.	0.06	102.11	5.58
HYDROGRAPH AT	250	66.	5.67	16.	4.	4.	0.11		
HYDROGRAPH AT	460	122.	5.92	34.	9.	9.	0.24		
2 COMBINED AT	461	653.	7.75	390.	222.	214.	10.25		
HYDROGRAPH AT	495B	658.	7.92	409.	225.	217.	10.38		
2 COMBINED AT	495B2	842.	5.58	468.	243.	234.	10.42		
HYDROGRAPH AT	270	66.	5.17	13.	3.	3.	0.06		

HYDROGRAPH AT	470	107.	5.33	22.	6.	6.	0.13		
HYDROGRAPH AT	2223	60.	5.50	17.	4.	4.	0.00		
HYDROGRAPH AT	480	98.	5.67	26.	7.	7.	0.08		
2 COMBINED AT	481	190.	5.42	48.	13.	12.	0.21		
HYDROGRAPH AT	490	329.	5.67	85.	22.	21.	0.41		
2 COMBINED AT	491	1153.	5.67	553.	265.	255.	10.84		
HYDROGRAPH AT	550B	1189.	5.67	562.	267.	257.	10.89		
ROUTED TO	1992	1182.	5.75	562.	265.	256.	10.89		
2 COMBINED AT	1993	1570.	5.83	697.	301.	290.	11.65		
2 COMBINED AT	1994	6910.	6.58	3286.	1017.	980.	29.49		
ROUTED TO	2001	6879.	6.67	3282.	1015.	977.	29.49	10.21	6.67
HYDROGRAPH AT	2000	75.	5.75	21.	5.	5.	0.12		
2 COMBINED AT	2002	6913.	6.67	3300.	1020.	983.	29.60		
ROUTED TO	541	6894.	6.75	3298.	1018.	981.	29.60	10.22	6.75
HYDROGRAPH AT	540B	105.	5.67	27.	7.	7.	0.15		
2 COMBINED AT	542	6931.	6.75	3320.	1025.	988.	29.75		
ROUTED TO	546	6928.	6.75	3319.	1024.	986.	29.75	10.24	6.75
HYDROGRAPH AT	545EDV	12.	5.50	3.	1.	1.	0.00		
2 COMBINED AT	546T	6931.	6.75	3320.	1025.	987.	29.75		
DIVERSION TO	546CAN	2900.	6.75	1389.	429.	413.	29.75		
HYDROGRAPH AT	546ADT	4031.	6.75	1931.	596.	574.	29.75		
2 COMBINED AT	547	4473.	6.67	2189.	671.	646.	31.49		
ROUTED TO	531	4441.	6.83	2182.	668.	644.	31.49	16.77	6.83
HYDROGRAPH AT	560W	52.	5.75	15.	4.	4.	0.09		
ROUTED TO	531A	52.	6.00	15.	4.	4.	0.09		
HYDROGRAPH AT	530AW	97.	5.67	26.	7.	7.	0.15		
3 COMBINED AT	532	4505.	6.75	2217.	679.	654.	31.72		
ROUTED TO	537	4487.	6.83	2212.	677.	652.	31.72	13.02	6.83
HYDROGRAPH AT	360W	35.	6.08	11.	3.	3.	0.09		
HYDROGRAPH AT	420W	12.	5.42	2.	1.	1.	0.02		

HYDROGRAPH AT	410W	15.	5.50	3.	1.	1.	0.02		
2 COMBINED AT	381	26.	5.42	6.	1.	1.	0.04		
HYDROGRAPH AT	380	36.	5.42	8.	2.	2.	0.06		
HYDROGRAPH AT	400W	38.	5.42	8.	2.	2.	0.05		
2 COMBINED AT	371	73.	5.42	16.	4.	4.	0.11		
HYDROGRAPH AT	370	100.	5.58	22.	6.	5.	0.16		
2 COMBINED AT	372	120.	5.67	33.	8.	8.	0.25		
ROUTED TO	373	118.	5.67	33.	8.	8.	0.25	8.76	5.67
ROUTED TO	501	115.	5.83	32.	8.	8.	0.25	9.05	5.83
HYDROGRAPH AT	510	58.	6.00	18.	5.	4.	0.14		
HYDROGRAPH AT	500W	179.	5.83	51.	13.	13.	0.28		
3 COMBINED AT	502	348.	5.83	101.	26.	25.	0.67		
ROUTED TO	516	345.	5.92	101.	26.	25.	0.67	10.16	5.92
HYDROGRAPH AT	515	20.	5.58	5.	1.	1.	0.03		
2 COMBINED AT	517	361.	5.92	106.	27.	26.	0.70		
ROUTED TO	518	360.	5.92	106.	27.	26.	0.70	10.79	5.92
ROUTED TO	519	359.	6.00	106.	27.	26.	0.70	10.95	6.00
HYDROGRAPH AT	520A	155.	5.75	43.	11.	11.	0.25		
2 COMBINED AT	519A	504.	5.92	149.	39.	37.	0.95		
ROUTED TO	521	493.	6.00	149.	39.	37.	0.95	10.33	6.00
HYDROGRAPH AT	520B	218.	5.00	41.	11.	10.	0.13		
ROUTED TO	DAMP1	194.	5.17	22.	6.	5.	0.13	110.88	5.17
2 COMBINED AT	522	539.	6.00	171.	44.	43.	1.08		
ROUTED TO	535A1	534.	6.08	171.	44.	43.	1.08	10.27	6.08
HYDROGRAPH AT	535A	154.	5.00	29.	7.	7.	0.09		
ROUTED TO	DAMP2	61.	5.50	9.	2.	2.	0.09	110.41	5.50
2 COMBINED AT	535A2	565.	6.08	180.	47.	45.	1.18		
ROUTED TO	535D1	564.	6.08	180.	47.	45.	1.18	10.32	6.08
HYDROGRAPH AT	535D	4.	5.08	1.	0.	0.	0.00		
2 COMBINED AT	535D2	565.	6.08	180.	47.	45.	1.18		

DIVERSION TO	CWRW	0.	6.08	0.	0.	0.	1.18		
HYDROGRAPH AT	CWRS	565.	6.08	180.	47.	45.	1.18		
ROUTED TO	535B1	566.	6.08	180.	47.	45.	1.18	10.73	6.08
HYDROGRAPH AT	535E	1.	5.00	0.	0.	0.	0.00		
ROUTED TO	535B2	1.	5.08	0.	0.	0.	0.00		
HYDROGRAPH AT	535B	18.	5.00	3.	1.	1.	0.01		
3 COMBINED AT	535B3	569.	6.08	183.	48.	46.	1.19		
ROUTED TO	535C1	562.	6.17	182.	48.	46.	1.19	10.72	6.17
HYDROGRAPH AT	535C	16.	5.42	4.	1.	1.	0.02		
3 COMBINED AT	548	4846.	6.75	2383.	725.	698.	32.93		
HYDROGRAPH AT	546CAN	2900.	6.75	1389.	429.	413.	0.00		
ROUTED TO	549	2868.	6.92	1381.	426.	411.	0.00	7.67	6.92
DIVERSION TO	551	2254.	6.92	1274.	399.	385.	0.00		
HYDROGRAPH AT	550	614.	6.92	107.	27.	26.	0.00		
2 COMBINED AT	552	5453.	6.83	2491.	752.	724.	32.93		

APPENDIX H

HEC-1 Output Summary

File: PF2A

100-Year, 12-Hour Storm

```
****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*            JUN 09 1992               *
*          VERSION 4.0.3E              *
*                                      *
*  RUN DATE  09/16/98  TIME  20:11:48  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 551-1748             *
*                                      *
****************************************
```

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

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID      ************************************************************
  2           ID      *                                                          *
  3           ID      *                  ROBERT L. WARD, P.E.                    *
  4           ID      *                  CONSULTING ENGINEER                     *
  5           ID      *                                                          *
  6           ID      *                     PIMA FREEWAY                         *
  7           ID      *              (NORTH OF THE ARIZONA CANAL)                *
  8           ID      *                                                          *
  9           ID      *      SCOTTSDALE PAVILIONS & PIMA FREEWAY ARE IN-PLACE    *
 10           ID      *                                                          *
 11           ID      *         HYDROLOGY ANALYSIS FOR OFFSITE DRAINAGE          *
 12           ID      *                    100 YEAR EVENT                        *
 13           ID      *         12 HOUR HYPOTHETICAL STORM DISTRIBUTION          *
 14           ID      *                                                          *
 15           ID      *      USES % IMPERVIOUS COVER TO SIMULATE DEVELOPMENT     *
 16           ID      *          INCLUDES RETENTION/DETENTION BASINS FOR         *
 17           ID      *               RESIDENTIAL & COMMERCIAL AREAS             *
 18           ID      *                                                          *
 19           ID      *                                                          *
 20           ID      *         THIS MODEL INCLUDES THE ADDITIONAL AREA          *
 21           ID      *        PREVIOUSLY MODELED BY THE CORP OF ENGINEERS       *
 22           ID      *                                                          *
 23           ID      *  SEE SECTION 4.3.4 OF THE MAY 1989 SLA FINAL HYDROLOGY RPT, *
 24           ID      *  OUTER LOOP HWY, CAMELBACK WALK CHANNEL TO ARIZONA CANAL,  *
 25           ID      *  FOR DISCUSSION ON ONSITE RETENTION/DETENTION ASSUMPTIONS  *
 26           ID      *                                                          *
 27           ID      *                                                          *
 28           ID      *     ALL CURVE NUMBERS ARE FOR 24-HOUR STORM DURATION     *
 29           ID      *     NORMAL DEPTH STORAGE ROUTING ALONG ARIZONA CANAL     *
 30           ID      *       INCLUDES CAP CROSS-DRAINAGE AT EAST BOUNDARY       *
 31           ID      *  BASE MODEL USES APRIL 1989 HYDROLOGIC REVISIONS BY R. WARD *
 32           ID      *  MARCH 1989 HIGHWAY ALIGNMENT HAS BEEN REVISED TO MID 1989 *
 33           ID      *                  HIGHWAY ALIGNMENT.                      *
 34           ID      *                                                          *
 35           ID      *                     MODEL PF2A.12I                       *
 36           ID      *                 (Base Model Was OL1L.12I)                *
 37           ID      *                                                          *
 38           ID      *      THIS MODEL SIMULATES THE IMPACT TO THE PIMA FWY     *
 39           ID      *      OF A NORTH/SOUTH CHANNEL ALONG AN EXTENSION OF      *
 40           ID      *      96th STREET FROM THE NORTH BOUNDARY OF THE SRPMIC   *
 41           ID      *      TO THE ARIZONA CANAL                                *
 42           ID      *      THIS MODEL ALSO SIMULATES THE IMPACT OF THE PROPOSED *
 43           ID      *      EVANS-KUHN CHANNEL ALONG THE NORTH BANK OF THE ARIZONA*
 44           ID      *      CANAL BETWEEN 96th ST & THE PIMA FREEWAY            *
 45           ID      *                                                          *
 46           ID      *  DAM 1 ROUTING SEQUENCE HAS BEEN CORRECTED ON 7/29/96 TO *
 47           ID      *  ONLY DETAIN RUNOFF FROM SUB-BASINS 185 & 195.           *
 48           ID      *                                                          *
 49           ID      *  ADOT BERM HAS BEEN REMOVED & THE EVANS-KUHN CHANNEL HAS *
 50           ID      *  BEEN CONNECTED DIRECTLY TO THE ADOT CHANNEL             *
 51           ID      *                                                          *
 52           ID      *  DIVERT HAS BEEN ADDED AT CP 1987 TO REFLECT MANUAL      *
 53           ID      *  SPLIT-FLOW CALCULATIONS.  ANY FLOWS IN EXCESS OF        *
 54           ID      *  6,529 cfs WILL OVERTOP THE SOUTH CANAL BANK.            *
 55           ID      *                                                          *
```

```
      LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

        56          ID        *   SEPARATE CHANNEL & CANAL ROUTING OPERATIONS BEGIN AT      *
        57          ID        *   CP 546T TO REFLECT SPLIT-FLOW CALCULATIONS.               *
        58          ID        *   CANAL "n"=.021                                            *
        59          ID        *   DIVERT AT 545E HAS BEEN CHANGED TO PUT 50% TO NORTH-SOUTH *
        60          ID        *   ADOT CHANNEL & 50% TO CP 546T.                            *
        61          ID        *                                                             *
        62          ID        *   13 DETENTION BASINS HAVE BEEN REMOVED THAT WERE ADJACENT  *
        63          ID        *   TO THE OUTER LOOP.  MODIFIED PULS CHANNEL ROUTING         *
        64          ID        *   OPERATIONS ARE USED IN-PLACE OF THE BASINS.               *
        65          ID        *   CHANNEL GEOMETRY IS BASED ON AVERAGED, APPROXIMATE XSEC   *
        66          ID        *   GEOMETRY USED BY MKE FOR FINAL DESIGN                     *
        67          ID        *                                                             *
        68          ID        *                CP 103 IS ROUTED TO SUB 360.                 *
        69          ID        *  ALL SUB-BASIN DATA & ROUTING OPERATIONS HAVE BEEN REVISED  *
        70          ID        *  TO REFLECT THE HIGHWAY ALIGNMENT CHANGE MADE BY DCCO IN    *
        71          ID        *  MID-1989.   ADDITIONAL ONSITE DRAINAGE HAS BEEN ROUTED     *
        72          ID        *THROUGH 12,365' OF PIPE AND INSERTED IN THE MODEL AT CP 503B *
        73          ID        *     WHICH IS AT THE NORTH SIDE OF VIA DE VENTURA            *
        74          ID        *                                                             *
        75          ID        * NORTH-SOUTH CHANNEL ROUTING OPERATIONS ARE REFERENCED TO    *
        76          ID        * OUTER LOOP HIGHWAY STATIONING FROM THE HIGHWAY GENERAL PLAN *
        77          ID        *                                                             *
        78          ID        * NORTH-SOUTH DRAINAGE CHANNEL GEOMETRY HAS BEEN REVISED TO   *
        79          ID        * REFLECT MKE FINAL DESIGN (SOIL-CEMENT)                      *
        80          ID        *                                                             *
        81          ID        * CITY OF SCOTTSDALE HEC-1 MODELS HAVE BEEN INSERTED FOR      *
        82          ID        * STONEGATE & FOR THE AREA CAPTURED BY SCOTTSDALE RANCH LAKE. *
        83          ID        *                                                             *
        84          ID        * HEC-1 MODELS FOR CAP CACTUS ROAD DETENTION BASIN AND THE    *
        85          ID        * TWO CAP PIPE OVERCHUTES SOUTH OF SHEA BLVD ARE INCLUDED IN  *
        86          ID        * THE FORM OF HYDROGRAPHS WHICH ARE INPUT ON QI RECORDS.      *
        87          ID        ***************************************************************
        88          IT       5 14JUN96       0     300
        89          IO       5
*** NOLIST ***

 89 IO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE

   IT           HYDROGRAPH TIME DATA
                       NMIN           5  MINUTES IN COMPUTATION INTERVAL
                      IDATE     14JUN96  STARTING DATE
                      ITIME        0000  STARTING TIME
                         NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     15JUN96  ENDING DATE
                     NDTIME        0055  ENDING TIME
                      ICENT          19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

      ENGLISH UNITS
          DRAINAGE AREA          SQUARE MILES
          PRECIPITATION DEPTH    INCHES
```

LENGTH, ELEVATION	FEET
FLOW	CUBIC FEET PER SECOND
STORAGE VOLUME	ACRE-FEET
SURFACE AREA	ACRES
TEMPERATURE	DEGREES FAHRENHEIT

RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	165	35.	6.17	4.	1.	1.	0.01		
ROUTED TO	156	33.	6.17	4.	1.	1.	0.01		
HYDROGRAPH AT	284310	53.	6.17	5.	1.	1.	0.02		
ROUTED TO	284310	0.	6.17	0.	0.	0.	0.02	4.41	16.92
ROUTED TO	284320	0.	8.33	0.	0.	0.	0.02		
HYDROGRAPH AT	4320A	168.	6.17	18.	5.	5.	0.06		
2 COMBINED AT	284320	168.	6.17	18.	5.	5.	0.08		
HYDROGRAPH AT	160	205.	6.17	25.	7.	7.	0.10		
ROUTED TO	161	201.	6.25	25.	7.	7.	0.10		
HYDROGRAPH AT	155	67.	6.17	8.	2.	2.	0.03		
3 COMBINED AT	157	290.	6.25	37.	10.	10.	0.14		
ROUTED TO	151	290.	6.25	37.	10.	10.	0.14		
HYDROGRAPH AT	150	112.	6.17	13.	4.	4.	0.04		
HYDROGRAPH AT	150A	46.	6.17	6.	2.	2.	0.02		
ROUTED TO	151.1	45.	6.25	6.	2.	2.	0.02		
3 COMBINED AT	152	430.	6.25	55.	16.	15.	0.20		
ROUTED TO	121	429.	6.25	55.	16.	15.	0.20		
HYDROGRAPH AT	70	11.	6.33	2.	0.	0.	0.01		
ROUTED TO	122	11.	6.33	2.	0.	0.	0.01		
HYDROGRAPH AT	120	38.	6.17	4.	1.	1.	0.01		
3 COMBINED AT	123	470.	6.25	61.	17.	17.	0.23		
HYDROGRAPH AT	75	469.	6.25	62.	17.	17.	0.23		
ROUTED TO	DAM75	468.	6.25	62.	17.	17.	0.23	102.54	6.25
HYDROGRAPH AT	85	464.	6.25	63.	18.	17.	0.23		
ROUTED TO	DAM85	463.	6.25	63.	18.	17.	0.23	102.54	6.25
HYDROGRAPH AT	80	22.	6.08	2.	1.	1.	0.01		

ROUTED TO	DAM80	19.	6.17	2.	0.	0.	0.01	102.06	6.17
ROUTED TO	87	19.	6.17	2.	0.	0.	0.01		
2 COMBINED AT	88	475.	6.25	64.	18.	17.	0.24		
ROUTED TO	96	460.	6.25	65.	18.	17.	0.24		
HYDROGRAPH AT	95	32.	6.17	4.	1.	1.	0.01		
2 COMBINED AT	97	490.	6.25	68.	19.	19.	0.25		
ROUTED TO	91	473.	6.25	69.	19.	19.	0.25		
HYDROGRAPH AT	90	36.	6.17	4.	1.	1.	0.02		
2 COMBINED AT	92	502.	6.25	72.	20.	20.	0.27		
HYDROGRAPH AT	110	45.	6.17	5.	1.	1.	0.02		
ROUTED TO	101	40.	6.25	5.	1.	1.	0.02		
HYDROGRAPH AT	100	88.	6.17	10.	3.	3.	0.00		
ROUTED TO	DAM100	89.	6.17	10.	3.	3.	0.00	102.18	6.17
3 COMBINED AT	102	607.	6.25	87.	24.	23.	0.29		
ROUTED TO	103	604.	6.25	87.	24.	23.	0.29		
DIVERSION TO	103B	0.	6.25	0.	0.	0.	0.29		
HYDROGRAPH AT	103A	604.	6.25	87.	24.	23.	0.29		
ROUTED TO	361	587.	6.33	87.	24.	23.	0.29	3.92	6.33
HYDROGRAPH AT	360	14.	6.75	4.	1.	1.	0.03		
2 COMBINED AT	362	595.	6.33	90.	25.	24.	0.32		
ROUTED TO	411	600.	6.33	90.	25.	24.	0.32	3.99	6.33
ROUTED TO	410B	604.	6.33	90.	25.	24.	0.32	4.00	6.33
HYDROGRAPH AT	410	28.	6.42	5.	1.	1.	0.03		
ROUTED TO	410A	28.	6.42	5.	1.	1.	0.03	0.31	6.42
2 COMBINED AT	410C	631.	6.33	95.	27.	26.	0.35		
ROUTED TO	421	613.	6.33	95.	27.	26.	0.35	3.69	6.33
HYDROGRAPH AT	140	59.	6.25	8.	2.	2.	0.03		
ROUTED TO	DAM140	55.	6.33	7.	2.	2.	0.03	102.13	6.33
HYDROGRAPH AT	130	116.	6.25	16.	4.	4.	0.06		
HYDROGRAPH AT	420	136.	6.33	26.	7.	7.	0.14		

ROUTED TO	420A	138.	6.33	26.	7.	7.	0.14	1.67	6.33
2 COMBINED AT	423	751.	6.33	121.	34.	33.	0.49		
ROUTED TO	401	749.	6.42	121.	34.	33.	0.49	4.09	6.42
HYDROGRAPH AT	240	112.	6.17	13.	4.	4.	0.06		
ROUTED TO	246	109.	6.25	13.	4.	4.	0.06		
HYDROGRAPH AT	245	44.	6.17	5.	1.	1.	0.02		
2 COMBINED AT	247	150.	6.25	18.	5.	5.	0.09		
ROUTED TO	248	147.	6.25	18.	5.	5.	0.09		
HYDROGRAPH AT	284010	249.	6.17	27.	7.	7.	0.09		
HYDROGRAPH AT	255	53.	6.25	6.	2.	2.	0.03		
ROUTED TO	236	49.	6.25	6.	2.	2.	0.03		
HYDROGRAPH AT	235	27.	6.17	3.	1.	1.	0.01		
2 COMBINED AT	237	71.	6.25	9.	2.	2.	0.04		
ROUTED TO	181	70.	6.33	9.	2.	2.	0.04		
3 COMBINED AT	182	422.	6.25	53.	15.	14.	0.22		
ROUTED TO	191	416.	6.25	54.	15.	14.	0.22		
HYDROGRAPH AT	195	123.	6.08	12.	3.	3.	0.04		
ROUTED TO	186	117.	6.17	12.	3.	3.	0.04		
HYDROGRAPH AT	185	72.	6.08	7.	2.	2.	0.02		
2 COMBINED AT	187	187.	6.17	19.	5.	5.	0.06		
ROUTED TO	188	173.	6.17	19.	5.	5.	0.06		
ROUTED TO	DAM1	0.	0.00	0.	0.	0.	0.06	101.91	19.58
2 COMBINED AT	189	416.	6.25	54.	15.	14.	0.28		
HYDROGRAPH AT	190	14.	6.92	4.	1.	1.	0.03		
2 COMBINED AT	192	422.	6.25	58.	16.	15.	0.32		
ROUTED TO	211	398.	6.33	58.	16.	15.	0.32		
HYDROGRAPH AT	210	45.	6.17	5.	1.	1.	0.02		
2 COMBINED AT	212	433.	6.25	63.	17.	17.	0.34		
DIVERSION TO	429	433.	0.00	63.	17.	17.	0.34		
HYDROGRAPH AT	213	0.	0.00	0.	0.	0.	0.34		

HYDROGRAPH AT	405	14.	6.33	2.	1.	0.	0.35		
HYDROGRAPH AT	200	47.	6.33	7.	2.	2.	0.04		
ROUTED TO	DAM200	47.	6.33	7.	2.	2.	0.04	102.11	6.33
HYDROGRAPH AT	415	52.	6.33	8.	2.	2.	0.05		
HYDROGRAPH AT	135	55.	6.25	8.	2.	2.	0.03		
HYDROGRAPH AT	425	66.	6.25	9.	3.	2.	0.04		
3 COMBINED AT	426	125.	6.33	19.	5.	5.	0.44		
HYDROGRAPH AT	400	175.	6.42	35.	10.	9.	0.54		
ROUTED TO	400A	175.	6.42	35.	10.	9.	0.54	1.85	6.42
2 COMBINED AT	402	923.	6.42	156.	44.	42.	1.02		
ROUTED TO	431	889.	6.50	156.	44.	42.	1.02	4.49	6.50
HYDROGRAPH AT	430C	85.	6.58	17.	5.	5.	0.10		
2 COMBINED AT	432	973.	6.50	173.	49.	47.	1.12		
ROUTED TO	433	966.	6.50	173.	49.	47.	1.12	4.50	6.50
HYDROGRAPH AT	430A	82.	6.50	15.	4.	4.	0.08		
HYDROGRAPH AT	440A	46.	6.75	12.	3.	3.	0.07		
3 COMBINED AT	441	1087.	6.50	200.	56.	54.	1.26		
ROUTED TO	501	1084.	6.50	200.	56.	54.	1.26	4.81	6.50
HYDROGRAPH AT	500A	26.	6.50	5.	1.	1.	0.03		
HYDROGRAPH AT	503A	125.	6.67	15.	6.	6.	0.00		
ROUTED TO	503B	125.	6.92	15.	6.	6.	0.00		
3 COMBINED AT	503C	1122.	6.50	221.	63.	61.	1.30		
ROUTED TO	500B1	1111.	6.58	221.	63.	61.	1.30	2.93	6.58
HYDROGRAPH AT	500B	17.	6.42	3.	1.	1.	0.02		
2 COMBINED AT	500B2	1126.	6.58	224.	64.	62.	1.31		
ROUTED TO	560A1	1138.	6.58	224.	64.	62.	1.31	2.47	6.58
HYDROGRAPH AT	560A	24.	6.33	3.	1.	1.	0.02		
2 COMBINED AT	560A2	1152.	6.58	227.	65.	63.	1.33		
ROUTED TO	560B1	1146.	6.58	227.	65.	63.	1.33	3.99	6.58
HYDROGRAPH AT	560B	22.	6.42	4.	1.	1.	0.02		

2 COMBINED AT	560B2	1163.	6.58	231.	66.	64.	1.36		
ROUTED TO	560C1	1163.	6.58	231.	66.	64.	1.36	4.02	6.58
HYDROGRAPH AT	560C	33.	6.50	6.	2.	2.	0.04		
2 COMBINED AT	560C2	1194.	6.58	237.	68.	65.	1.40		
ROUTED TO	551	1160.	6.67	237.	68.	65.	1.40	4.02	6.67
HYDROGRAPH AT	495A	26.	6.50	5.	1.	1.	0.03		
HYDROGRAPH AT	550A	127.	6.75	33.	9.	9.	0.18		
2 COMBINED AT	552	1281.	6.67	269.	77.	74.	1.58		
HYDROGRAPH AT	540A	59.	6.58	13.	4.	4.	0.07		
2 COMBINED AT	540A1	1337.	6.67	283.	80.	77.	1.65		
ROUTED TO	545A1	1338.	6.67	283.	80.	77.	1.65	4.31	6.67
HYDROGRAPH AT	545A	16.	6.17	2.	0.	0.	0.01		
2 COMBINED AT	545A2	1342.	6.67	284.	81.	78.	1.66		
ROUTED TO	545B1	1344.	6.67	284.	81.	78.	1.66	4.80	6.67
HYDROGRAPH AT	545B	14.	6.25	2.	1.	1.	0.01		
2 COMBINED AT	545B2	1351.	6.67	286.	81.	78.	1.67		
ROUTED TO	545C1	1342.	6.67	286.	81.	78.	1.67	4.80	6.67
HYDROGRAPH AT	545C	14.	6.33	2.	1.	1.	0.01		
2 COMBINED AT	545C2	1350.	6.67	289.	82.	79.	1.68		
ROUTED TO	545D1	1347.	6.75	289.	82.	79.	1.68	4.49	6.75
HYDROGRAPH AT	545D	32.	6.42	6.	2.	1.	0.03		
2 COMBINED AT	545D2	1367.	6.75	294.	83.	80.	1.71		
ROUTED TO	545E1	1371.	6.75	294.	83.	80.	1.71	4.54	6.75
HYDROGRAPH AT	545E	30.	6.50	6.	2.	2.	0.03		
DIVERSION TO	545EDV	15.	6.50	3.	1.	1.	0.03		
HYDROGRAPH AT	545EW	15.	6.50	3.	1.	1.	0.03		
2 COMBINED AT	545E2	1382.	6.75	297.	84.	81.	1.74		
HYDROGRAPH AT	1270	9.	7.83	4.	1.	1.	0.03		
HYDROGRAPH AT	1280	18.	7.92	9.	3.	3.	0.06		
HYDROGRAPH AT	1350	27.	7.92	13.	4.	4.	0.09		

HYDROGRAPH AT	1360	35.	7.92	18.	5.	5.	0.12
HYDROGRAPH AT	1440	44.	7.92	22.	7.	6.	0.15
HYDROGRAPH AT	1450	52.	7.92	26.	8.	8.	0.18
HYDROGRAPH AT	1520	61.	8.00	31.	9.	9.	0.22
HYDROGRAPH AT	1530	69.	8.00	35.	11.	10.	0.25
HYDROGRAPH AT	1600	85.	8.08	44.	13.	13.	0.31
ROUTED TO	1591	85.	8.25	43.	13.	13.	0.31
HYDROGRAPH AT	1260	9.	7.92	5.	1.	1.	0.03
HYDROGRAPH AT	1290	18.	8.00	9.	3.	3.	0.06
HYDROGRAPH AT	1340	27.	8.00	14.	4.	4.	0.10
HYDROGRAPH AT	1370	36.	8.00	18.	5.	5.	0.13
HYDROGRAPH AT	1430	44.	8.00	23.	7.	7.	0.16
HYDROGRAPH AT	1460	53.	8.00	27.	8.	8.	0.19
HYDROGRAPH AT	1510	61.	8.08	32.	10.	9.	0.22
HYDROGRAPH AT	1540	70.	8.08	36.	11.	11.	0.26
HYDROGRAPH AT	1590	86.	8.08	45.	14.	13.	0.32
2 COMBINED AT	1592	171.	8.17	88.	27.	26.	0.63
ROUTED TO	1581	171.	8.33	88.	27.	26.	0.63
HYDROGRAPH AT	1250	9.	7.83	4.	1.	1.	0.03
HYDROGRAPH AT	1300	18.	7.83	9.	3.	3.	0.06
HYDROGRAPH AT	1330	27.	7.92	13.	4.	4.	0.09
HYDROGRAPH AT	1380	35.	7.92	18.	5.	5.	0.12
HYDROGRAPH AT	1420	44.	7.92	22.	6.	6.	0.15
HYDROGRAPH AT	1470	52.	7.92	26.	8.	7.	0.18
HYDROGRAPH AT	1500	60.	8.00	30.	9.	9.	0.21
HYDROGRAPH AT	1550	68.	8.00	35.	10.	10.	0.24
HYDROGRAPH AT	1580	85.	7.92	43.	13.	12.	0.30
2 COMBINED AT	1582	251.	8.17	130.	40.	38.	0.93
ROUTED TO	1571	251.	8.33	130.	40.	38.	0.93
HYDROGRAPH AT	1240	9.	7.83	5.	1.	1.	0.03

HYDROGRAPH AT	1310	18.	7.83	9.	3.	3.	0.06		
HYDROGRAPH AT	1320	27.	7.83	14.	4.	4.	0.09		
HYDROGRAPH AT	1400	28.	7.83	15.	4.	4.	0.10		
HYDROGRAPH AT	1390	8.	7.50	4.	1.	1.	0.02		
ROUTED TO	1391	8.	7.58	4.	1.	1.	0.02		
2 COMBINED AT	1392	36.	7.67	19.	6.	5.	0.13		
HYDROGRAPH AT	1410	45.	7.75	23.	7.	7.	0.16		
HYDROGRAPH AT	1480	54.	7.83	28.	8.	8.	0.19		
HYDROGRAPH AT	1490	63.	7.83	33.	10.	9.	0.22		
HYDROGRAPH AT	1560	72.	7.83	37.	11.	11.	0.25		
HYDROGRAPH AT	1570	90.	7.92	46.	14.	13.	0.31		
2 COMBINED AT	1572	332.	8.08	173.	53.	51.	1.25		
ROUTED TO	1611	332.	8.17	173.	53.	51.	1.25		
HYDROGRAPH AT	1610	67.	8.08	35.	11.	10.	0.25		
2 COMBINED AT	1612	399.	8.17	208.	64.	62.	1.50		
ROUTED TO	1621	398.	8.17	208.	64.	61.	1.50		
HYDROGRAPH AT	1620	78.	8.00	39.	12.	11.	0.25		
HYDROGRAPH AT	1630	50.	7.42	20.	6.	5.	0.11		
HYDROGRAPH AT	1640	55.	7.75	24.	7.	7.	0.14		
3 COMBINED AT	1622	523.	8.08	271.	83.	80.	1.89		
ROUTED TO	1887	413.	9.00	249.	82.	79.	1.89	387.25	8.92
HYDROGRAPH AT	1950	14.	7.50	6.	2.	2.	0.04		
HYDROGRAPH AT	1945	27.	7.83	13.	4.	4.	0.08		
ROUTED TO	1951	27.	7.92	13.	4.	4.	0.08		
2 COMBINED AT	1952	40.	7.67	19.	6.	5.	0.12		
HYDROGRAPH AT	1940	89.	7.58	41.	12.	12.	0.24		
HYDROGRAPH AT	1920	82.	7.67	37.	11.	10.	0.20		
ROUTED TO	1941	82.	7.75	37.	11.	10.	0.20		
2 COMBINED AT	1942	170.	7.67	78.	23.	22.	0.43		
HYDROGRAPH AT	1925	195.	7.83	90.	27.	26.	0.50		

HYDROGRAPH AT	1930	214.	8.00	101.	30.	29.	0.57		
HYDROGRAPH AT	1910	56.	7.75	26.	8.	7.	0.14		
HYDROGRAPH AT	1900	105.	7.75	49.	15.	14.	0.27		
HYDROGRAPH AT	1890	142.	7.83	67.	20.	19.	0.36		
ROUTED TO	1931	142.	7.92	67.	20.	19.	0.36		
2 COMBINED AT	1932	355.	8.00	169.	51.	49.	0.93		
HYDROGRAPH AT	1885	370.	8.17	179.	54.	52.	1.00		
HYDROGRAPH AT	1850	59.	7.67	26.	8.	7.	0.14		
HYDROGRAPH AT	1860	108.	7.67	49.	14.	14.	0.26		
HYDROGRAPH AT	1870	171.	8.08	82.	25.	24.	0.44		
ROUTED TO	1886	171.	8.08	82.	25.	24.	0.44		
HYDROGRAPH AT	1880	27.	7.42	11.	3.	3.	0.05		
4 COMBINED AT	1888	900.	8.50	514.	164.	158.	3.38		
ROUTED TO	1984	897.	8.58	513.	164.	158.	3.38	388.59	8.58
HYDROGRAPH AT	1840	12.	7.83	6.	2.	2.	0.03		
HYDROGRAPH AT	1670	29.	7.33	11.	3.	3.	0.08		
ROUTED TO	1681	29.	7.50	11.	3.	3.	0.08		
HYDROGRAPH AT	1680	29.	7.33	11.	3.	3.	0.08		
2 COMBINED AT	1682	59.	7.42	23.	7.	6.	0.15		
ROUTED TO	1751	58.	7.50	23.	7.	6.	0.15		
HYDROGRAPH AT	1226	437.	5.00	357.	133.	129.	0.00		
DIVERSION TO	1228	371.	5.00	304.	113.	110.	0.00		
HYDROGRAPH AT	1227	66.	5.00	54.	20.	19.	0.00		
HYDROGRAPH AT	1225	171.	6.17	64.	23.	22.	0.08		
HYDROGRAPH AT	1230	642.	6.50	152.	47.	46.	0.72		
ROUTED TO	1221	641.	6.67	152.	47.	46.	0.72		
HYDROGRAPH AT	310510	6.	6.17	1.	0.	0.	0.01		
HYDROGRAPH AT	1217A	866.	6.25	109.	28.	27.	0.74		
HYDROGRAPH AT	1220	1377.	6.50	202.	54.	52.	1.41		
ROUTED TO	1222	1311.	6.58	202.	54.	52.	1.41		

2 COMBINED AT	1223	1916.	6.58	352.	101.	97.	2.13
HYDROGRAPH AT	1750	1844.	6.75	363.	104.	100.	2.20
2 COMBINED AT	1752	1860.	6.75	386.	111.	107.	2.36
ROUTED TO	1761	1822.	6.83	386.	111.	107.	2.36
HYDROGRAPH AT	1760	23.	7.17	8.	2.	2.	0.05
2 COMBINED AT	1762	1839.	6.83	393.	113.	109.	2.41
ROUTED TO	1771	1816.	6.83	394.	113.	109.	2.41
HYDROGRAPH AT	1770	19.	7.08	6.	2.	1.	0.04
2 COMBINED AT	1772	1831.	6.83	399.	115.	110.	2.44
ROUTED TO	1841	1784.	6.92	399.	114.	110.	2.44
2 COMBINED AT	1842	1794.	6.92	404.	116.	112.	2.47
HYDROGRAPH AT	1830	1837.	7.00	425.	123.	118.	2.59
HYDROGRAPH AT	1660	31.	7.50	13.	4.	4.	0.09
ROUTED TO	1691	31.	7.67	13.	4.	4.	0.09
HYDROGRAPH AT	1690	32.	7.50	14.	4.	4.	0.09
2 COMBINED AT	1692	63.	7.58	27.	8.	8.	0.18
ROUTED TO	1741	63.	7.75	27.	8.	8.	0.18
HYDROGRAPH AT	1740	32.	7.50	14.	4.	4.	0.09
2 COMBINED AT	1742	94.	7.67	40.	12.	11.	0.27
ROUTED TO	1781	94.	7.83	40.	12.	11.	0.27
HYDROGRAPH AT	1780	39.	7.42	15.	4.	4.	0.09
2 COMBINED AT	1782	128.	7.67	55.	16.	16.	0.36
ROUTED TO	1831	128.	7.83	55.	16.	16.	0.36
2 COMBINED AT	1832	1872.	7.00	480.	139.	134.	2.95
HYDROGRAPH AT	1820	1865.	7.08	498.	145.	139.	3.06
HYDROGRAPH AT	1650	31.	7.50	13.	4.	4.	0.09
ROUTED TO	1701	31.	7.67	13.	4.	4.	0.09
HYDROGRAPH AT	1700	32.	7.50	14.	4.	4.	0.09
2 COMBINED AT	1702	63.	7.58	27.	8.	8.	0.18
ROUTED TO	1731	63.	7.75	27.	8.	8.	0.18

HYDROGRAPH AT	1730	32.	7.50	13.	4.	4.	0.09
2 COMBINED AT	1732	94.	7.67	40.	12.	11.	0.27
ROUTED TO	1791	94.	7.83	40.	12.	11.	0.27
HYDROGRAPH AT	1790	36.	7.42	15.	4.	4.	0.09
2 COMBINED AT	1792	126.	7.75	54.	16.	15.	0.36
ROUTED TO	1822	126.	7.83	54.	16.	15.	0.36
2 COMBINED AT	1823	1909.	7.08	552.	161.	155.	3.43
HYDROGRAPH AT	1810	1955.	7.08	573.	167.	161.	3.54
HYDROGRAPH AT	1210	586.	6.67	131.	35.	34.	0.93
ROUTED TO	1201	583.	6.83	131.	35.	34.	0.93
HYDROGRAPH AT	310210	31.	6.42	6.	2.	2.	0.04
HYDROGRAPH AT	310220	17.	6.17	3.	1.	1.	0.02
2 COMBINED AT	310220	48.	6.42	10.	3.	3.	0.06
HYDROGRAPH AT	310310	25.	6.17	5.	1.	1.	0.03
HYDROGRAPH AT	310410	5.	6.17	1.	0.	0.	0.01
3 COMBINED AT	31B	77.	6.42	16.	4.	4.	0.09
HYDROGRAPH AT	1204A	903.	6.33	130.	34.	33.	0.74
HYDROGRAPH AT	1200	1256.	6.67	207.	55.	53.	1.31
2 COMBINED AT	1202	1748.	6.67	338.	91.	88.	2.24
ROUTED TO	1191	1722.	6.75	337.	91.	87.	2.24
HYDROGRAPH AT	300010	18.	6.42	4.	1.	1.	0.02
HYDROGRAPH AT	310010	38.	6.17	8.	2.	2.	0.05
HYDROGRAPH AT	310110	19.	6.17	4.	1.	1.	0.02
ROUTED TO	310120	19.	6.17	4.	1.	1.	0.02
ROUTED TO	310130	19.	6.25	4.	1.	1.	0.02
HYDROGRAPH AT	310130	26.	6.42	5.	1.	1.	0.03
2 COMBINED AT	310130	44.	6.42	9.	3.	2.	0.05
3 COMBINED AT	31A	100.	6.42	20.	6.	5.	0.12
HYDROGRAPH AT	1187A	321.	6.33	52.	14.	13.	0.33
HYDROGRAPH AT	1190	708.	6.83	151.	41.	40.	1.05

2 COMBINED AT	1192	2326.	6.83	487.	132.	127.	3.29		
ROUTED TO	1181	2284.	6.83	486.	132.	127.	3.29		
HYDROGRAPH AT	2530B	170.	6.17	19.	5.	5.	0.10		
ROUTED TO	1173	24.	6.92	20.	13.	13.	0.10	1500.21	6.92
ROUTED TO	300720	24.	7.00	21.	15.	14.	0.10		
HYDROGRAPH AT	300720	21.	6.17	4.	1.	1.	0.03		
2 COMBINED AT	300720	44.	6.42	25.	16.	16.	0.13		
ROUTED TO	300730	44.	6.50	25.	16.	16.	0.13		
HYDROGRAPH AT	300730	18.	6.17	3.	1.	1.	0.02		
2 COMBINED AT	300730	61.	6.42	28.	17.	17.	0.15		
ROUTED TO	300740	60.	6.50	28.	17.	17.	0.15		
HYDROGRAPH AT	300740	94.	6.17	11.	3.	3.	0.04		
2 COMBINED AT	300740	143.	6.17	39.	20.	20.	0.19		
HYDROGRAPH AT	300810	60.	6.17	12.	3.	3.	0.07		
ROUTED TO	300740	59.	6.25	12.	3.	3.	0.07		
2 COMBINED AT	300740	190.	6.25	51.	23.	23.	0.26		
ROUTED TO	300750	186.	6.25	51.	23.	23.	0.26		
HYDROGRAPH AT	300750	56.	6.17	6.	2.	2.	0.02		
2 COMBINED AT	300750	229.	6.25	57.	25.	25.	0.28		
HYDROGRAPH AT	300910	20.	6.17	4.	1.	1.	0.02		
ROUTED TO	300750	19.	6.58	4.	1.	1.	0.02		
2 COMBINED AT	300750	240.	6.25	61.	26.	26.	0.30		
ROUTED TO	300760	233.	6.25	61.	26.	26.	0.30		
HYDROGRAPH AT	300760	123.	6.17	13.	4.	3.	0.05		
2 COMBINED AT	300760	324.	6.25	74.	30.	29.	0.35		
ROUTED TO	300770	323.	6.25	74.	30.	29.	0.35		
HYDROGRAPH AT	300770	32.	6.17	5.	1.	1.	0.03		
2 COMBINED AT	300770	351.	6.25	79.	31.	31.	0.38		
HYDROGRAPH AT	301010	36.	6.42	7.	2.	2.	0.05		
ROUTED TO	301020	36.	6.42	7.	2.	2.	0.05		

ROUTED TO	301030	36.	6.50	7.	2.	2.	0.05		
HYDROGRAPH AT	301030	19.	6.50	4.	1.	1.	0.02		
2 COMBINED AT	301030	55.	6.50	11.	3.	3.	0.07		
ROUTED TO	301040	55.	6.50	11.	3.	3.	0.07		
HYDROGRAPH AT	301040	42.	6.42	8.	2.	2.	0.05		
2 COMBINED AT	301040	96.	6.42	20.	5.	5.	0.12		
ROUTED TO	300770	96.	6.50	20.	5.	5.	0.12		
2 COMBINED AT	300770	404.	6.25	98.	37.	36.	0.50		
ROUTED TO	300770	398.	6.33	97.	32.	31.	0.50	4.92	6.33
HYDROGRAPH AT	1177A	488.	6.42	117.	38.	36.	0.65		
HYDROGRAPH AT	1180	874.	6.92	209.	63.	61.	1.35		
HYDROGRAPH AT	1000	14.	6.33	2.	1.	1.	0.01		
ROUTED TO	1042	13.	6.42	2.	1.	1.	0.01		
HYDROGRAPH AT	1060A	44.	7.00	14.	4.	4.	0.06		
ROUTED TO	1051	44.	7.08	14.	4.	4.	0.06		
HYDROGRAPH AT	1050	34.	6.17	3.	1.	1.	0.01		
2 COMBINED AT	1052	47.	7.00	17.	5.	5.	0.07		
ROUTED TO	1041	47.	7.08	17.	5.	5.	0.07		
HYDROGRAPH AT	1040	66.	6.25	9.	2.	2.	0.03		
3 COMBINED AT	1043	112.	6.33	28.	8.	8.	0.11		
ROUTED TO	DAM8	107.	6.42	23.	6.	6.	0.11	102.20	6.42
ROUTED TO	1011	94.	6.58	24.	6.	6.	0.11		
HYDROGRAPH AT	1010	76.	6.25	9.	2.	2.	0.04		
2 COMBINED AT	1012	122.	6.58	32.	9.	9.	0.15		
HYDROGRAPH AT	1110	125.	6.58	33.	9.	9.	0.16		
HYDROGRAPH AT	1020	76.	6.17	8.	2.	2.	0.03		
HYDROGRAPH AT	1120	100.	6.17	13.	4.	3.	0.07		
2 COMBINED AT	1121	178.	6.25	46.	13.	12.	0.23		
DIVERSION TO	2223	71.	6.25	18.	5.	5.	0.23		
HYDROGRAPH AT	2222	107.	6.25	28.	8.	7.	0.23		

ROUTED TO	1131	103.	6.25	28.	8.	7.	0.23
HYDROGRAPH AT	1070	72.	6.25	9.	2.	2.	0.04
ROUTED TO	1031	68.	6.25	9.	2.	2.	0.04
HYDROGRAPH AT	1030	52.	6.25	7.	2.	2.	0.03
2 COMBINED AT	1032	120.	6.25	16.	4.	4.	0.07
HYDROGRAPH AT	1130	171.	6.42	24.	7.	6.	0.13
2 COMBINED AT	1132	265.	6.33	52.	14.	14.	0.36
DIVERSION TO	3334	132.	6.33	26.	7.	7.	0.36
HYDROGRAPH AT	3333	132.	6.33	26.	7.	7.	0.36
ROUTED TO	1151	131.	6.42	26.	7.	7.	0.36
HYDROGRAPH AT	1080A	166.	6.17	18.	5.	5.	0.09
HYDROGRAPH AT	1090	244.	6.25	29.	8.	8.	0.14
HYDROGRAPH AT	1150	360.	6.50	62.	17.	17.	0.37
2 COMBINED AT	1152	483.	6.50	88.	24.	23.	0.74
DIVERSION TO	4445	242.	6.50	44.	12.	12.	0.74
HYDROGRAPH AT	4444	242.	6.50	44.	12.	12.	0.74
ROUTED TO	1161	235.	6.58	44.	12.	12.	0.74
HYDROGRAPH AT	1159	1236.	6.75	478.	130.	125.	2.25
ROUTED TO	300120	1233.	6.75	478.	130.	125.	2.25
HYDROGRAPH AT	300120	31.	6.17	6.	2.	2.	0.04
2 COMBINED AT	300120	1250.	6.75	484.	131.	126.	2.29
ROUTED TO	300130	1249.	6.75	484.	131.	126.	2.29
ROUTED TO	300140	1247.	6.83	483.	131.	127.	2.29
HYDROGRAPH AT	300140	20.	6.42	4.	1.	1.	0.03
2 COMBINED AT	300140	1259.	6.75	487.	132.	128.	2.31
ROUTED TO	300150	1258.	6.83	487.	133.	128.	2.31
ROUTED TO	300160	1258.	6.83	487.	132.	128.	2.31
HYDROGRAPH AT	300160	58.	6.33	11.	3.	3.	0.06
2 COMBINED AT	300160	1285.	6.83	496.	135.	130.	2.37
HYDROGRAPH AT	300310	10.	6.42	2.	1.	1.	0.01

ROUTED TO	300160	10.	6.67	2.	1.	1.	0.01		
2 COMBINED AT	300160	1293.	6.83	498.	136.	131.	2.38		
ROUTED TO	300170	1292.	6.83	498.	136.	131.	2.38		
ROUTED TO	300180	1291.	6.83	498.	136.	131.	2.38		
HYDROGRAPH AT	300180	7.	6.42	1.	0.	0.	0.01		
2 COMBINED AT	300180	1294.	6.83	499.	136.	131.	2.39		
ROUTED TO	300190	1293.	6.83	499.	136.	131.	2.39		
ROUTED TO	300200	1291.	6.92	498.	136.	131.	2.39		
HYDROGRAPH AT	300200	96.	6.17	13.	4.	3.	0.06		
2 COMBINED AT	300200	1311.	6.83	507.	140.	135.	2.46		
HYDROGRAPH AT	300410	53.	6.42	11.	3.	3.	0.07		
ROUTED TO	300410	48.	6.58	9.	2.	2.	0.07	2.47	6.58
ROUTED TO	300420	47.	6.58	9.	2.	2.	0.07		
HYDROGRAPH AT	300420	33.	6.42	7.	2.	2.	0.04		
2 COMBINED AT	300420	75.	6.58	16.	4.	4.	0.11		
ROUTED TO	300420	0.	6.58	0.	0.	0.	0.11	3.74	24.92
ROUTED TO	300200	0.	6.67	0.	0.	0.	0.11		
2 COMBINED AT	300200	1311.	6.83	507.	140.	135.	2.56		
HYDROGRAPH AT	290410	103.	6.50	21.	6.	6.	0.13		
ROUTED TO	290420	103.	6.50	21.	6.	6.	0.13		
ROUTED TO	290430	103.	6.50	21.	6.	6.	0.13		
HYDROGRAPH AT	290430	51.	6.17	7.	2.	2.	0.04		
2 COMBINED AT	290430	128.	6.50	29.	8.	8.	0.17		
2 COMBINED AT	30A	1396.	6.83	533.	148.	142.	2.74		
HYDROGRAPH AT	1155A	1430.	6.83	555.	154.	148.	2.89		
HYDROGRAPH AT	1160	1522.	7.08	590.	165.	158.	3.20		
HYDROGRAPH AT	300510	35.	6.42	7.	2.	2.	0.04		
ROUTED TO	300520	35.	6.42	7.	2.	2.	0.04		
ROUTED TO	300530	35.	6.50	7.	2.	2.	0.04		
HYDROGRAPH AT	300530	87.	6.08	11.	3.	3.	0.06		

2 COMBINED AT	300530	93.	6.08	18.	5.	5.	0.10		
ROUTED TO	300540	90.	6.17	18.	5.	5.	0.10		
HYDROGRAPH AT	300540	52.	6.08	6.	2.	2.	0.03		
2 COMBINED AT	300540	129.	6.17	25.	7.	7.	0.13		
ROUTED TO	300550	129.	6.17	25.	7.	7.	0.13		
HYDROGRAPH AT	300550	79.	6.17	12.	3.	3.	0.06		
2 COMBINED AT	300550	208.	6.17	36.	10.	10.	0.19		
ROUTED TO	300560	198.	6.17	37.	10.	10.	0.19		
HYDROGRAPH AT	300560	71.	6.08	8.	2.	2.	0.03		
2 COMBINED AT	300560	259.	6.17	44.	12.	12.	0.22		
ROUTED TO	300560	169.	6.58	28.	7.	7.	0.22	4.37	6.58
HYDROGRAPH AT	300610	56.	6.17	8.	2.	2.	0.04		
ROUTED TO	300620	55.	6.17	8.	2.	2.	0.04		
HYDROGRAPH AT	300630	107.	6.17	16.	4.	4.	0.08		
ROUTED TO	300630	23.	6.92	6.	2.	2.	0.08	4.11	6.92
2 COMBINED AT	30B	171.	6.58	34.	9.	9.	0.30		
HYDROGRAPH AT	1165A	254.	6.17	61.	16.	16.	0.48		
HYDROGRAPH AT	1170	402.	6.67	96.	26.	25.	0.74		
ROUTED TO	1162	393.	6.75	95.	26.	25.	0.74		
3 COMBINED AT	1163	1936.	7.00	729.	203.	195.	4.67		
DIVERSION TO	5556	968.	7.00	365.	101.	98.	4.67		
HYDROGRAPH AT	5555	968.	7.00	365.	101.	98.	4.67		
ROUTED TO	1182	966.	7.00	364.	101.	98.	4.67		
2 COMBINED AT	1183	1815.	6.92	573.	165.	159.	6.02		
ROUTED TO	1184	1796.	7.00	573.	165.	159.	6.02		
2 COMBINED AT	1185	4009.	6.92	1059.	296.	285.	9.31		
ROUTED TO	1646	3965.	6.92	1059.	296.	286.	9.31		
HYDROGRAPH AT	1645	52.	7.08	17.	5.	5.	0.09		
2 COMBINED AT	1647	4015.	6.92	1075.	301.	290.	9.40		
ROUTED TO	1711	3955.	7.00	1076.	301.	290.	9.40		

HYDROGRAPH AT	1710	40.	7.42	16.	5.	4.	0.09		
2 COMBINED AT	1712	3989.	7.00	1092.	306.	295.	9.49		
ROUTED TO	1721	3985.	7.00	1092.	306.	295.	9.49		
HYDROGRAPH AT	1720	46.	7.33	17.	5.	5.	0.09		
2 COMBINED AT	1722	4026.	7.00	1109.	311.	299.	9.59		
ROUTED TO	1801	3999.	7.00	1108.	311.	299.	9.59		
HYDROGRAPH AT	1800	51.	7.25	19.	5.	5.	0.09		
2 COMBINED AT	1802	4047.	7.00	1127.	316.	305.	9.68		
ROUTED TO	1811	3986.	7.08	1127.	316.	305.	9.68		
2 COMBINED AT	1812	5941.	7.08	1700.	483.	466.	13.22		
ROUTED TO	1813	5917.	7.08	1700.	484.	466.	13.22		
2 COMBINED AT	1985	6053.	7.08	2198.	647.	624.	16.60		
ROUTED TO	1986	5175.	7.33	2189.	646.	623.	16.60	394.93	7.33
HYDROGRAPH AT	3334	132.	6.33	26.	7.	7.	0.00		
HYDROGRAPH AT	1135	218.	6.50	44.	12.	12.	0.11		
ROUTED TO	1136	217.	6.58	44.	12.	12.	0.11		
HYDROGRAPH AT	4445	242.	6.50	44.	12.	12.	0.00		
HYDROGRAPH AT	1140	339.	6.67	66.	18.	18.	0.14		
2 COMBINED AT	1141	547.	6.67	110.	30.	29.	0.25		
ROUTED TO	1971	538.	6.75	110.	30.	29.	0.25		
HYDROGRAPH AT	5556	968.	7.00	365.	101.	98.	0.00		
ROUTED TO	1972	966.	7.17	363.	101.	98.	0.00		
HYDROGRAPH AT	1970	280.	6.92	83.	23.	22.	0.51		
3 COMBINED AT	1973	1577.	7.08	551.	154.	149.	0.76		
HYDROGRAPH AT	1980	1762.	7.25	632.	179.	173.	1.23		
2 COMBINED AT	1987	6892.	7.33	2811.	826.	795.	17.83		
DIVERSION TO	1987B	363.	7.17	16.	4.	4.	17.83		
HYDROGRAPH AT	1987A	6529.	7.17	2795.	822.	791.	17.83		
ROUTED TO	1991	6236.	7.67	2788.	821.	791.	17.83	395.79	7.67
HYDROGRAPH AT	1960	268.	6.83	74.	20.	20.	0.38		

HYDROGRAPH AT	1990	492.	7.00	146.	40.	39.	0.76
HYDROGRAPH AT	429	433.	6.25	63.	17.	17.	0.00
HYDROGRAPH AT	430B	435.	6.33	65.	18.	17.	0.01
HYDROGRAPH AT	440B	437.	6.42	71.	20.	19.	0.05
ROUTED TO	495B1	430.	6.42	71.	20.	19.	0.05
HYDROGRAPH AT	280010	19.	6.17	2.	1.	1.	0.01
ROUTED TO	280020	19.	6.17	2.	1.	1.	0.01
ROUTED TO	280030	18.	6.17	2.	1.	1.	0.01
ROUTED TO	280040	17.	6.25	2.	1.	1.	0.01
HYDROGRAPH AT	280040	59.	6.17	6.	2.	2.	0.02
2 COMBINED AT	280040	75.	6.17	8.	2.	2.	0.03
ROUTED TO	280050	74.	6.17	8.	2.	2.	0.03
ROUTED TO	280060	70.	6.17	8.	2.	2.	0.03
HYDROGRAPH AT	280060	3.	6.08	0.	0.	0.	0.00
2 COMBINED AT	280060	73.	6.17	8.	2.	2.	0.03
ROUTED TO	280070	71.	6.17	8.	2.	2.	0.03
ROUTED TO	280080	66.	6.25	8.	2.	2.	0.03
HYDROGRAPH AT	280080	43.	6.17	4.	1.	1.	0.01
2 COMBINED AT	280080	108.	6.17	13.	3.	3.	0.04
HYDROGRAPH AT	280410	27.	6.08	3.	1.	1.	0.01
ROUTED TO	280420	26.	6.17	3.	1.	1.	0.01
ROUTED TO	280080	26.	6.17	3.	1.	1.	0.01
2 COMBINED AT	280080	134.	6.17	15.	4.	4.	0.05
ROUTED TO	280090	130.	6.17	15.	4.	4.	0.05
ROUTED TO	280100	122.	6.25	16.	4.	4.	0.05
HYDROGRAPH AT	280100	68.	6.17	7.	2.	2.	0.02
2 COMBINED AT	280100	188.	6.17	22.	6.	6.	0.07
ROUTED TO	280110	184.	6.17	22.	6.	6.	0.07
HYDROGRAPH AT	280510	85.	6.17	9.	2.	2.	0.03
ROUTED TO	280520	77.	6.17	9.	2.	2.	0.03

HYDROGRAPH AT	280520	72.	6.17	8.	2.	2.	0.03		
2 COMBINED AT	280520	149.	6.17	17.	5.	4.	0.06		
ROUTED TO	280530	138.	6.17	17.	5.	4.	0.06		
HYDROGRAPH AT	280530	18.	6.17	2.	1.	0.	0.01		
2 COMBINED AT	280530	156.	6.17	19.	5.	5.	0.06		
ROUTED TO	280540	153.	6.17	19.	5.	5.	0.06		
ROUTED TO	280110	147.	6.25	19.	5.	5.	0.06		
2 COMBINED AT	280110	325.	6.17	41.	11.	11.	0.14		
ROUTED TO	280120	322.	6.25	41.	11.	11.	0.14		
HYDROGRAPH AT	280120	14.	6.50	3.	1.	1.	0.02		
2 COMBINED AT	280120	336.	6.25	44.	12.	12.	0.16		
HYDROGRAPH AT	280610	50.	6.42	10.	3.	3.	0.06		
ROUTED TO	280610	9.	7.58	4.	1.	1.	0.06	4.16	7.58
ROUTED TO	280620	9.	7.67	4.	1.	1.	0.06		
HYDROGRAPH AT	280620	52.	6.33	8.	2.	2.	0.03		
2 COMBINED AT	280620	52.	6.33	11.	3.	3.	0.09		
HYDROGRAPH AT	280810	129.	6.17	13.	4.	3.	0.04		
ROUTED TO	280820	125.	6.17	13.	4.	3.	0.04		
ROUTED TO	280620	119.	6.17	13.	4.	3.	0.04		
2 COMBINED AT	280620	154.	6.17	24.	7.	7.	0.13		
ROUTED TO	280630	152.	6.25	24.	7.	7.	0.13		
HYDROGRAPH AT	280910	5.	6.08	1.	0.	0.	0.00		
ROUTED TO	280920	5.	6.17	1.	0.	0.	0.00		
ROUTED TO	280630	5.	6.17	1.	0.	0.	0.00		
2 COMBINED AT	280630	157.	6.25	25.	7.	7.	0.14		
ROUTED TO	280640	156.	6.25	25.	7.	7.	0.14		
HYDROGRAPH AT	281010	64.	6.17	7.	2.	2.	0.02		
ROUTED TO	280640	63.	6.17	7.	2.	2.	0.02		
2 COMBINED AT	280640	208.	6.17	32.	9.	9.	0.16		
ROUTED TO	280650	206.	6.25	32.	9.	9.	0.16		

HYDROGRAPH AT	280650	18.	6.50	4.	1.	1.	0.02
2 COMBINED AT	280650	219.	6.25	35.	10.	10.	0.18
ROUTED TO	280660	213.	6.25	35.	10.	10.	0.18
HYDROGRAPH AT	280660	11.	6.42	2.	1.	1.	0.01
2 COMBINED AT	280660	224.	6.25	38.	11.	10.	0.20
HYDROGRAPH AT	281110	56.	6.17	6.	2.	2.	0.02
ROUTED TO	281120	50.	6.25	6.	2.	2.	0.02
HYDROGRAPH AT	281120	56.	6.17	6.	2.	2.	0.02
2 COMBINED AT	281120	105.	6.17	12.	3.	3.	0.04
HYDROGRAPH AT	281210	53.	6.42	11.	3.	3.	0.07
ROUTED TO	281120	53.	6.42	11.	3.	3.	0.07
2 COMBINED AT	281120	138.	6.17	23.	6.	6.	0.11
HYDROGRAPH AT	281310	20.	6.50	4.	1.	1.	0.03
ROUTED TO	281320	20.	6.50	4.	1.	1.	0.03
ROUTED TO	281120	20.	6.58	4.	1.	1.	0.03
2 COMBINED AT	281120	144.	6.17	27.	8.	7.	0.14
ROUTED TO	281130	142.	6.25	27.	8.	7.	0.14
HYDROGRAPH AT	281130	109.	6.17	11.	3.	3.	0.04
2 COMBINED AT	281130	236.	6.17	38.	11.	10.	0.17
ROUTED TO	281140	230.	6.17	38.	11.	10.	0.17
HYDROGRAPH AT	281140	37.	6.17	5.	1.	1.	0.02
2 COMBINED AT	281140	267.	6.17	43.	12.	11.	0.19
ROUTED TO	280660	255.	6.25	43.	12.	11.	0.19
2 COMBINED AT	280660	479.	6.25	81.	23.	22.	0.39
2 COMBINED AT	280120	815.	6.25	125.	35.	34.	0.55
ROUTED TO	280120	808.	6.25	125.	35.	34.	0.55
ROUTED TO	280130	788.	6.25	125.	35.	34.	0.55
HYDROGRAPH AT	280130	23.	6.17	5.	2.	1.	0.04
2 COMBINED AT	280130	811.	6.25	130.	36.	35.	0.59
ROUTED TO	280140	802.	6.25	130.	36.	35.	0.59

ROUTED TO	280150	778.	6.33	131.	36.	35.	0.59
HYDROGRAPH AT	280150	26.	6.17	6.	2.	2.	0.05
2 COMBINED AT	280150	799.	6.33	136.	38.	37.	0.64
ROUTED TO	280160	797.	6.33	137.	38.	37.	0.64
HYDROGRAPH AT	280160	18.	6.17	3.	1.	1.	0.02
2 COMBINED AT	280160	811.	6.33	140.	39.	37.	0.66
HYDROGRAPH AT	281410	114.	6.17	11.	3.	3.	0.04
ROUTED TO	281420	102.	6.17	11.	3.	3.	0.04
HYDROGRAPH AT	281420	64.	6.17	6.	2.	2.	0.02
2 COMBINED AT	281420	166.	6.17	18.	5.	5.	0.06
ROUTED TO	281430	151.	6.25	18.	5.	5.	0.06
HYDROGRAPH AT	281430	95.	6.17	13.	4.	3.	0.06
2 COMBINED AT	281430	239.	6.17	31.	8.	8.	0.12
ROUTED TO	281440	230.	6.25	31.	8.	8.	0.12
HYDROGRAPH AT	281440	93.	6.17	13.	4.	3.	0.06
2 COMBINED AT	281440	306.	6.25	44.	12.	12.	0.19
ROUTED TO	281450	304.	6.25	44.	12.	12.	0.19
HYDROGRAPH AT	281450	65.	6.17	9.	2.	2.	0.04
2 COMBINED AT	281450	354.	6.25	52.	14.	14.	0.23
ROUTED TO	280160	353.	6.25	53.	14.	14.	0.23
2 COMBINED AT	280160	1132.	6.33	192.	53.	51.	0.89
ROUTED TO	280170	1129.	6.33	192.	53.	51.	0.89
ROUTED TO	280180	1119.	6.33	192.	53.	51.	0.89
HYDROGRAPH AT	281510	50.	6.17	5.	1.	1.	0.02
ROUTED TO	281520	48.	6.17	5.	1.	1.	0.02
ROUTED TO	281530	46.	6.25	5.	1.	1.	0.02
HYDROGRAPH AT	281530	109.	6.17	13.	4.	3.	0.05
2 COMBINED AT	281530	150.	6.25	18.	5.	5.	0.06
HYDROGRAPH AT	281710	92.	6.17	10.	3.	3.	0.03
ROUTED TO	281720	90.	6.17	10.	3.	3.	0.03

ROUTED TO	281530	81.	6.25	10.	3.	3.	0.03		
2 COMBINED AT	281530	231.	6.25	28.	8.	7.	0.09		
ROUTED TO	281540	226.	6.25	28.	8.	7.	0.09		
HYDROGRAPH AT	281540	90.	6.17	10.	3.	3.	0.04		
2 COMBINED AT	281540	301.	6.25	38.	10.	10.	0.13		
ROUTED TO	281540	304.	6.25	37.	10.	9.	0.13	2.77	6.25
ROUTED TO	281550	298.	6.25	37.	10.	9.	0.13		
HYDROGRAPH AT	281550	27.	6.17	3.	1.	1.	0.01		
2 COMBINED AT	281550	318.	6.25	40.	11.	10.	0.14		
HYDROGRAPH AT	281810	13.	6.17	1.	0.	0.	0.00		
ROUTED TO	281810	0.	10.17	0.	0.	0.	0.00	1.97	15.17
ROUTED TO	281550	0.	11.67	0.	0.	0.	0.00		
2 COMBINED AT	281550	318.	6.25	40.	11.	10.	0.14		
ROUTED TO	281560	312.	6.25	40.	11.	10.	0.14		
HYDROGRAPH AT	281560	22.	6.17	3.	1.	1.	0.01		
2 COMBINED AT	281560	332.	6.25	43.	11.	11.	0.15		
HYDROGRAPH AT	281910	66.	6.17	10.	3.	3.	0.05		
ROUTED TO	281560	63.	6.25	10.	3.	3.	0.05		
2 COMBINED AT	281560	395.	6.25	52.	14.	13.	0.20		
ROUTED TO	281570	389.	6.25	52.	14.	13.	0.20		
HYDROGRAPH AT	281570	49.	6.25	6.	2.	2.	0.02		
2 COMBINED AT	281570	438.	6.25	58.	16.	15.	0.22		
ROUTED TO	281580	425.	6.33	58.	16.	15.	0.22		
HYDROGRAPH AT	281580	14.	6.33	3.	1.	1.	0.01		
2 COMBINED AT	281580	439.	6.33	61.	16.	16.	0.24		
ROUTED TO	280180	436.	6.33	61.	16.	16.	0.24		
2 COMBINED AT	280180	1555.	6.33	253.	70.	67.	1.13		
ROUTED TO	280190	1539.	6.33	253.	70.	67.	1.13		
HYDROGRAPH AT	282010	104.	6.33	18.	5.	5.	0.09		
ROUTED TO	280190	104.	6.33	18.	5.	5.	0.09		

2 COMBINED AT	280190	1642.	6.33	272.	75.	72.	1.22		
ROUTED TO	280200	1589.	6.42	272.	75.	72.	1.22		
HYDROGRAPH AT	CACTUS	186.	10.58	186.	167.	165.	5.14		
HYDROGRAPH AT	282110	0.	6.58	0.	0.	0.	0.00		
2 COMBINED AT	282110	186.	10.58	186.	167.	165.	5.14		
ROUTED TO	282120	186.	10.67	186.	167.	165.	5.14		
HYDROGRAPH AT	282120	21.	6.17	3.	1.	1.	0.01		
2 COMBINED AT	282120	187.	10.67	186.	167.	166.	5.16		
ROUTED TO	282130	187.	10.75	186.	167.	166.	5.16		
ROUTED TO	282140	187.	10.83	186.	167.	166.	5.16		
HYDROGRAPH AT	282140	14.	6.17	2.	1.	1.	0.01		
2 COMBINED AT	282140	187.	10.75	186.	168.	166.	5.17		
ROUTED TO	282150	187.	10.83	186.	168.	166.	5.17		
HYDROGRAPH AT	282310	85.	6.08	10.	3.	3.	0.04		
ROUTED TO	282310	4.	7.92	2.	1.	1.	0.04	4.03	7.92
ROUTED TO	282320	4.	8.00	2.	1.	1.	0.04		
HYDROGRAPH AT	282320	55.	6.17	8.	2.	2.	0.04		
2 COMBINED AT	282320	55.	6.17	10.	3.	3.	0.08		
HYDROGRAPH AT	282410	60.	6.17	8.	2.	2.	0.03		
ROUTED TO	282320	57.	6.17	8.	2.	2.	0.03		
2 COMBINED AT	282320	112.	6.17	17.	5.	5.	0.12		
ROUTED TO	282320	90.	6.33	14.	4.	4.	0.12	2.45	6.33
ROUTED TO	282330	86.	6.33	14.	4.	4.	0.12		
HYDROGRAPH AT	282330	10.	6.17	1.	0.	0.	0.01		
2 COMBINED AT	282330	93.	6.33	15.	4.	4.	0.12		
ROUTED TO	282150	88.	6.33	15.	4.	4.	0.12		
2 COMBINED AT	282150	247.	6.42	197.	172.	170.	5.29		
ROUTED TO	282160	247.	6.42	197.	172.	170.	5.29		
HYDROGRAPH AT	282160	133.	6.17	21.	6.	6.	0.12		
2 COMBINED AT	282160	353.	6.42	216.	178.	176.	5.41		

ROUTED TO	282170	352.	6.42	216.	178.	176.	5.41
ROUTED TO	282180	350.	6.42	216.	178.	176.	5.41
HYDROGRAPH AT	282180	6.	6.25	1.	0.	0.	0.01
2 COMBINED AT	282180	355.	6.42	217.	178.	176.	5.41
ROUTED TO	282190	354.	6.42	217.	178.	176.	5.41
HYDROGRAPH AT	282510	116.	6.42	23.	6.	6.	0.13
ROUTED TO	282520	115.	6.42	23.	6.	6.	0.13
ROUTED TO	282530	113.	6.42	23.	6.	6.	0.13
HYDROGRAPH AT	282530	52.	6.17	8.	2.	2.	0.05
2 COMBINED AT	282530	153.	6.42	31.	9.	8.	0.17
ROUTED TO	282190	152.	6.42	31.	9.	8.	0.17
2 COMBINED AT	282190	506.	6.42	248.	187.	184.	5.59
ROUTED TO	282200	499.	6.50	247.	187.	184.	5.59
HYDROGRAPH AT	282200	94.	6.25	16.	4.	4.	0.09
2 COMBINED AT	282200	576.	6.50	263.	191.	189.	5.68
HYDROGRAPH AT	282610	68.	6.17	11.	3.	3.	0.06
ROUTED TO	282620	67.	6.25	11.	3.	3.	0.06
HYDROGRAPH AT	282620	157.	6.33	29.	8.	8.	0.16
2 COMBINED AT	282620	216.	6.33	39.	11.	10.	0.22
ROUTED TO	282630	216.	6.33	39.	11.	10.	0.22
ROUTED TO	282640	215.	6.33	39.	11.	10.	0.22
HYDROGRAPH AT	282640	26.	6.17	4.	1.	1.	0.02
2 COMBINED AT	282640	236.	6.33	43.	12.	12.	0.24
ROUTED TO	282650	235.	6.33	43.	12.	12.	0.24
ROUTED TO	282200	232.	6.42	44.	12.	12.	0.24
2 COMBINED AT	282200	807.	6.42	306.	203.	200.	5.91
ROUTED TO	282210	805.	6.42	306.	203.	200.	5.91
ROUTED TO	282220	801.	6.50	306.	203.	200.	5.91
HYDROGRAPH AT	282220	111.	6.25	19.	5.	5.	0.10
2 COMBINED AT	282220	888.	6.50	325.	208.	205.	6.02

HYDROGRAPH AT	282710	216.	6.25	37.	10.	10.	0.20		
ROUTED TO	282720	213.	6.33	37.	10.	10.	0.20		
HYDROGRAPH AT	282720	159.	6.17	27.	7.	7.	0.15		
2 COMBINED AT	282720	366.	6.25	64.	18.	17.	0.35		
ROUTED TO	282220	361.	6.33	64.	18.	17.	0.35		
2 COMBINED AT	282220	1230.	6.42	389.	226.	222.	6.37		
ROUTED TO	282230	1223.	6.42	389.	226.	222.	6.37		
HYDROGRAPH AT	282230	275.	6.25	47.	13.	12.	0.26		
2 COMBINED AT	282230	1464.	6.42	435.	239.	235.	6.63		
ROUTED TO	282240	1462.	6.42	435.	239.	235.	6.63		
HYDROGRAPH AT	282810	99.	6.17	12.	3.	3.	0.05		
ROUTED TO	282820	93.	6.25	12.	3.	3.	0.05		
HYDROGRAPH AT	282820	125.	6.17	17.	5.	5.	0.09		
2 COMBINED AT	282820	208.	6.17	29.	8.	8.	0.14		
ROUTED TO	282830	205.	6.17	29.	8.	8.	0.14		
ROUTED TO	282840	193.	6.25	29.	8.	8.	0.14		
HYDROGRAPH AT	282840	24.	6.17	4.	1.	1.	0.02		
2 COMBINED AT	282840	216.	6.17	33.	9.	9.	0.16		
HYDROGRAPH AT	283010	47.	6.17	7.	2.	2.	0.03		
ROUTED TO	283010	31.	6.42	5.	1.	1.	0.03	4.22	6.42
ROUTED TO	283020	31.	6.42	5.	1.	1.	0.03		
HYDROGRAPH AT	283020	13.	6.17	2.	0.	0.	0.01		
2 COMBINED AT	283020	39.	6.42	6.	2.	2.	0.04		
ROUTED TO	283020	36.	6.50	6.	2.	2.	0.04	2.61	6.50
ROUTED TO	283030	35.	6.58	6.	2.	2.	0.04		
HYDROGRAPH AT	283030	173.	6.17	21.	6.	6.	0.08		
2 COMBINED AT	283030	173.	6.17	27.	7.	7.	0.12		
ROUTED TO	283040	165.	6.25	27.	7.	7.	0.12		
HYDROGRAPH AT	283040	42.	6.25	7.	2.	2.	0.04		
2 COMBINED AT	283040	207.	6.25	34.	9.	9.	0.16		

ROUTED TO	283050	205.	6.25	34.	9.	9.	0.16		
ROUTED TO	282840	200.	6.25	34.	9.	9.	0.16		
2 COMBINED AT	282840	414.	6.25	67.	19.	18.	0.32		
ROUTED TO	282840	126.	6.92	30.	8.	8.	0.32	21.03	6.92
ROUTED TO	282850	121.	7.00	30.	8.	8.	0.32		
HYDROGRAPH AT	282850	50.	6.17	9.	2.	2.	0.05		
2 COMBINED AT	282850	135.	7.00	37.	10.	10.	0.37		
ROUTED TO	282860	134.	7.00	37.	10.	10.	0.37		
HYDROGRAPH AT	282860	19.	6.33	3.	1.	1.	0.02		
2 COMBINED AT	282860	141.	7.00	40.	11.	11.	0.38		
HYDROGRAPH AT	283110	85.	6.17	13.	4.	4.	0.07		
ROUTED TO	283120	80.	6.17	13.	4.	4.	0.07		
HYDROGRAPH AT	283120	50.	6.17	8.	2.	2.	0.05		
2 COMBINED AT	283120	130.	6.17	22.	6.	6.	0.12		
ROUTED TO	283120	21.	7.33	8.	2.	2.	0.12	14.38	7.33
ROUTED TO	282860	21.	7.42	8.	2.	2.	0.12		
2 COMBINED AT	282860	141.	7.00	47.	14.	13.	0.50		
ROUTED TO	282870	138.	7.00	48.	14.	13.	0.50		
HYDROGRAPH AT	282870	35.	6.17	6.	2.	1.	0.03		
2 COMBINED AT	282870	146.	7.00	53.	15.	15.	0.54		
ROUTED TO	282880	144.	7.00	53.	15.	15.	0.54		
ROUTED TO	282890	143.	7.08	53.	15.	15.	0.54		
HYDROGRAPH AT	282890	141.	6.17	23.	6.	6.	0.13		
2 COMBINED AT	282890	219.	6.25	75.	21.	21.	0.66		
ROUTED TO	282900	218.	6.33	75.	21.	21.	0.66		
HYDROGRAPH AT	282900	54.	6.17	9.	2.	2.	0.05		
2 COMBINED AT	282900	263.	6.33	83.	24.	23.	0.71		
ROUTED TO	282910	263.	6.33	83.	24.	23.	0.71		
HYDROGRAPH AT	282910	79.	6.17	12.	3.	3.	0.07		
2 COMBINED AT	282910	328.	6.33	96.	27.	26.	0.78		

ROUTED TO	282230	327.	6.33	96.	27.	26.	0.78
2 COMBINED AT	282230	1781.	6.42	531.	266.	261.	7.41
ROUTED TO	282240	1779.	6.42	531.	266.	261.	7.41
HYDROGRAPH AT	283210	18.	6.25	3.	1.	1.	0.02
ROUTED TO	283220	18.	6.33	3.	1.	1.	0.02
HYDROGRAPH AT	283220	61.	6.17	9.	3.	3.	0.05
2 COMBINED AT	283220	68.	6.33	13.	3.	3.	0.07
ROUTED TO	283230	68.	6.33	13.	3.	3.	0.07
ROUTED TO	283240	67.	6.33	13.	4.	3.	0.07
HYDROGRAPH AT	283240	81.	6.17	13.	3.	3.	0.07
2 COMBINED AT	283240	139.	6.17	25.	7.	7.	0.14
ROUTED TO	283250	135.	6.25	25.	7.	7.	0.14
ROUTED TO	283260	135.	6.33	25.	7.	7.	0.14
HYDROGRAPH AT	283260	172.	6.17	28.	8.	7.	0.15
2 COMBINED AT	283260	291.	6.25	53.	15.	14.	0.29
ROUTED TO	283270	289.	6.25	53.	15.	14.	0.29
ROUTED TO	283280	286.	6.33	53.	15.	14.	0.29
HYDROGRAPH AT	283280	10.	6.42	2.	1.	1.	0.02
2 COMBINED AT	283280	296.	6.33	55.	15.	15.	0.31
ROUTED TO	282240	294.	6.33	55.	15.	15.	0.31
2 COMBINED AT	282240	2070.	6.42	586.	281.	276.	7.71
ROUTED TO	280200	2044.	6.50	586.	281.	275.	7.71
HYDROGRAPH AT	280200	789.	6.17	81.	22.	22.	0.30
3 COMBINED AT	280200	3930.	6.42	932.	378.	369.	9.23
ROUTED TO	280210	3925.	6.42	933.	378.	369.	9.23
HYDROGRAPH AT	280210	181.	6.17	19.	5.	5.	0.07
2 COMBINED AT	280210	3994.	6.42	951.	384.	374.	9.30
HYDROGRAPH AT	283410	10.	6.25	2.	1.	1.	0.02
ROUTED TO	283420	9.	6.33	2.	1.	1.	0.02
HYDROGRAPH AT	283420	32.	6.17	7.	2.	2.	0.06

2 COMBINED AT	283420	41.	6.25	10.	3.	3.	0.08		
ROUTED TO	283430	40.	6.25	10.	3.	3.	0.08		
HYDROGRAPH AT	283430	43.	6.25	10.	3.	3.	0.08		
2 COMBINED AT	283430	82.	6.25	20.	6.	5.	0.16		
ROUTED TO	283440	81.	6.33	20.	5.	5.	0.16		
HYDROGRAPH AT	283440	56.	6.17	8.	2.	2.	0.05		
2 COMBINED AT	283440	117.	6.25	28.	8.	7.	0.21		
HYDROGRAPH AT	283610	68.	6.17	9.	3.	2.	0.05		
ROUTED TO	283620	67.	6.17	9.	3.	3.	0.05		
ROUTED TO	283440	66.	6.17	9.	3.	3.	0.05		
2 COMBINED AT	283440	169.	6.25	37.	10.	10.	0.26		
ROUTED TO	283450	167.	6.25	37.	10.	10.	0.26		
HYDROGRAPH AT	283450	2.	6.08	0.	0.	0.	0.00		
2 COMBINED AT	283450	168.	6.25	37.	10.	10.	0.26		
ROUTED TO	283460	167.	6.25	37.	10.	10.	0.26		
ROUTED TO	283470	164.	6.25	37.	10.	10.	0.26		
HYDROGRAPH AT	283470	37.	6.17	5.	1.	1.	0.02		
2 COMBINED AT	283470	195.	6.25	42.	12.	11.	0.28		
ROUTED TO	283480	194.	6.25	42.	12.	11.	0.28		
ROUTED TO	280210	188.	6.33	42.	12.	11.	0.28		
2 COMBINED AT	280210	4167.	6.42	992.	395.	386.	9.58		
ROUTED TO	280220	4152.	6.42	993.	395.	386.	9.58		
HYDROGRAPH AT	280220	107.	6.17	11.	3.	3.	0.04		
2 COMBINED AT	280220	4195.	6.42	1004.	399.	389.	9.62		
ROUTED TO	PARK	606.	8.50	430.	222.	214.	9.62	1374.26	8.50
ROUTED TO	291	606.	8.50	430.	222.	214.	9.62		
HYDROGRAPH AT	290	49.	6.08	5.	1.	1.	0.02		
ROUTED TO	DAM6	26.	6.33	2.	1.	1.	0.02	102.07	6.33
HYDROGRAPH AT	295	85.	6.17	9.	2.	2.	0.03		
ROUTED TO	291.1	82.	6.17	9.	2.	2.	0.03		

3 COMBINED AT	292	610.	8.50	433.	225.	217.	9.67		
ROUTED TO	331	609.	8.50	433.	225.	217.	9.67		
HYDROGRAPH AT	330	55.	6.17	6.	2.	2.	0.02		
ROUTED TO	DAM2	29.	6.33	3.	1.	1.	0.02	102.08	6.33
2 COMBINED AT	332	611.	8.50	434.	226.	218.	9.69		
ROUTED TO	231	611.	8.58	434.	226.	218.	9.69		
HYDROGRAPH AT	230	101.	6.17	11.	3.	3.	0.04		
2 COMBINED AT	232	614.	8.58	435.	229.	220.	9.73		
ROUTED TO	233	614.	8.58	435.	229.	220.	9.73		
HYDROGRAPH AT	220	619.	8.58	439.	233.	225.	9.81		
HYDROGRAPH AT	445	620.	8.67	439.	234.	225.	9.84		
HYDROGRAPH AT	310	30.	6.42	6.	2.	2.	0.03		
ROUTED TO	DAM4	0.	6.83	0.	0.	0.	0.03	101.81	16.42
ROUTED TO	312	0.	7.08	0.	0.	0.	0.03		
HYDROGRAPH AT	320	51.	6.17	5.	1.	1.	0.02		
2 COMBINED AT	322	51.	6.17	5.	2.	2.	0.05		
ROUTED TO	DAM3	30.	6.33	3.	1.	1.	0.05	102.08	6.33
HYDROGRAPH AT	260	88.	6.25	12.	3.	3.	0.09		
ROUTED TO	451	87.	6.25	12.	3.	3.	0.09		
HYDROGRAPH AT	450	108.	6.33	16.	4.	4.	0.12		
2 COMBINED AT	452	627.	8.58	444.	238.	229.	9.95		
HYDROGRAPH AT	455	631.	8.75	446.	240.	231.	10.02		
HYDROGRAPH AT	280	154.	6.17	18.	5.	5.	0.06		
ROUTED TO	DAM5	59.	6.50	9.	2.	2.	0.06	102.13	6.50
HYDROGRAPH AT	250	85.	6.25	18.	5.	5.	0.11		
HYDROGRAPH AT	460	153.	6.50	38.	10.	10.	0.24		
2 COMBINED AT	461	659.	6.42	479.	250.	241.	10.25		
HYDROGRAPH AT	495B	757.	6.58	498.	254.	245.	10.38		
2 COMBINED AT	495B2	1128.	6.58	562.	274.	263.	10.42		
HYDROGRAPH AT	270	122.	6.17	13.	4.	4.	0.06		

HYDROGRAPH AT	470	165.	6.33	24.	7.	6.	0.13		
HYDROGRAPH AT	2223	71.	6.25	18.	5.	5.	0.00		
HYDROGRAPH AT	480	112.	6.42	29.	8.	8.	0.08		
2 COMBINED AT	481	265.	6.42	53.	15.	14.	0.21		
HYDROGRAPH AT	490	435.	6.67	92.	25.	24.	0.41		
2 COMBINED AT	491	1510.	6.58	654.	299.	288.	10.84		
HYDROGRAPH AT	550B	1543.	6.67	664.	301.	290.	10.89		
ROUTED TO	1992	1511.	6.75	663.	300.	288.	10.89		
2 COMBINED AT	1993	1928.	6.75	807.	340.	327.	11.65		
2 COMBINED AT	1994	7145.	7.58	3568.	1161.	1118.	29.49		
ROUTED TO	2001	7113.	7.67	3562.	1158.	1116.	29.49	10.36	7.67
HYDROGRAPH AT	2000	86.	6.75	22.	6.	6.	0.12		
2 COMBINED AT	2002	7144.	7.67	3581.	1164.	1122.	29.60		
ROUTED TO	541	7120.	7.75	3579.	1163.	1120.	29.60	10.36	7.75
HYDROGRAPH AT	540B	125.	6.67	29.	8.	8.	0.15		
2 COMBINED AT	542	7156.	7.67	3601.	1171.	1128.	29.75		
ROUTED TO	546	7154.	7.75	3599.	1169.	1126.	29.75	10.38	7.75
HYDROGRAPH AT	545EDV	15.	6.50	3.	1.	1.	0.00		
2 COMBINED AT	546T	7157.	7.75	3601.	1170.	1127.	29.75		
DIVERSION TO	546CAN	2905.	7.75	1461.	475.	457.	29.75		
HYDROGRAPH AT	546ADT	4252.	7.75	2139.	695.	670.	29.75		
2 COMBINED AT	547	4669.	7.67	2414.	779.	751.	31.49		
ROUTED TO	531	4645.	7.75	2403.	776.	748.	31.49	17.20	7.75
HYDROGRAPH AT	560W	59.	6.75	16.	4.	4.	0.09		
ROUTED TO	531A	59.	7.00	16.	4.	4.	0.09		
HYDROGRAPH AT	530AW	113.	6.67	28.	8.	7.	0.15		
3 COMBINED AT	532	4704.	7.75	2438.	788.	759.	31.72		
ROUTED TO	537	4686.	7.83	2432.	786.	757.	31.72	13.35	7.83
HYDROGRAPH AT	360W	38.	7.00	12.	3.	3.	0.09		
HYDROGRAPH AT	420W	15.	6.50	3.	1.	1.	0.02		

HYDROGRAPH AT	410W	19.	6.50	4.	1.	1.	0.02		
2 COMBINED AT	381	33.	6.50	6.	2.	2.	0.04		
HYDROGRAPH AT	380	45.	6.50	9.	2.	2.	0.06		
HYDROGRAPH AT	400W	50.	6.42	9.	2.	2.	0.05		
2 COMBINED AT	371	94.	6.42	17.	5.	4.	0.11		
HYDROGRAPH AT	370	126.	6.58	24.	6.	6.	0.16		
2 COMBINED AT	372	148.	6.58	36.	10.	9.	0.25		
ROUTED TO	373	145.	6.67	36.	10.	9.	0.25	8.96	6.67
ROUTED TO	501	137.	6.83	36.	10.	9.	0.25	9.19	6.83
HYDROGRAPH AT	510	62.	6.92	19.	5.	5.	0.14		
HYDROGRAPH AT	500W	205.	6.75	55.	15.	14.	0.28		
3 COMBINED AT	502	401.	6.83	110.	30.	29.	0.67		
ROUTED TO	516	388.	6.92	109.	30.	29.	0.67	10.34	6.92
HYDROGRAPH AT	515	24.	6.58	5.	1.	1.	0.03		
2 COMBINED AT	517	405.	6.92	115.	32.	30.	0.70		
ROUTED TO	518	404.	6.92	115.	32.	30.	0.70	10.89	6.92
ROUTED TO	519	402.	7.00	115.	32.	30.	0.70	11.06	7.00
HYDROGRAPH AT	520A	178.	6.75	47.	13.	12.	0.25		
2 COMBINED AT	519A	563.	6.83	161.	45.	43.	0.95		
ROUTED TO	521	551.	7.00	161.	45.	43.	0.95	10.44	7.00
HYDROGRAPH AT	520B	487.	6.08	41.	12.	11.	0.13		
ROUTED TO	DAMP1	316.	6.17	26.	7.	6.	0.13	111.22	6.17
2 COMBINED AT	522	579.	7.00	186.	51.	49.	1.08		
ROUTED TO	535A1	577.	7.00	185.	51.	49.	1.08	10.34	7.00
HYDROGRAPH AT	535A	347.	6.08	29.	8.	8.	0.09		
ROUTED TO	DAMP2	81.	6.42	12.	3.	3.	0.09	110.49	6.42
2 COMBINED AT	535A2	598.	7.00	197.	54.	52.	1.18		
ROUTED TO	535D1	596.	7.00	197.	54.	52.	1.18	10.37	7.00
HYDROGRAPH AT	535D	8.	6.17	1.	0.	0.	0.00		
2 COMBINED AT	535D2	597.	7.00	198.	54.	52.	1.18		

DIVERSION TO	CWRW	0.	7.00	0.	0.	0.	1.18		
HYDROGRAPH AT	CWRS	597.	7.00	198.	54.	52.	1.18		
ROUTED TO	535B1	597.	7.08	197.	54.	52.	1.18	10.79	7.08
HYDROGRAPH AT	535E	3.	6.08	0.	0.	0.	0.00		
ROUTED TO	535B2	3.	6.17	0.	0.	0.	0.00		
HYDROGRAPH AT	535B	43.	6.08	3.	1.	1.	0.01		
3 COMBINED AT	535B3	599.	7.08	200.	55.	53.	1.19		
ROUTED TO	535C1	594.	7.08	199.	55.	53.	1.19	10.78	7.08
HYDROGRAPH AT	535C	20.	6.42	4.	1.	1.	0.02		
3 COMBINED AT	548	5050.	7.75	2612.	842.	811.	32.93		
HYDROGRAPH AT	546CAN	2905.	7.75	1461.	475.	457.	0.00		
ROUTED TO	549	2869.	7.92	1452.	472.	455.	0.00	7.67	7.92
DIVERSION TO	551	2255.	7.92	1352.	447.	431.	0.00		
HYDROGRAPH AT	550	615.	7.92	99.	25.	24.	0.00		
2 COMBINED AT	552	5639.	7.75	2712.	867.	835.	32.93		

APPENDIX I

HEC-2 Input/Output Data

File: PIMACH2F

Final Design Profile
Pima & Arizona Canal Outfall Channels

100-Year, 12-Hour Storm

THIS RUN EXECUTED 21SEP98 09:26:07

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

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

MODEL: PIMACH2F.IN - USES COE BACKWATER WEST OF PIMA ROAD
SPECIAL CULVERT ROUTINE AT PIMA ROAD
GROUTED RIPRAP OUTLET WEST OF PIMA ROAD

EVANS-KUHN CHANNEL CONNECTED TO ADOT PIMA OUTFALL CHANNEL AND
THE N-S FREEWAY CHANNEL.

THIS MODEL IS BASED ON THE THE FINAL CHANNEL DESIGN PREPARED BY SRPMIC
AND PUBLISHED IN:

PIMA OUTFALL CHANNEL DRAINAGE REPORT, VOLUME 1
Project No. 93E130
SRPMIC, JANUARY 7, 1998

THIS MODEL WAS CODED BY ROBERT L. WARD, P.E. IN JUNE-JULY 1998 USING
DESIGN DATA FROM THE ABOVE DRAINAGE REPORT.

CROSS-SECTIONAL GEOMETRY FOR EVANS-KUHN CHANNEL WAS DEVELOPED BY R.WARD
ON THE BASIS OF TYPICAL SECTION A-A SHOWN ON SHEET 4 of 25, "96th STREET
STORM DRAIN & ARIZONA CANAL OUTFALL CHANNEL", 7/1/92, EVANS, KUHN & ASSC
THE CONCRETE SIDE-SLOPE WAS HELD CONSTANT AT 2:1 INSTEAD OF USING A
VARIABLE SLOPE.

TOPO FOR THIS MODEL IS FROM THE 1989 WLB GROUP, INC. MAPPING FOR ADOT,
AS SUPPLEMENTED BY GROUND SURVEYS BY SRPMIC IN JUNE 1998.

STARTING CWSEL IS BASED ON IBW INTERCEPTOR CHANNEL BACKWATER
AS ORIGINALLY DETERMINED BY RLW IN 1993. ADJUSTMENTS HAVE BEEN MADE TO
REFLECT JULY 1998 SRPMIC GROUTED RIPRAP OUTLET DESIGN.

T1 ADOT/PIMA OUTFALL CHANNEL ALONG NORTH BANK OF THE ARIZONA CANAL
T2 7-10'x 8' CBC (NO DEBRIS) IN-PLACE AT PIMA RD - USES SRPMIC GEOMETRY
T3 MODEL PIMACH2F.IN - SPECIAL CULVERT

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	0	2			0				1280.24	

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

J3 VARIABLE CODES FOR SUMMARY PRINTOUT

38	43	1	3	26	4	66	27	28	68

```
  42        17        18

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

  -10       -10


QT        1       5050

NC     .018       .018       .018         .1         .3

       HEC-2 XSECs ARE REFERENCED TO CHANNEL STATIONING
       FOR EXAMPLE, XSEC 19485 = CHANNEL STA 194+85

X1    19485         8      959.5     1040.5                                                1000
GR      285     959.5     270.77      959.5     270.46     979.75     270.22       1000    269.98    1020.25
GR   269.70  1030.375     270.30     1040.5        285     1040.5


X1    19465         7      959.5     1040.5                           19.89                1000
GR      285     959.5     270.66      959.5     270.36     979.75     270.05       1000    269.75    1020.25
GR   270.55    1040.5        285     1040.5


X1    19445         8      959.5     1040.5                           19.89                1000
GR      285     959.5     270.54      959.5     270.24     979.75     269.95       1000    269.79    1010.10
GR   270.00   1020.25     270.80     1040.5        285     1040.5


X1    19425         7      959.5     1040.5                           19.89                1000
GR      285     959.5     270.41      959.5     270.13     979.75     269.83      999.4    270.45    1020.25
GR   271.06    1040.5        285     1040.5


X1    19405         8      959.5     1040.5                           19.89                1000
GR      285     959.5     270.28      959.5     270.01     979.75     269.88     988.77    270.19      1000
GR   270.75   1020.25     271.31     1040.5        285     1040.5


X1    19385         8      959.5     1040.5                           19.89                1000
GR      285     959.5     270.17      959.5     269.93     978.25     269.97     979.75    270.50      1000
GR   271.03   1020.25     271.56     1040.5        285     1040.5

       DOWNSTREAM SIDE OF NEW BOX CULVERT AT STA 193+65.64
       PGL INVERT ELEV=1270.80
       NO DEBRIS ON INTERIOR CELL WALLS
```

```
NC                                  .3        .5

X1    19365       6     959.5    1040.5                          19.91                 1000
GR      285   959.5    270.06     959.5    269.98    968.60    270.80       1000    271.61    1040.50
GR      285  1040.5

SC    7.016      .2       3.0         0         8        10       170       12.3   1271.04    1270.80

      UPSTREAM SIDE OF NEW BOX CULVERT AT STA 191+95.64
      PGL INVERT ELEV=1271.04

X1    19195       4    962.20   1037.80                          170               1270.28
X2                         2   1279.04    1284.9
BT        2     950    1284.9                1050    1284.9
GR       15   962.2         0     962.2     1.512    1037.8        15     1037.8

      PT IMMEDIATELY UPSTREAM OF CBC INLET, LOCATION OF 100-FT CHANNEL
      TRANSITION INTO CBC - STA 190+95.64

X1    19095       4       920      1076                          100               1270.18
GR       15     920         0       950         2      1050        15       1076

NC                                  .1        .3
QT        1    4704

X1    19000       4       920      1076                        95.64               1270.31
GR       15     920         0       950         2      1050        15       1076

X1    18900       4       920      1076                          100               1270.45
GR       15     920         0       950         2      1050        15       1076

X1    18800       4       920      1076                          100               1270.59
GR       15     920         0       950         2      1050        15       1076

X1    18700       4       920      1076                          100               1270.73
GR       15     920         0       950         2      1050        15       1076

X1    18600       4       920      1076                          100               1270.87
GR       15     920         0       950         2      1050        15       1076
```

```
X1    18500     4    920    1076                    100          1271.01
GR       15   920      0     950     2    1050     15    1076

X1    18400     4    920    1076                    100          1271.15
GR       15   920      0     950     2    1050     15    1076

X1    18300     4    920    1076                    100          1271.29
GR       15   920      0     950     2    1050     15    1076

X1    18200     4    920    1076                    100          1271.43
GR       15   920      0     950     2    1050     15    1076

X1    18100     4    920    1076                    100          1271.57
GR       15   920      0     950     2    1050     15    1076

X1    18000     4    920    1076                    100          1271.71
GR       15   920      0     950     2    1050     15    1076

X1    17900     4    920    1076                    100          1271.85
GR       15   920      0     950     2    1050     15    1076

DOWNSTREAM END OF SIDE-SLOPE TRANSITION FROM 2:1 TO 1:1 @ STA 178+00.00

X1    17800     4    920    1076                    100          1271.99
GR       15   920      0     950     2    1050     15    1076

UPSTREAM END OF SIDE-SLOPE TRANSITION FROM 2:1 TO 1:1 @ STA 177+00.00

X1    17700     4    935    1063                    100          1272.13
GR       15   935      0     950     2    1050     15    1063

X1    17600     4    935    1063                    100          1272.27
GR       15   935      0     950     2    1050     15    1063

SLOPE BREAK AT STA 175+77.40 TO MATCH EXTENDED EKA CHANNEL SLOPE
TO CORRECT 0.74 FT DIFFERENCE IN CHANNEL HEIGHTS BETWEEN ADOT'S
CHANNEL AND THE EKA CHANNEL.
```

```
X1    17577      4     935    1063                          22.6              1272.30
GR       15    935       0     950       2     1050        15     1063

X1    17500      4     935    1063                          100               1272.33
GR       15    935       0     950       2     1050        15     1063

X1    17400      4     935    1063                          100               1272.36
GR       15    935       0     950       2     1050        15     1063

X1    17300      4     935    1063                          100               1272.40
GR       15    935       0     950       2     1050        15     1063

X1    17200      4     935    1063                          100               1272.44
GR       15    935       0     950       2     1050        15     1063
```

EXP/CONTRACTION COEFFICIENT INCREASED TO .4/.6 TO SIMULATE
TURBULENCE FROM N-S CHANNEL FLOWS AND TRANSITION FROM EKA GEOMETRY.

DOWNSTREAM END OF RETAINING WALL THAT SEPARATES THE N-S CHANNEL FROM
E-W CHANNEL IS AT STA 170+00.

```
NC                                .4        .6

X1    17100      4     935    1063                          100               1272.47
GR       15    935       0     950       2     1050        15     1063

QT        1   4252

X1    17000      4     970    1015                          100               1272.51
GR       15    970       0     985      .6     1015        15     1015
```

TRANSITION FROM ADOT CHANNEL GEOMETRY TO EKA CHANNEL GEOMETRY
BETWEEN STA 169+58.7 & STA 168+61.79

```
NC                                .2        .4

X1    16958      4     970    1015                          41.3              1272.52
GR       15    970       0     985      .6     1015        15     1015

QT        1   3957

X1    16861      4     970    1030                          96.91             1273.56
GR       15    970       0     985       0     1015        15     1030
```

DOWNSTREAM END OF EKA CHANNEL GEOMETRY AT ADOT STATION 168+61.79.
THIS LOCATION IS ALSO EKA STATION 10+56

BEGIN SRPMIC CHANNEL, DESIGNED BY EKA.
THE FOLLOWING XSEC NUMBERS REFLECT EKA CHANNEL STATIONING.
FOR EXAMPLE, XSEC 1100 IS EKA STATION 11+00.

```
NC                                  .1        .3
QT      1      3587

NH      4      .028     967.5      .018    1032.5      .028    1046.5      .025    1061.5
X1   1100        11     961.5    1061.5                            44               1273.58
GR     14     961.5         8     967.5         8       969         0       985         0      1015
GR      8      1031         8    1032.5        14    1038.5        13    1042.5        14    1046.5
GR   14.3    1061.5

X1   1200                                                          100                .036

X1   1300                                                          100                .036

QT      1      3557

X1   1400                                                          100                .036

X1   1500                                                          100                .036

X1   1600                                                          100                .036

X1   1700                                                          100                .036

QT      1      3504

X1   1800                                                          100                .036

X1   1900                                                          100                .036

X1   2000                                                          100                .036

X1   2100                                                          100                .036
```

QT	1	3459		
X1	2200		100	.036
X1	2300		100	.036
QT	1	3314		
X1	2400		100	.036
X1	2500		100	.036
X1	2600		100	.036
X1	2700		100	.036
QT	1	3315		
X1	2800		100	.036
X1	2900		100	.036
X1	3000		100	.036
X1	3100		100	.036
X1	3200		100	.036
X1	3300		100	.036
X1	3400		100	.036
X1	3500		100	.036

```
X1    3600                                                    100                .036

X1    3700                                                    100                .036

X1    3800                                                    100                .036

X1    3900                                                    100                .036

X1    4000                                                    100                .036

NC    .028      .025      .018       .3        .5

QT      1      3260

X1    4102        7     969.5      1029                    102.21            1274.66
GR      10    963.5        7     969.5        7       971       0       985       0      1015
GR       7     1029        7    1063.5

QT      1      2099

X1    4212        8       971      1029                    110.38            1280.60
GR     3.7    970.4       3.5       971        0       985       0      1000       1      1000
GR       1     1015       4.5      1029      4.5    1070.4

QT      1      1529

X1    4318        5    957.42   1042.58    105.9     105.9     105.9            1280.75
GR    2.77   957.42         0     968.5        0    1031.5      2.77   1042.58    2.77   1057.42
```

RETURN TO NATURAL FLOODPLAIN GEOMETRY AT XSEC 6822.
XSEC 6822 IS JUST EAST OF THE 96th ST CHANNEL & CORRESPONDS TO STA 44+34
ALONG THE EKA CHANNEL CONTROL LINE.
THIS XSEC IS AT STA 68+22 ALONG THE ARIZONA CANAL CENTERLINE.

ALL THE FOLLOWING XSEC NUMBERS ARE REFERENCED TO THE ARIZONA CANAL
CENTERLINE. STATION 1000 IS AT THE INTERSECTION WITH PIMA ROAD.

X4 RECORDS HAVE BEEN ADDED TO DEFINE A RIGHT BANK AT STATION 400. THIS
WAS DONE TO ADDRESS RIGHT OVERBANK REACH LENGTHS.

```
NC    0.021     0.053     0.053       0.3       0.5

QT        1      1469

X1     6822        23     146.3       400    115.51    115.51    115.51              1000
X3                                   146.3
X4        1   1283.27       400
GR   287.09      53.7    276.06        65    276.06       135    284.21     146.3    284.04     172.6
GR   283.43     176.9    281.92     181.9    283.01     184.7    282.93     247.1    283.14     329.7
GR   283.24     386.2    283.55     544.4    284.33     648.1    284.81     756.2    285.51     857.1
GR   285.59     954.9    286.06    1051.1    286.39    1143.2    286.86    1255.6    287.21    1358.5
GR   287.55    1454.3    287.82    1555.1    288.15    1655.3

QT        1      1479

NC                                     .1        .3
X1     6907        23     145.9       400        85        85        85              1000
X3                                   145.9
X4        1   1283.32       400
GR   286.88      54.1    276.09        65    276.09       135    284.94     145.9    284.38     167.8
GR   283.30     174.7    281.99     180.2    283.47     184.5    283.33     297.8    283.32     474.0
GR   283.56     536.1    283.82     632.0    284.25     730.7    285.00     832.8    285.32     929.4
GR   285.79    1031.8    286.20    1131.3    286.73    1231.8    287.20    1334.7    287.58    1434.5
GR   287.95    1532.9    288.16    1629.4    288.55    1711.4

X1     7104        24     150.3       400       200       197       197              1000
X3                                   150.3
X4        1   1283.65       400
GR   287.12      53.7    276.17        65    276.17       135    285.92     146.3    286.01     150.3
GR   285.73     168.9    285.01     174.1    282.74     182.3    284.81     189.0    283.81     231.9
GR   283.64     339.8    283.69     540.9    283.95     643.5    284.44     744.1    284.76     844.8
GR   285.28     943.9    285.75    1042.2    286.15    1143.5    286.48    1243.0    286.94    1344.6
GR   287.48    1443.9    287.92    1542.8    288.47    1641.0    288.74    1742.6

X1     7304        31     151.0       400       200       207       202              1000
X3                                   151.0
X4        1   1283.67       400
GR   287.23      28.8    286.85      52.6    276.25        65    276.25       135    286.44     147.4
GR   286.89     151.0    286.43     151.9    286.67     168.9    286.21     169.4    285.87     174.4
GR   285.37     174.4    283.10     181.6    283.51     182.0    284.50     187.4    284.01     208.5
GR   283.61     282.3    283.64     380.3    283.78     471.4    284.10     577.6    284.36     683.4
GR   284.67     781.1    285.16     881.0    285.55     978.3    285.92    1078.6    286.36    1179.9
GR   286.77    1278.8    287.24    1377.9    287.71    1479.0    288.35    1581.1    289.30    1680.3
GR   289.30    1724.4
```

```
X1    7504      23    168.0     400     200     251     213            1000
X3                            168.0
X4       1 1284.11     400
GR  288.13    10.3  287.85    27.9  287.95    51.2  276.32      65  276.32     135
GR  286.86   148.8  287.06   168.0  286.27   173.0  282.54   181.2  284.09   187.8
GR  283.79   209.2  283.94   290.9  284.04   372.3  284.24   452.2  284.30   535.4
GR  284.78   637.2  285.23   744.6  285.54   862.4  286.09   972.7  286.63  1112.7
GR  287.60  1333.7  288.02  1431.5  288.41  1524.3

X1    7704      22    168.5     400     200     276     220            1000
X3                            168.5
X4       1 1284.24     400
GR  288.35    51.6  276.40      65  276.40     135  286.44   148.4  286.55   168.5
GR  285.75   172.7  282.56   181.0  283.52   184.6  283.59   207.6  283.83   288.9
GR  284.38   438.5  284.58   525.3  284.78   613.8  285.26   717.7  285.58   818.6
GR  285.95   927.8  286.43  1026.8  286.95  1120.7  287.23  1221.5  287.52  1319.9
GR  288.19  1441.9  288.62  1548.4

QT       1    1439

X1    7904      24    166.4     400     200     263     217            1000
X3                            166.4
X4       1 1284.39     400
GR  288.40    51.8  276.47      65  276.47     135  286.54   148.2  286.56   166.4
GR  285.89   171.5  283.55   177.7  284.50   182.4  283.89   215.2  283.98   289.2
GR  284.37   390.9  284.64   490.7  284.94   583.9  285.28   685.2  285.68   789.2
GR  285.99   885.3  286.50   983.7  286.99  1085.1  287.20  1168.7  287.44  1270.5
GR  288.21  1370.2  288.52  1468.9  288.97  1571.1  289.28  1670.0

X1    8104      25    165.7     400     200     261     216            1000
X3                            165.7
X4       1 1284.36     400
GR  287.53    54.7  287.33    54.7  276.55      65  276.55     135  285.44   145.3
GR  285.67   165.7  285.07   169.6  283.79   174.3  284.53   180.6  284.02   250.1
GR  284.32   349.9  284.41   450.5  284.88   551.0  285.26   651.1  285.66   750.5
GR  286.03   849.1  286.41   949.0  286.88  1051.1  287.18  1150.6  287.52  1249.9
GR  288.13  1350.8  288.38  1450.7  288.79  1552.2  289.45  1651.3  289.85  1750.8

X1    8304      24    144.6     400     200     251     213            1000
X3                            144.6
X4       1 1284.44     400
GR  287.30    55.4  276.63      65  276.63     135  285.21   144.6  285.13   164.1
GR  284.37   169.3  282.48   175.2  283.77   179.2  284.05   244.4  284.29   334.7
GR  284.52   436.2  285.06   531.6  285.54   644.9  285.86   733.3  286.32   830.5
GR  286.61   936.4  287.07  1041.3  287.21  1124.7  287.55  1229.3  288.04  1337.9
GR  288.52  1463.7  288.83  1566.6  289.17  1651.1  289.63  1726.3
```

```
X1    8504      24    168.7     400     200     207     200            1000
X3                            168.7
X4       1 1284.41     400
GR  287.29    55.3  276.70      65  276.70     135  284.66   144.7  284.71   168.7
GR  283.96   173.3  280.40   185.0  281.19   192.4  283.87   311.6  284.41   397.3
GR  284.58   493.8  284.96   594.9  285.36   694.7  285.76   794.2  286.15   890.8
GR  286.64   988.8  287.04  1077.4  287.34  1175.0  287.62  1270.6  288.08  1371.9
GR  288.47  1495.1  288.88  1597.3  289.31  1698.8  289.71  1789.5

QT       1    1447

X1    8704      29    168.8     400     200     202     201            1000
X3                            168.8
X4       1 1284.49     400
GR  287.89    55.1  276.78      65  276.78     135  284.86   144.9  284.97   168.8
GR  284.39   171.7  282.63   178.4  283.40   180.8  283.85   195.3  283.63   257.2
GR  283.71   278.1  284.10   290.0  284.44   381.6  284.75   485.9  284.97   575.2
GR  284.88   596.4  284.61   597.4  285.01   600.6  285.51   692.8  285.82   785.5
GR  286.21   878.0  286.54   970.9  286.94  1060.9  287.26  1146.3  287.55  1241.8
GR  287.98  1336.1  288.46  1429.4  288.77  1528.6  289.05  1621.5

X1    8904      29    169.6     400     200     200     200            1000
X3                            169.6
X4       1 1284.53     400
GR  287.40    55.8  276.85      65  276.85     135  285.32   144.2  285.60   169.6
GR  284.79   173.1  283.30   177.2  284.38   180.3  283.92   231.9  284.17   328.6
GR  284.67   427.1  284.83   522.9  285.44   622.0  284.85   628.4  285.26   635.3
GR  285.47   713.3  285.89   820.8  286.37   922.4  286.80  1019.1  287.10  1121.1
GR  287.49  1224.3  287.85  1323.9  288.21  1428.2  288.73  1529.8  287.59  1545.1
GR  288.67  1564.2  289.11  1627.6  289.44  1727.3  289.87  1832.6

QT       1    1473

X1    9104      29    144.5     400     200     200     200            1000
X3                            144.5
X4       1 1284.59     400
GR  287.49    55.5  276.93      65  276.93     135  285.81   144.5  285.51   169.1
GR  285.13   172.2  283.15   178.6  284.20   181.8  283.92   193.3  284.12   295.6
GR  284.59   399.4  285.11   511.1  285.45   603.0  285.07   621.8  285.38   629.6
GR  285.67   723.6  286.05   827.4  286.42   937.4  286.72   953.9  286.30   993.1
GR  285.64   998.9  286.65  1017.1  287.20  1128.5  287.51  1231.8  287.89  1326.3
GR  288.37  1429.6  288.93  1532.3  289.17  1634.1  289.34  1743.9

QT       1    1528
```

```
X1    9304      29    167.7     400     200     200     200            1000
X3                            167.7
X4       1 1284.69     400
GR  287.62    56.1   277.01      65  277.01     135  285.42   143.9  285.56   167.7
GR  284.83   170.7   282.76   176.5  284.40   181.6  284.05   227.1  284.25   273.1
GR  284.97   362.5   284.68   401.2  284.53   420.2  284.94   452.1  285.34   548.5
GR  285.25   610.3   285.62   653.5  286.00   746.8  286.28   834.2  286.57   927.2
GR  286.90  1023.3   287.18  1109.1  287.48  1200.8  287.73  1299.1  288.16  1391.4
GR  288.49  1484.9   288.88  1580.5  289.24  1683.7  289.66  1774.6

QT       1    1620

X1    9504      27    143.9     400     200     200     200            1000
X3                            143.9
X4       1 1284.70     400
GR  287.77    56.1   277.08      65  277.08     135  284.06   139.0  285.65   143.9
GR  285.29   170.2   283.29   179.8  284.33   184.6  284.12   192.4  284.20   245.7
GR  284.30   300.5   284.58   370.7  284.87   442.3  285.20   537.6  285.51   624.7
GR  285.80   716.4   286.26   809.8  286.71   900.9  286.92   992.8  287.17  1081.4
GR  287.53  1169.6   287.85  1276.9  288.16  1367.9  288.46  1457.5  288.89  1549.5
GR  289.13  1637.6   289.50  1726.6
```

THIS RUN EXECUTED 21SEP98 09:26:08

****
HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

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

MODEL PIMACH2F.IN - SPE

SUMMARY PRINTOUT

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
19485.000	5050.00	1280.24	1280.84	6.24	81.00	.00	.00	.00	.35	1269.70	18.00	.00
19465.000	5050.00	1280.25	1280.85	6.20	81.00	19.89	.00	.00	.34	1269.75	18.00	.00
19445.000	5050.00	1280.26	1280.86	6.19	81.00	39.78	.00	.00	.34	1269.79	18.00	.00
19425.000	5050.00	1280.26	1280.87	6.25	81.00	59.67	.00	.00	.35	1269.83	18.00	.00
19405.000	5050.00	1280.26	1280.88	6.33	81.00	79.56	.00	.00	.36	1269.88	18.00	.00
19385.000	5050.00	1280.25	1280.90	6.45	81.00	99.45	.00	.00	.37	1269.93	18.00	.00
19365.000	5050.00	1280.25	1280.92	6.57	81.00	119.36	.00	.00	.38	1269.98	18.00	.00
19195.000	5050.00	1281.71	1282.31	6.26	75.60	289.36	.00	.00	.34	1270.28	18.00	.00
19095.000	5050.00	1282.23	1282.45	3.74	144.21	389.36	.00	.00	.22	1270.18	18.00	.00
19000.000	4704.00	1282.27	1282.46	3.52	143.84	485.00	.00	.00	.20	1270.31	18.00	.00
18900.000	4704.00	1282.28	1282.47	3.57	143.29	585.00	.00	.00	.21	1270.45	18.00	.00
18800.000	4704.00	1282.28	1282.49	3.62	142.75	685.00	.00	.00	.21	1270.59	18.00	.00
18700.000	4704.00	1282.29	1282.50	3.67	142.22	785.00	.00	.00	.22	1270.73	18.00	.00
18600.000	4704.00	1282.30	1282.51	3.73	141.69	885.00	.00	.00	.22	1270.87	18.00	.00
18500.000	4704.00	1282.30	1282.52	3.79	141.16	985.00	.00	.00	.22	1271.01	18.00	.00
18400.000	4704.00	1282.31	1282.54	3.84	140.62	1085.00	.00	.00	.23	1271.15	18.00	.00
18300.000	4704.00	1282.32	1282.55	3.90	140.10	1185.00	.00	.00	.23	1271.29	18.00	.00

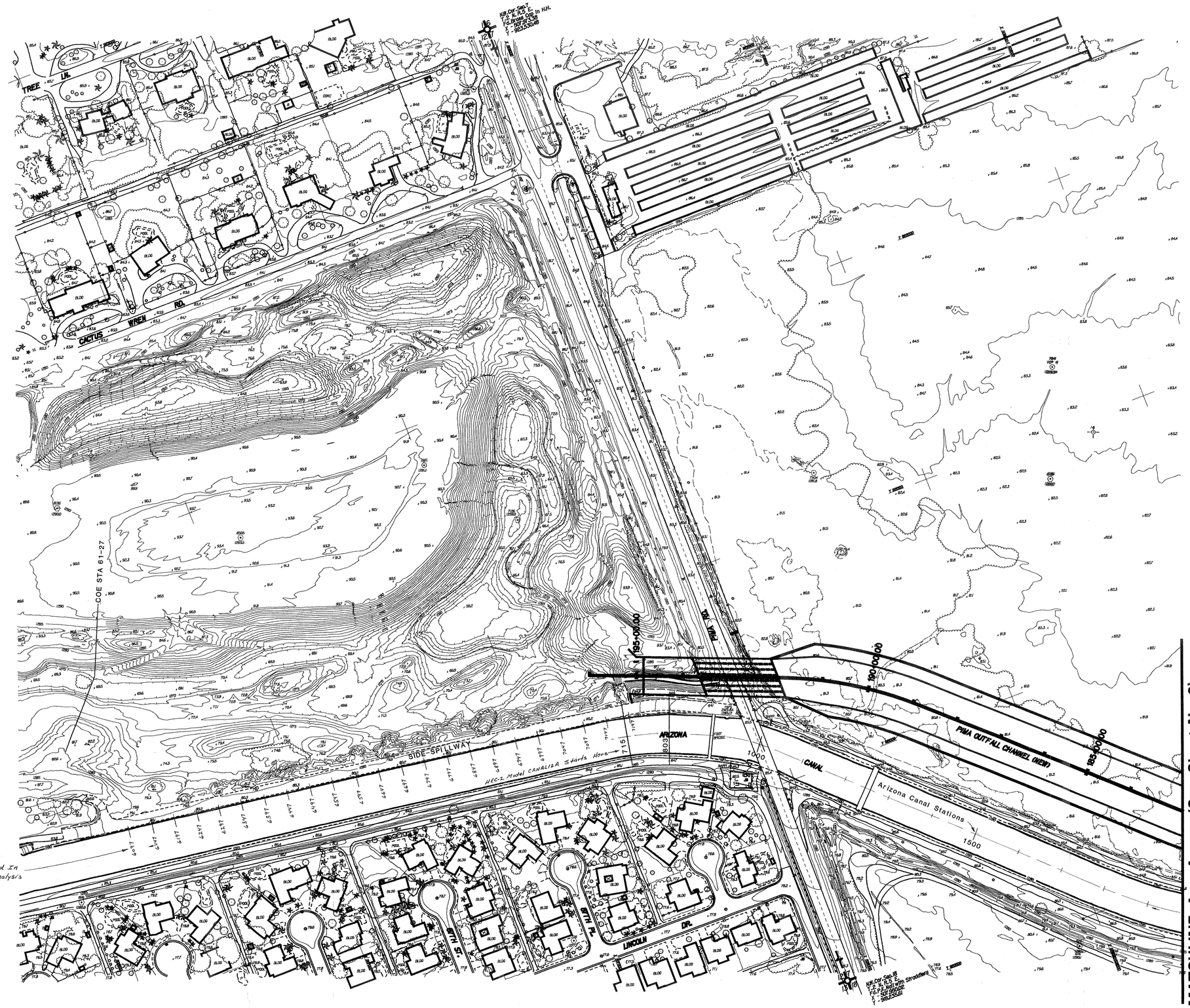
SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
18200.000	4704.00	1282.33	1282.57	3.96	139.57	1285.00	.00	.00	.24	1271.43	18.00	.00
18100.000	4704.00	1282.33	1282.59	4.03	139.04	1385.00	.00	.00	.24	1271.57	18.00	.00
18000.000	4704.00	1282.34	1282.60	4.09	138.52	1485.00	.00	.00	.25	1271.71	18.00	.00
17900.000	4704.00	1282.35	1282.62	4.15	138.00	1585.00	.00	.00	.26	1271.85	18.00	.00
17800.000	4704.00	1282.36	1282.64	4.22	137.48	1685.00	.00	.00	.26	1271.99	18.00	.00
17700.000	4704.00	1282.34	1282.68	4.67	118.42	1785.00	.00	.00	.28	1272.13	18.00	.00
17600.000	4704.00	1282.35	1282.70	4.75	118.15	1885.00	.00	.00	.29	1272.27	18.00	.00
17577.000	4704.00	1282.36	1282.71	4.76	118.11	1907.60	.00	.00	.29	1272.30	18.00	.00
17500.000	4704.00	1282.38	1282.73	4.77	118.08	2007.60	.00	.00	.29	1272.33	18.00	.00
17400.000	4704.00	1282.40	1282.75	4.77	118.06	2107.60	.00	.00	.29	1272.36	18.00	.00
17300.000	4704.00	1282.42	1282.77	4.78	118.02	2207.60	.00	.00	.29	1272.40	18.00	.00
17200.000	4704.00	1282.44	1282.79	4.80	117.98	2307.60	.00	.00	.29	1272.44	18.00	.00
17100.000	4704.00	1282.46	1282.82	4.80	117.96	2407.60	.00	.00	.29	1272.47	18.00	.00
* 17000.000	4252.00	1281.37	1284.57	14.35	38.86	2507.60	.00	.00	.92	1272.51	18.00	.00
16958.000	4252.00	1282.13	1284.79	13.07	39.61	2548.90	.00	.00	.80	1272.52	18.00	.00
16861.000	3957.00	1283.70	1285.17	9.73	50.27	2645.81	.00	.00	.60	1273.56	18.00	.00
* 1100.000	3587.00	1284.69	1285.28	6.19	71.22	2689.81	.00	.00	.38	1273.58	19.26	.00
1200.000	3587.00	1284.73	1285.33	6.19	71.21	2789.81	.00	.00	.38	1273.62	19.26	.00
1300.000	3587.00	1284.78	1285.37	6.17	71.25	2889.81	.00	.00	.38	1273.65	19.26	.00
1400.000	3557.00	1284.84	1285.42	6.11	71.30	2989.81	.00	.00	.38	1273.69	19.27	.00
1500.000	3557.00	1284.88	1285.46	6.10	71.31	3089.81	.00	.00	.38	1273.72	19.27	.00
1600.000	3557.00	1284.92	1285.50	6.09	71.33	3189.81	.00	.00	.38	1273.76	19.28	.00
1700.000	3557.00	1284.97	1285.54	6.09	71.34	3289.81	.00	.00	.37	1273.80	19.28	.00
1800.000	3504.00	1285.03	1285.59	5.98	71.40	3389.81	.00	.00	.37	1273.83	19.29	.00
1900.000	3504.00	1285.07	1285.63	5.97	71.41	3489.81	.00	.00	.37	1273.87	19.29	.00
2000.000	3504.00	1285.12	1285.67	5.97	71.42	3589.81	.00	.00	.37	1273.90	19.29	.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
2100.000	3504.00	1285.16	1285.71	5.97	71.43	3689.81	.00	.00	.37	1273.94	19.29	.00
2200.000	3459.00	1285.22	1285.75	5.87	71.48	3789.81	.00	.00	.36	1273.98	19.30	.00
2300.000	3459.00	1285.26	1285.79	5.87	71.49	3889.81	.00	.00	.36	1274.01	19.30	.00
2400.000	3314.00	1285.35	1285.83	5.58	71.60	3989.81	.00	.00	.34	1274.05	19.32	.00
2500.000	3314.00	1285.38	1285.87	5.59	71.60	4089.81	.00	.00	.34	1274.08	19.32	.00
2600.000	3314.00	1285.42	1285.90	5.59	71.60	4189.81	.00	.00	.34	1274.12	19.32	.00
2700.000	3314.00	1285.45	1285.94	5.59	71.60	4289.81	.00	.00	.34	1274.16	19.32	.00
2800.000	3315.00	1285.49	1285.97	5.59	71.59	4389.81	.00	.00	.34	1274.19	19.32	.00
2900.000	3315.00	1285.52	1286.01	5.59	71.59	4489.81	.00	.00	.34	1274.23	19.32	.00
3000.000	3315.00	1285.56	1286.04	5.59	71.59	4589.81	.00	.00	.34	1274.26	19.32	.00
3100.000	3315.00	1285.59	1286.08	5.59	71.59	4689.81	.00	.00	.34	1274.30	19.32	.00
3200.000	3315.00	1285.63	1286.12	5.59	71.59	4789.81	.00	.00	.34	1274.34	19.32	.00
3300.000	3315.00	1285.67	1286.15	5.59	71.59	4889.81	.00	.00	.34	1274.37	19.32	.00
3400.000	3315.00	1285.70	1286.19	5.59	71.59	4989.81	.00	.00	.34	1274.41	19.32	.00
3500.000	3315.00	1285.74	1286.22	5.59	71.58	5089.81	.00	.00	.34	1274.44	19.32	.00
3600.000	3315.00	1285.77	1286.26	5.59	71.58	5189.81	.00	.00	.34	1274.48	19.32	.00
3700.000	3315.00	1285.81	1286.29	5.59	71.58	5289.81	.00	.00	.34	1274.52	19.32	.00
3800.000	3315.00	1285.84	1286.33	5.59	71.58	5389.81	.00	.00	.34	1274.55	19.32	.00
3900.000	3315.00	1285.88	1286.36	5.59	71.58	5489.81	.00	.00	.34	1274.59	19.32	.00
4000.000	3315.00	1285.91	1286.40	5.59	71.58	5589.81	.00	.00	.34	1274.62	19.32	.00
4102.000	3260.00	1286.09	1286.46	5.10	100.00	5692.02	.00	.00	.29	1274.66	18.00	25.00
* 4212.000	2099.00	1285.61	1287.04	9.68	100.00	5802.40	.00	.00	.89	1280.60	18.00	25.00
* 4318.000	1529.00	1287.36	1287.47	2.74	100.00	5908.30	.00	.00	.19	1280.75	18.00	25.00
6822.000	1469.00	1287.51	1287.51	.70	1139.29	6023.81	146.30	1655.30	.06	1276.06	53.00	53.00
6907.000	1479.00	1287.52	1287.52	.66	1096.31	6108.81	145.90	1711.40	.08	1276.09	53.00	53.00
7104.000	1479.00	1287.54	1287.54	.67	1105.54	6305.81	150.30	1742.60	.07	1276.17	53.00	53.00

SECNO	Q	CWSEL	EG	VCH	TOPWID	CUMDS	STENCL	STENCR	FRCH	ELMIN	K*XNCH	K*XNR
7304.000	1479.00	1287.56	1287.56	.60	1204.40	6507.81	151.00	1724.40	.06	1276.25	53.00	53.00
7504.000	1479.00	1287.58	1287.59	.77	1081.68	6720.81	168.00	1524.30	.08	1276.32	53.00	53.00
7704.000	1479.00	1287.62	1287.63	.95	1020.04	6940.81	168.50	1548.40	.12	1276.40	53.00	53.00
7904.000	1439.00	1287.67	1287.68	.87	1033.54	7157.81	166.40	1670.00	.08	1276.47	53.00	53.00
8104.000	1439.00	1287.72	1287.73	.89	1016.47	7373.81	165.70	1750.80	.09	1276.55	53.00	53.00
8304.000	1439.00	1287.77	1287.78	.95	1030.43	7586.81	144.60	1726.30	.10	1276.63	53.00	53.00
* 8504.000	1439.00	1287.80	1287.81	.78	1047.33	7786.81	168.70	1789.50	.06	1276.70	53.00	53.00
8704.000	1447.00	1287.82	1287.83	.86	1030.66	7987.81	168.80	1621.50	.08	1276.78	53.00	53.00
8904.000	1447.00	1287.86	1287.87	.88	1064.35	8187.81	169.60	1832.60	.10	1276.85	53.00	53.00
9104.000	1473.00	1287.89	1287.90	.85	1070.73	8387.81	144.50	1743.90	.08	1276.93	53.00	53.00
9304.000	1528.00	1287.93	1287.94	.88	1135.31	8587.81	167.70	1774.60	.09	1277.01	53.00	53.00
9504.000	1620.00	1287.97	1287.98	.95	1095.52	8787.81	143.90	1726.60	.09	1277.08	53.00	53.00

SUMMARY OF ERRORS AND SPECIAL NOTES

```
WARNING SECNO=  19095.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  17000.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   1100.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=   4212.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=   4212.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

WARNING SECNO=   4318.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=   8504.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```



N

100 0 100 200 300 FEET

SCALE: 1"=100'

PIMA OUTFALL CHANNEL (93E130)

(VICINITY ARIZONA CANAL & PIMA RD)

MARICOPA COUNTY, ARIZONA

LEVEL DATUM: Based on N.G.S. Elevations, and as Surveyed by Consultant, The WLB GROUP INC.

NOTE: Map Coordinates are N.A.D. 27 Modified Central Zone State Plane Coordinates using G.A.F.= 1.00016 All Bearings are Grid Bearings.

Section Corner Location and Description as Provided by Consultant: The WLB GROUP INC.

See E.R. Job No. 8941 for Further Information.

HEC-2 XSEC Locations Used In Side-Spillway Split-Flow Analysis Model: COET.

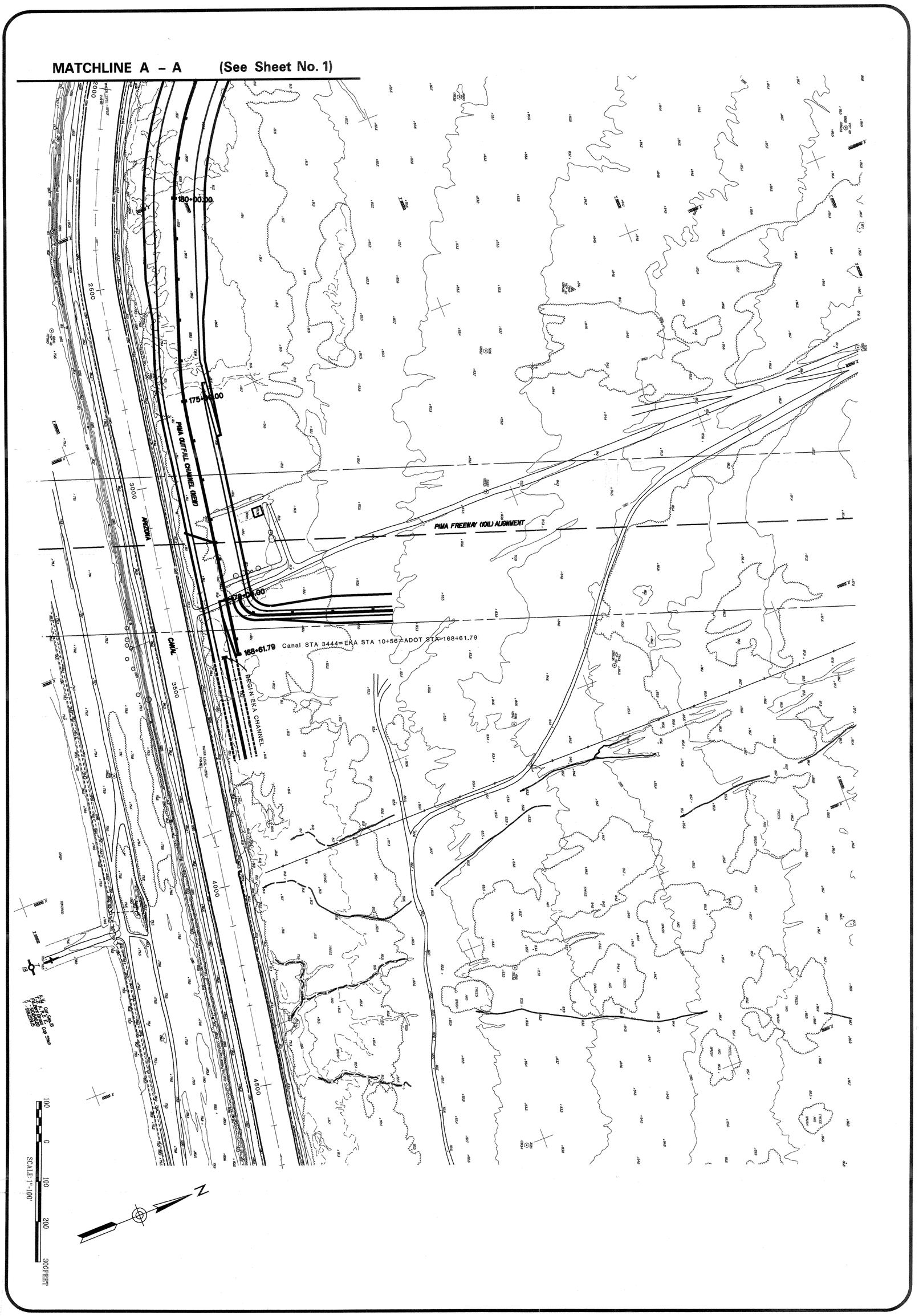
PROJECT DATA
MAP COMPILED BY STEREOPHOTOGRAMMETRIC METHODS FROM PHOTOS DATED 7-19-89
PHOTOGRAMMETRY JOB NO. 2985

PLATE 2

Salt River
PIMA-MARICOPA INDIAN COMMUNITY
10005 East Osborn Road
Scottsdale, Arizona 85256-9722
Phone (602) 850-8160

Design:	HBJ
Drawn:	HBJ
Check:	
Date:	981014
Revision Date:	
Sheet No.	1 of 2

1989 ADOT Mapping



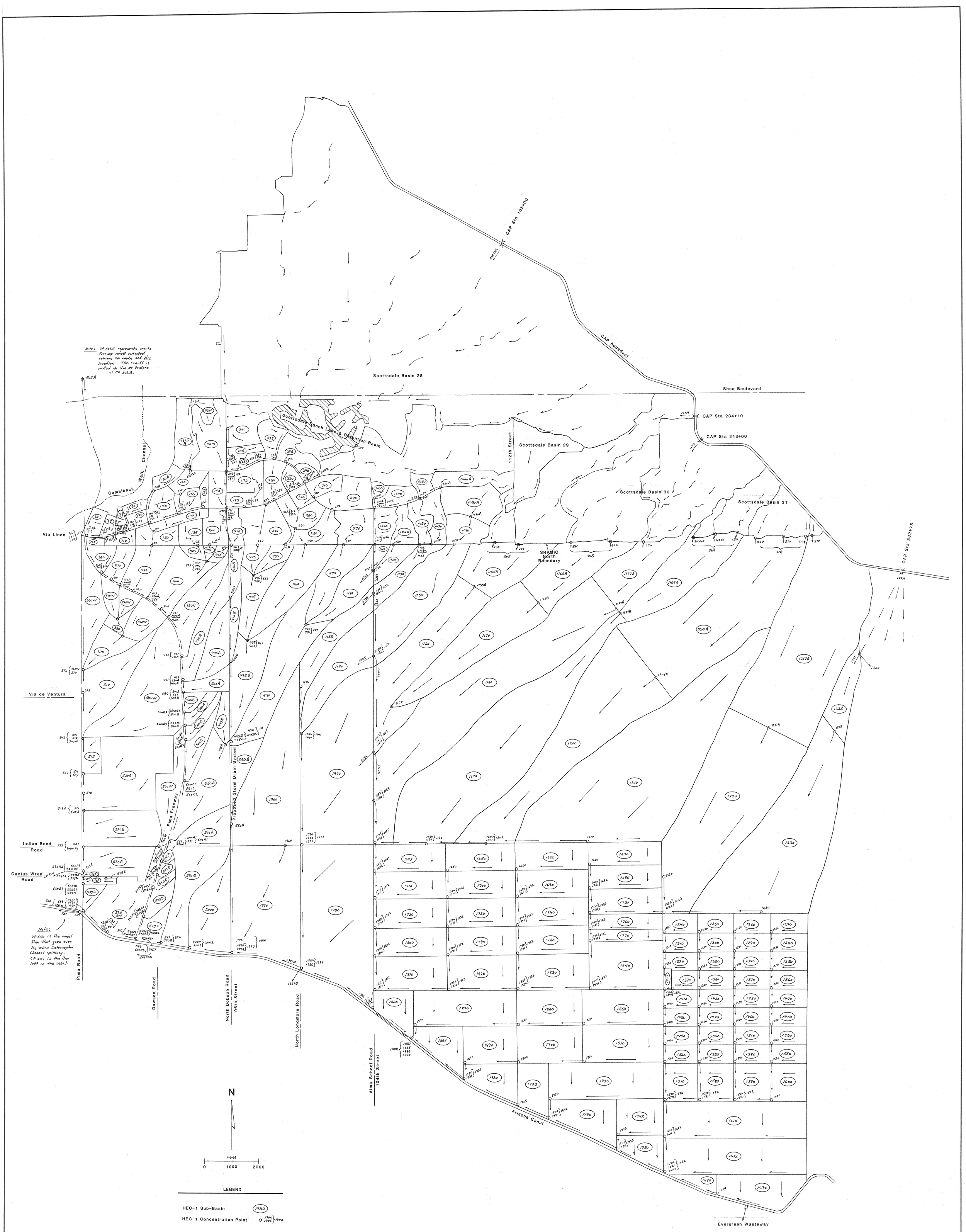
Salt River
PIMA-MARICOPA INDIAN COMMUNITY
10005 East Osborn Road
Scottsdale, Arizona 85256-9722
Phone (602) 850-8160

PLATE 3

Design:	HBJ
Drawn:	HBJ
Check:	
Date:	981014
Revision Date:	
Sheet No.	2 of 2

PLATE 3

1989 ADOT Mapping



HEC-1 Routing Schematic		
Pima Freeway / SRPMIC Drainage Analysis		
Robert L. Ward, P.E., Consulting Engineer		
August 1996		PLATE 1

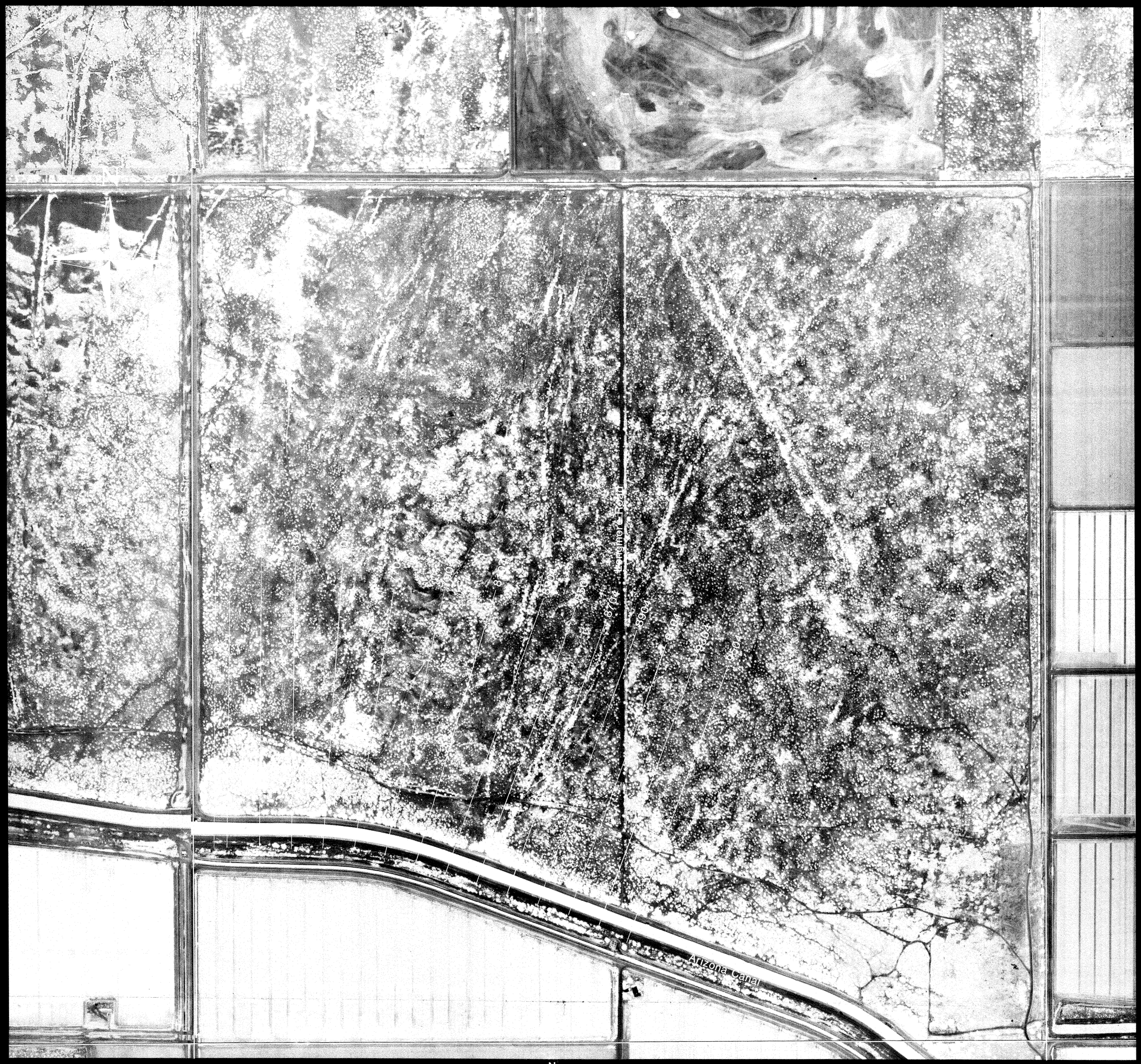


PLATE 4

HEC-2 XSEC Locations Surveyed By SRPMIC, June 1998