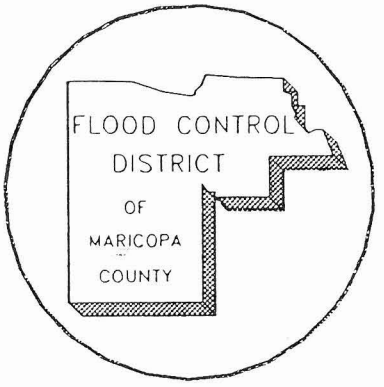

INDIAN BEND WASH FLOODPLAIN DELINEATION STUDY

Salt River to 40th Street FCD 93-05

HYDRAULICS REPORT VOLUME 2 OF 2

NOVEMBER 1997

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INDIAN BEND WASH FLOODPLAIN DELINEATION STUDY

Salt River to 40th Street
FCD 93-05

HYDRAULICS REPORT
VOLUME 2 OF 2

NOVEMBER 1997

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Phoenix, AZ 85009

INDIAN BEND WASH
FROM
SALT RIVER CONFLUENCE TO 40TH STREET

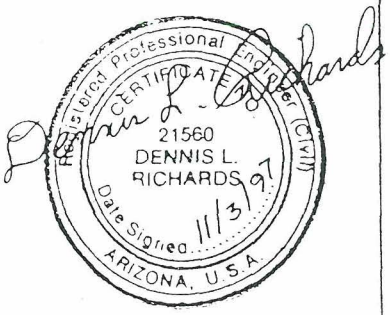
DOCUMENTATION IN SUPPORT OF A REQUEST FOR LETTER OF MAP REVISION

Prepared for:

Flood Control District
of Maricopa County
2801 West Durango Street
Phoenix, AZ 85009

Prepared by:

Simons, Li & Associates, Inc.
4600 South Mill Avenue, Suite 200
Tempe, AZ 85282
(602) 491-1393



November 1997

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	Section 3	Hydrologic Analysis	
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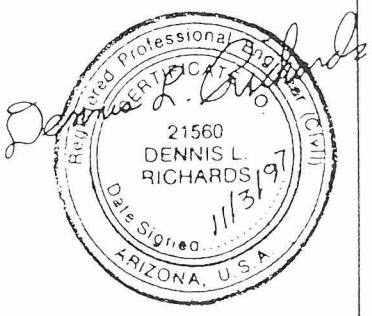

SECTION 4: Hydraulic Analysis

4.4. Bridge As-builts

F.A.P.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-S-917	2	184	

2021 MA 8

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173-184	A-1 - A-12	Levee Access Control Gates

NOTE : Drawing Numbers are in Sequencial Order but are NOT Consecutively Numbered.

	NAME	DATE
DESIGN	[illegible]	6/90
DRAWN	[illegible]	6/90
CHECKED	[illegible]	04/91

HIGHWAYS DIVISION
ARIZONA DEPARTMENT OF TRANSPORTATION

Gannett Fleming

INDEX of DRAWINGS

INDIAN BEND WASH TO McCLINTOCK DRIVE

DWG. NO. G-1.1

TRACS NO. H 086104C

SHEET OF

G1168.DGN
08-June-1992

VIEW NAME:

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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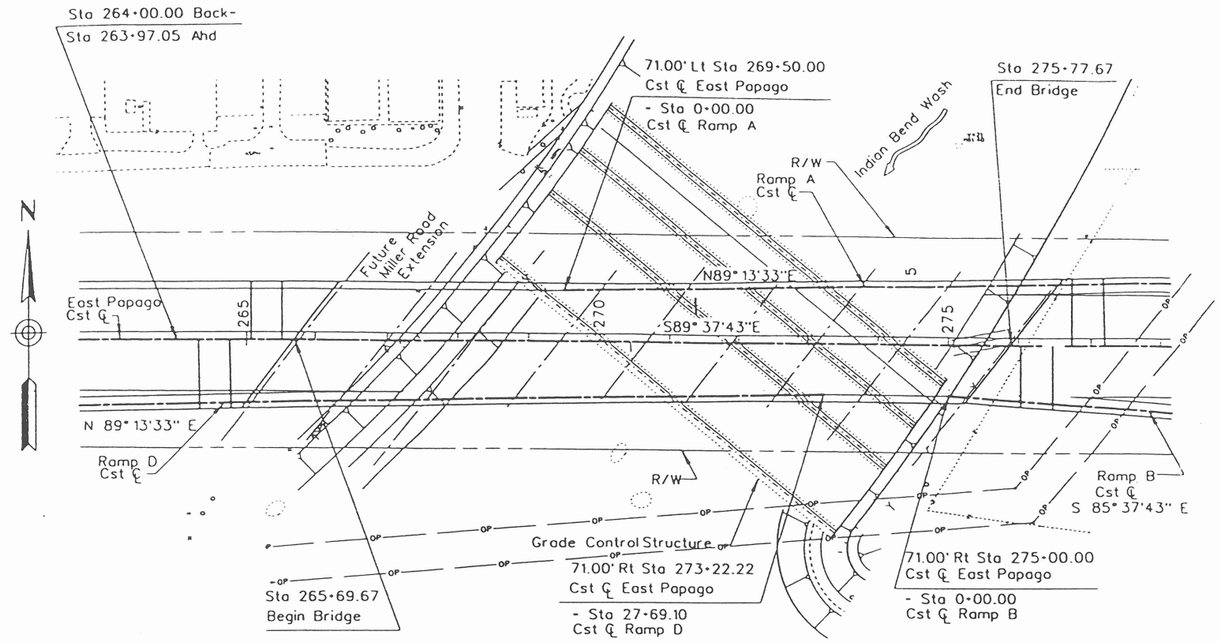
		202L MA 8			



LOCATION PLAN

New Eight Span Prestressed Concrete Girder Bridge
AASHTO Type VI Girder
Skew 39° 00'00" Rt.
Scale: 1" = 100'

DRAWING INDEX

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S-9. 5		SUMMARY OF QUANTITIES
S-9. 6	TO 9.11	FOUNDATION DATA
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S-9.16	TO 9.19	ABUTMENT PLAN AND ELEVATION
S-9.20		ABUTMENT DETAILS
S-9.21		WINGWALL DETAILS
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S-9.29		PIER & SIGN SUPPORT DETAILS
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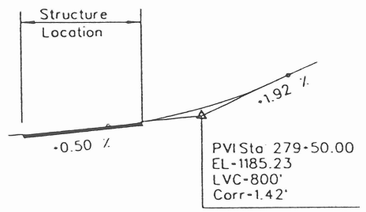
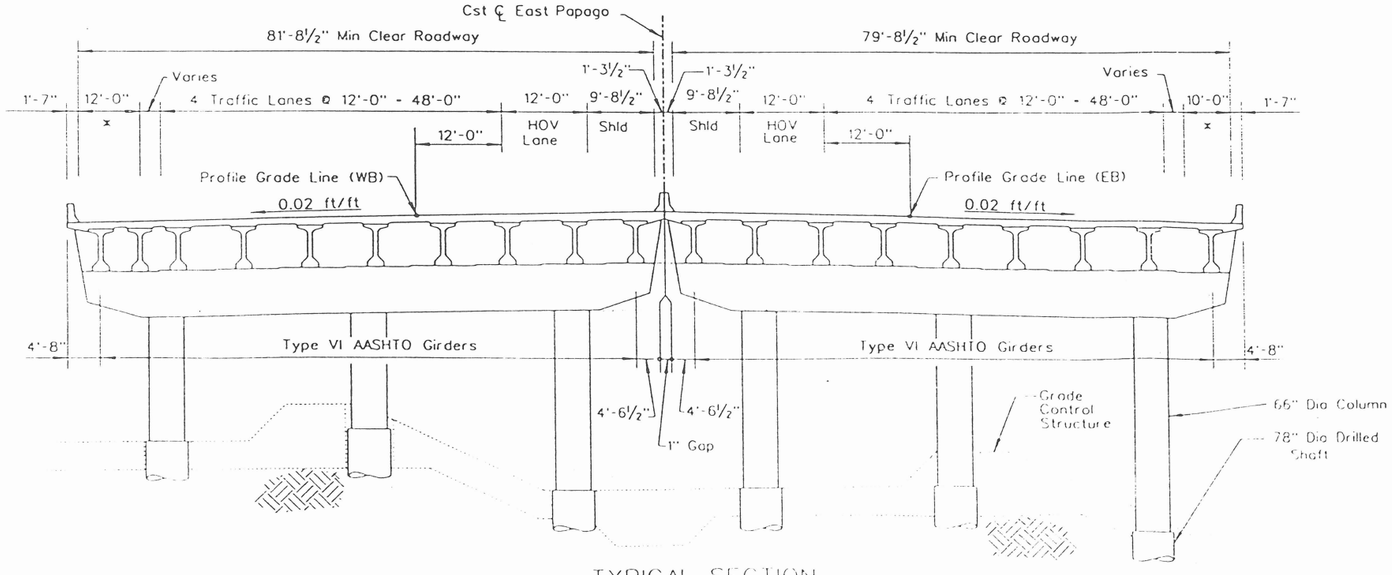
S-9.64		PULL BOX IN BARRIER DETAIL



EAST PAPAGO PROFILE GRADE LINE

N.T.S



*8'-0" Shoulder at Ramps A, B and D

TYPICAL SECTION

Scale: 1" = 10'

GENERAL NOTES

Construction Specification - Arizona Department of Transportation "Standard Specifications for Road and Bridge Construction", Edition of 1990.

Design Specifications - AASHTO "Standard Specifications for Highway Bridges", Fourteenth Edition, 1989; and the 1990 and 1991 Interim Specifications.

Dead Load - Dead Load includes allowance of 25 pounds per square foot for future wearing surface.

Loading Class - HS20-44 and/or Interstate Alternate Loading.

Composite Design - Slab and diaphragm Dead Load carried by girders only.

Seismic Performance Category A.

Reinforcing Steel shall conform to ASTM Specification A615. Bar sizes #6 and smaller shall be designed as Grade 40 but may be furnished as Grade 40 or Grade 60 Unless Otherwise Noted. Bar sizes #7 and Larger shall be designed and furnished as Grade 60.

All bend dimensions for reinforcing steel shall be out-to-out of bars. All placement dimensions for reinforcing steel shall be to center of bars unless noted otherwise.

All reinforcing steel shall have 2 inch clear cover unless noted otherwise.

All concrete shall be Class 'S' unless noted otherwise.

Stresses:

Deck Slab, and Diaphragms	f'c = 4.500 psi
(Deck Slab)	fc = 1.400 psi
Girders	See Precast Girder Details
Pier Caps, Columns, Abutments and Wingwalls	f'c = 3.500 psi
Drilled Shafts	f'c = 3.500 psi
All other Class "S" Concrete	f'c = 3.000 psi
Grade 40 Reinforcing Steel	fs = 20.000 psi
Grade 60 Reinforcing Steel	fs = 24.000 psi
Prestressing Steel (1/2" dia. 7-wire Low Relaxation Strand)	f's = 270.000 psi

Girders shall be prestressed by the pretensioning method only.

Barriers shall be constructed after spans have taken dead load deflection. Barriers shall not be slip formed.

Chamfer all exposed corners 3/4" as per Standard B-19.10 unless noted otherwise.

Dimensions shall not be scaled from drawings.

The information shown on these drawings concerning type and location of underground and other utilities is not represented to be accurate or all inclusive. The information is made available to provide the Contractor with ready access to the same information used by the Design Consultant in preparation of the Plans. It is the responsibility of the Contractor to verify type and location of utilities as is necessary to avoid damage thereto.

Inventory and operating ratings for HS20-44 are in accordance with AASHTO "Manual for Maintenance Inspection of Bridges", Edition of 1983, and 1984 through 1990 Interim Specifications (Working Stress Method).

Inventory Rating	HS-20
Operating Rating	HS-61

Arizona Department of Transportation, Highways Division, Structures Section "Standard Drawings", 1988 Edition, revised to date:

B-19.10	Miscellaneous Details for Bridges
~~B-19.11~~	~~Approach Slab Details~~
~~B-19.12~~	~~Anchor Slab Details~~
B-19.30	Structural Excavation - Payment Limits
B-19.40	Structure Backfill - Payment Limits
B-21.18	Bridge Concrete Barrier Details

		DATE
DESIGN	K. FREEMAN	8/90
DRAWN	G. SCHOUWEILER	8/90
CHECKED	H. COX	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
LOCATION PLAN

LOOP 202 ROUTE	7.78 MILEPOST	2265 STRUCTURE NO	LOCATION EAST PAPAGO FREEWAY

DWG NO S-9.1

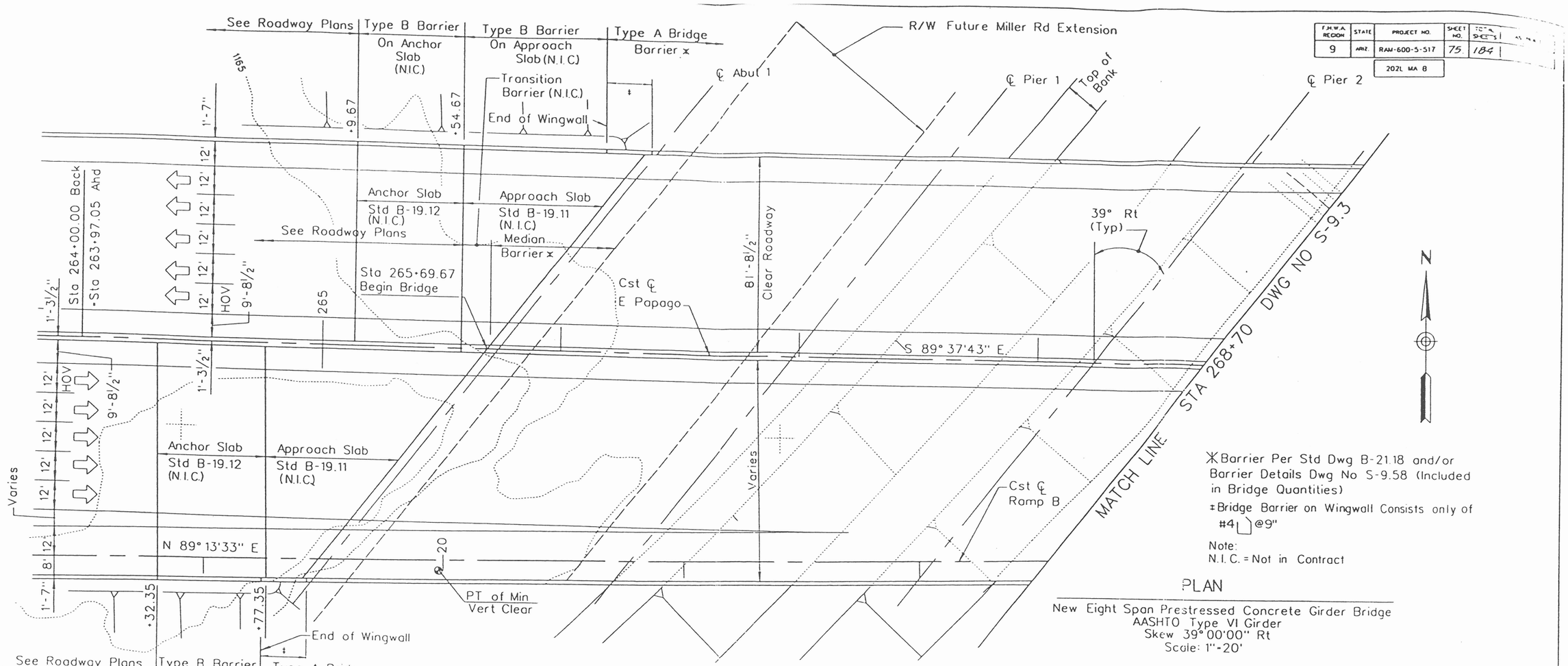
TRACS NO H 0861 04C

OF

---DGN=SPECIFICATION----- VIEW NAME:
---SYSTIME-----

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	ARIZ.	RAM-600-5-517	75	184

202L MA 8



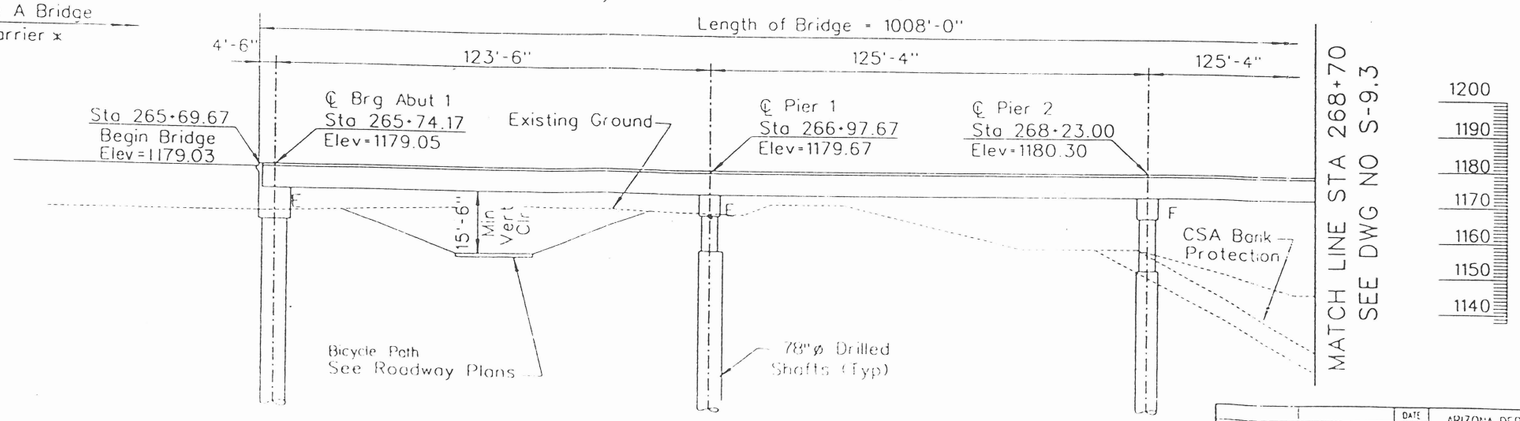
✳Barrier Per Std Dwg B-21.18 and/or Barrier Details Dwg No S-9.58 (Included in Bridge Quantities)

‡Bridge Barrier on Wingwall Consists only of #4 ⌐ @9"

Note:
N.I.C. = Not in Contract

PLAN

New Eight Span Prestressed Concrete Girder Bridge
AASHTO Type VI Girder
Skew 39°00'00" Rt
Scale: 1"=20'



SECTION ALONG CONSTRUCTION ℄

(Stations and Elevations on Cst ℄ East Papago)
Scale: 1"=20'

			DATE
DESIGN	KF	K. FREEMAN	8/90
DRAWN	GS	G. SCHUMACHER	8/90
CHECKED	RC	R. COX	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PLAN AND ELEVATION 1

LOC. RTE	MILEPOST	STRUCTURE NO
202	7.78	2265

LOCATION: EAST PAPAGO FREEWAY

DWG NO S-9.2 - 5

TRACS NO. H 086104C

SHEET OF

DATE | BASE BY | DESCRIPTION OF REVISIONS

-----DGN=SPECIFICATION-----
-----SYSTIME-----
VIEW NAME:

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
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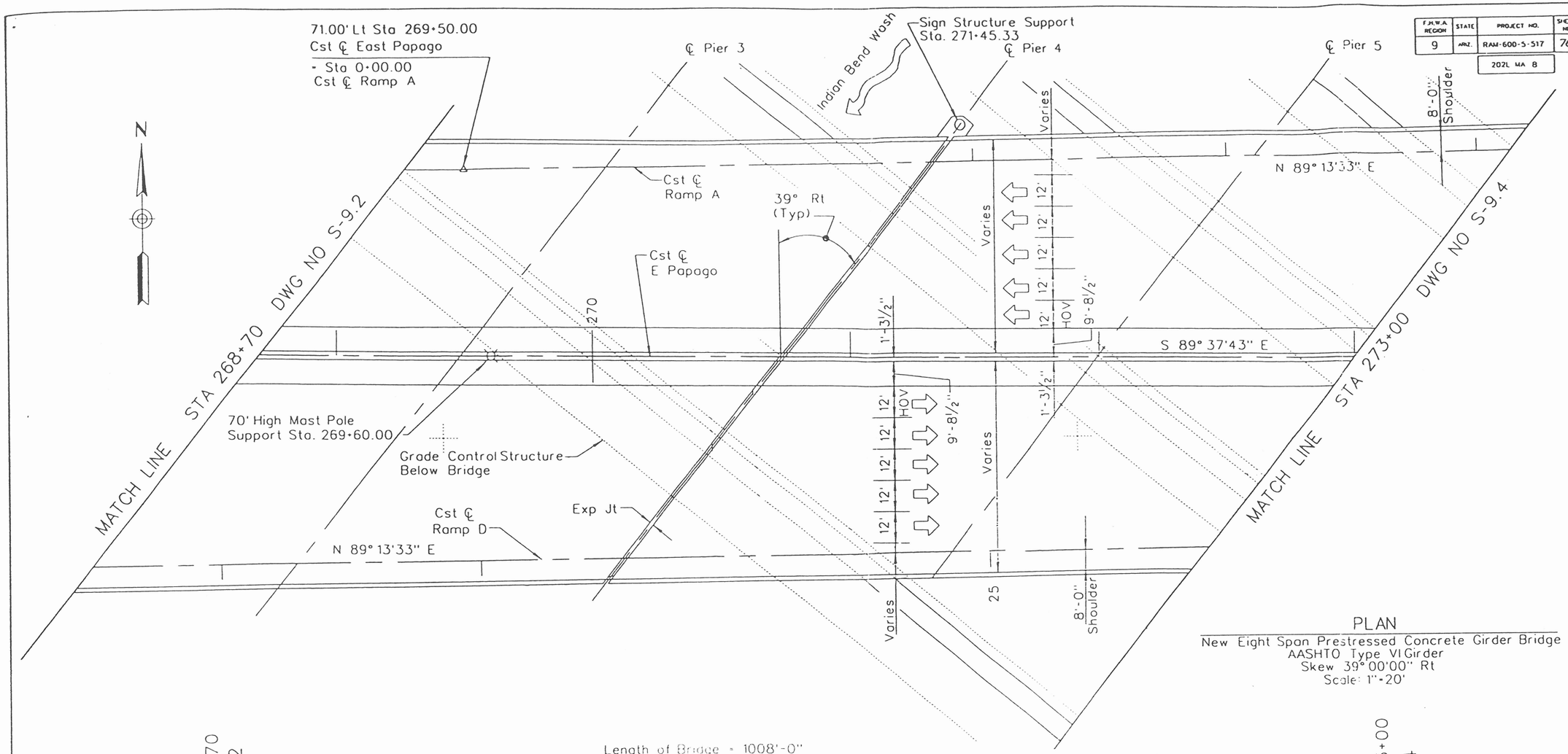
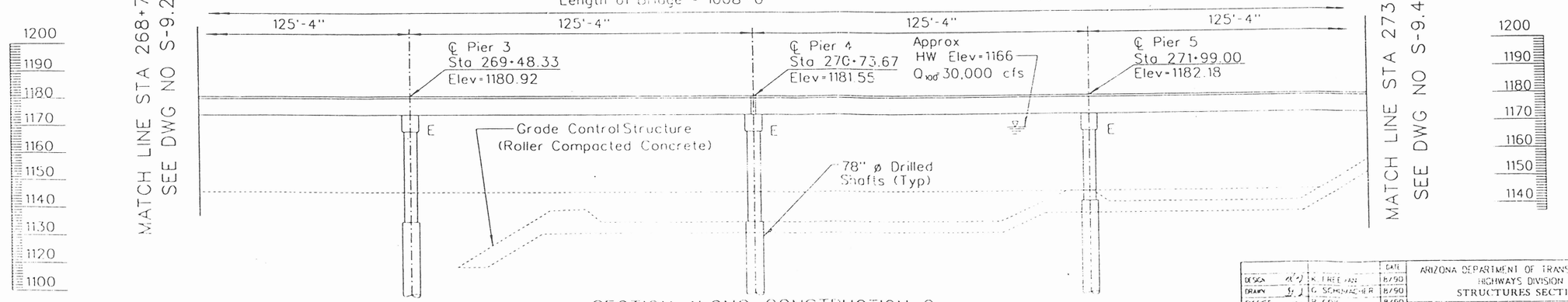
		202L MA 8			



PLAN

New Eight Span Prestressed Concrete Girder Bridge
AASHTO Type VI Girder
Skew 39°00'00" Rt
Scale: 1"=20'



SECTION ALONG CONSTRUCTION ℄

(Stations and Elevations on Cst ℄ East Papago)
Scale: 1"=20'

DESIGN	K. FREEMAN	DATE	8/90
DRAWN	G. SCHWARZ-HER		8/90
CHECKED	R. COX		8/90
ALPHA ENGINEERS INC.			
LOOP 202 ROUTE	7.78 MILEPOST	2265 LOCATION NO.	

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PLAN AND ELEVATION 2

LOCATION: EAST PAPAGO FREEWAY

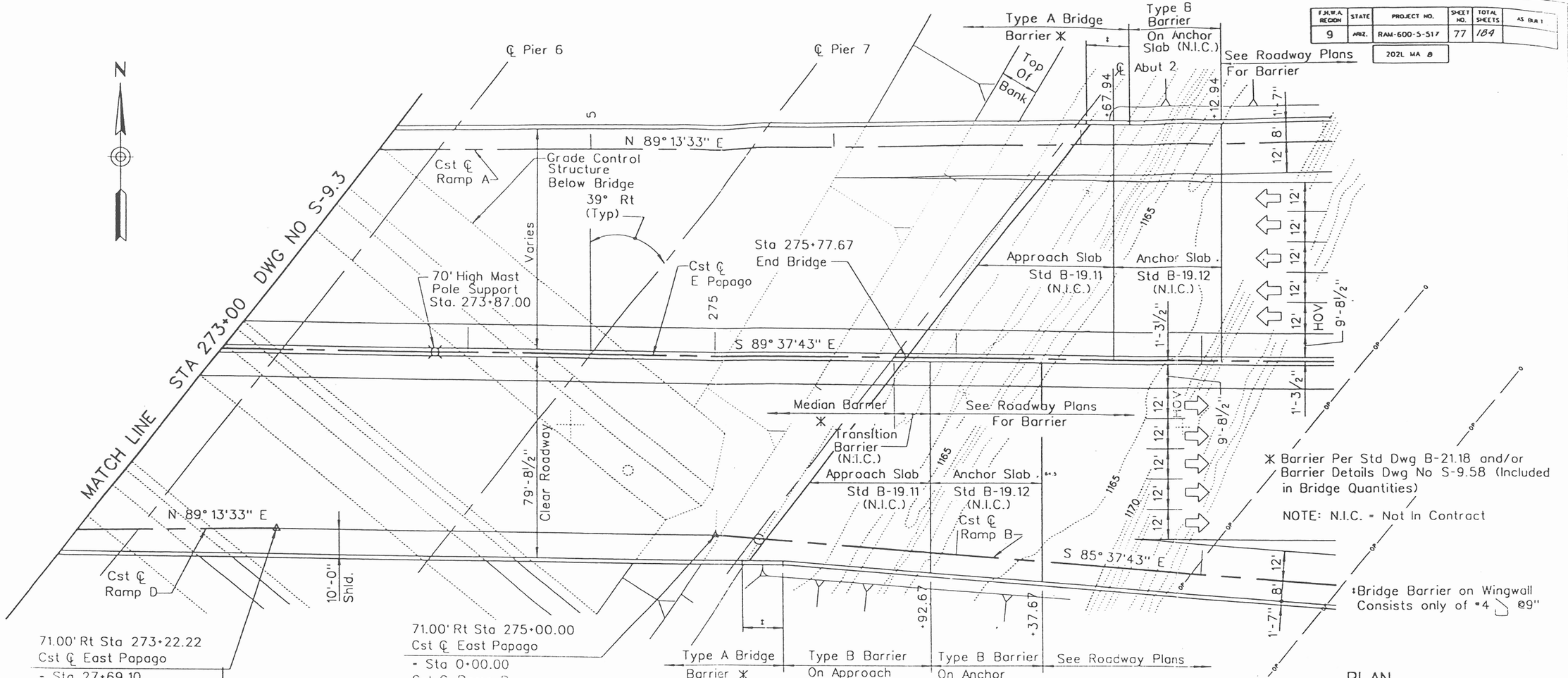
DWG NO S-9.3

TRACS NO H 0861 04C

___ OF ___

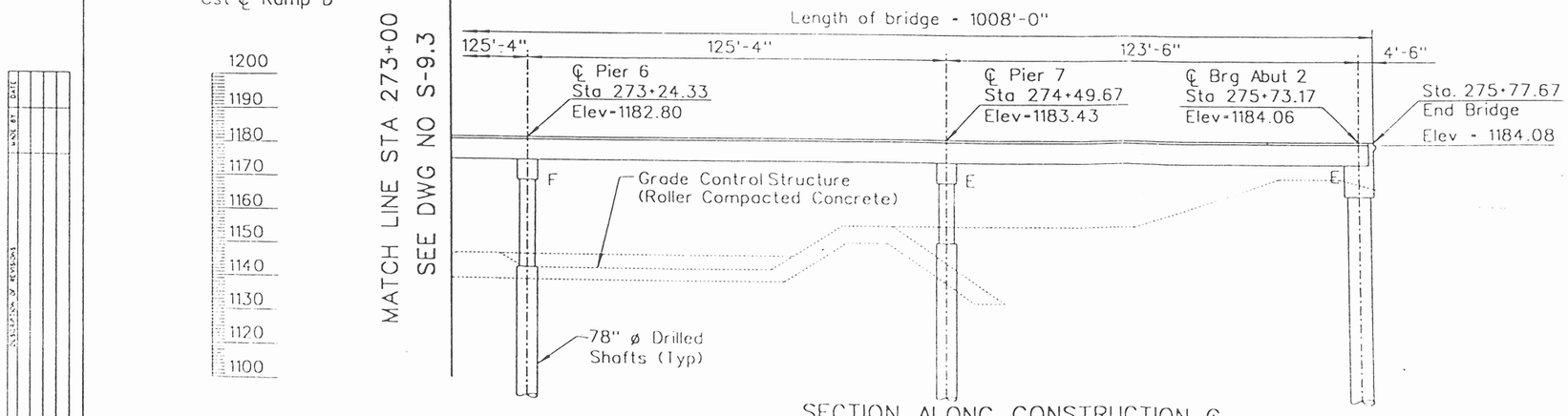
·····DGN=SPECIFICATION·····
·····SYSTIME·····
VIEW NAME:

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-S-517	77	184	
		202L MA 8			



PLAN

New Eight Span Prestressed Concrete Girder Bridge
AASHTO Type VI Girder
Skew 39° 00'00" Rt
Scale: 1"-20'



SECTION ALONG CONSTRUCTION ℄

(Stations and Elevations on Cst ℄ East Papago)
Scale: 1"-20'

NO	DESCRIPTION OF REVISIONS	INIT. BY	DATE
1			
2			
3			
4			

		DATE
DESIGN	K. FREEMAN	8/90
DRAWN	G. SCHUMACHER	8/90
CHECKED	R. COX	8/90

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

ALPHA ENGINEERS INC.

INDIAN BEND WASH BRIDGE
PLAN AND ELEVATION 5

LOOP 202 ROUTE	7.78 MILEPOST	2265 STRUCTURE NO

LOCATION: EAST PAPAGO FREEWAY

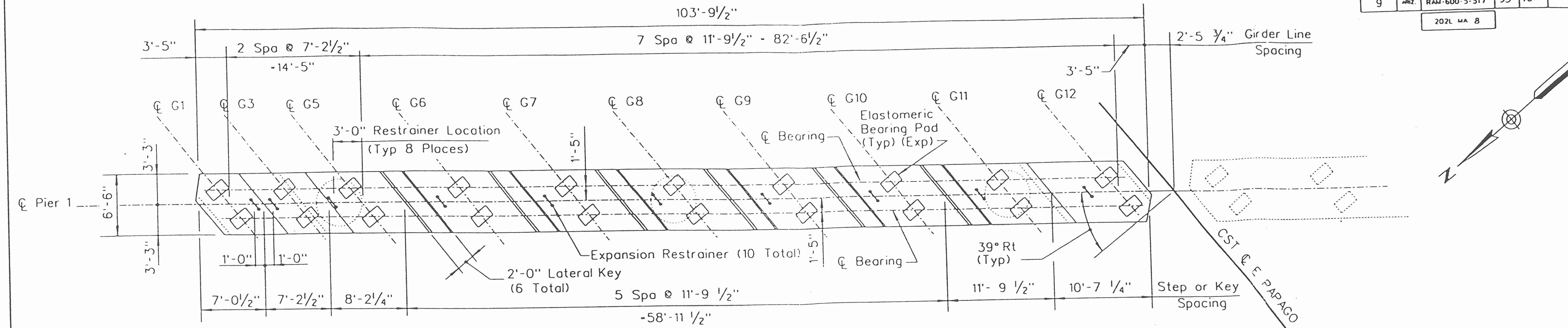
DWG NO S-9.4

TRACS NO. H 0861 01C

•••••DGN=SPECIFICATION•••••
•••••SYSTIME•••••
VIEW NAME=

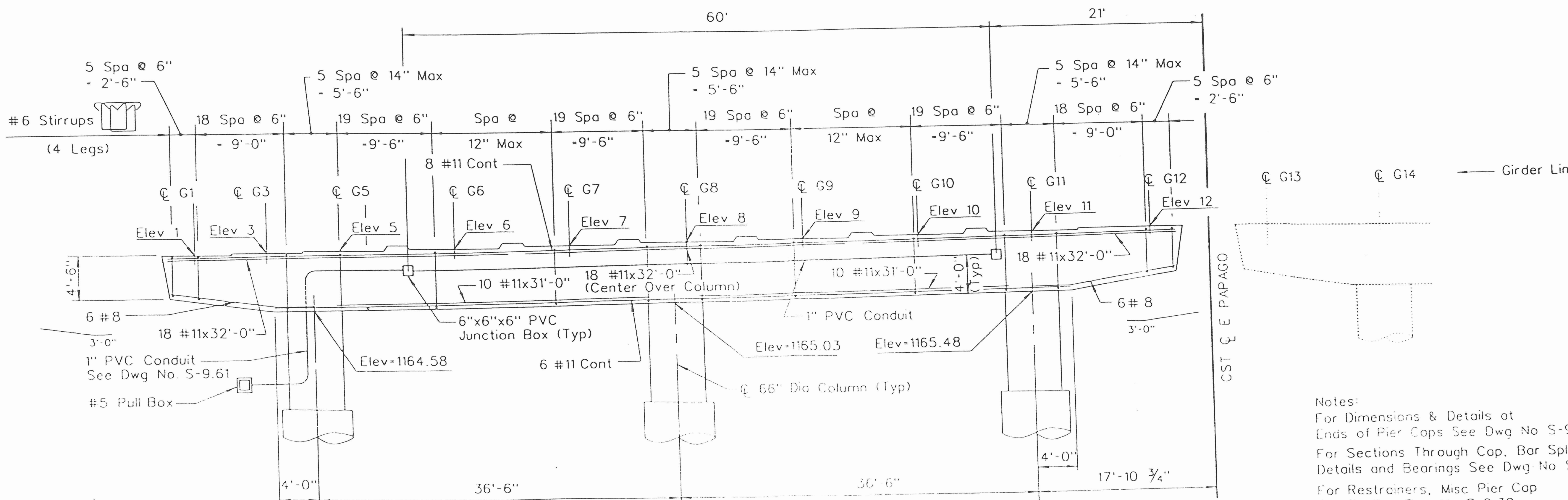
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-5-517	95	184	

202L MA 8



PLAN

Scale 3/16" - 1'-0"



Notes:

For Dimensions & Details at Ends of Pier Caps See Dwg No S-9.37

For Sections Through Cap, Bar Splice Details and Bearings See Dwg No S-9.38

For Restrainers, Misc Pier Cap Details See Dwg No S-9.39

ELEVATION

(Shown at ℄ Pier)

Scale 3/16" - 1'-0"

ELEVATIONS									
Elev 1	Elev 3	Elev 5	Elev 6	Elev 7	Elev 8	Elev 9	Elev 10	Elev 11	Elev 12
1171.02	1171.10	1171.19	1171.34	1171.49	1171.63	1171.78	1171.92	1172.07	1172.22

		DATE
DESIGN	K. FREEMAN	8/90
DRAWN	G. SCHUMACHER	8/90
CHECKED	R. COX	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER 1 WESTBOUND
PLAN AND ELEVATION

LOOP 202 (ROUTE) | 7.78 (MILEPOST) | 2265 (STRUCTURE NO.)

LOCATION: EAST PAPAGO FREEWAY

DWG NO S-9.22

OF

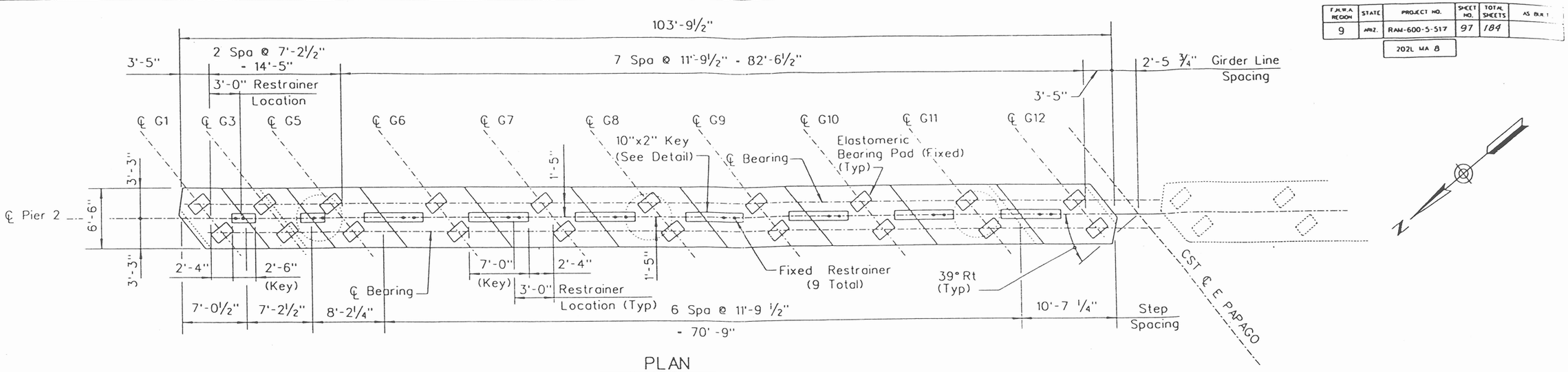
TRACS NO. H 0861 04C

•••••DGN•SPECIFICATION•••••
•••••SYSTIME•••••

VIEW NAME:

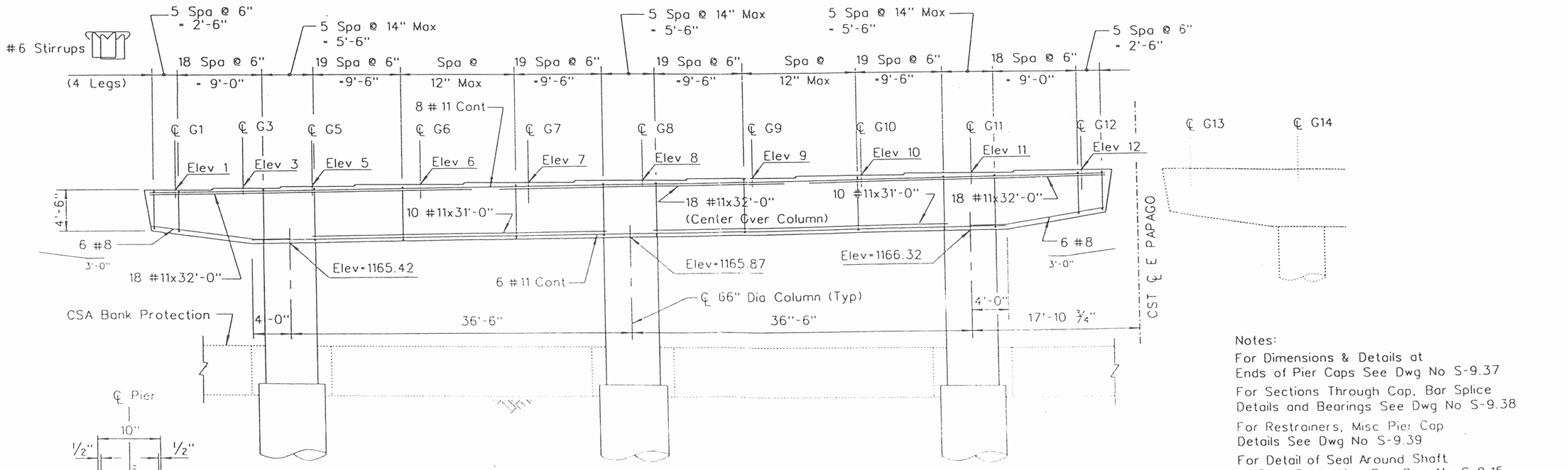
DESCRIPTION OF REVISIONS | MADE BY | DATE

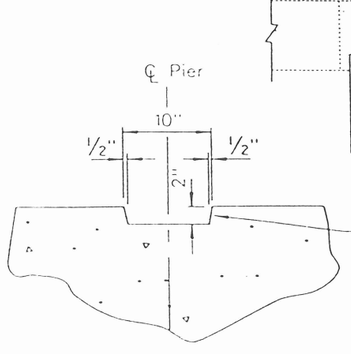
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-5-517	97	184	
		202L MA 8			



PLAN

Scale: 3/16" - 1'-0"





Key Shall be Formed to Exact Lines Shown or Sides Shall be Sawcut and Key Chipped Out to 2" Depth.

KEY DETAIL

Not to Scale

ELEVATION

(Shown at ℄ Pier)

Scale: 3/16" - 1'-0"

ELEVATIONS									
Elev 1	Elev 3	Elev 5	Elev 6	Elev 7	Elev 8	Elev 9	Elev 10	Elev 11	Elev 12
1171.85	1171.94	1172.03	1172.17	1172.32	1172.47	1172.61	1172.76	1172.91	1173.05

Notes:

For Dimensions & Details at Ends of Pier Caps See Dwg No S-9.37

For Sections Through Cap, Bar Splice Details and Bearings See Dwg No S-9.38

For Restrainers, Misc Pier Cap Details See Dwg No S-9.39

For Detail of Seal Around Shaft at Bank Protection See Dwg No S-9.15

		DATE
DESIGN	K. FREEMAN	8/90
DRAWN	G. SCHUMACHER	8/90
CHECKED	R. COX	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER 2 WESTBOUND
PLAN AND ELEVATION

LOOP	7.78	2265
202	MILEPOST	STRUCTURE NO

LOCATION: EAST PAPAGO FREEWAY

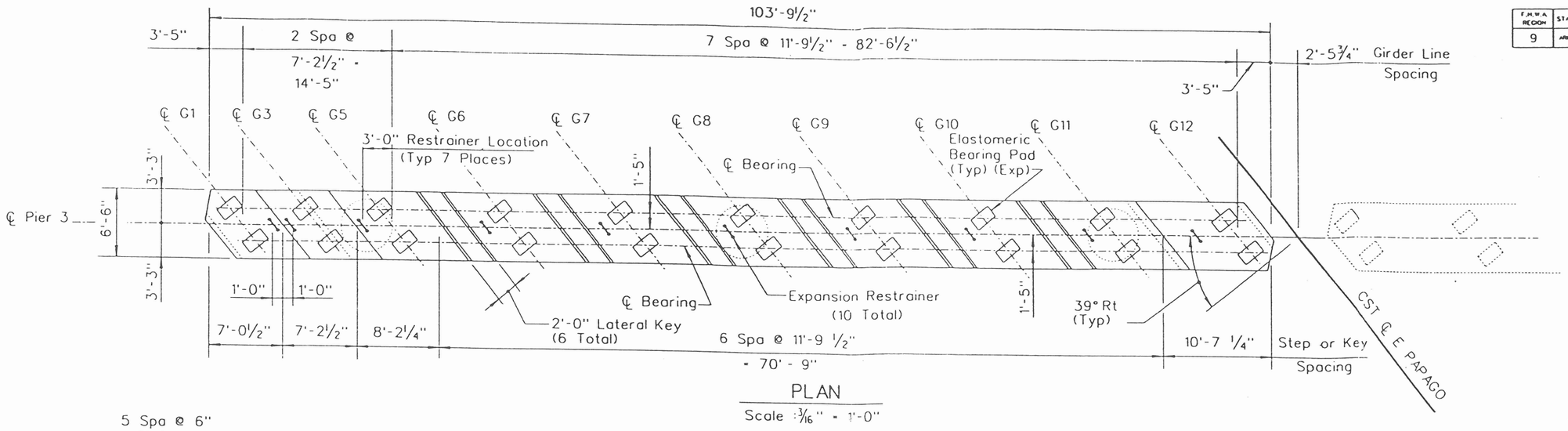
DWG NO S-9.24

TRACS NO. H 0861 04C

NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE
1			
2			
3			
4			

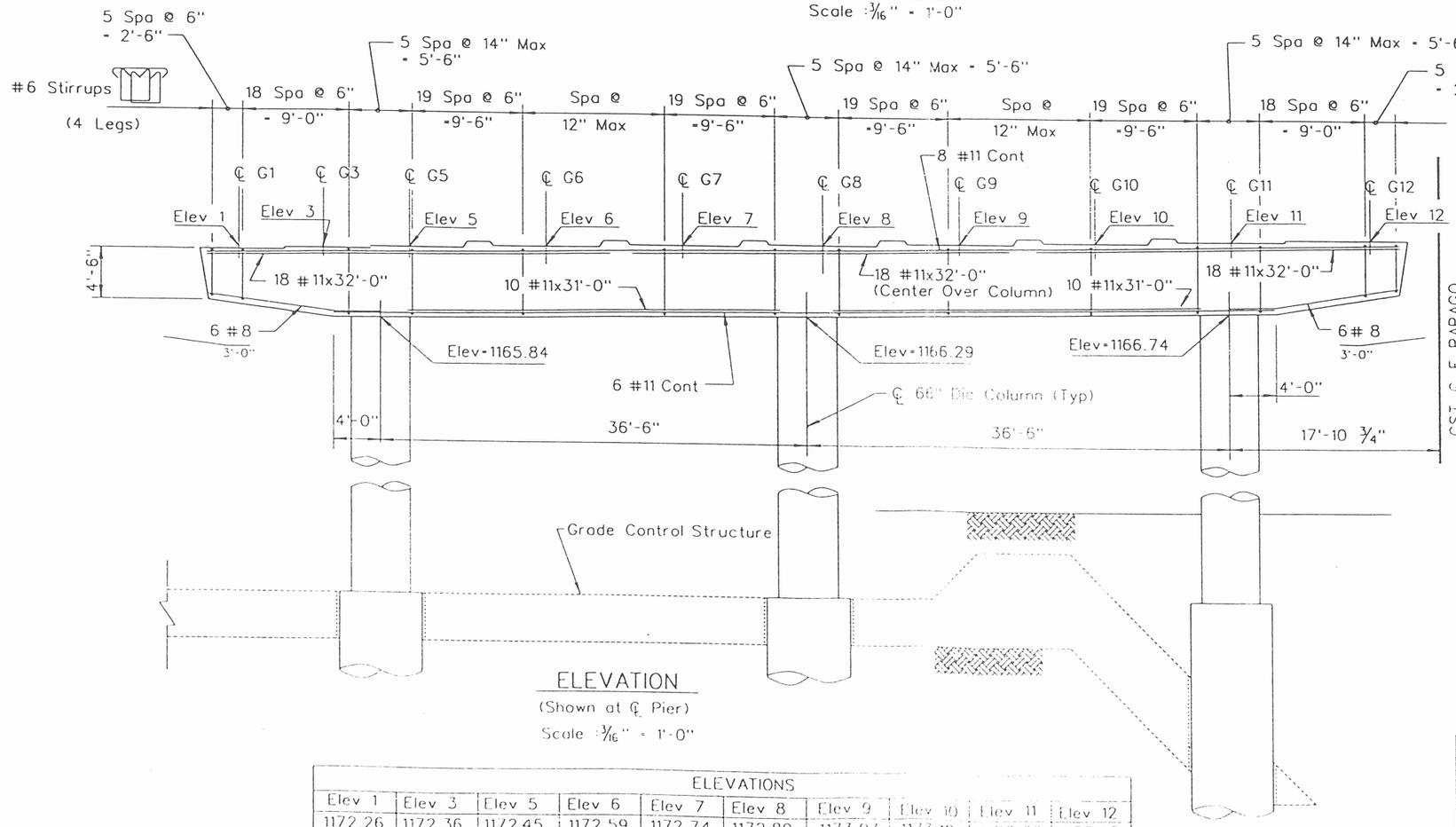
-----DGN-SPECIFICATION-----
-----SYSTIME-----
VIEW NAME:

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-S-517	99	184	
		202L MA 8			



PLAN

Scale : 3/16" = 1'-0"



ELEVATION

(Shown at ℄ Pier)

Scale : 3/16" = 1'-0"

ELEVATIONS									
Elev 1	Elev 3	Elev 5	Elev 6	Elev 7	Elev 8	Elev 9	Elev 10	Elev 11	Elev 12
1172.26	1172.36	1172.45	1172.59	1172.74	1172.89	1173.03	1173.18	1173.32	1173.47

Notes:

For Dimensions & Details at Ends of Pier Caps See Dwg No S-9.37

For Sections Through Cap, Bar Splice Details and Bearings See Dwg No S-9.38

For Restrainers, Misc Pier Cap Details See Dwg No S-9.39

For Detail of Seal Around Shaft at Grade Control Sructure See Dwg No S-9.15

NO.	DESCRIPTION OF REVISIONS	MADE BY	DATE
1			
2			
3			
4			

		DATE
DESIGN	K. FREEMAN	8/90
DRAWN	C. SCHUMACHER	8/90
CHECKED	R. COX	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER 3 WESTBOUND
PLAN AND ELEVATION

LOOP 202 ROUTE	7.78 MILEPOST	2265 STRUCTURE NO.

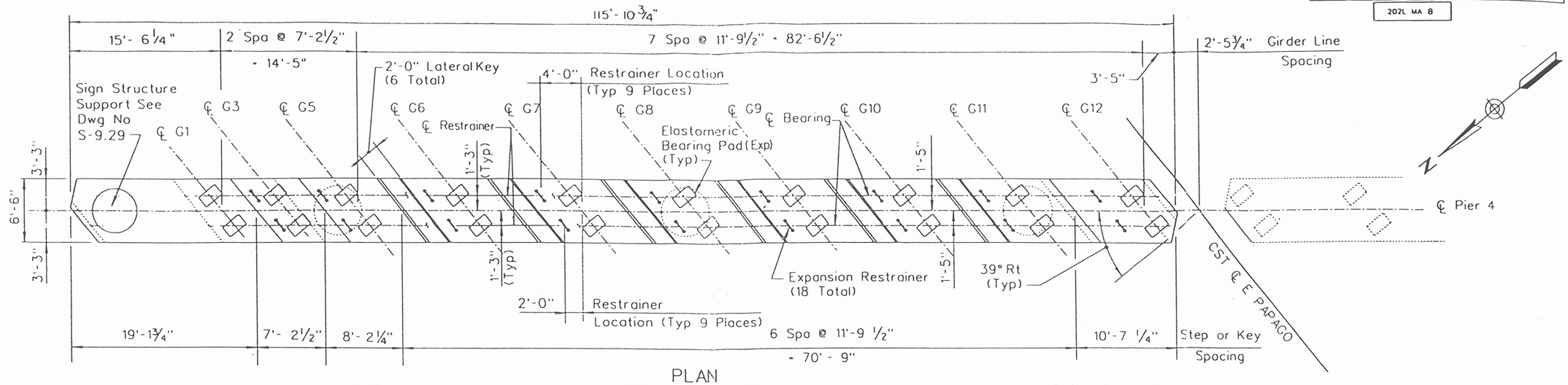
LOCATION: EAST PAPAGO FREEWAY

DWG NO S-9.26

TRACS NO. H 0861 04C

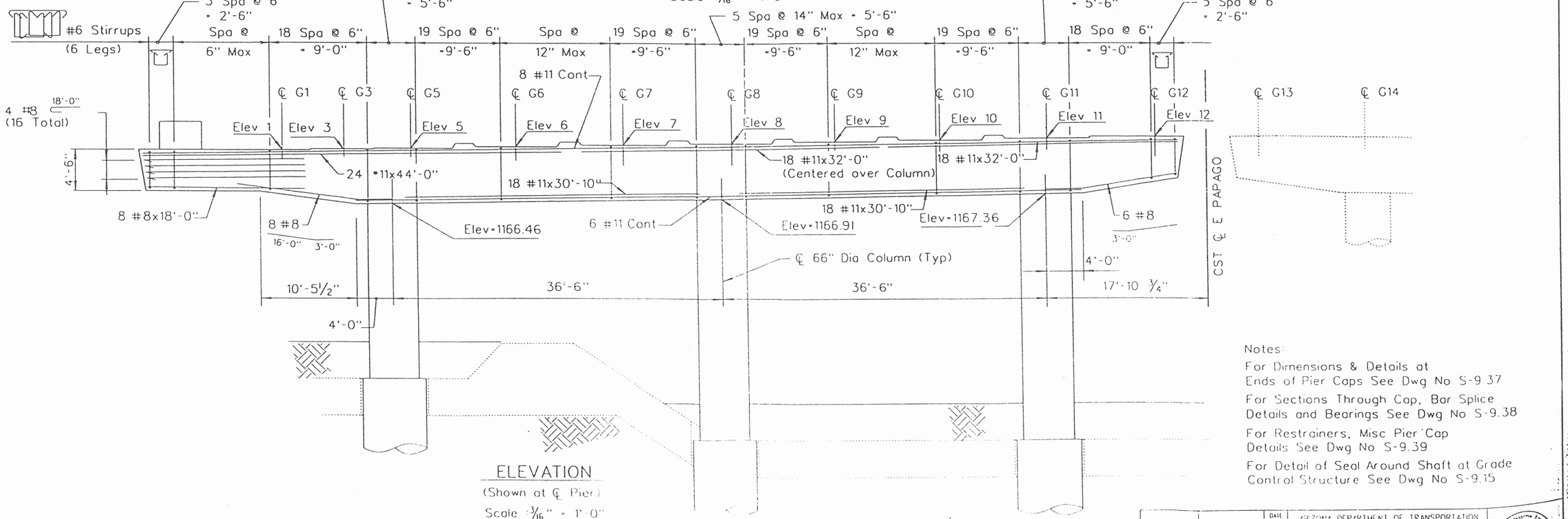
*****DGN=SPECIFICATION*****
*****SYSTIME*****
VIEW NAME:

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-S-517	101	184	
		202L MA 8			



PLAN

Scale 3/16" = 1'-0"



ELEVATION

(Shown at ℄ Pier)

Scale 3/16" = 1'-0"

ELEVATIONS

Elev 1	Elev 3	Elev 5	Elev 6	Elev 7	Elev 8	Elev 9	Elev 10	Elev 11	Elev 12
1172.90	1172.99	1173.07	1173.22	1173.37	1173.51	1173.66	1173.80	1173.95	1174.10

Notes:

For Dimensions & Details at Ends of Pier Caps See Dwg No S-9.37

For Sections Through Cap, Bar Splice Details and Bearings See Dwg No S-9.38

For Restrainers, Misc Pier Cap Details See Dwg No S-9.39

For Detail of Seal Around Shaft at Grade Control Structure See Dwg No S-9.15

		DATE
DESIGN	K. FREEMAN	8/90
DRAWN	G. SCHUMACHER	8/90
CHECKED	R. COX	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER 4 WESTBOUND
PLAN AND ELEVATION

LOOP 202 | 7.78 MILEPOST | 2265 STRUCTURE NO

LOCATION: EAST PAPAGO FREEWAY

DWG NO S-9.28

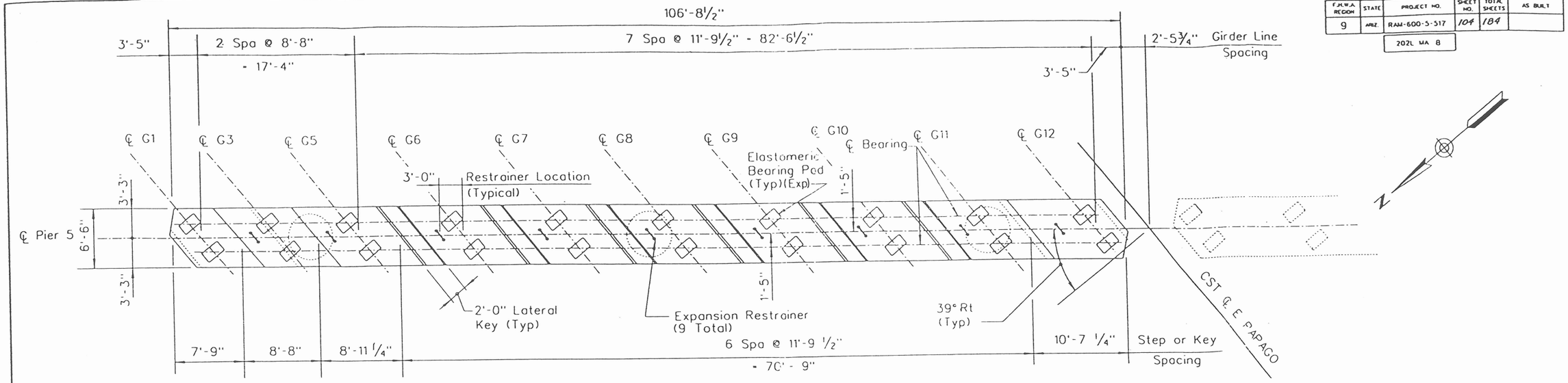
TRACS NO. H 0861 04C

_____ OF _____

DATE	WORK BY	DESCRIPTION OF REVISIONS

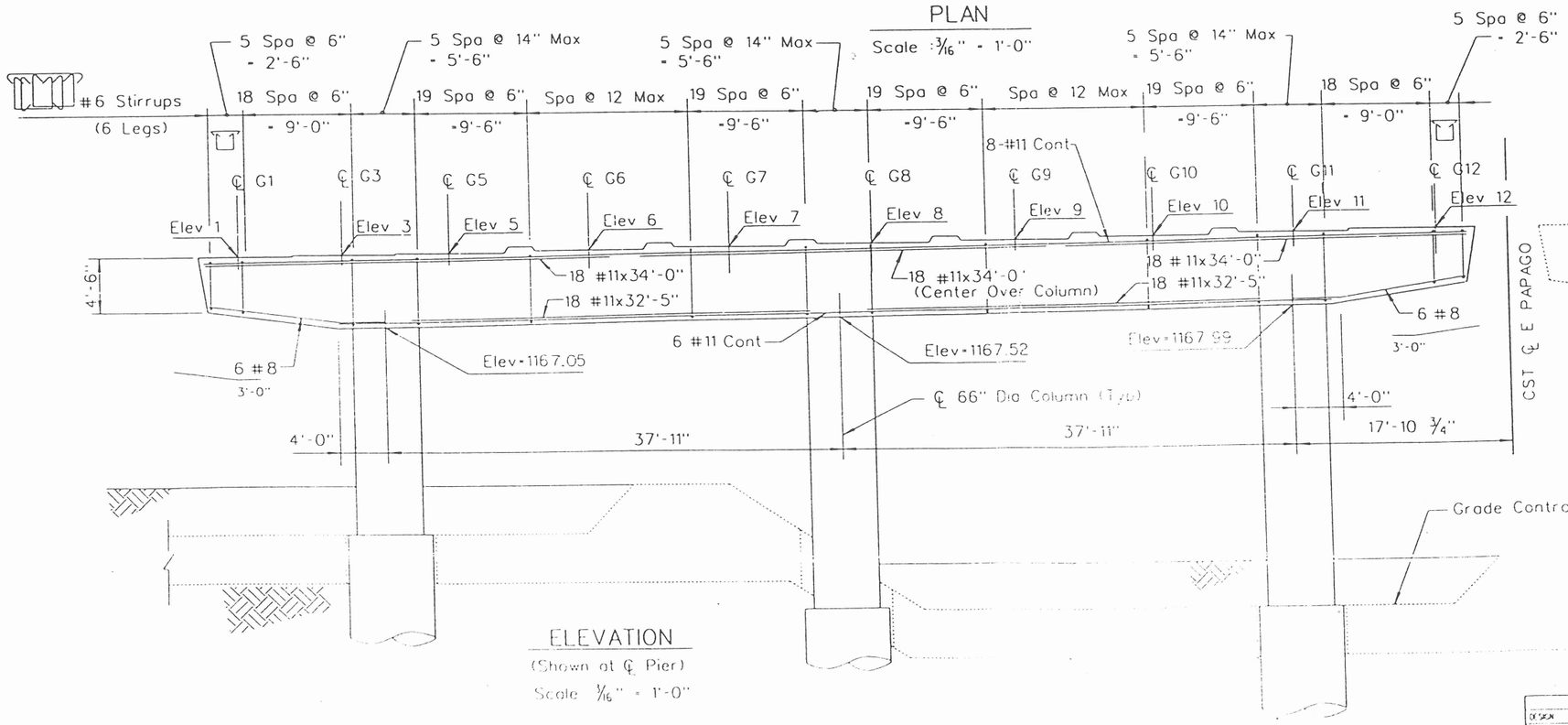
-----DGN=SPECIFICATION-----
-----SYSTIME-----
VIEW NAME=

FHWA REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-S-517	104	184	
		202L MA 8			



PLAN

Scale 3/16" = 1'-0"



ELEVATION

(Shown at ℄ Pier)

Scale 1/16" = 1'-0"

ELEVATIONS

Elev 1	Elev 3	Elev 5	Elev 6	Elev 7	Elev 8	Elev 9	Elev 10	Elev 11	Elev 12
1173.49	1173.59	1173.70	1173.85	1173.99	1174.14	1174.28	1174.43	1174.58	1174.72

Notes:

For Dimensions & Details at Ends of Pier Caps See Dwg No S-9.37

For Sections Through Cap, Bar Splice Details and Bearings See Dwg No S-9.38

For Restrainers, Misc. Pier Cap Details See Dwg No S-9.39

For Detail of Seal Around Shaft at Grade Control Structure See Dwg No S-9.15

DESIGN	T.J. FREEMAN	DATE 8/2010
DRAWN	J.J. SCHUMACHER	DATE 8/2010
CHECKED	R. COX	DATE 8/2010
ALPHA ENGINEERS INC.		

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER 5 WESTBOUND
PLAN AND ELEVATION

LOOP 202	7.28	2265
ROUTE	SECTION	STRUCTURE NO.

LOCATION: EAST PAPAGO FREEWAY

DWG NO S 9.31

TRACS NO H 0861 040

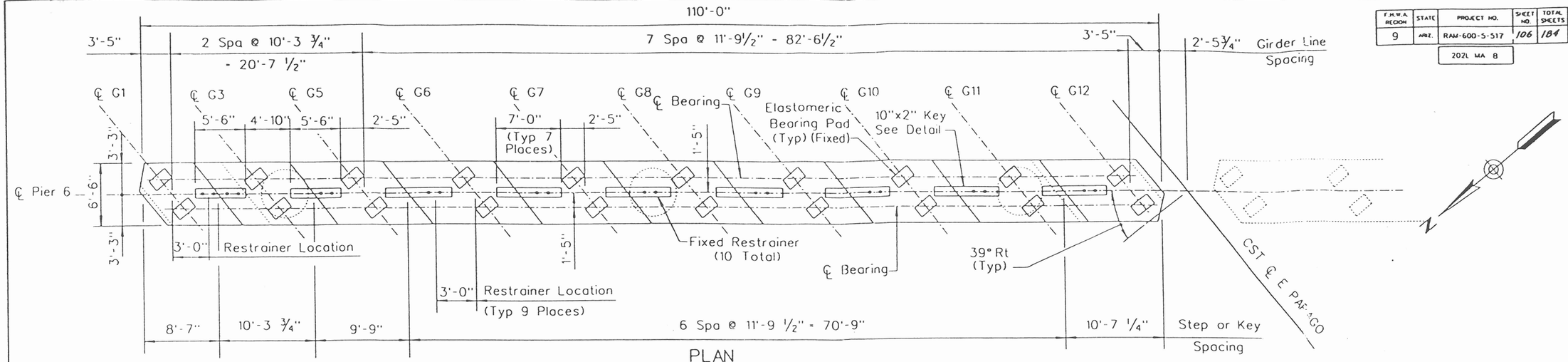
__ OF __

•••••DGN=SPECIFICATION•••••

•••••SYSTIME•••••

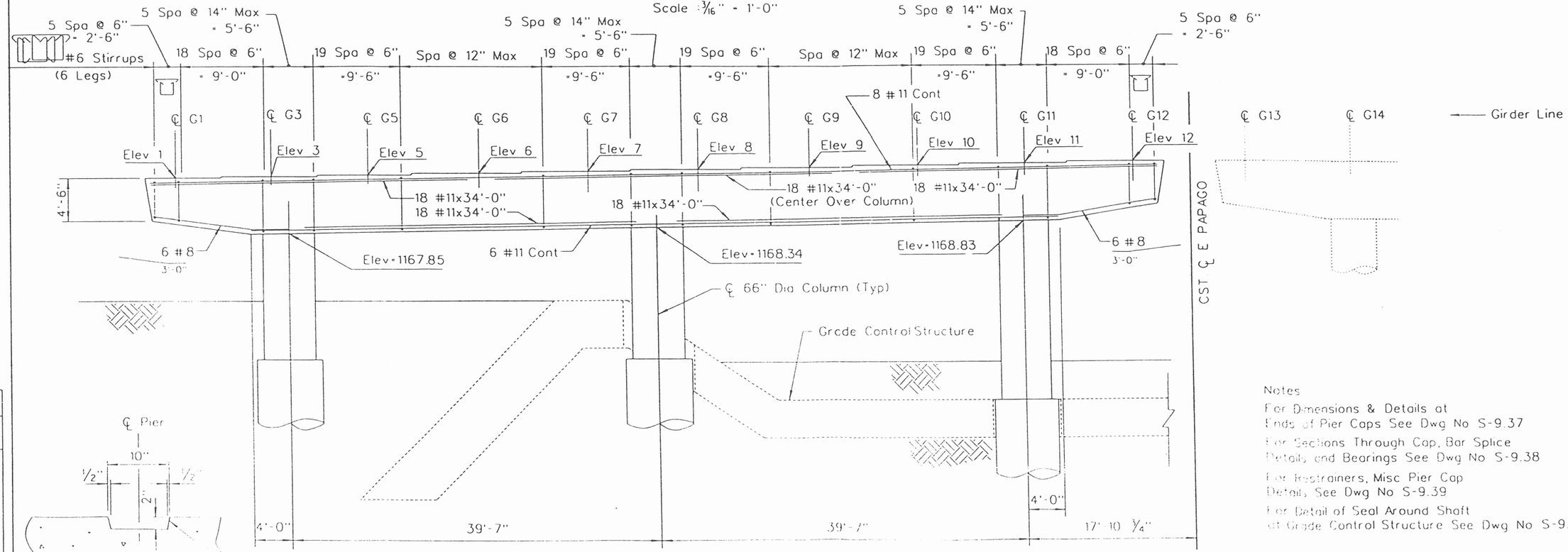
VIEW NAME:

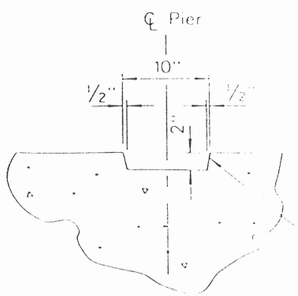
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-5-517	106	184	
		202L MA 8			



PLAN

Scale 3/16" = 1'-0"





KEY DETAIL

Not to Scale

Key Shall be Formed to Exact Lines Shown or Sides Shall be Sawcut and Key Chipped Out to 2" Depth.

ELEVATION

(Shown at ℄ Pier)

Scale 3/16" = 1'-0"

ELEVATIONS

Elev 1	Elev 3	Elev 5	Elev 6	Elev 7	Elev 8	Elev 9	Elev 10	Elev 11	Elev 12
1174.28	1174.41	1174.54	1174.68	1174.83	1174.97	1175.12	1175.27	1175.41	1175.56

Notes

For Dimensions & Details at Ends of Pier Caps See Dwg No S-9.37

For Sections Through Cap, Bar Splice Details and Bearings See Dwg No S-9.38

For Restrainers, Misc Pier Cap Details See Dwg No S-9.39

For Detail of Seal Around Shaft at Grade Control Structure See Dwg No S-9.15

			DATE
DESIGN	JLF	PROJECT ENGR.	8/90
DRAWN	JLF	SUPERVISOR	8/90
CHECKED	LJC	DIR. CONST.	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER 6 WESTBOUND
PLAN AND ELEVATION

LOOP	ROUTE	SECTION	STRUCTURE NO.
202		7 78	2265

LOCATION: EAST PAPAGO FREEWAY

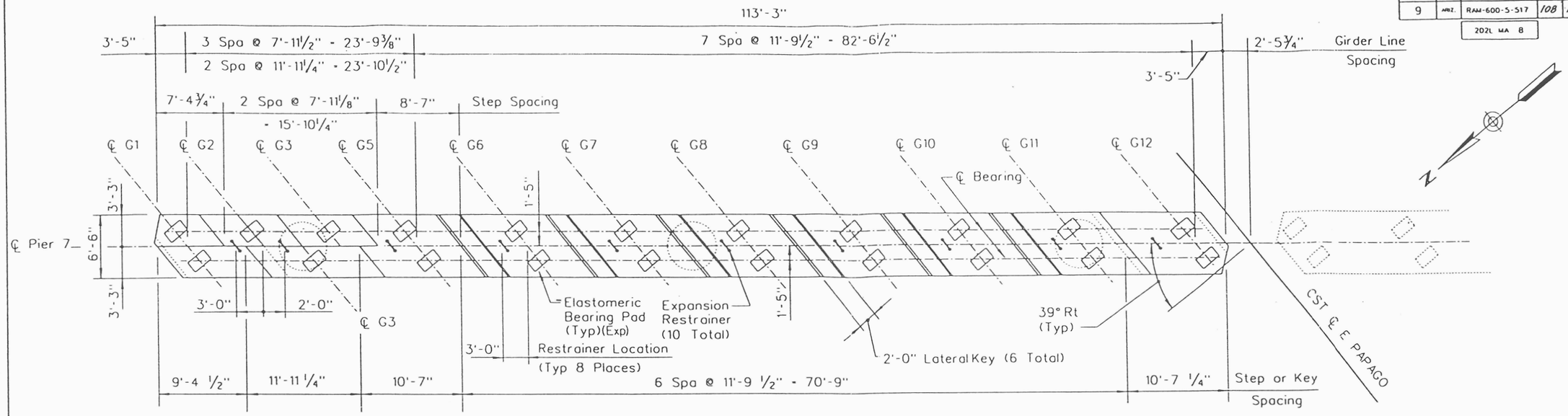
DWG NO S-9.33

TRACS NO 18 0861 04C

01

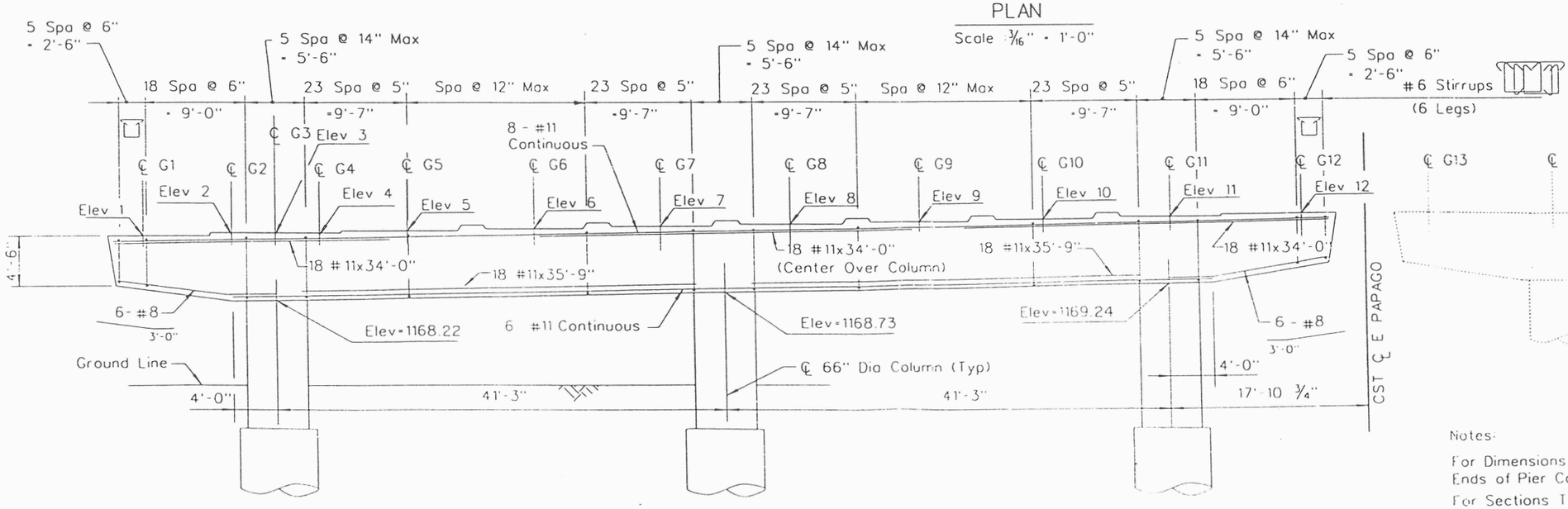
----DGN-SPECIFICATION-----
----SYSTIME-----
VIEW NAME:

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-S-517	108	184	
		202L MA 8			



PLAN

Scale 3/16" = 1'-0"



ELEVATION

(Shown at ℄ Pier)

Scale 3/16" = 1'-0"

ELEVATIONS											
Elev 1	Elev 2	Elev 3	Elev 4	Elev 5	Elev 6	Elev 7	Elev 8	Elev 9	Elev 10	Elev 11	Elev 12
1174.66	1174.76	1174.81	1174.85	1175.95	1175.10	1175.25	1175.39	1175.54	1175.68	1175.83	1175.98

Notes:

For Dimensions & Details at Ends of Pier Caps See Dwg No S-9.37

For Sections Through Cap, Bar Splice Details and Bearings See Dwg No S-9.38

For Restrainers, Misc Pier Cap Details See Dwg No S-9.39

		DATE
DESIGN KF	K. FREEMAN	8/90
DRAWN MJ	C. SCHUMACHER	8/90
CHECKED EC	R. COX	8/90

ALPHA ENGINEERS INC.

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER 7 WESTBOUND
PLAN AND ELEVATION

ROUTE	MILEPOST	STRUCTURE NO.	LOCATION
LOOP 202	7.78	2265	EAST PAPAGO FREEWAY

DWG NO S-9.35

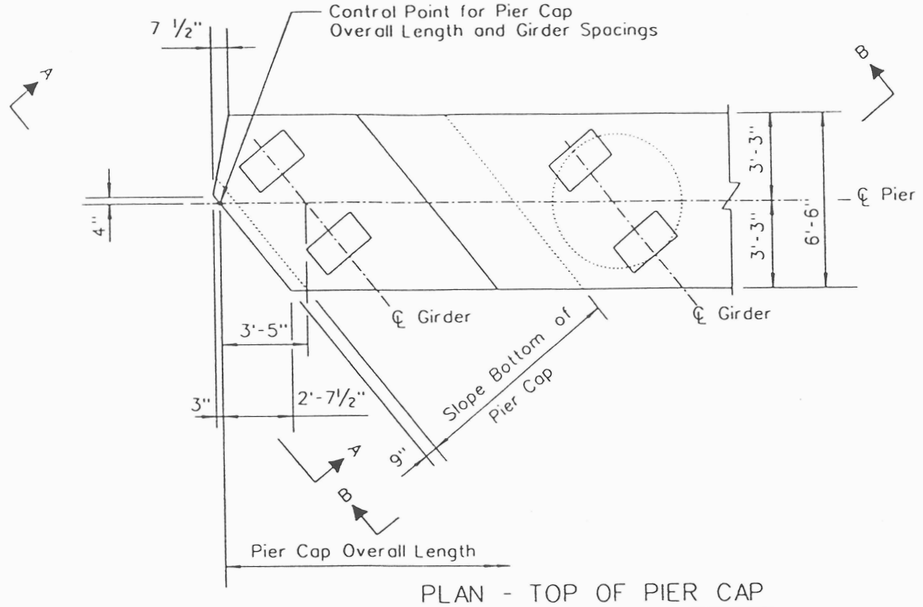
TRACS NO. H 0861 04C

OF

*****DGN=SPECIFICATION*****
*****SYSTIME*****
VIEW NAME:

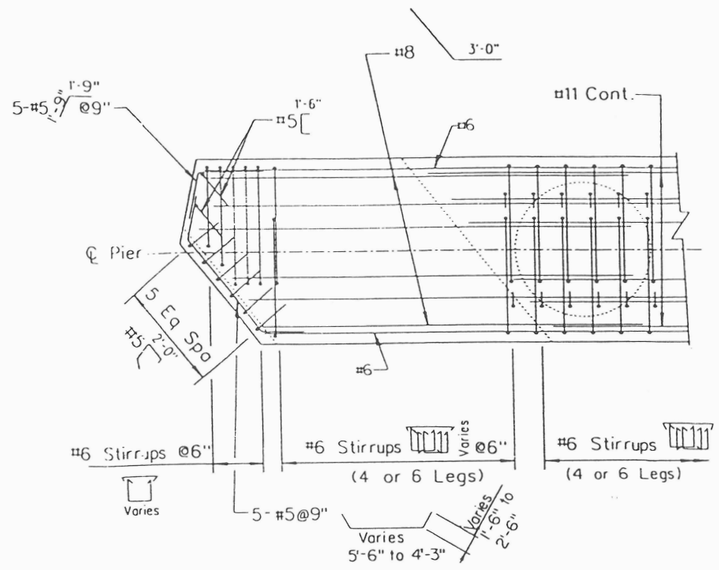
F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	RAM-600-5-517	110	184	

202L MA 8



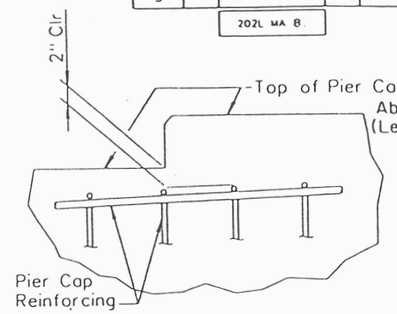
PLAN - TOP OF PIER CAP

Scale: 3/8" - 1'-0"



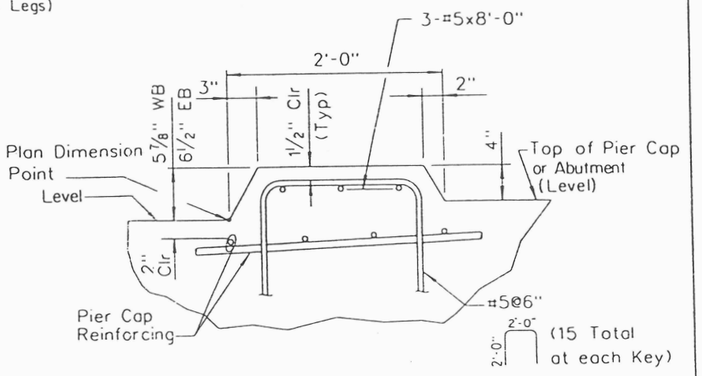
PLAN SECTION - TOP OF PIER CAP

Scale: 3/8" - 1'-0"



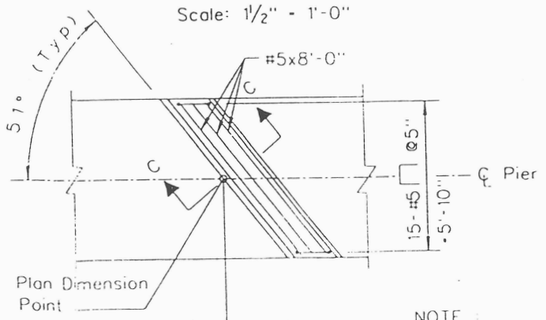
STEP DETAIL

N.T.S.



LATERAL KEY SECTION C - C

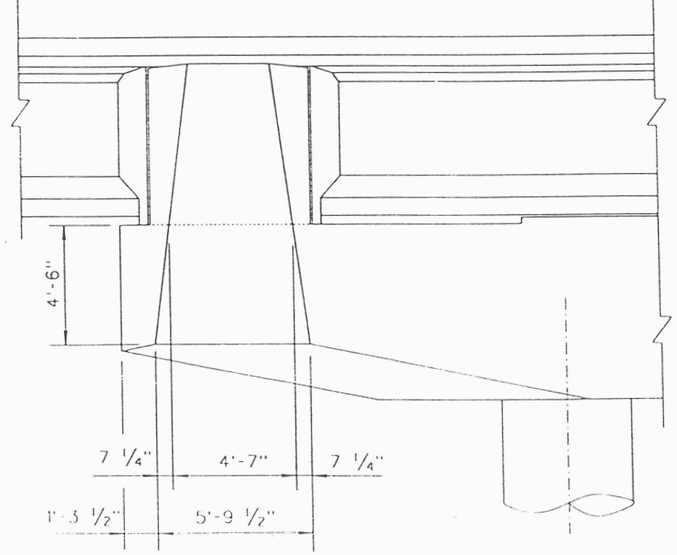
Scale: 1 1/2" - 1'-0"



NOTE
All Lateral Keys
are Parallel to
Cst ℄ E Papago

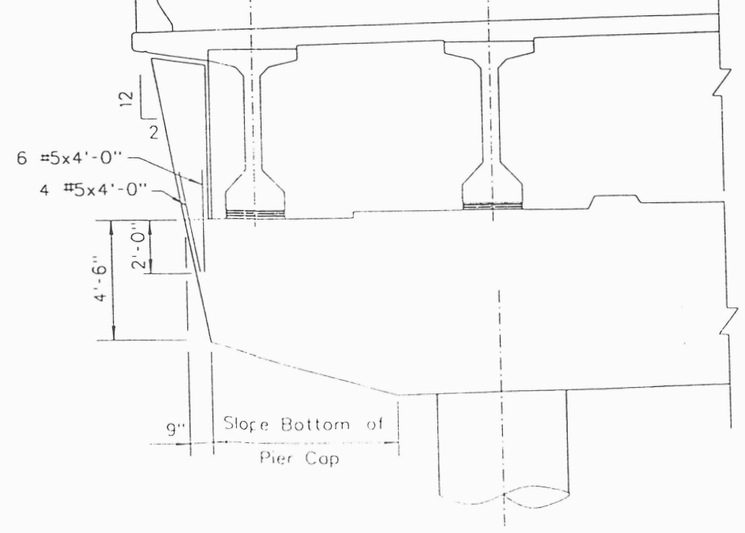
LATERAL KEY PLAN

Scale: 3/8" - 1'-0"



ELEVATION VIEW A - A

Scale: 3/8" - 1'-0"



ELEVATION VIEW B - B

Scale: 3/8" - 1'-0"

			DATE
DESIGN	K. FREEMAN		8/90
DRAWN	G. SCHUMACHER		8/90
CHECKED	H. COX		8/90
ALPHA ENGINEERS INC.			
LOOP 202	7.78	2265	
ROUTE	M.P. POST	STRUCTURE NO.	

ARIZONA DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION
STRUCTURES SECTION

INDIAN BEND WASH BRIDGE
PIER DETAILS

LOCATION: EAST PAPAGO FREEWAY

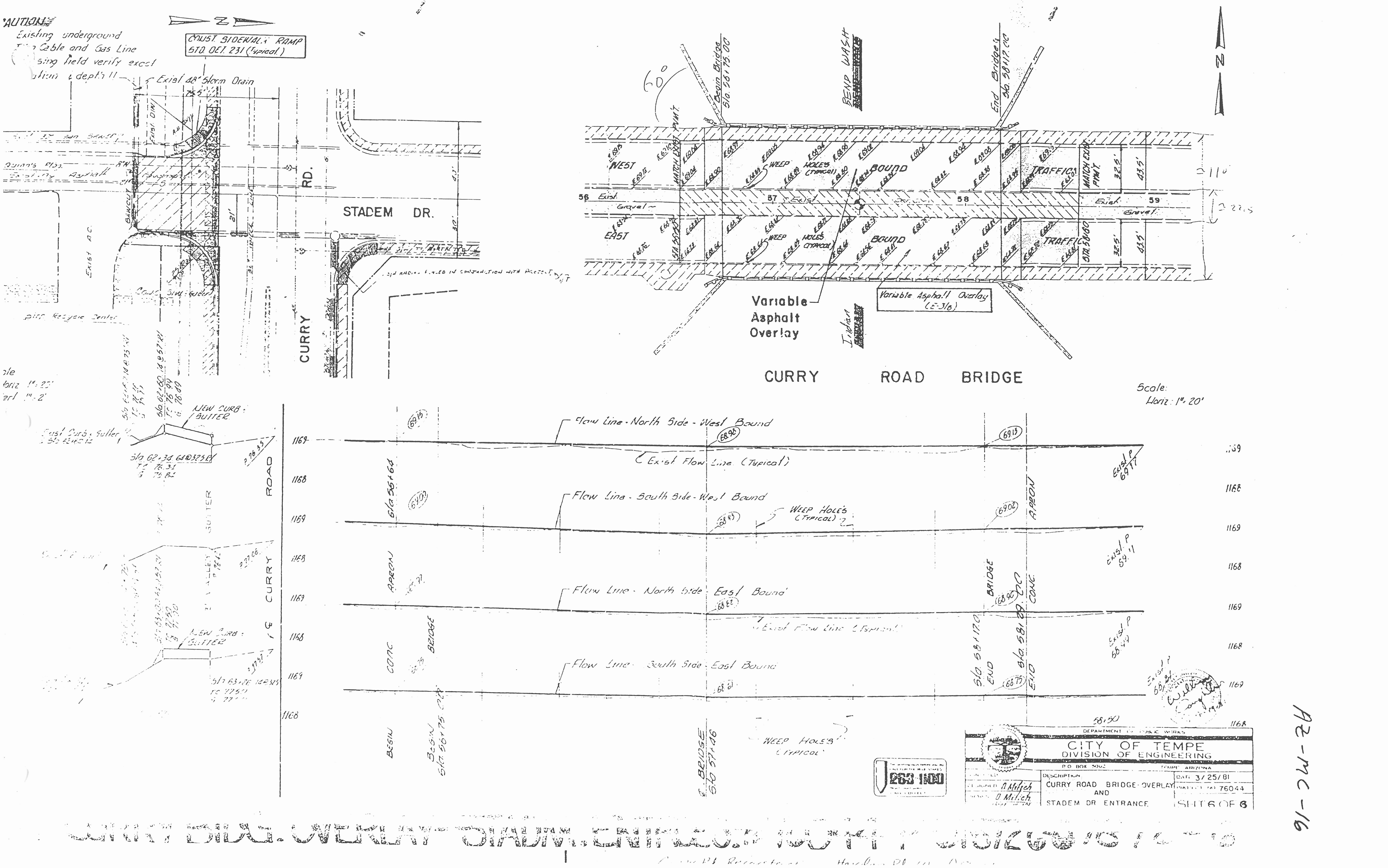
DWG NO S-9.37

TRACS NO. H 086104C

__ OF __

-----DGN=SPECIFICATION-----
-----SYSTIME-----

VIEW NAME:



CAUTION
Existing underground
Cable and Gas Line
field verify excel
depth
CONST. SIDEWALK RAMP
STD. DET. 231 (Typical)
Exist 48" Storm Drain
STADEM DR.
CURRY RD.
60°
Drain Bridge Sta. 56+75.00
BEND WASH
End Bridge Sta. 58+17.00
MATCH EXIST PVMT.
WEST
EAST
WEEP HOLES (TYPICAL)
BOUND
TRAFFIC
Exist Gravel
Variable Asphalt Overlay
Variable Asphalt Overlay (E-3/8)
CURRY ROAD BRIDGE
Scale:
Horiz: 1" = 20'
NEW CURB & GUTTER
Flow Line - North Side - West Bound
Exist Flow Line (Typical)
Flow Line - South Side - West Bound
WEEP HOLES (TYPICAL)
Flow Line - North Side - East Bound
Flow Line - South Side - East Bound
CURRY ROAD
APRON
CONC
BRIDGE
BEGIN BRIDGE Sta. 56+75.00
BRIDGE Sta. 57+16
END BRIDGE Sta. 58+17.00
WEEP HOLES (TYPICAL)
DEPARTMENT OF PUBLIC WORKS
CITY OF TEMPE
DIVISION OF ENGINEERING
P.O. BOX 5002 TEMPE, ARIZONA
CURRY ROAD BRIDGE OVERLAY AND STADEM DR ENTRANCE
DATE 3/25/81
76044
SHT 6 OF 6
263 1100
AZ-MC-16

AZ-MC-16

N

CITY OF SCOTTSDALE PROPERTY
LAND PARCELS 1 TO 7B

CITY OF SCOTTSDALE
MAINTENANCE YARD

1

MILLER ROAD

MILLER ROAD

7874 ST.

PRINCESS DRIVE

Point on R/W Line

Point on R/W Line

℄MC

℄MC

Scale: 1" = 200'

NOT AS-BUILT

I B W DYKE LOCATION AT PRINCESS DRIVE AND CITY OF SCOTTSDALE PROP

REVISIONS

DESIGNED BY | DRAWN BY | CHECKED BY

JOHANNESSEN & GIRAND
CONSULTING ENGINEERS, INC.
6611 NORTH BLACK CANYON HIGHWAY
PHOENIX ARIZONA

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
McKELLIPS ROAD BRIDGE OVER INDIAN BEND WASH

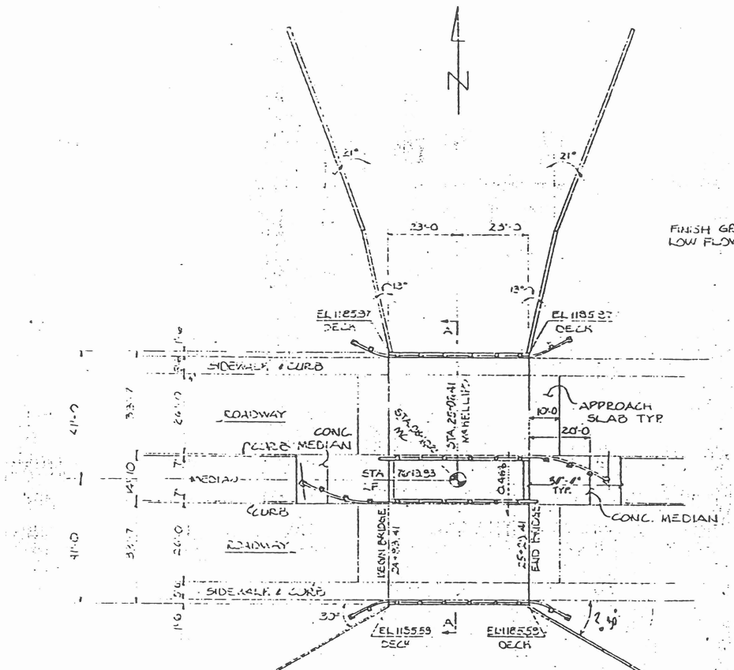
FCD 73-10

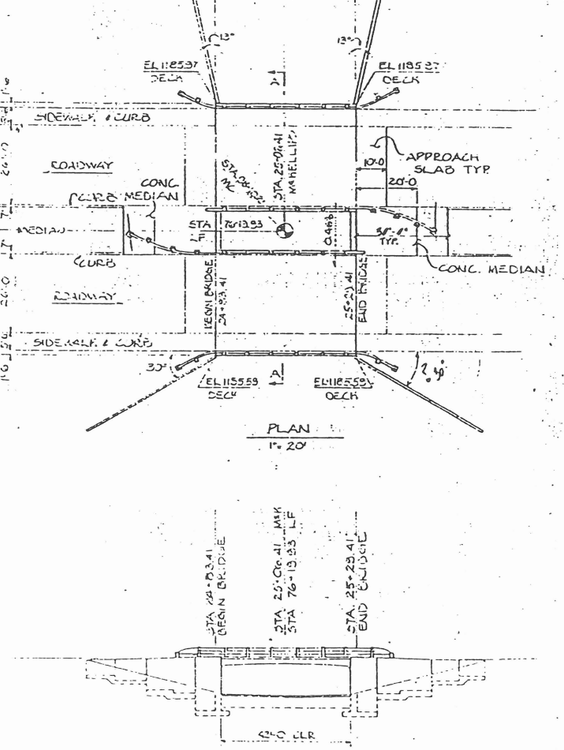
RETAINING WALL ELEVATIONS

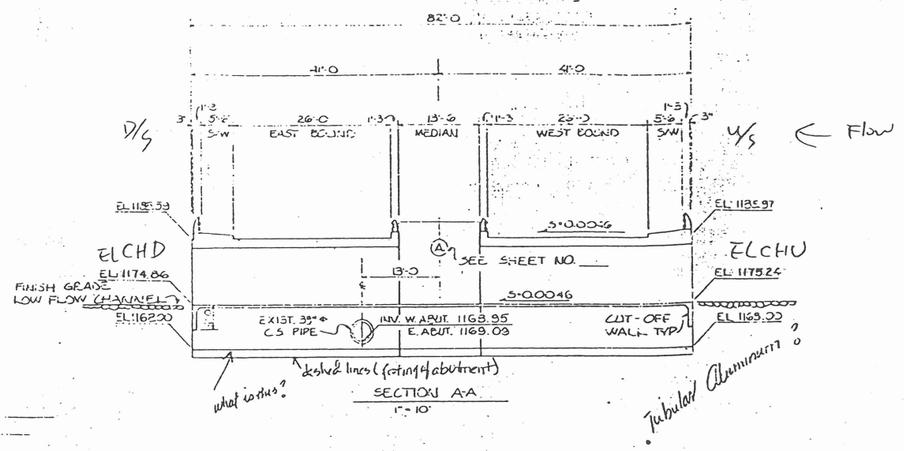
DATE

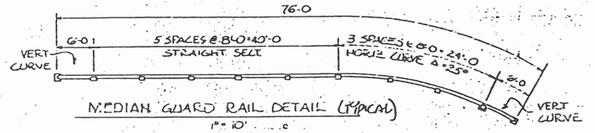
JOB NO.

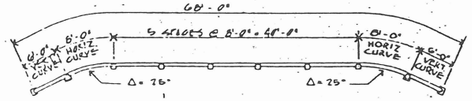
SHEET 8 OF 7











SIDEWALK, CURB, GUARD RAIL DETAIL (TYPICAL)

REVISIONS

DESIGNED BY	DRAWN BY	CHECKED BY

JOHANNESSEN & GIRAND
CONSULTING ENGINEERS, INC.
6811 NORTH BLACK CANYON HIGHWAY
PHOENIX ARIZONA

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
McKELLIPS ROAD BRIDGE OVER INDIAN BEND WASH

F.C.D. 73-10
BRIDGE PLAN

DATE

JOB NO.

SHEET 2 OF 9

SYMMETRICAL ABT. CENTERLINE

ELLC = 1185.62 - 14⅛" = 1184.16

1185.62

APPROACH SLAB

¾" CHAMFER

APPROACH SLAB

SS = 0

¾" BITUMINOUS FILLER W/ ½" ELASTIC SEALANT TYP.

1175.14

WWF 6-6 - W2.9 x W2.9

1174.80

½" EXP. JT.

1175.14

ELASTIC SEALANT

6" NEOPRENE DUMBELL TYPE WATERSTOP CONT.

TYP. EXP. JT.
1" = 1'-0"

CUT OFF WALL BEYOND

1168.00

1168.00

BWC

42'-0 P. LEAK

EQUAL SPACES @ 1'-0 = 23'-0

EQUAL SPACES @ 2'-0 = 42'-0

VARIES MAX 17'-11¾
MIN 17'-7¼

SECTION B-B (@ ℄ & NORTH ½)
1" = 1'-0"

EQUAL SPACES @ 1'-0 = 10'-0

¾" BITUMINOUS FILLER W/ ½" ELASTIC SEALANT

½" ELASTIC SEALANT

1185.62

APPROACH SLAB SECTION
1" = 1'-0"

EQUAL SPACES @ 1'-0 = 10'-0

JOHANNESSEN & GIRARD
CONSULTING ENGINEERS, INC.
6611 NORTH BLACK CANYON HIGHWAY
PHOENIX ARIZONA

REVISIONS

DESIGNED BY

DRAWN BY

CHECKED BY

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
McKELLIPS ROAD BRIDGE OVER INDIAN BEND WASH
F.C.D. 73-10
LONGITUDINAL SECTION & DETAILS

DATE

JOB NO.

SHEET 6 OF 9

AZ-MC-16

JOHANNESSEN & GIRAND CONSULTING ENGINEERS INC. PHOENIX, ARIZONA	FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
SCALE: HORIZ. 1"= 50' VERT. 1"= 5'	McKELLIPS RD. BRIDGE OVER INDIAN BEND WASH
DES. DR. CK'D. DATE:	F.C.D. 73-10
	DETOUR AND TEMPORARY ROADWAY
	McKELLIPS ROAD STA. 22+75 TO STA. 28+35

LEGEND

- DETOUR RD. PAVEMENT
- TRANSITION RD. PAVEMENT
- CURB REMOVAL
- EXIST. PVMT TO BE REMOVED
- EXIST. PVMT TO REMAIN
- EXIST. CURB TO REMAIN
- EXIST. DRIV. ENTRANCE
- CONC. ROADWAY AT BRIDGE

N

CHANNEL E

TOP OF BERM 90.0

CONSTRUCT DITCH

CONSTRUCT BERM

CONSTRUCT 3000 SY TRANS. PAVEMENT

CHANNEL E 86.5'±

TOP OF BERM 89.0

TOP OF BANK

DIRT DITCH

EDGE AC PVMT.

TOP OF BERM 25.0 1187.25

DIRT DITCH

McKELLIPS ROAD

MILLER ROAD STA. 10+00

HAYDEN RD STA. 36+39.56

CONSTRUCT 300 SY OF TRANS PAVEMENT

REMOVE 1000 SY AC PAVEMENT

POWER POLE TO BE RELOCATED BY UTILITY CO.

CONSTRUCT 1500 SY DETOUR RD PAVEMENT

BEGIN DETOUR TEMP ROWY STA. 23+00

END DETOUR STA. 27+35

END TEMP ROWY STA. 27+20

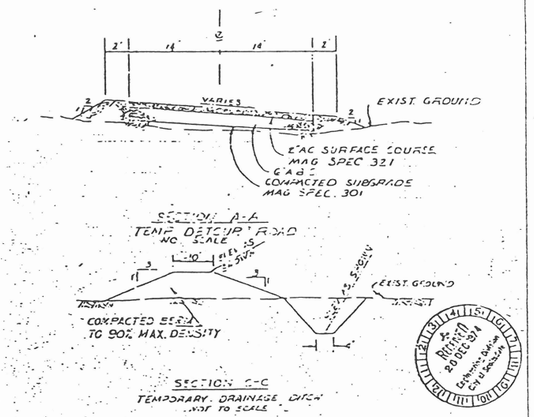
P=200' Δ=44°25'37" L=155.08

P=200' Δ=28°51'16" L=310.16

B.M. 1/2 REBAR 1' BELOW A.C. PVMT. McKELLIPS RD. & MILLER RD ELEV. 1189.72

B.M. X" IN HOWL PAINTED BLUE S. SIDE McKELLIPS RD. ELEV. 1187.26

B.M. SC W. PUNCH HLR IN K.H. McKELLIPS & HAYDEN RD. ELEV. 1182.07



SECTION A-A
TEMP. DETOUR ROAD
NO SCALE

SECTION C-C
TEMPORARY DRAINAGE DITCH
NOT TO SCALE

RECEIVED 20 DEC 1974 Contracts, Bonds & Construction

PLAN: SURVEYED; PLOTTED; DRAWN; CHECKED; DATE; SHEET; MAP BOOK; PG.

PROFILE: SURVEYED; PLOTTED; DRAWN; CHECKED; DATE; SHEET; MAP BOOK; PG.

TEMPORARY McKELLIPS RD. PROFILE

EXIST AC PVMT

EXIST GROUND

TEMPORARY DETOUR ROAD PROFILE

1190
1185
1190
1185

22 23 24 25 26 27 28 29

PLANET PLAN PROFILE P.B.B.
TELEPHONE PAPER CO. S.F. CAL.
#3 REORDER

JOB NO 1963 BA SHEET 1 OF

AZ-M-16

CITY OF SCOTTSDALE
ARIZONA

MCDOWELL ROAD BRIDGE

PROJECT B-73 12-C

1973

INDEX

SHEET	ITEM
1	FACE SHEET
2	DETOUR PLAN
3	DETOUR PROFILE
4 & 5	200' BRIDGE APPROACHES, PLAN & PROF.
6	" " " LOCATION PLAN
7	" " " FOUNDATION DATA
8	" " " ABUTMENT DATA
9	" " " PIER DETAILS
10 & 11	" " " DECK DETAILS
12 & 13	150' BRIDGE APPROACHES, PLAN & PROF.
14	" " " LOCATION PLAN
15	" " " FOUNDATION DATA
16	" " " ABUTMENT DATA
17	" " " PIER DETAILS
18 & 19	" " " DECK DETAILS
20	" " " HANDRAIL STANDARDS

CITY COUNCIL

B.L. TIMS, OD	MAYOR
RICHARD CAMPANA	WILLIAM C. JENKINS
HERB R. DRINKWATER	HEINZ R. HINK, Ph. D.
MRS. BILLIE GENTRY	PAUL MESSINGER
DALE C. CARTER	CITY MANAGER
FERN ANDERSON NELL	CITY CLERK
MARC G. STRAGIER	PUBLIC WORKS DIRECTOR
DAN RABY	CITY ENGINEER

APPROVALS

CITY ENGINEER	6-19-73 DATE
PUBLIC WORKS DIRECTOR	6-19-73 DATE
MAYOR	6-20-73 DATE
CITY CLERK	6-21-73 DATE
MARICOPA CO. FLOOD CONTROL DISTRICT	DATE

HOFFMAN-MILLER (BRIDGE)
ENGINEERS INC.
PHOENIX, ARIZONA

AS BUILT
21 MAY 74

BROOKS & KELLY (APPROACHES)
CONSULTING ENGINEERS
PHOENIX, ARIZONA

Registered Professional Engineer — Certificate No. 5857 — Lloyd Kennedy — Arizona, U.S.A.

5857

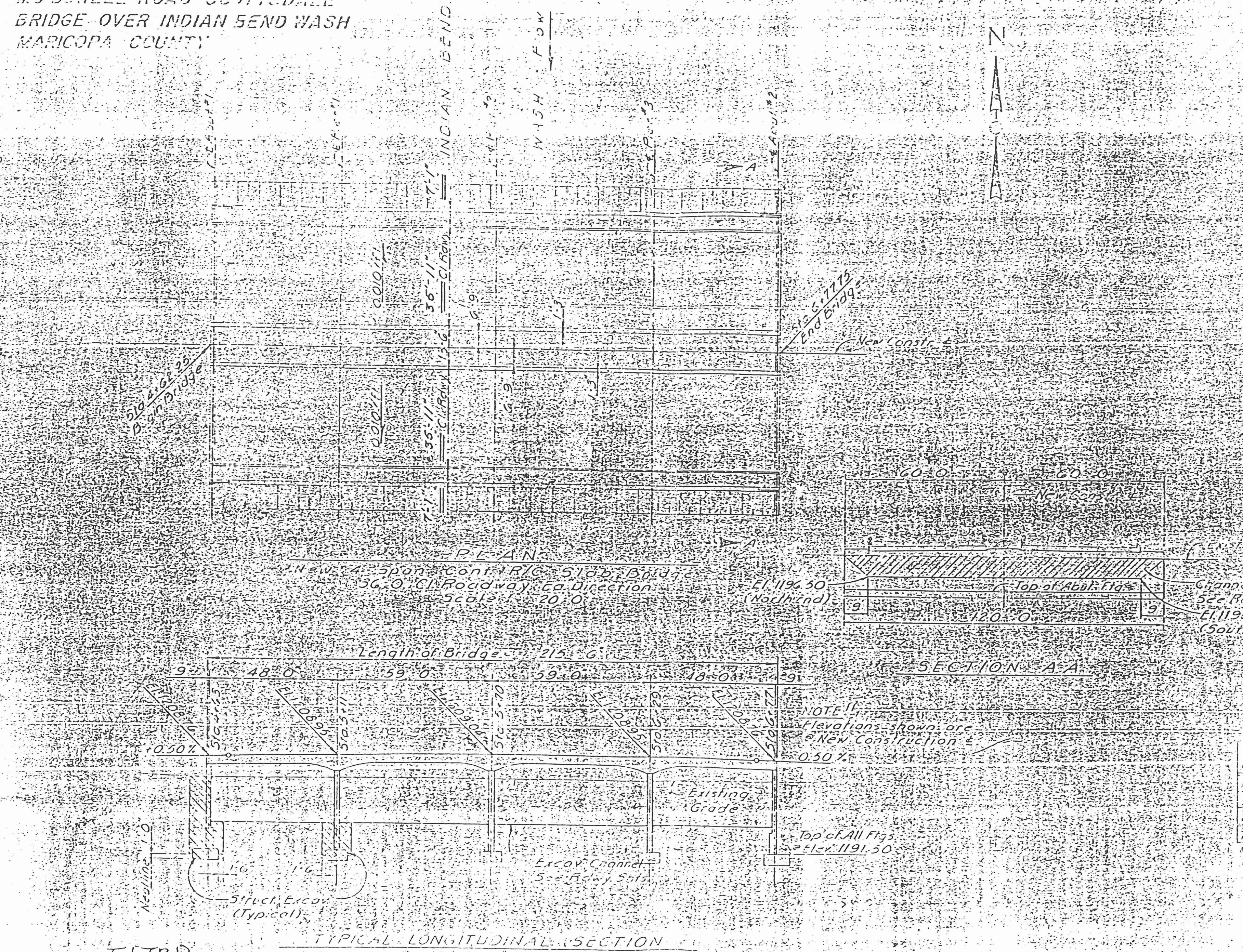
△ Revision to detour loc. (sheets 2 & 3), 1 Water & Gas line loc. (sheet 13), July 73

Sheet 1 of 20 sheets

720

P-018-1

MC DOWELL ROAD SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



GENERAL NOTES

APPROXIMATE QUANTITIES

Item	Struct. Excav. (CY)	Spcl. Bkfl. (CY)	Concrete (CY) Class A	Concrete (CY) Class S	Reinf. Steel (Lbs)	Std. 421 Hndrl. (Lf)
Deck*				1331.58	325,360	829.33
Piers	310	410		119.87	23,570	
2 Abuts.	1380	1000	422.18		31,690	
Totals	1690	1410	422.18	1451.45	386,120	829.33

*Includes Diaphs & Curbs

ELTRD

BW = 48 * 2 + 59 * 2 = 214'

½ SPAN ONLY

5862

AS BUILT PLANS, FEB. 1974

CITY OF SCOTTSDALE

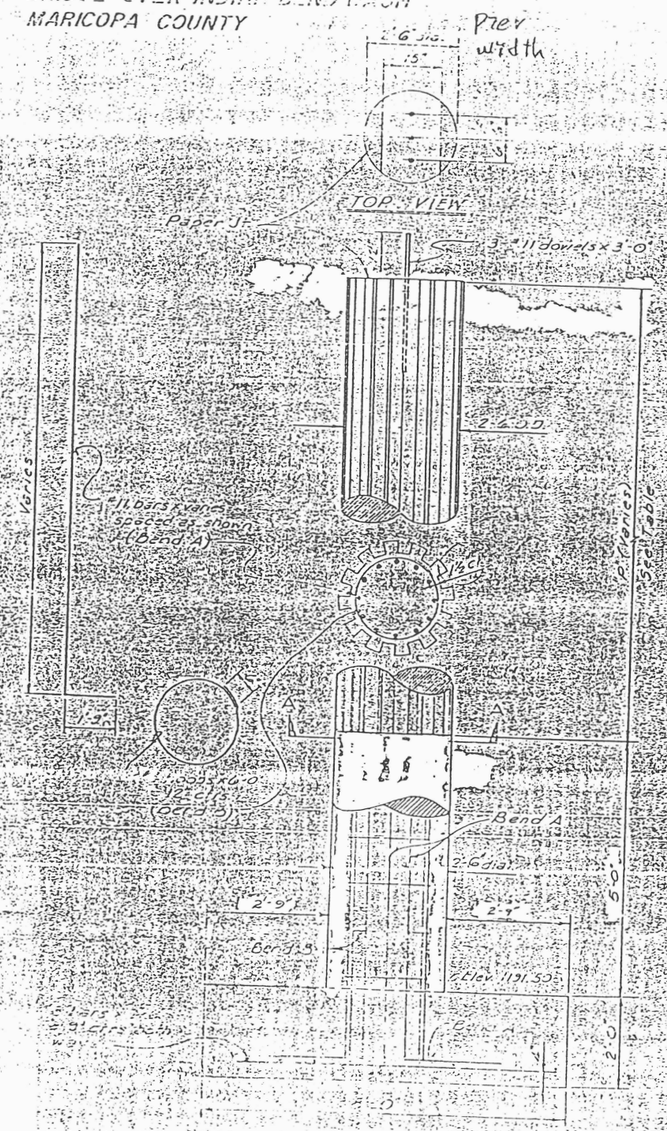
SCALE Noted	LOCATION PLAN	DRAWN BY ORD
DATE June, 73		REVISED

STA. 5± McDOWELL ROAD
BRIDGE OVER INDIAN BEND WASH

HOFFMAN-MILLER ENGINEERS INC.
PHOENIX ARIZONA
DRAWING NUMBER 6 of 14

P-018-6

MC DOWELL ROAD SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



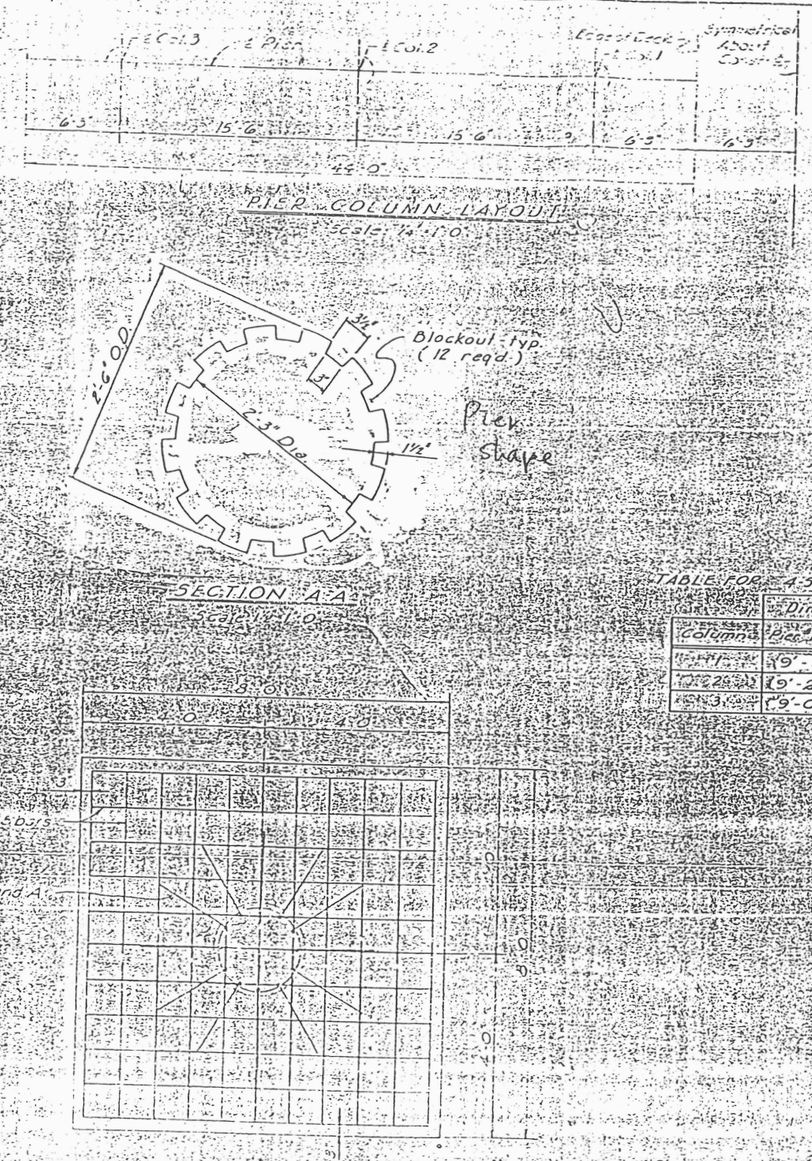


TABLE FOR 4-SPAN STRUCTURE

	Dimension D
Column	Pier 1 & 3 / Pier 2
#1	9'-3⅝" / 9'-4⅛"
#2	9'-2" / 9'-3⅛"
#3	9'-0⅝" / 9'-1⅛"

AS BUILT PLAN FEB 1974
All Pier Concrete Class S

CITY OF SCOTTSDALE

Scale: Noted	PIER DETAILS	Sheet No. 5
Date: Jun. '73		

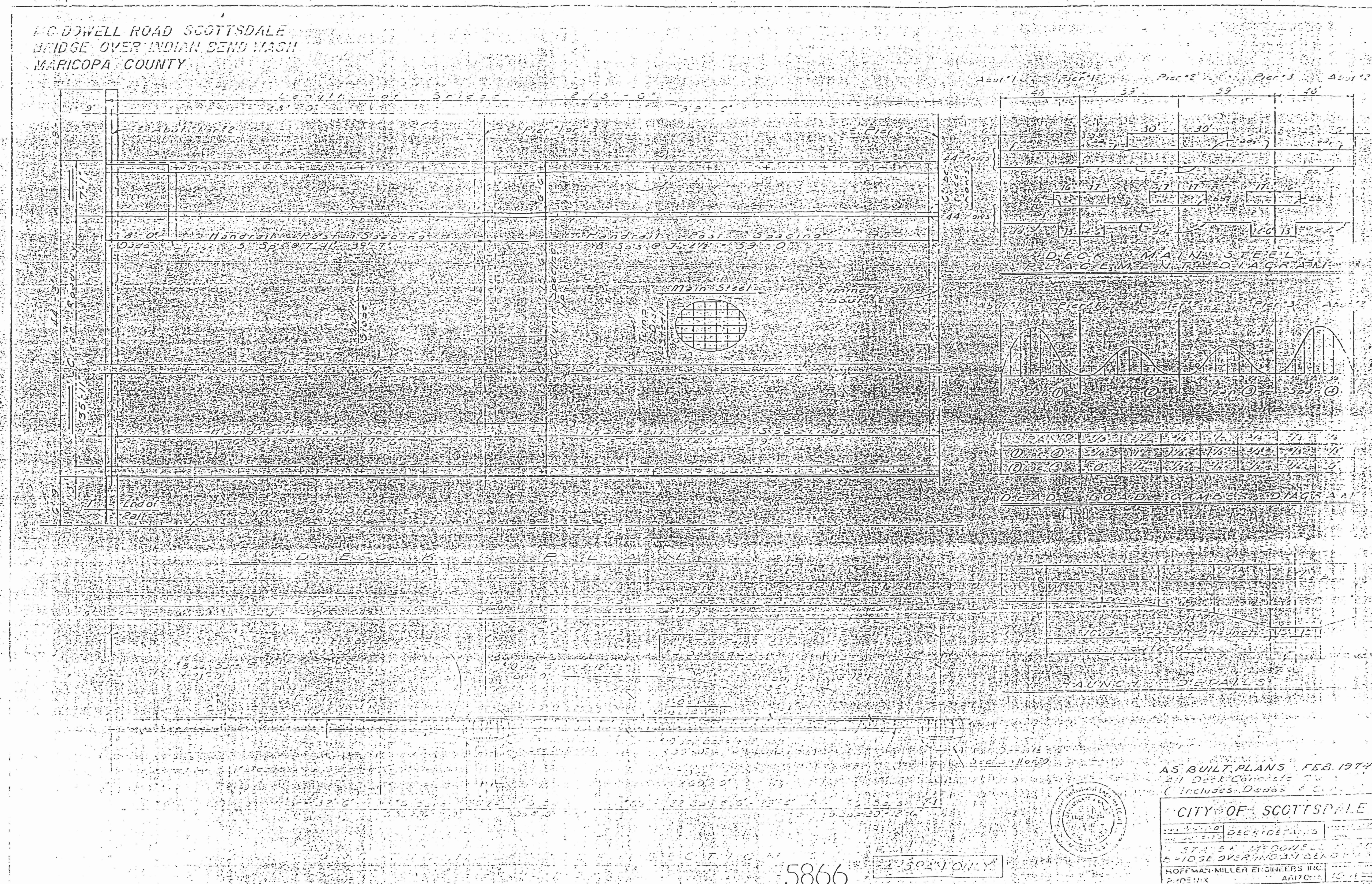
STA. 5+ McDOWELL ROAD
BRIDGE OVER INDIAN BEND WASH

HOFFMAN-MILLER ENGINEERS, INC.
PHOENIX ARIZONA

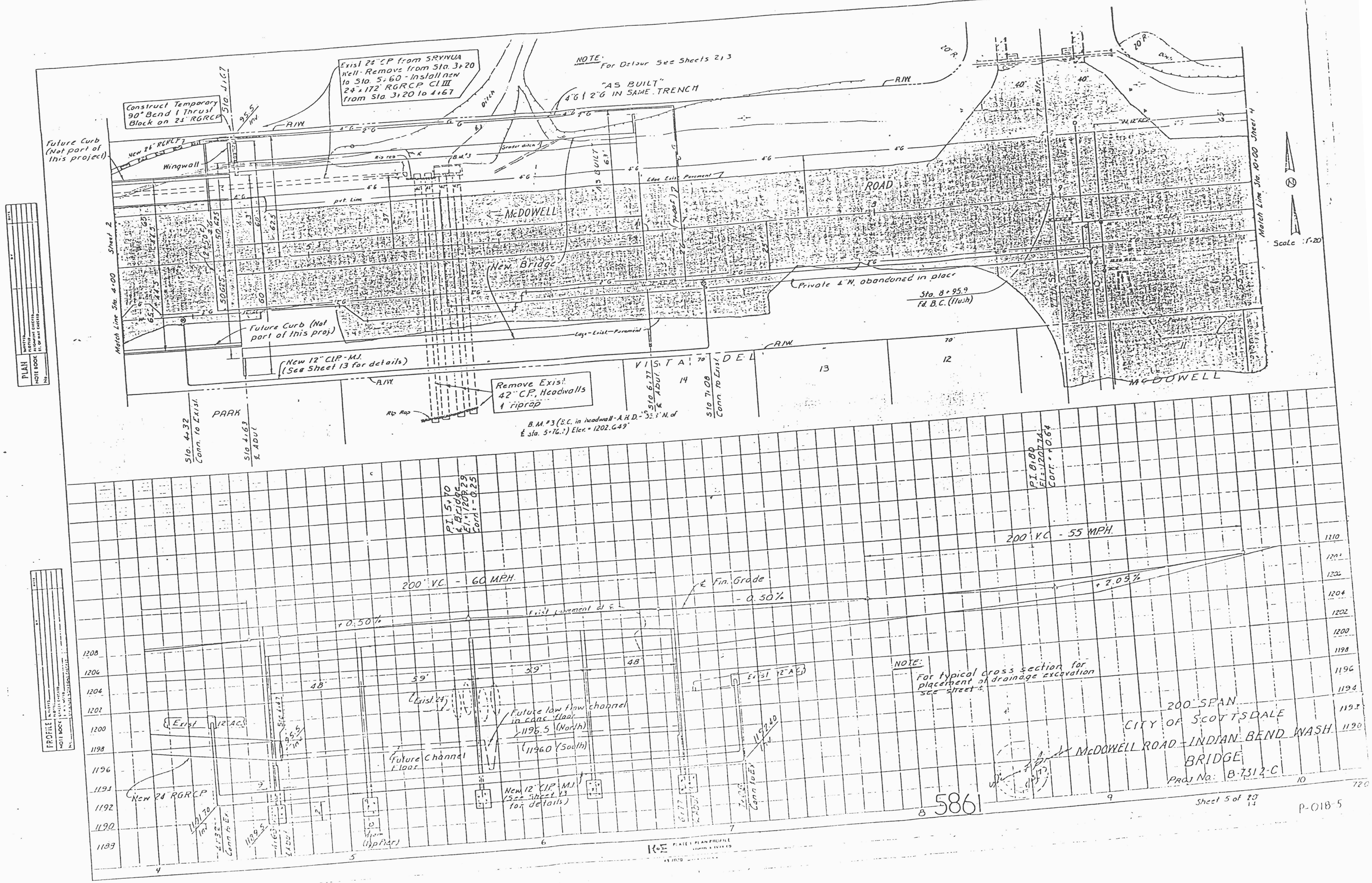
5865

4-SPAN ONLY

P-018-9


McDOWELL ROAD SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY
Handrail Post Spacing
Main Steel
DECK MAIN STEEL PLACEMENT DIAGRAM
DEAD LOAD CAMBER DIAGRAM
HAUNCH DETAILS
AS BUILT PLANS FEB. 1974
CITY OF SCOTTSDALE
HOFFMAN-MILLER ENGINEERS INC.
5866

P-018-10


NOTE: For Detour See Sheets 2 & 3
Exist 24" CP from SRVWUA Well - Remove from Sta. 3+20 to Sta. 5+60 - Install new 24" x 172' RGRCP Cl III from Sta 3+20 to 4+67
Construct Temporary 90° Bend & Thrust Block on 24" RGRCP
"AS BUILT" 4"G & 2"G IN SAME TRENCH
Future Curb (Not part of this project)
Wingwall
McDOWELL
ROAD
New Bridge
Private 4"W, abandoned in place
Sta. 8+95.9 Fd. B.C. (flush)
Future Curb (Not part of this proj)
New 12" CIP-MJ (See Sheet 13 for details)
Remove Exist 42" CP, Headwalls & riprap
B.M. #3 (S.C. in headwall - A.H.D. - 33' N. of ℄ sta. 5+76±) Elev. = 1202.649
VISTA DEL
PARK
McDOWELL
Match Line Sta. 4+00 Sheet 2
Match Line Sta. 10+00 Sheet 4
Scale 1"=20'
P.I. 5+70 ℄ Bridge El. = 1209.29 Corr. = -0.25
P.I. 8+80 El. = 1207.74 Corr. = +0.64
200' V.C. - 60 MPH.
200' V.C. - 55 MPH.
+0.50%
-0.50%
+2.05%
℄ Fin. Grade
Exist pavement at ℄
NOTE: For typical cross section for placement of drainage excavation see sheet 4.
Future low flow channel in conc. floor 1196.5 (North) 1196.0 (South)
Future Channel Floor
New 24" RGRCP
New 12" CIP-MJ (See Sheet 13 for details)
200' SPAN
CITY OF SCOTTSDALE
McDOWELL ROAD - INDIAN BEND WASH BRIDGE
Proj No: B-7312-C
Sheet 5 of 20
5861

P-018-5

AE-190-16

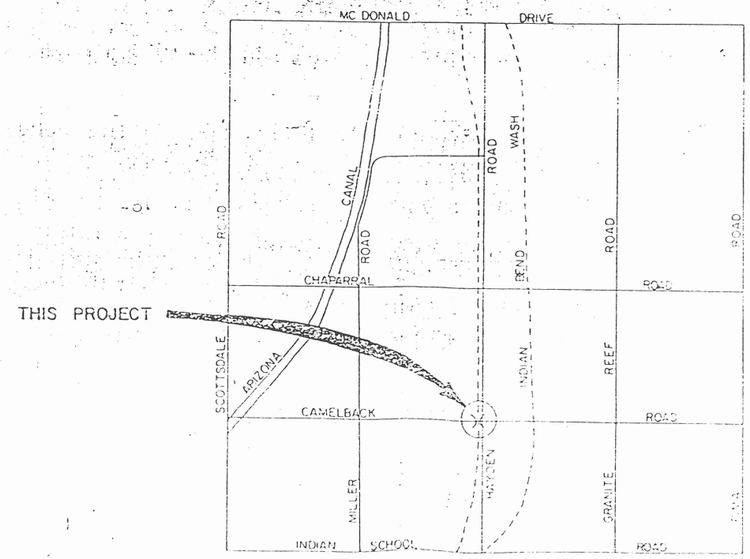
CAPITAL IMPROVEMENTS ENGINEERING

PROJECT NO.

B-7706

INDIAN BEND WASH LOW-FLOW CHANNEL BRIDGE

CAMELBACK ROAD



VICINITY MAP

NO SCALE

COUNCIL

WILLIAM C. JENKINS (Mayor)

RICHARD CAMPANA

BILLIE GENTRY

HERB DRINKWATER

HEINZ HINK, Ph.D.

JEFF SCHUBERT

CHARLIE SMITH

CITY MANAGER - F. D. AL.....

CITY ATTORNEY - RICHARD FILLER

CITY CLERK - FERN A. NELL

SHEET INDEX

1. COVER SHEET
2. TYPICAL ROADWAY SECTIONS
3. CAMELBACK ROAD
4. CAMELBACK ROAD
5. CAMELBACK DETOUR ROAD
6. LOCATION PLAN & PROFILE
7. DECK DETAILS - PRECAST
8. PRECAST SLAB DETAILS
9. DECK DETAILS - CAST IN PLACE OMITTED, NOT CONST.
10. ABUTMENT DETAILS
11. PIER DETAILS
12. WING WALL DETAILS
13. MISCELLANEOUS DETAILS
14. LIGHTING PLAN & DETAILS
15. GRADING PLAN
16. GRADING DETAILS
17. SIDE DRAINS
18. TRAFFIC SIGNALIZATION PLAN - CAMELBACK DETOUR
19. TRAFFIC SIGNALIZATION PLAN - TEMPORARY INTERSECTION
20. STRIPING PLANS - CAMELBACK DETOUR
21. STRIPING PLANS - CAMELBACK ROAD
22. CATCH BASIN DETAILS
23. CAMELBACK ROAD - FOUNDATION DATA

NOT AS-BUILT

RAY WILLIAMSON
TRAFFIC ENGINEERING MANAGER

ASST. DEPARTMENT HEAD
FOR FIELD OPERATIONS

GEORGE IANNELLA
ENGINEERING SERVICES DIRECTOR

16373

REVISION 5-18-78
SHEET NO 1 & 22
REVISION 6-6-78 SHT. 17

B-7706

TEMPE, ARIZONA

N

MATCH LINE STA. 6+00 SHEET 3

Lt. Sta. 6+00 to 8+27.50 Constr. ℄
227.50 L.F. New Conc. Curb, Gutter, & Sidewalk

See Sheet 15 For Grading in This Area

Service Pedestal For Bridge Lighting

Drain Easement Line

Replant in Kind After Grading

Remove Tree

Remove Bushes

Grade Side Slopes Level With Roadway Grade To End of Guard Rail.

Install 125 L.F. Type "A" Guard Rail Per A.D.O.T. Std. C-10.01 or C-10.03. Use Wing Wall Connection Shown in C-10.01

Constr. 15'±x 6" Thick A.C. (C-3.4) Strip to place Vert. Curb on.

Catch Basin

Conc. Wall by Others

Sprinkler

Exist. R/W

Remove Sprinkler

Abandoned 8" Ø

Remove As Needed For Construction

CAMELBACK

Monument Line ℄ Construction ℄

High Pressure

40' Depressed C, G & S/W

Exist. R/W

Light Pole to be Relocated by Others

Install 68.5 L.F. Type B Bridge Approach Guard Railing (Type I Flare, L=68'-6") Per State of Calif. D.O.T. 1975 Std. Plans B11-36 & B11-37 (See Appendix of Specs.) With Modified Wing Wall Connection - (See Detail Sheet 7.)

Rt. Sta. 6+00 to 8+28.33 Constr. ℄
Future Conc. Curb, Gutter, & Sidewalk

Light Pole (to be Remov- ed by Others) Hdwl. (Remove)

Remove Solvage

Remove C.P.

Side Slope at Roadway Grade

R=30'

Light Pole

Begin 4:1 Side Slope

Sign (Remove)

Traffic Signal Pole (Remove & R-30' Solvage

Conc. Hdwl. (Remove)

Adjust to Grade

Adjust to Grade M.H.

Adjust to Grade W.V.

Adjust to Grade B.C.

Adjust to Grade M.H.

Adjust to Grade

Remove C.G. & Curve ℄

Remove Conc. Hdwl.

Traffic Signal Pole

Remove & Solvage

Remove (12" O.P. Sign)

Conc. Hdwl. (Remove)

Exist. 36" Pipe Extend 14' North

Exist. 36" Pipe Extend 14' South

Install 71 L.F. Extruded 6" Vertical Concrete Curb (See Detail Sheet 2.)

Sta. 12+30 Match Exist. Road With Temp. Conn.

Single Cable Fence With Wood Posts

TAPER TO MEET EXIST. PVMT.

ROAD

Exist. R/W

Light Pole

Cen. Sec. 24 3/4" Iron Pipe in ⌀ Intersection of Granite Reef Rd. & Camelback Rd.

N.E. Corn. Sec. 23 & N.W. Corn. Sec. 24
Lieb Nail in Pvmt. 60.99' West of B.C. in Intersection of Chaparral Rd. & Hayden Rd.

B.M. = 1240.645 ▲
U.S. Army Corps of Engineers Datum
B.C. in H.H. ⌀ Intersection of Hayden Rd. & Camelback Rd.

S.E. Corn. Sec. 23 & S.W. Corn. Sec. 24

9+33 Conn. 30+00 Temp. Conn. North

10+12 Conn. 30+00 Temp. Conn. South

69.25'

Δ=180°25'50"

10+60 34'

Corn. Sec. 23 Corn. Sec. 24 B.C. in H.H.

E 1/4 W 1/4

Conn. ℄ Temp. Conn. ℄ HAYDEN ROAD ℄ Section Line

NOTE: See Camelback Detour Rd. (Sheet 15) for Complete Plan of Temporary Connections for Intersections.

PROFILE
TEMPORARY CONNECTION NORTH AND SOUTH OF CAMELBACK RD.
SCALE: 1"=50' Horiz. 1"=5' Vert

Fin. Gutter 34' Lt. +0.5%
Exist. Gutter Lt.
100' V.C.
Fin Grade Constr. ℄ +0.5%
-0.467%
Exist ℄ Pavement
Fin. Edge Pvmt. 34' Rt. (Future Gutter) +0.5%
Exist Ground 34' Rt. Constr. ℄ (Approx. Bottom Ditch)

1243.71
Sta 8+27.50 Begin Approach
P.V.C. Sta 8+43.33 Elev. 1244.47
P.V.I. Sta 8+95.50 Elev. 1244.72 Corr. +0.15
P.V.T. Sta 9+49.67 Elev. 1244.47
Sta 8+65.50 Begin App. Slab
106.33' V.C.
F.F. Elev. ? of Roadway 1230.5
Exist Path Elev. 1235.75
Sta 8+67.49 Begin Approach Slab
P.V.I. Sta 6+20.00 Elev. 1243.35 Corr. +0.12'

P.V.C. Sta 27+60 Elev. 1239.98
P.V.I. Sta 28+20 Elev. 1240.31
60' V.C.
+2.50%
P.V.I. Sta 29+00 Elev. 1240.51 Corr. +1.75
P.V.I. Sta 30+16 Camelback ℄ Sta 30+00 Temp. Conn. S
P.V.I. Elev. 1240.36 Corr. +1.25
P.V.I. Sta 30+92 Camelback ℄ Sta 30+00 Temp. Conn. N.
P.V.I. Elev. 1240.55 Corr. +1.25
100' 1/2 Crown
-2.50%
P.V.T. Sta 31+00 Elev. 1240.30
P.V.C. Sta 32+00 Elev. 1240.50
60' V.C.
P.V.T. Sta 32+60 Elev. 1239.63
P.V.I. Sta 27+90 Elev. 1240.13 Corr. +0.15
P.V.I. Sta 32+52 Elev. 1239.75 Corr. +0.21'
Exist ℄

P.V.C. Sta 9+96 Elev. 1244.24
P.V.I. Sta 10+46 Elev. 1243.99 Corr. +0.25
P.V.T. Sta 10+96 Elev. 1243.74
P.V.C. Sta 11+30 Elev. 1243.59
P.V.I. Sta 11+80 Elev. 1240.64 Corr. +0.31
PVT Sta 12+30 Elev. 1240.63
100' V.C.

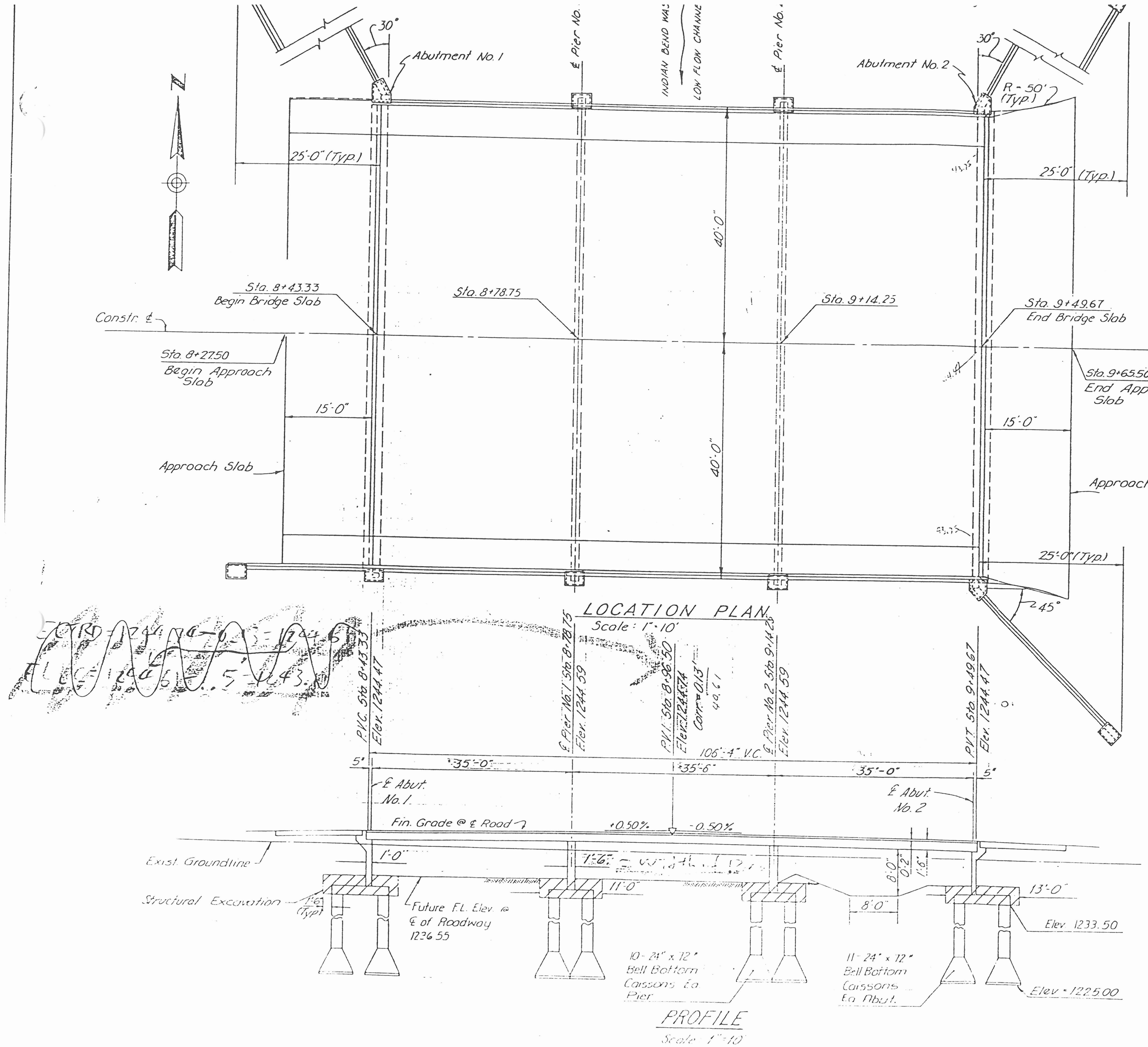
AS BUILT
DATE 8-10-79

16375

CITY OF SCOTTSDALE
INDIAN BEND WASH
LOW FLOW CHANNEL BRIDGE
CAMELBACK ROAD

INTERNATIONAL ENGINEERING CO., INC.
PHOENIX AREA OFFICE
2144 W. CLARENDON AVE.
PHOENIX, ARIZONA 85017
PHONE (602) 263-8636

SCALE HORIZ 1"= VERT 1"=
DESIGN
DRAWN
CHECKED
PROJ 77-06
SHEET NO 4 OF 23



APPROXIMATE QUANTITIES

	ITEM	UNIT	CAMELBACK ROAD BRIDGE SUPER	ABUT-1	PIER-1	PIER-2	ABUT-2	WALL	TOTAL
CONVENTIONALLY REINFORCED & PRESTRESSED	UNCLASSIFIED EXC.	CY.							2020
	STRUCTURAL EXCAVATION	CY.		356	108	108	331	193	1096
	STRUCTURAL BACKFILL	CY.		282	64	64	282	147	839
	2" WEARING SURFACE	CY.	45º						45
	ELASTOMERIC SEAL (1-1/2" x 6")	LF.		80			80		160
	ELASTOMERIC SEAL (3" x 6")	LF.			80	80			160
	ELASTOMERIC BEARING PAD	LF.		80	160	160	80		480
	RAILING, WROUGHT IRON	LF.	192					135.5	327.5
	DRILLED CAISSONS (24" x 72")	LF.		93.5	85º	85º	93.5		357
	CONC. CLASS "D" APP. SLABS	CY.	89.7						89.7
	REINF. STEEL—APP. SLABS	LB.	5773						5773
	8" ABC—APPROACH SLABS	TON	117						117
CONVENTIONALLY REINFORCED	CONCRETE CLASS "D" (f'c = 3000 psi)	CY.	64.6	80.5	71.2	71.2	80.5	68.9	436.9
	CONCRETE CLASS "S" (f'c = 4000 psi)	CY.	359º						359º
	REINFORCING STEEL	LB.	98190	11,686	6,300	6,300	11,686	3,390	137,552
PRESTRESSED	CONCRETE CLASS "D" (f'c = 3000 psi)	CY.	64.6	80.5	71.2	71.2	80.5	68.9	436.9
	CONCRETE CLASS "S" (f'c = 5000 psi)	CY.	373º						373º
	UNITS, PRECAST	EA.	60						60
	REINFORCING STEEL (NORMAL)	LB.	34,037	11,686	6,300	6,300	11,686	3,390	73,399
	PRESTRESSING STEEL (270 Ksi)	LB.	10,020						10,020
	PRESTRESSING STEEL (150 Ksi)	LB.	2,565						2,565

NOTE:
FOR GENERAL NOTES SEE SHEET 7

Bench Marks - U.S. Army Corps of Eng. Datum
Camelback: 1240.645 BC in H.H. @ Intersection of Hayden Rd. & Camelback Road.

AS BUILT
DATE 8-10-77 GS

16378

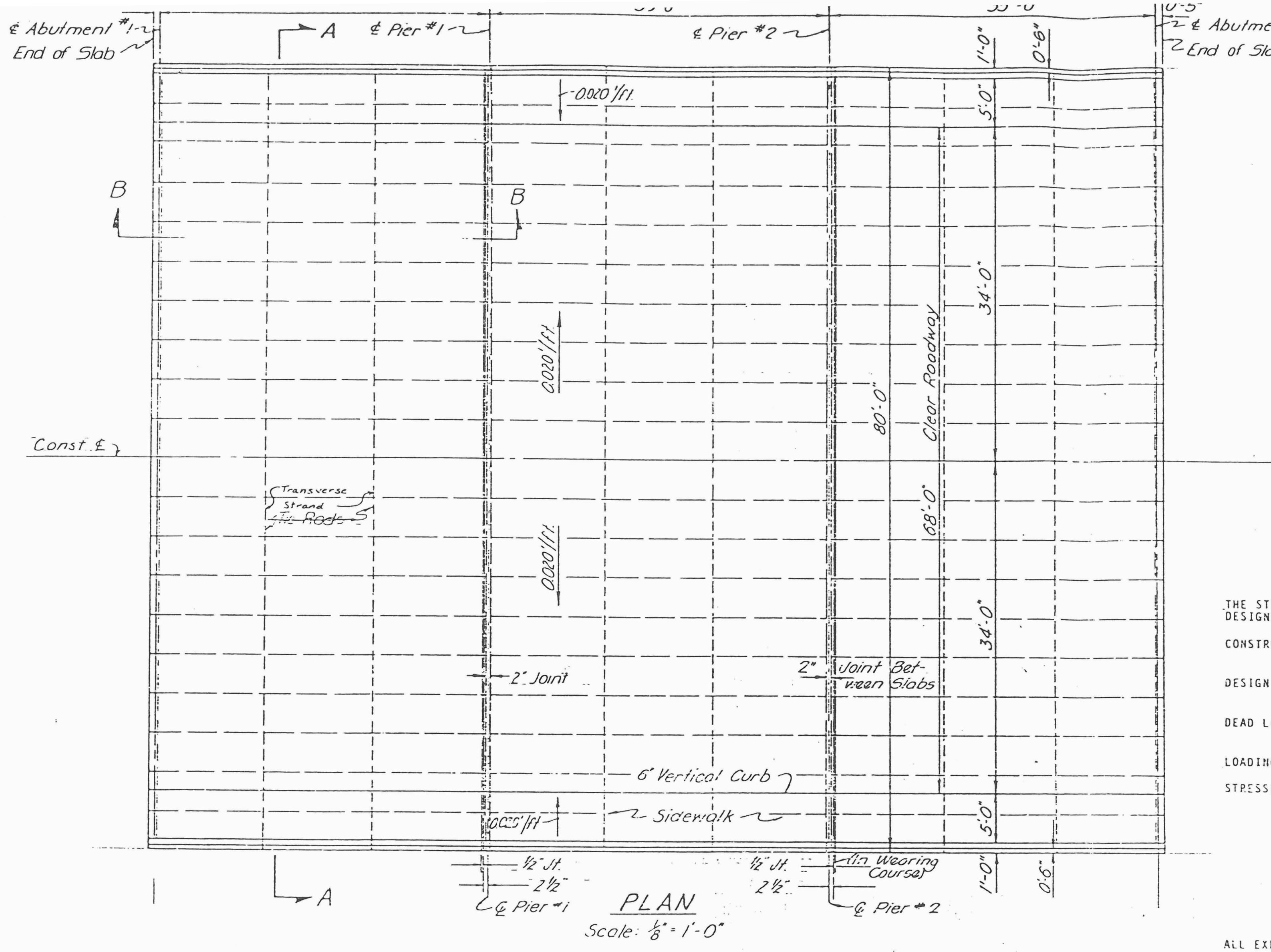
CITY OF SCOTTSDALE

INDIAN BEND WASH
LOW FLOW CHANNEL BRIDGE
LOCATION PLAN & PROFILE

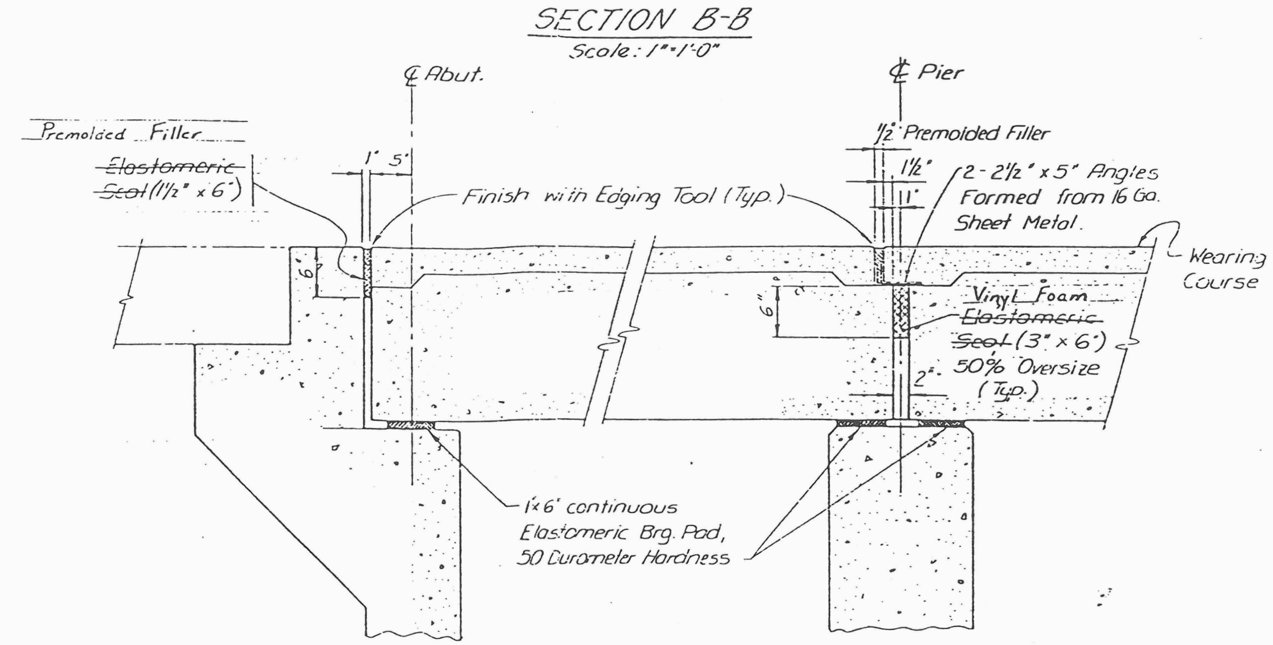
INTERNATIONAL ENGINEERING CO., INC.
PHOENIX AREA OFFICE
2204 E. CLARENDON AVE.
PHOENIX, ARIZONA 85017
PHONE (602) 263-8630

SCALE	DESIGN R.A.H.	PROJ. 77-06
HORIZ. 1" = 10'	DRAWN G.S.	SHEET NO.
VERT. 1" = 10'	CHECKED R.A.H.	6 OF 23

FC-042



PLAN
Scale: ⅛" = 1'-0"



SECTION B-B
Scale: 1" = 1'-0"

GENERAL NOTES

THE STRUCTURE WAS ANALYZED USING SERVICE LOAD DESIGN. DESIGN BASED ON A MAXIMUM OF SIX (6) TRAFFIC LANES.

CONSTRUCTION - - STANDARD SPECIFICATIONS, ARIZONA HIGHWAY DEPARTMENT EDITION OF 1969, REVISED TO DATE.

DESIGN - - A.A.S.H.T.O. SPECIFICATIONS FOR HIGHWAY BRIDGE 1973. REVISED TO DATE.

DEAD LOAD - - DEAD LOAD INCLUDES ALLOWANCE OF 25 POUNDS PER SQUARE FOOT FOR WEARING SURFACE.

LOADING CLASS - HS20-44

STRESSES - - CLASS D CONCRETE F'_c = 3000PSI, FC = 1200PSI
CLASS S CONCRETE F'_c = 5000PSI, AND 4000PSI
PRESTRESSING STEEL - 1/2" 7 WIRE STRAND(A= .153 SQ. IN.) MIN. F'_s = 270,000PSI P=41,300 LBS. (OR APPROVED ALTERNATE) 1" ⌀ RODS. MIN F'_s = 150,000PSI

ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4" EXCEPT AS NOTED.

CONCRETE CLASS DESIGNATIONS

CLASS D - ALL CONCRETE EXCEPT AS NOTED FOR CLASS S.

CLASS S - S:F'_c = 5000PSI PRECAST SLAB
S:F'_c = 4000PSI CAST IN PLACE SLAB

CONCRETE FINISHES

FRESH CONCRETE IN BRIDGE DECKS, SIDEWALKS AND APPROACH SLABS SHALL BE FINISHED IN COMPLIANCE WITH MAG SPECIFICATIONS TO THE SATISFACTION OF THE ENGINEER.

ALL FORMED OR FINISHED SURFACES WHICH ARE TO BE COVERED BY BACKFILL OR OTHERWISE UNEXPOSED TO VIEW SHALL BE GIVEN CLASS I FINISH.

ALL OTHER FORMED OR FINISHED SURFACES WHICH ARE EXPOSED TO VIEW, AND THOSE SURFACES COVERED BY THE TOP SIX (6) INCHES OF BACKFILL SHALL BE GIVEN CLASS III FINISH EXCEPT THAT CLASS II FINISH IS ACCEPTABLE ON THE INTERIOR UNDERSIDES OF BRIDGE SPANS NOT TRAVERSED BY BICYCLE/PEDESTRIAN PATHS.

REINFORCING STEEL SHALL CONFORM TO A.S.T.M. SPEC. A615,
GRADE 40 FOR BAR SIZES #4 AND SMALLER (FS = 20,000PSI)
GRADE 60 FOR BAR SIZES #5 AND LARGER (FS = 24,000PSI)

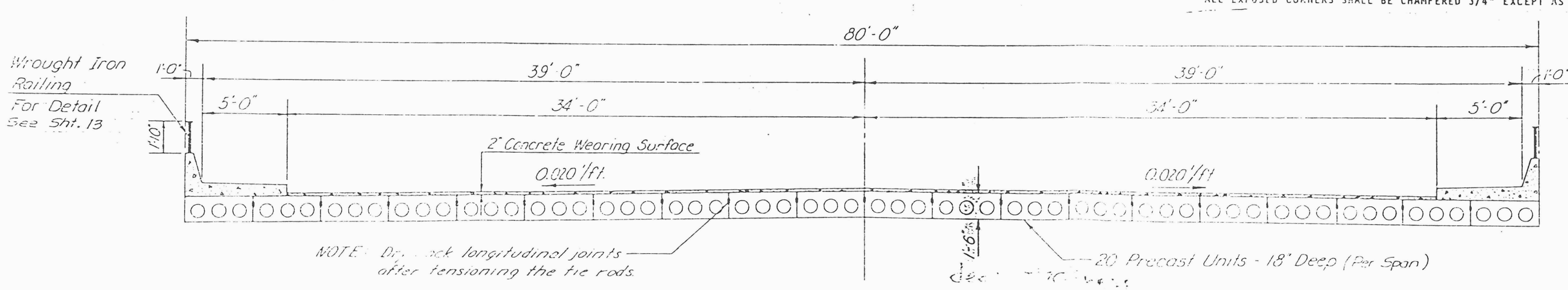
ALL DIMENSIONS FOR REINFORCING STEEL SHALL BE TO CENTER OF BARS UNLESS NOTED OTHERWISE

ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER UNLESS NOTED OTHERWISE.

DIMENSIONS SHALL NOT BE SCALED FROM DRAWINGS.

IF RETAINING WALLS ARE NOT CAST MONOLITHACALLY WITH ABUTMENT WALLS, A 6" WATERSTOP SHALL BE ADDED BETWEEN THE ABUTMENT AND RETAINING WALL.

WHEN EXCAVATING FOR FOOTINGS, THE FINAL SIX INCHES IN DEPTH SHALL BE DONE BY HAND LABOR METHODS.



SECTION A-A
Scale: ¼" = 1'-0"

NOTE: Apply epoxy, suitable for use between old and new concrete, immediately before placing Class "D" surface. Use approximately 1 gal per 100 sq ft of surface

ELTRD = 1244.... + 2.55 = 1247.16

ELLC = 1244.74 - ... - 1.5 = 1243.11

AS BUILT
DATE 8-10-79 GS

11379

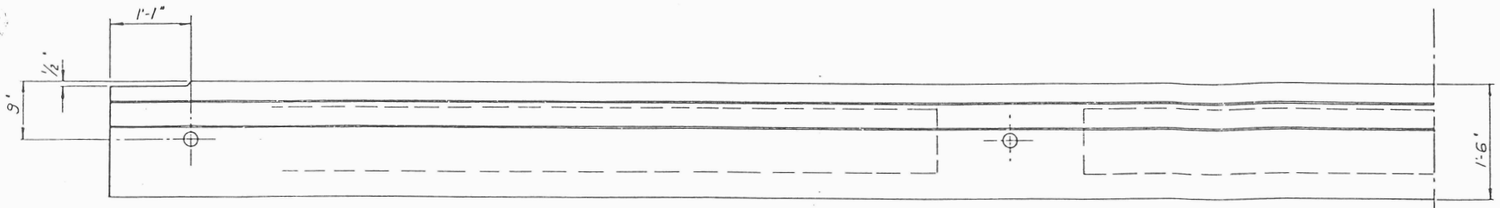
CITY OF SCOTTSDALE

INDIAN BEND WASH
LOW FLOW CHANNEL BRIDGE
DECK DETAILS—PRECAST (ALT-1)

INTERNATIONAL ENGINEERING CO., INC
PHOENIX AREA OFFICE
2968 W. CLARENDON AVE
PHOENIX, ARIZONA 85017
PHONE (602) 263-6633

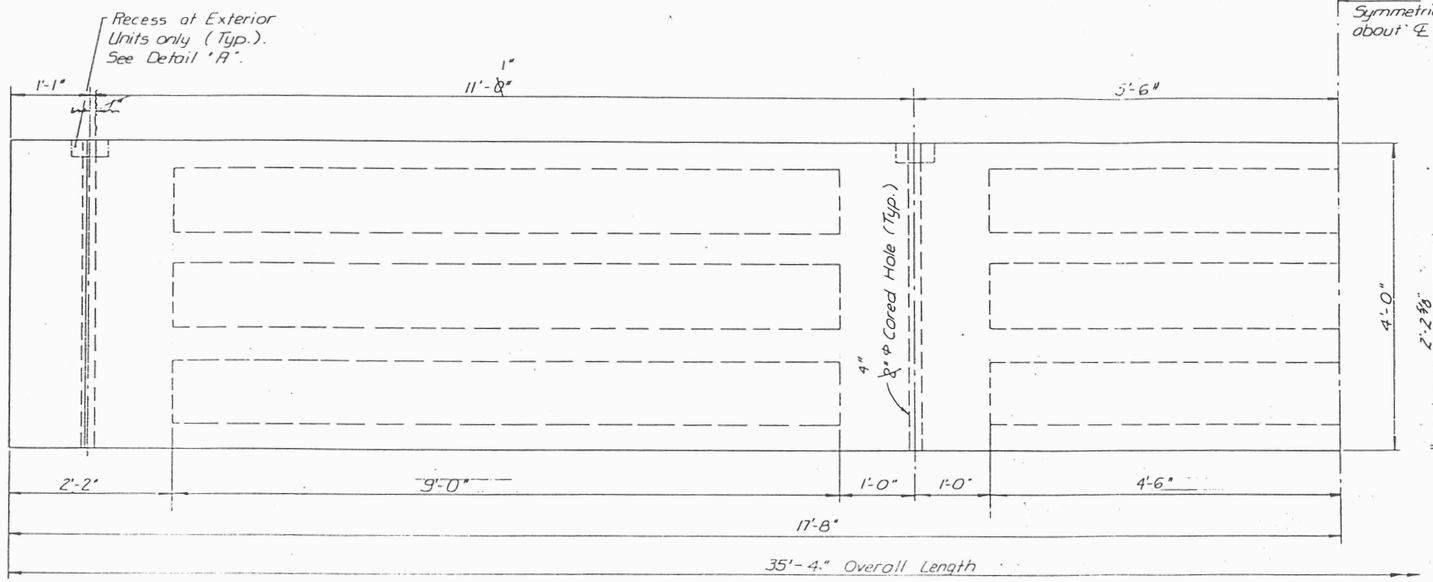
SCALE	DESIGN	PROJ 77-06
HORIZ	DRAWN	SHEET NO
VERT	CHECKED	7 OF 23

FC-022



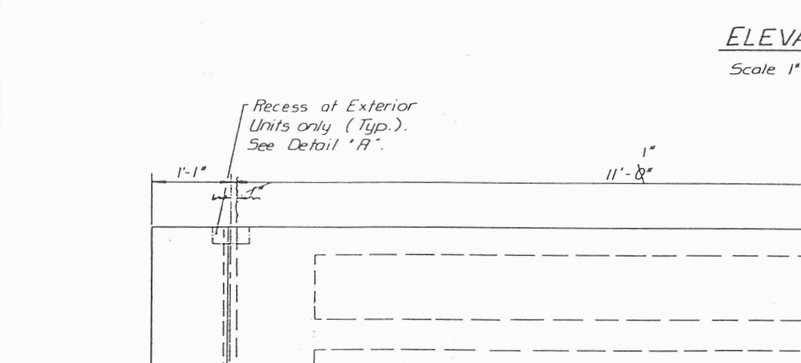
ELEVATION

Scale 1" - 1'-0"



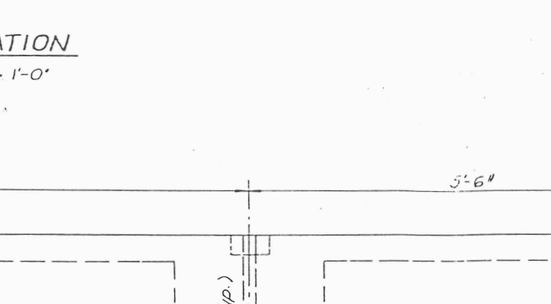
PLAN

1" - 1'-0"



TYP. SECTION - EXTERIOR UNIT

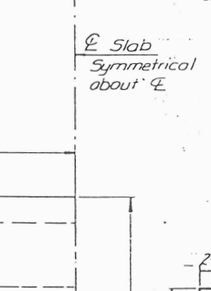
Scale 1" - 1'-0"



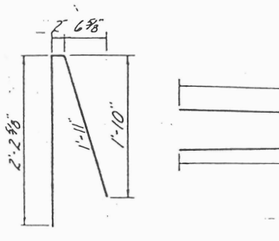
For more Dimensions and Details see Exterior Unit at left Hand Side.

TYP. SECTION - INTERIOR UNIT

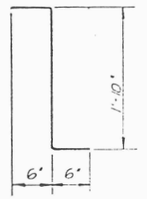
Scale 1" - 1'-0"



Bend "A"



Bend "C"



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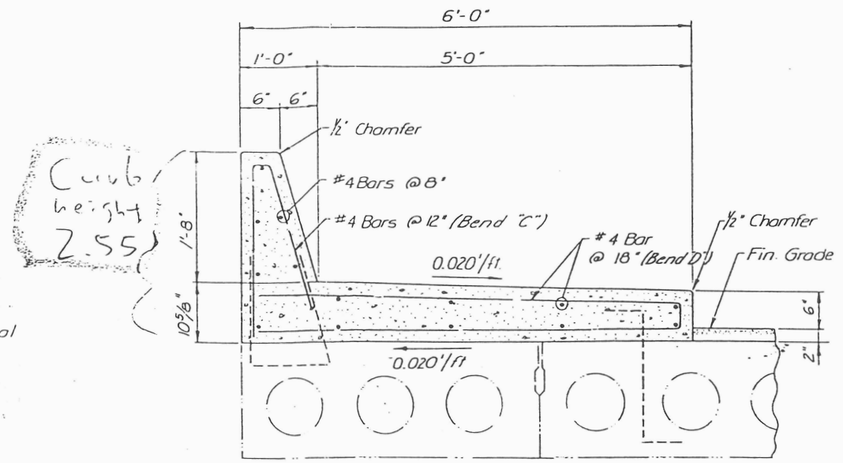
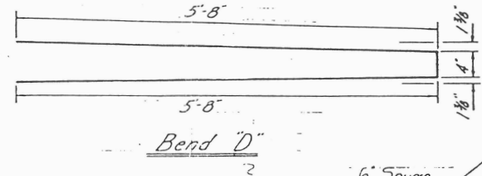


Curb height 2.55

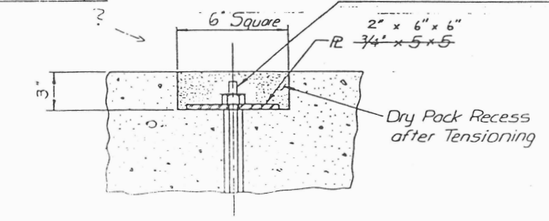
NOTE: Continue the ½" transverse joint in the wearing surface (See Sheet 7) thru the curb and sidewalk.

CURB AND SIDEWALK DETAIL

1" - 1'-0"



Bend "D"



DETAIL "A"

(Recess at Exterior Slab Units)

Scale 3" - 1'-0"

3 - ½" ϕ - 270ᴷ STRAND
~~1" Dia. Rod~~ - To Be Transversely Stressed 29,500 # EA. STRAND ~~ONE TIME - USE STRESSING VALUES~~ With ~~Stressing Forms~~, After Units are in Place

NOTES:

1) Provide a Final Prestressing Force of 200,000 lbs. With an Eccentricity (e) of 6½". Eccentricity May Be Decreased, But the Prestressing Force Must Be Changed Accordingly.

2) Provide 150 KSI, 1" Dia. Rods Transversely Stressed to 80K Per Bar and Grouted Full.

3) Use Class "S" 4000 psi Concrete With ¾" ϕ Maximum Aggregate for Prestressed Slabs.

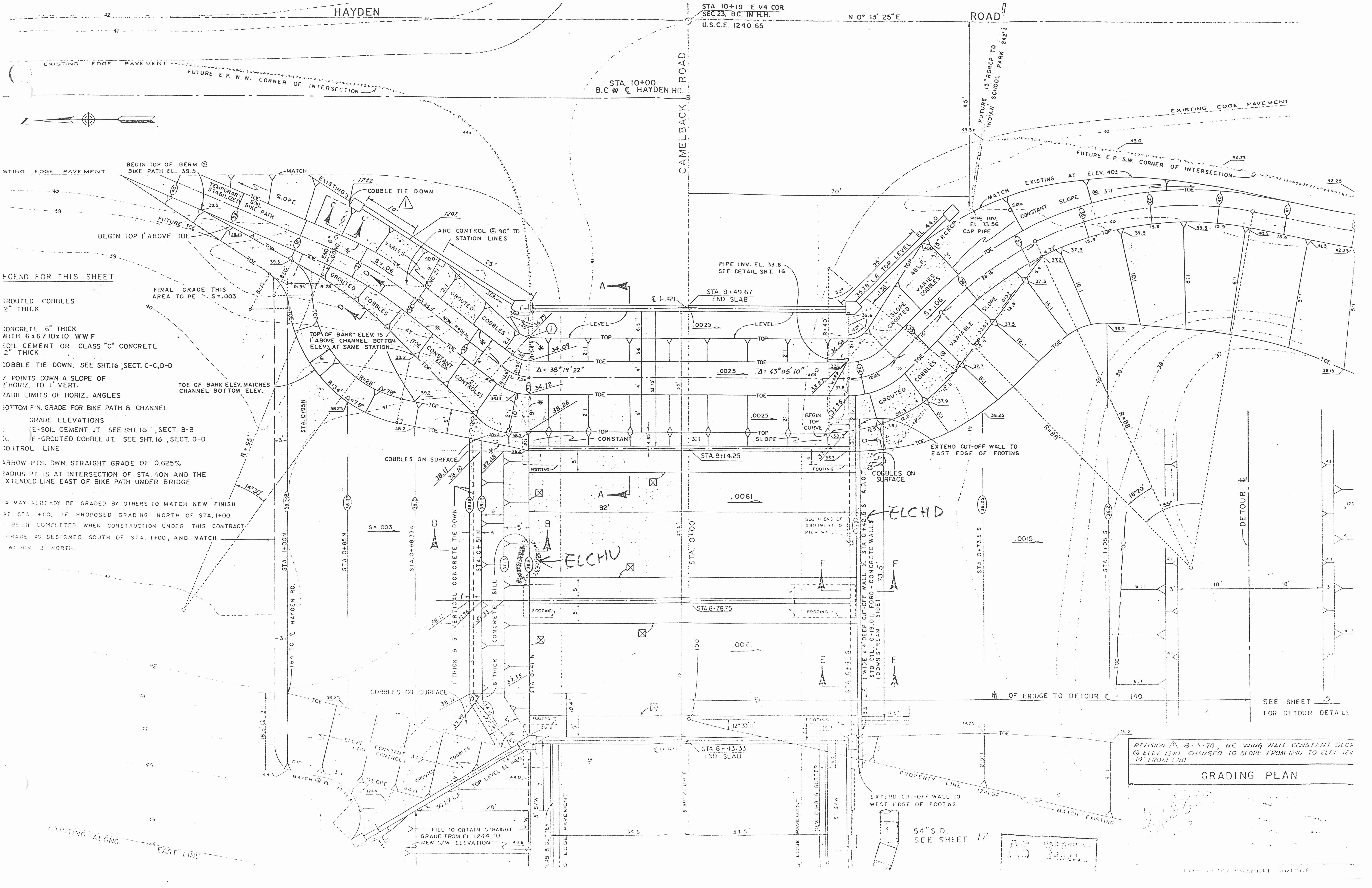
4) Contractor Shall Submit Calculations of Losses for the Prestress Units to the Engineer for Approval.

5) Brush Top Surface With Stiff Broom 1½ to 2 Hours After Concrete is Poured to Remove Laitance and Provide Rough Surface for Bonding Wearing Course. Leave All Wires That Project From Top to Aid in Bonding Wearing Course.

AS BUILT
8-10-79 GS

B380

CITY OF SCOTTSDALE		
INDIAN BEND WASH LOW FLOW CHANNEL BRIDGE PRECAST SLAB DETAILS (ALT-I)		
INTERNATIONAL ENGINEERING CO., INC. PHOENIX AREA OFFICE 2366 W. CLARENDON AVE. PHOENIX, ARIZONA 85017 PHONE (602) 263-8638		
SCALE HORIZ 1" = 1'-0" VERT 1" = 1'-0"	DESIGN JLS DRAWN JLS CHECKED JLS	PROJ. 77-09 SHEET NO. 8 OF 21



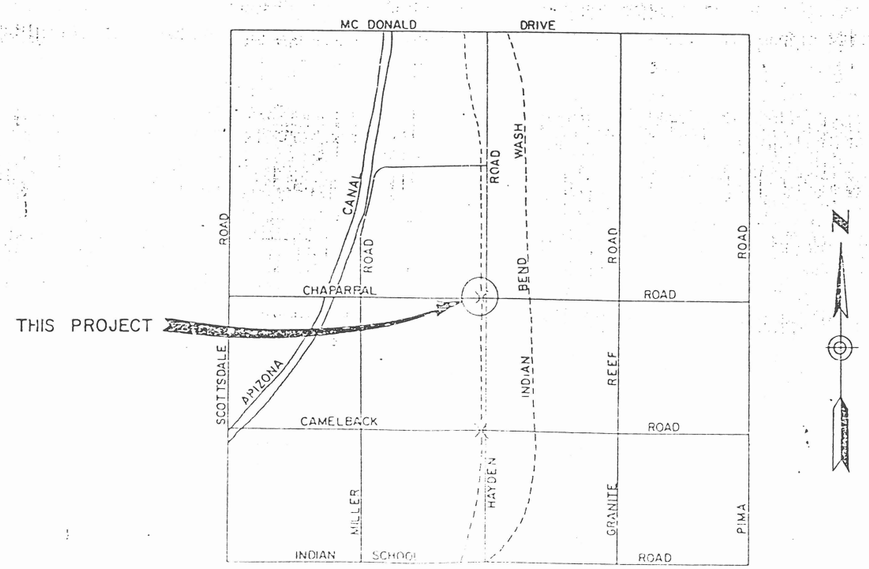
HAYDEN
ROAD
CAMELBACK ROAD
STA. 10+19 E 1/4 COR
SEC 23, B.C. IN H.H.
U.S.C.E. 1240.65
N 0° 13' 25" E
STA. 10+00
B.C @ ℄ HAYDEN RD.
EXISTING EDGE PAVEMENT
FUTURE E.P. N.W. CORNER OF INTERSECTION
FUTURE E.P. S.W. CORNER OF INTERSECTION
FUTURE 15" RGRCP TO INDIAN SCHOOL PARK 242'±
BEGIN TOP OF BERM @ BIKE PATH EL. 39.5
TEMPORARY STABILIZED BIKE PATH
TOE SOIL SLOPE
MATCH EXISTING
COBBLE TIE DOWN
ARC CONTROL @ 90° TO STATION LINES
BEGIN TOP 1' ABOVE TOE
FUTURE TOE
LEGEND FOR THIS SHEET
GROUTED COBBLES 12" THICK
CONCRETE 6" THICK WITH 6x6/10x10 WWF
SOIL CEMENT OR CLASS "C" CONCRETE 12" THICK
COBBLE TIE DOWN. SEE SHT.16, SECT. C-C, D-D
POINTS DOWN A SLOPE OF 2' HORIZ. TO 1' VERT.
RADII LIMITS OF HORIZ. ANGLES
BOTTOM FIN. GRADE FOR BIKE PATH & CHANNEL
GRADE ELEVATIONS
E-SOIL CEMENT JT. SEE SHT 16, SECT. B-B
E-GROUTED COBBLE JT. SEE SHT.16, SECT. D-D
CONTROL LINE
ARROW PTS. DWN. STRAIGHT GRADE OF 0.625%
RADIUS PT IS AT INTERSECTION OF STA. 40N AND THE EXTENDED LINE EAST OF BIKE PATH UNDER BRIDGE
A MAY ALREADY BE GRADED BY OTHERS TO MATCH NEW FINISH AT STA 1+00. IF PROPOSED GRADING NORTH OF STA. 1+00 BEEN COMPLETED WHEN CONSTRUCTION UNDER THIS CONTRACT GRADE AS DESIGNED SOUTH OF STA. 1+00, AND MATCH WITHIN 3' NORTH.
FINAL GRADE THIS AREA TO BE S=.003
TOP OF BANK ELEV. IS 1' ABOVE CHANNEL BOTTOM ELEV. AT SAME STATION
TOE OF BANK ELEV. MATCHES CHANNEL BOTTOM ELEV.
Δ= 38°19'22"
Δ= 43°05'10"
STA. 9+49.67 END SLAB
PIPE INV. EL. 33.6 SEE DETAIL SHT. 16
PIPE INV. EL. 33.56 CAP PIPE
15" RGRCP
35.78 L.F. TOP LEVEL EL. 44.0
CONSTANT SLOPE @ 3:1
MATCH EXISTING AT ELEV. 40±
VARIES COBBLES
GROUTED COBBLES
S=.06
STA 9+14.25
COBBLES ON SURFACE
EXTEND CUT-OFF WALL TO EAST EDGE OF FOOTING
STA. 0+95N
STA. 0+85N
STA. 0+68.33 N
STA. 0+51 N
STA. 0+41 N
STA. 0+00
STA. 0+73.5 S
STA. 1+05 S
STA. 1+00N
164 TO ℄ HAYDEN RD.
1' THICK & 3' VERTICAL CONCRETE TIE DOWN
CONCRETE SILL
6" THICK
ELCHU
ELCHD
1' WIDE x 4' DEEP CUT-OFF WALL @ STA. 0+42.5 S STD. DTL. C-19.01, FORD-CONCRETE WALLS (DOWNSTREAM SIDE)
SOUTH END OF ABUTMENT & PIER WALLS
STA 8+78.75
STA 8+43.33 END SLAB
℄ OF BRIDGE TO DETOUR ℄ = 140'
DETOUR ℄
SEE SHEET 5 FOR DETOUR DETAILS
REVISION 1 8-3-78, NE WING WALL CONSTANT SLOPE @ ELEV. 1240 CHANGED TO SLOPE FROM 1240 TO ELEV. 124 14' FROM END
GRADING PLAN
PROPERTY LINE
MATCH EXISTING
EXTEND CUT-OFF WALL TO WEST EDGE OF FOOTING
54" S.D. SEE SHEET 17
FILL TO OBTAIN STRAIGHT GRADE FROM EL. 1244 TO NEW S/W ELEVATION
TOP LEVEL EL. 44.0
EXISTING ALONG EAST LINE
SLOPE (TOE CONSTANT CONTROL)
EDGE PAVEMENT
CURB & GUTTER
S/W

CAPITAL IMPROVEMENTS ENGINEERING

PROJECT NO.

B-7707

INDIAN BEND WASH LOW-FLOW CHANNEL BRIDGE
CHAPARRAL ROAD



VICINITY MAP

NO SCALE

SHEET INDEX

1	COVER SHEET
2	TYPICAL ROADWAY SECTIONS
3	CHAPARRAL ROAD
4	CHAPARRAL DETOUR ROAD
5	UTILITY PROFILES
6	LOCATION PLAN & PROFILE
7	DECK DETAILS - PRECAST
8	PRECAST SLAB DETAILS
9	DECK DETAILS - CAST IN PLACE
10	ABUTMENT DETAILS
11	PIER DETAILS
12	WING WALL DETAILS
13	MISCELLANEOUS DETAILS
14	GRADING PLAN AT BRIDGE
15	GRADING PLAN OF CHANNEL BANK
16	GRADING DETAILS
17	CHANNEL BOTTOM PROTECTION UNDER McDONALD BRIDGE
18	TRAFFIC SIGNALIZATION PLAN - CHAPARRAL DETOUR
19	STRIPING PLANS - HAYDEN ROAD
20	STRIPING PLANS - DETOUR
21	STRIPING PLANS - CHAPARRAL ROAD
22	FOUNDATION DATA

AS BUILT
Shts. 5, 14, 15, 16, & 17 Only
7-11-84

COUNCIL

WILLIAM C. JENKINS (Mayor)

RICHARD CAMPANA
BILLIE GENTRY
HERB DRINKWATER
HEINZ HINK, Ph.D.
JEFF SCHUBERT
CHARLIE SMITH

CITY MANAGER - F. D. ALESHIRE
CITY ATTORNEY - RICHARD FILLER
CITY CLERK - FERN A. NELL

RAY WILLIAMSON
TRAFFIC ENGINEERING MANAGER

RON RUZISKA
REAL ESTATE SERVICES MANAGER

CARL DARDEN
DEPARTMENT HEAD
FOR FIELD OPERATIONS

GEORGE IANNELLA,
ENGINEERING SERVICES DIRECTOR

16350

Revision 2 - Shts. 6, 7, 8, 9, 11, 12, 13, 14 & 15 2-2-79
Revision ⚠ Change MH # 1 Date 3-7-79
REVISION ⚠ SHEETS 2, 3, & 5 1-17-79

PROJECT NO. B-7707
SHEET 1 OF 22
FED. AID NO. FC-044

CITY OF SCOTTSDALE, ARIZONA

Two Weeks Prior to installation of Loop Detectors, Request City Field Engrg. Inspector to Notify Traffic Signal Foreman. Contractor shall Install (4) 6'x40' Loop Detectors as shown, with 4 turns of Wire 6'x6' plus 2 turns 6'x40'. Loop Detector installation shall conform to A.D.O.T. Std. Dwg's & Specifications, except as noted. [Abandon existing Chaparral Rd. Loops]. Any Damage to existing Traffic Signal Poles; Conduit; etc. shall be repaired or replaced at Contractors expense and in Conformance with A.D.O.T. Std. Dwg's and Specifications.

Install 8"x6" Tee
6' Valve
4'-6" C.I.P.
Relocated Fire Hydrant
(City of Phoenix Std. Detail 461)

Install 2-45° Elbows & Thrust Block (Std Det. 480) See Profile Sheet 5

Install 230 L.F. New 8" Pipe

Lt Sta. 7+40 Constr. ℄
Install New 8" Valve & 90° Elbow & Thrust Block (Std Det. 480) Remove Exist 8" Water East as Needed for Thrust Block Area

INDIAN BEND WASH
LOW FLOW CHANNEL

Gas Line to be Relocated by Others.

Power Pole to be Relocated by Others

Exist. R/W

Sta. 7+34 Begin Relocation of ℄ Gas

P.P.

8" W G

70'

Sign

Sta. 6+30 Match Exist Pvmt.

Sta. 6+75 Match Exist Pvmt.

Warp N. Half of Street From Flat To 1.0% Cross Slope

40' 39' 58'

8" Conc. Curb (14" Deep) Flush With Pvmt. Remove Under New Pvmt.

Underground Power Line to be Relocated by Others.

5 6 CHAPARRAL 7 8

Monument Line ℄ Construction ℄

1.0%

S. Half of ℄ Street

30'

Remove Under New Pvmt. 8" Conc. Curb Flush With Pvmt. (14" Deep)

Sta. 7+34 Begin Relocation U.G. Elec.

U.G.

SS

8"

205'

N 1/4 Corn Sec. 23
S 1/4 Corn. Sec. 14
B.C. @ Intersect.
Of Miller Rd. &
Chaparral Rd.

Sofety Curbs

Exist. R/W

* 58.5 L.F. Future Guard Rail Type 8

Asphalt Parking

25 Rt. Sta. 6+90 Constr. ℄
Install New MH #1 - City of Phoenix Std. Details 363, 370, 371 or 372 & 362
Plug Exist. 8" Sewer East.
F.L. = 1238.4

Bldg.

* Use California D.O.T. Bridge Approach Guard Railing Type 8

Drainage Easement Line

71.32°

Plug 8" Sewer West

Remove Exist. F.H. & Relocate to Position N.W. of Bridge

F.H.

12" Wide Trench @ 5' Below Finish Grade.

Utility Relocation by A.P.S.

120' Rt. Sta. 7+34

245'

To Existing Lines Along Hayden Rd.

97' Rt. Sta. 9+20±

Constr. ℄

Install New MH #2 - City of Phx. Std Details 363, 370, 371 or 372 & 362
F.L. = 1232.1

Adjust Manhole Cover and Frame to Grade

* Install 48.5 L.F. Type 8 Bridge Approach Guard Railing (Type I Flare, L=43'6" Per State of Colif. D.O.T. Std Plans B11.36 & B11.37 (See Appendix of Specs.) With Mod. Connect. (See Det. Sht 2)

W 1/4 Cor. Sec. 14 & E 1/4 Cor. Sec. 13

40' 55'

ROAD

Install 2-45° Elbows & Thrust Block (Std Det. 480)

Install 90° Elbow & 8" Valve (Lt. Sta 8+95) & Thrust Block (Std Detail 480) See Profile Sheet 5

Traffic Detector (Typ) Conc. Hdwl.

12' C.P.

Conc. Hdwl. Exist. R/W

St. Sign

Traffic Signal Box

Traffic Signal Pole

Traffic Control Box

EXISTING CONDUIT (BURIED)

Traffic Detector Box

Conc. Curb Flush w/Pvmt

Traffic Signal Box

Vert. Curb & Gutter

Sta. 9+30 Match Exist Pvmt.

Warp N. Half of Str. From 1% Cross Slope to Flat

Sec. 14 Sec. 13

Sec. 23 Sec. 24

9 10 11

Sta. 9+85 Match Exist Pvmt.

Traffic Detector (Typ)

SEE NOTE ABOVE LEFT

Δ = 179° 24' 56"

Lietz Nail in Pvmt

63.37

60.99'

B.C. in H.H.

Warp Cross Slope 1% to 1.5%

EXISTING CONDUIT (BURIED)

Traffic Signal Box

Conc. Curb Flush w/Pvmt

Traffic Detector Box

Vert. Curb & Gutter

Traffic Signal Box

Traffic Signal Pole

Traffic Signal Pole w/Light

Exist. R/W

Ch. Lk. Fence

Section Line

Clearness

Ch. Lk. Fence

HAYDEN

85'

B.M. = 1248.31 ▲
U.S. Corps of Engineers Datum
B.C. in H.H. @ Intersection of Chaparral Rd. & Hayden Rd.

Install Brass Cap in Hand Hole. - (City of Phx. Std. Detail 195)

W 1/4 Cor. Sec. 23 & E 1/4 Cor. Sec. 24
B.C. in H.H. @ Intersection of Hayden Rd. & Camelback Rd.

P.V.I. Sta. 6+50.76
Elev. 1250.76

Fin Grade Constr. ℄

0.19%

Exist. ℄ Pavement

Begin Approach Slab Sta. 7+53.50

Sta. 7+69.33
Elev. 1250.53

P.V.C. Sta. 8+22.50
Elev. 1250.43

106.33'

P.V.I. Sta. 8+75.67
Elev. 1250.33
Corr. = -0.19'

End Approach Slab
Sta. 8+91.50
Elev. 1249.97

1.65%

P.V.T. Sta. 9+28.84
Elev. 1249.45

P.V.C. Sta. 9+43.35
Elev. 1249.35

P.V.T. Sta. 9+60
Elev. 1248.94
Corr. = +0.01'

P.V.T. Sta. 9+85
Elev. 1248.80

0.58%

106.33' V.C.

50' V.C.

F.L. Elev @ ℄ of Roadway 1244.70

Future Bikepath Elev. 1238.0

1254 1252 1250 1248

5 6 7 8 9 10

REVISION 1 NEW SEWER DATE 11-7-79 BY E.B.

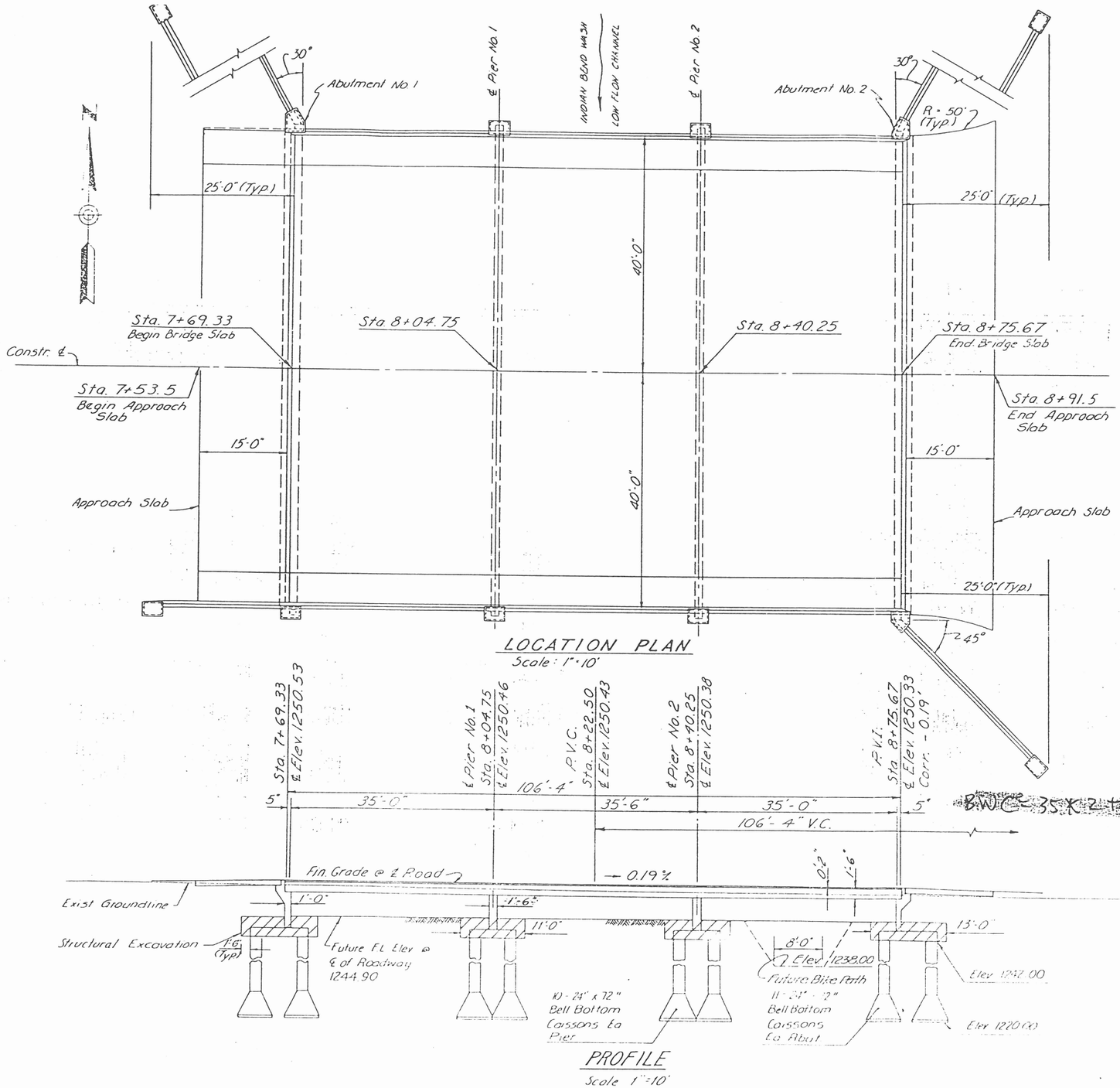
CITY OF SCOTTSDALE

INDIAN BEND WASH
LOW FLOW CHANNEL BRIDGE
CHAPARRAL ROAD

INTERNATIONAL ENGINEERING CO., INC
PHOENIX AREA OFFICE
2646 W. CLARENDON AVE.
PHOENIX, ARIZONA 85017
PHONE (602) 263-8638

SCALE HORIZ 1" = 20' VERT
DESIGN MHR
DRAWN MHR
PROJ. B 7707
SHEET NO. 5 OF 22

16352



APPROXIMATE QUANTITIES

	ITEM	UNIT	SUPER	ABUT-1	PIER-1	PIER-2	ABUT-2	WALL	TOTAL
CONVENTIONALLY REINFORCED OR PRESTRESSED	UNCLASSIFIED EXCAVATION	CY	2,385						2,385
	STRUCTURAL EXCAVATION	CY		80	67	67	80	188	482
	STRUCTURAL BACKFILL	CY		64	30	30	61	78	263
	2" WEARING SURFACE	CY	45ª						45
	ELASTOMERIC BEARING PAD	L.F.		80	160	160	80		480
	RAILING, WROUGHT IRON	L.F.	192					135.5	327.5
	DRILLED CAISSONS (24" x 72")	L.F.		242	220	220	242		924
	CONC. CLASS "D" APP. SLABS	C.Y.	90						90
	REINF. STEEL—APP. SLABS	L.B.	5,775						5,775
	8" ABC - APPROACH SLABS	TON	117						117
CONVENTIONALLY REINFORCED	CONCRETE CLASS "D" (f'c = 3000 psi)	CY.	53	78	63	63	77	62	396
	CONCRETE CLASS "S" (f'c = 4000 psi)	CY.	359						359
	REINFORCING STEEL	LB.	98,432	11,213	5,311	5,283	11,028	3,379	134,646
PRESTRESSED	CONCRETE CLASS "D" (f'c = 3000 psi)	CY.	53	78	63	63	77	62	396
	CONCRETE CLASS "S" (f'c = 5000 psi)	CY.	373						373
	UNITS, PRECAST	EA.	60						60
	REINFORCING STEEL (NORMAL)	LB.	34,947	11,213	5,311	5,283	11,028	3,379	71,161
	PRESTRESSING STEEL (270 Ksi)	LB.	10,020						10,020
	PRESTRESSING STEEL (150 Ksi)	LB.	2,565						2,565

Note: For General Notes see Sheet 7

Bench Mark - US Army Corps of Eng. Datum
1248.31 - B.C. in H.H. @ Intersection of Hayden Rd & Chaparral Road.

Revision 2 - Class D Concrete and Reinforcing Steel Quantities Changed 2-2-79

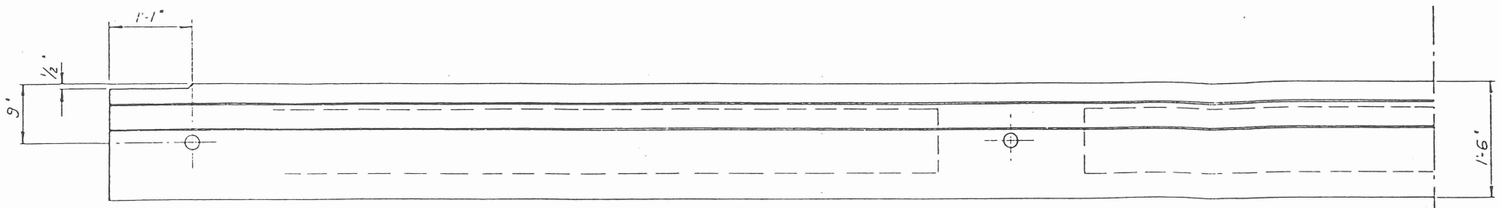
CITY OF SCOTTSDALE

INDIAN BEND WASH
LOW FLOW CHANNEL BRIDGE
LOCATION PLAN & PROFILE

INTERNATIONAL ENGINEERING CO., INC.

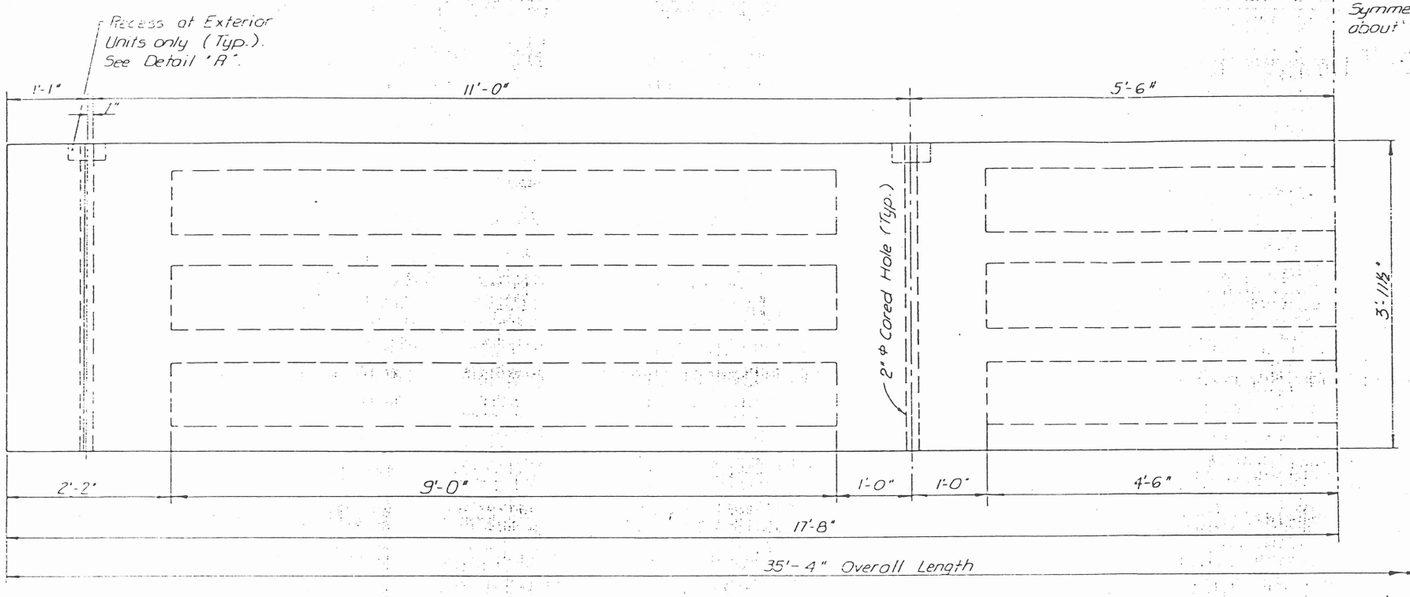
DWG. B-7707
SHT. 6 OF 22

FC-049



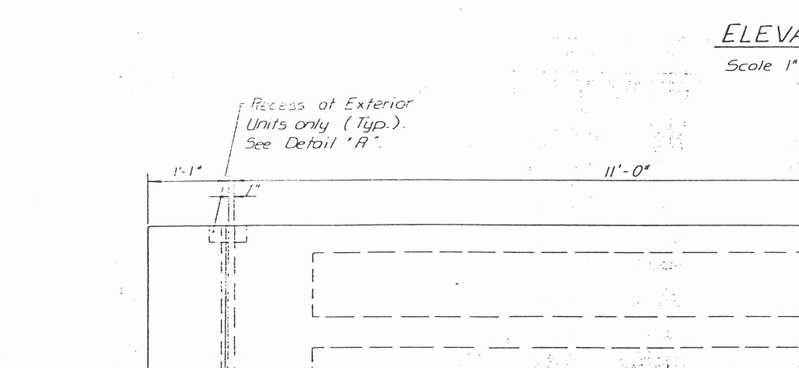
ELEVATION

Scale 1" - 1'-0"



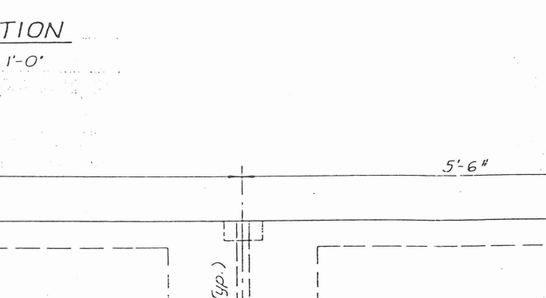
PLAN

1" - 1'-0"



TYP. SECTION – EXTERIOR UNIT

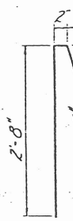
Scale 1" - 1'-0"



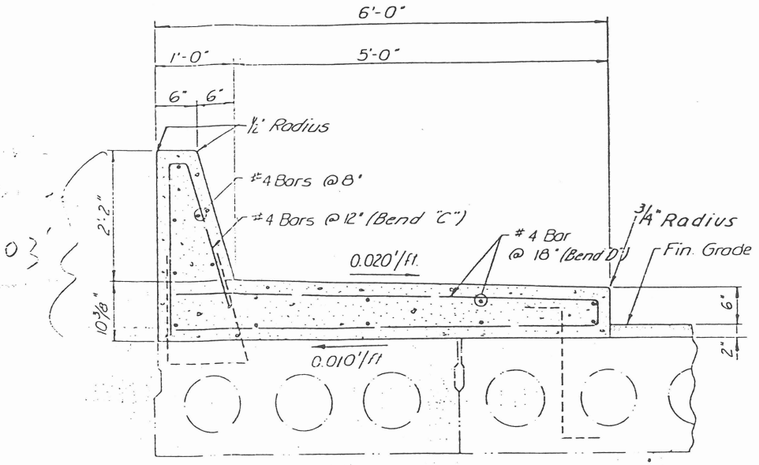
Re more Dimensions and Details see Exterior Unit of Left Hand Side.

TYP. SECTION – INTERIOR UNIT

Scale 1" - 1'-0"



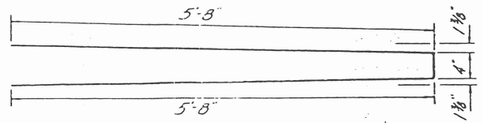
Bend "C"



NOTE: Continue the ½" transverse joint in the wearing surface (See Sheet 7) thru the curb and sidewalk.

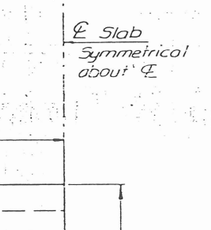
CURB AND SIDEWALK DETAIL

1" - 1'-0"



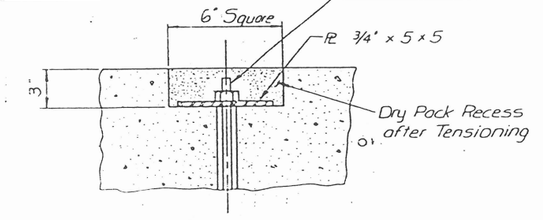
Bend "D"

Bend "B"



Bend "A"

1" Dia. Rod – To Be Transversely Stressed With Stressing Rams, After Units are in Place



DETAIL "A"

(Recess at Exterior Slab Units)

Scale 3" - 1'-0"

NOTES:

1) Provide a Final Prestressing Force of 200,000 lbs With an Eccentricity (e) of 6½" Eccentricity May Be Decreased, But the Prestressing Force Must Be Changed Accordingly.
2) [illegible] PSI, 1" Dia Rods Transversely Stressed to 80K Per Bar. If strands are used in lieu of rods, grout transverse holes full.
3) Use Class "S" 5000 psi Concrete With ¾" Ø Maximum Aggregate for Prestressed Slabs.
4) Contractor Shall Submit Calculations of Losses for the Prestress Units to the Engineer for Approval.
5) Brush Top Surface With Stiff Broom 1½ to 2 Hours After Concrete is Placed to Remove Laitance and Provide Rough Surface for Bonding Wearing Course. Point All Wires That Project From Top to Aid in Bonding Wearing Course.

1837

Revised 2 - Phased Wall Raised 3" Length of Bars bends A.F.C. (D.T.C.M.) 2-2-79

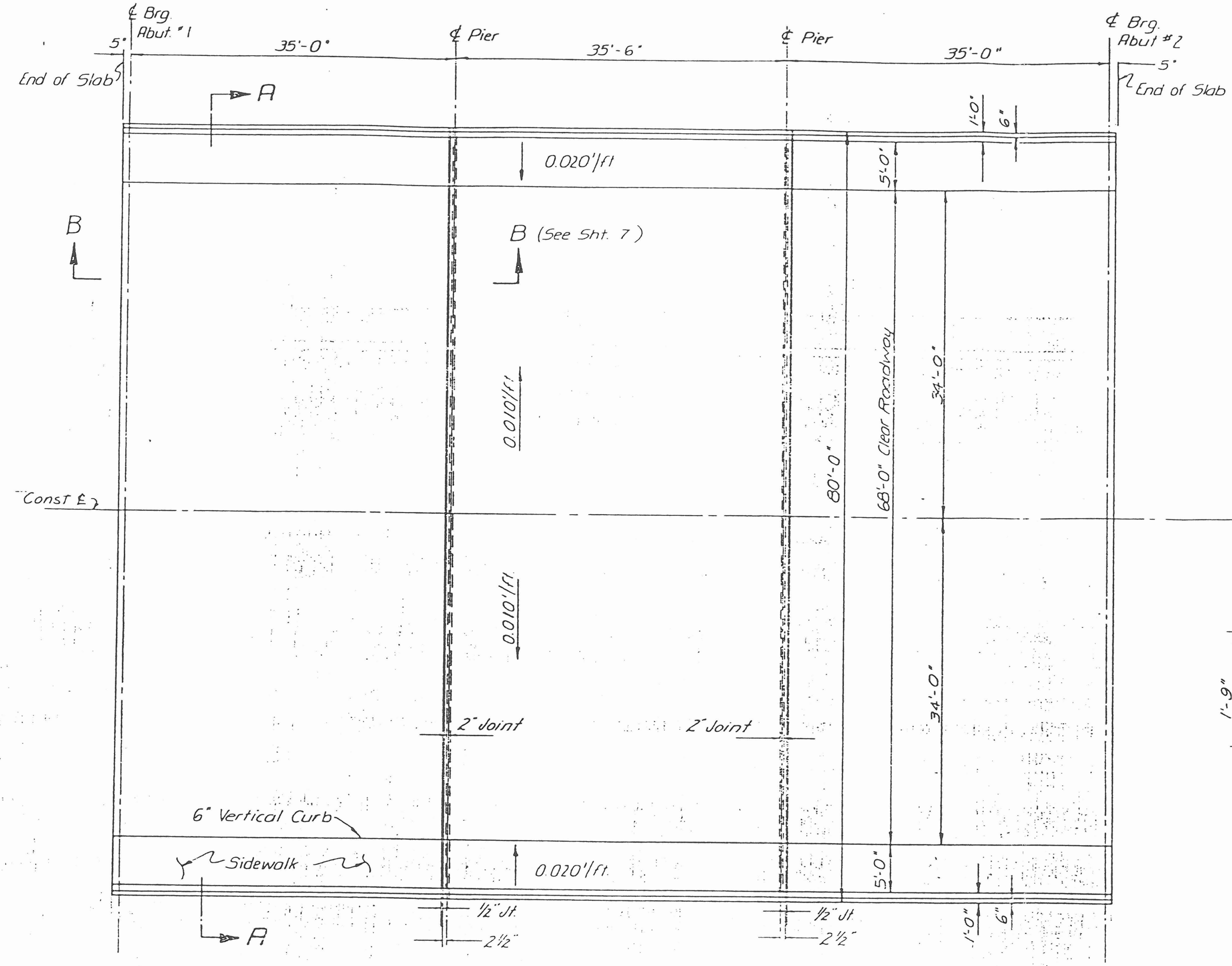
CITY OF SCOTTSDALE

INDIAN BEND WASH
LOW FLOW CHANNEL BRIDGE
PRECAST SLAB DETAILS (ALT-H)

INTERNATIONAL ENGINEERING CO., INC
PHOENIX AREA OFFICE
2936 N. CLEARVIEW AVE.
PHOENIX, ARIZONA 85017
PHONE (602) 263-8638

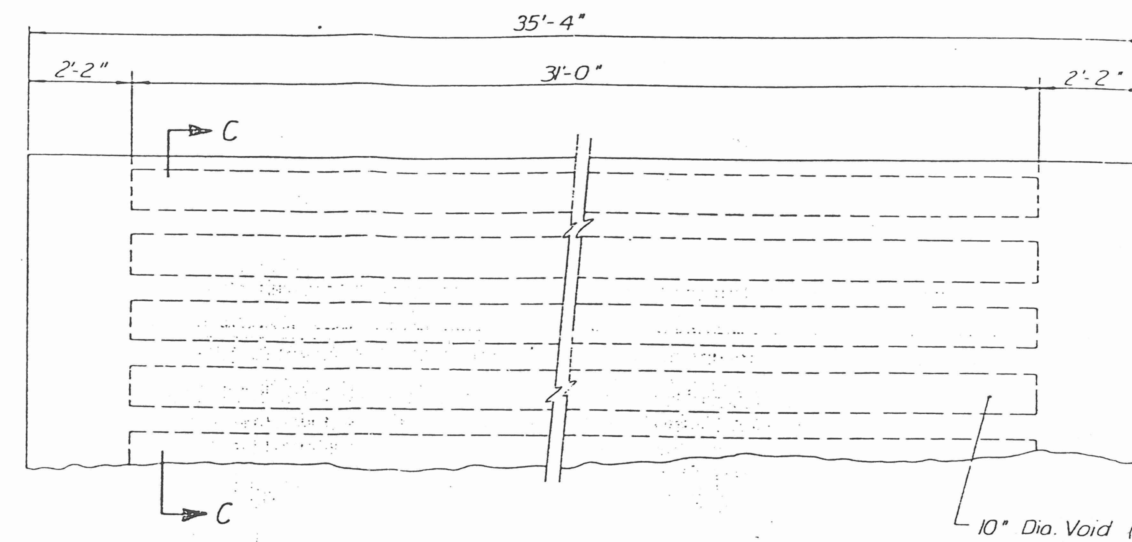
SCALE	DESIGN	RAH	PROJ. B-770
HORIZ 1"=1'-0"	DETAILED	L.G.	SHEET NO.
VERT 1"=1'-0"	CHECKED	RAH	8 OF 22

FC-04



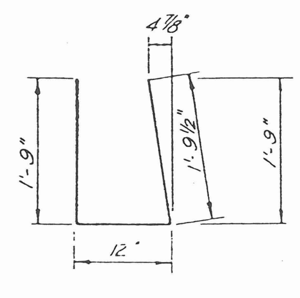
PLAN

Scale: ⅛" - 1'-0"

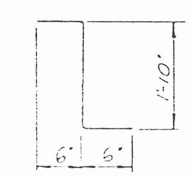


SLAB - PLAN

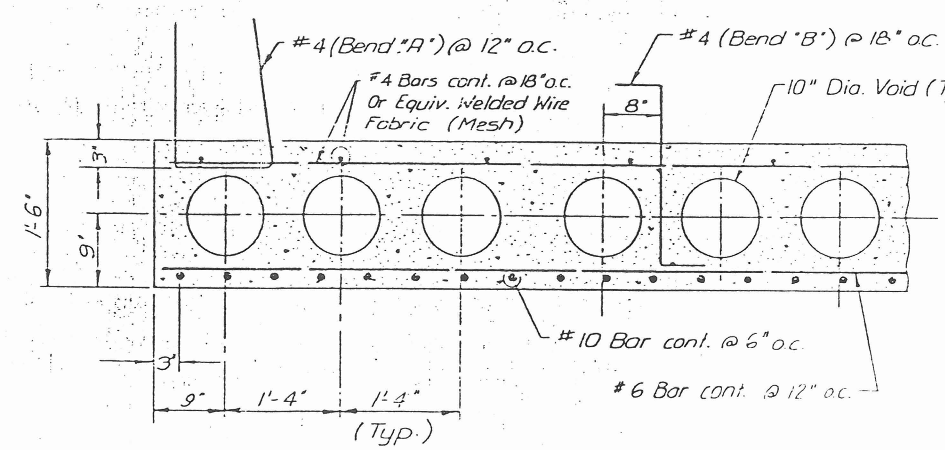
Scale: ½" - 1'-0"



Bend "A"

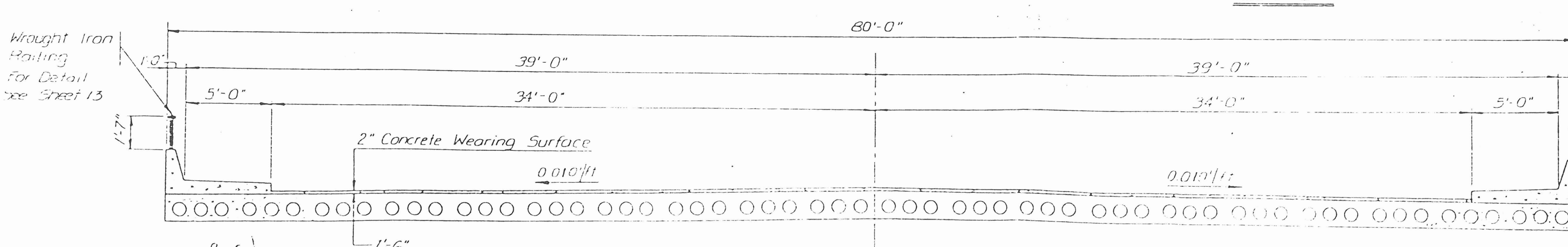


Bend "B"



SECTION C-C

Scale: 1" - 1'-0"



SECTION A-A

Scale: ¼" - 1'-0"

Road Surface — Page 8 Curb

ELTRD = 1250.53 + 3.03 = 1253.56

ELLC = 1250.53 − 1.5 = 1249.03

deck Page 8

NOTES:

Thoroughly presoak deck with water for a time period beginning 24 hours before placing wearing surface.

Use class "D" concrete with ⅜" ɸ maximum aggregate for wearing surface.

Apply epoxy, suitable for use between old and new concrete, immediately before placing class "D" surface. Use approximately 1gal. per 100 sq. ft. of surface.

NOTES:

1) For Curb & Sidewalk Details See Sheet 8
2) Deck May Be Cast in Minimal 4'-0" Widths Providin[g] Steel is Extended Beyond the Pour
3) Use Class "S" 4000 psi. Concrete with ¾" ɸ Maximum Aggregate for Hollow Core Slab
4) Leave Top Surface of Hollow Core Slab Rough and Le[ave] All Wires That Project from the Top to Aid in Bond[ing] the Wearing Course.
5) Cast-in-Place Deck May Be Prestressed as Opposed to the Conventional Reinforcement Shown on the Plans, Subject to the Engineer's Approval of the Contractor's Methods.

13358

12-18-78

Revision 2 - Handrail Lowered 3". Length of Bar Bend A increased 2-2-79

CITY OF SCOTTSDA[LE]

INDIAN BEND WAS[H]
LOW FLOW CHANNEL
DECK DETAILS-CAST-IN-[PLACE]

INTERNATIONAL ENGINE[ERING]
PHOENIX AREA OFFICE

SCALE		
HORIZ 1" =	DESIGN	RAH
VERT 1" =	DRAWN	LG
	CHECKED	RAH

AZ-MIC-16

CITY OF SCOTTSDALE
ARIZONA
MCDONALD DRIVE BRIDGE
PROJECT B-7311-C
1973

INDEX

SHEET	ITEM	
1	FACE SHEET	
2	ROADWAY PLAN & PROFILE	STA 44+00 TO 48+00
3	" " "	STA 48+00 TO 54+00
4	" " "	STA 54+00 TO 60+00
5	" " "	STA 60+00 TO 66+00
6	DETOUR PLAN & PROFILE	
7	ROADWAY DETAILS	
8	BRIDGE - LOCATION PLAN	
9	BRIDGE- FOUNDATION DATA Bad Fische, to dim to read	
10	BRIDGE - ABUTMENT DETAILS	
11	BRIDGE - PIER DETAILS	
12	BRIDGE - DECK DETAILS - WESTBOUND	
13	BRIDGE - DECK DETAILS - WESTBOUND	
14	BRIDGE - DECK DETAILS - EASTBOUND	
15	BRIDGE - DECK DETAILS - EASTBOUND	
16	BRIDGE - HANDRAIL SHEET	

APPROVALS:

Daniel C Raby — 9/21/73
CITY ENGINEER — DATE

CITY COUNCIL

B.L. TIMS, O.D. — MAYOR

RICHARD CAMPANA
HERB R. DRINKWATER
MRS. BILLIE GENTRY
WILLIAM C. JENKINS
HEINZ R. HINK, Ph. D.
PAUL MESSINGER

DALE C. CARTER — CITY MANAGER
FERN ANDERSON NELL — CITY CLERK
MARC G. STRAGIER — PUBLIC WORKS DIRECTOR
DAN RABY — CITY ENGINEER

MARICOPA COUNTY:

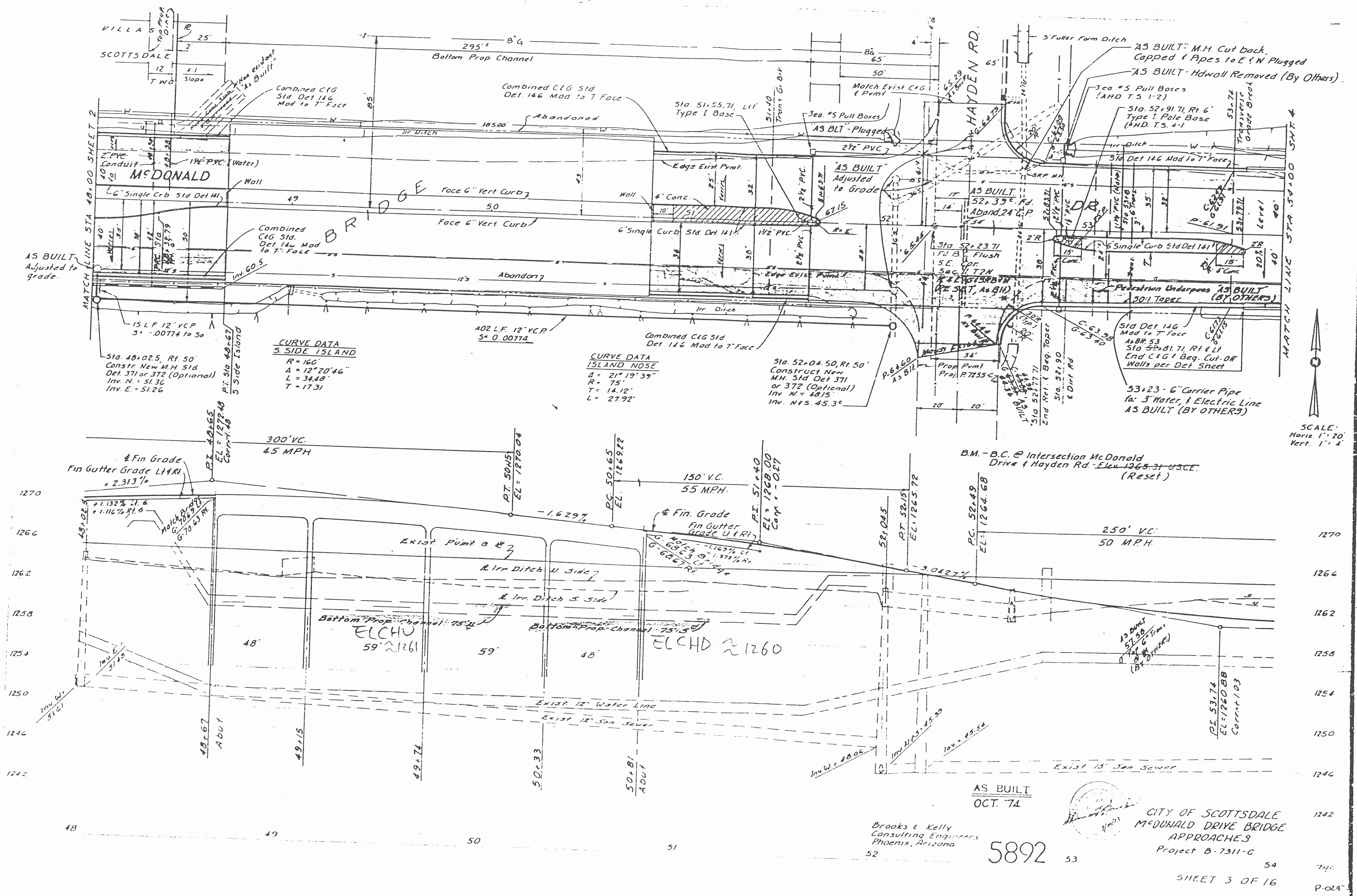
John E Lovell — Oct 22, 1973
FLOOD CONTROL DISTRICT — DATE

HOFFMAN-MILLER (BRIDGE)
ENGINEERS INC.
PHOENIX, ARIZONA

AS BUILT
OCT. '74

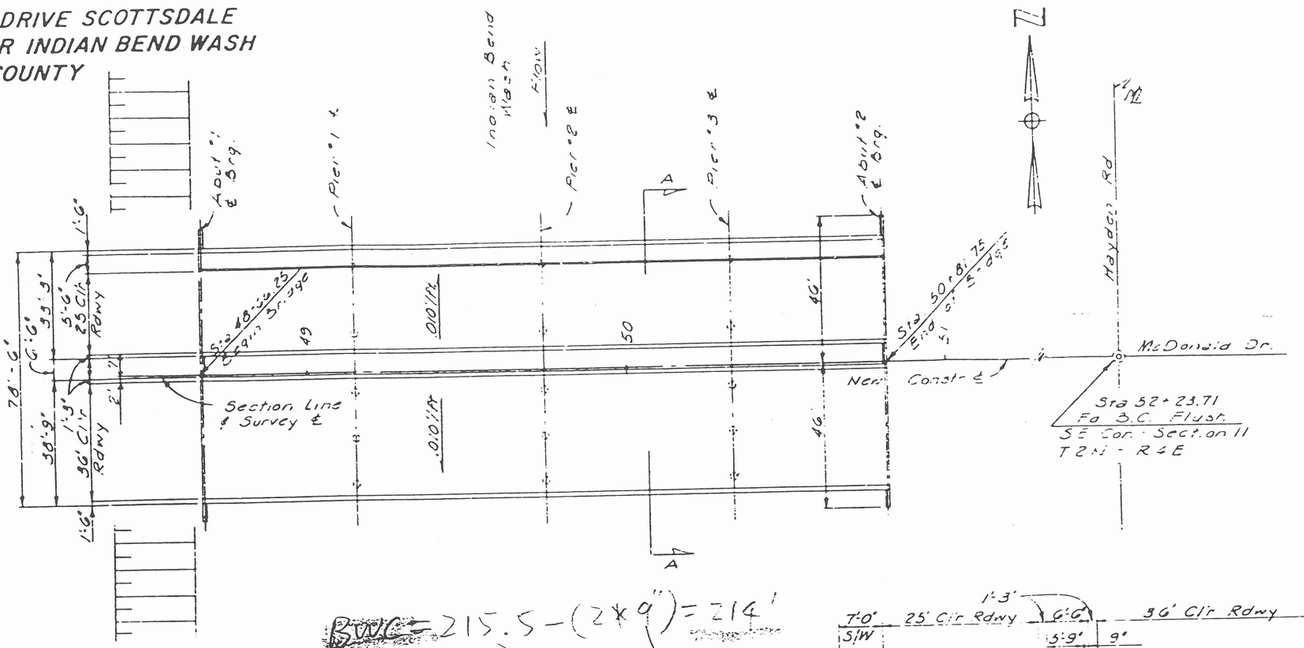
BROOKS & KELLY (APPROACHES)
CONSULTING ENGINEERS
PHOENIX, ARIZONA

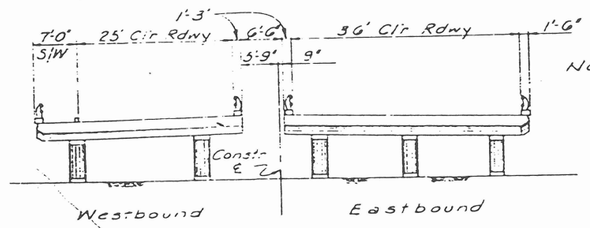
5890



VILLAS
SCOTTSDALE
McDONALD
BRIDGE
HAYDEN RD.
DR.
MATCH LINE STA 48+00 SHEET 2
MATCH LINE STA 54+00 SHT. 4
Bottom Prop Channel
Combined C&G Std Det 146 Mod to 7" Face
Abandoned
Irr Ditch
Face 6" Vert Curb
6" Single Curb Std Det 141
AS BUILT Adjusted to grade.
15 LF 12" VCP
402 L.F. 12" V.C.P. S = 0.00774
Sta. 48+02.5, Rt. 50' Constr. New M.H. Std Det. 371 or 372 (Optional) Inv. N. = 51.36 Inv. E. = 51.26
CURVE DATA S. SIDE ISLAND
R = 160' Δ = 12°20'46" L = 34.48' T = 17.31
CURVE DATA ISLAND NOSE
Δ = 21°19'39" R = 75' T = 14.12' L = 27.92'
Sta. 52+04.50, Rt 50' Construct New M.H. Std Det 371 or 372 (Optional) Inv. W. = 48.15' Inv. N+S. 45.3±
"AS BUILT" M.H. Cut back. Capped & Pipes to E & W Plugged
"AS BUILT" - Hdwall Removed (By Others)
3 ea. #5 Pull Boxes (AHD T.S. 1-2)
Sta. 52+91.71, Rt 6' Type I Pole Base (AHD. T.S. 4-1)
"AS BUILT" Adjusted to Grade
Pedestrian Underpass "AS BUILT" (BY OTHERS)
53+23 - 6" Carrier Pipe for 3" Water, & Electric Line AS BUILT (BY OTHERS)
SCALE: Horiz. 1" = 20' Vert. 1" = 4'
B.M. - B.C. @ Intersection McDonald Drive & Hayden Rd. Elev. 1265.31 U.S.C.E. (Reset)
300' V.C. 45 MPH
150' V.C. 55 M.P.H.
250' V.C. 50 M.P.H.
Exist Pvmt @ ℄
℄ Irr Ditch N. Side
℄ Irr. Ditch S. Side
Bottom Prop Channel 75'±
Exist 12" Water Line
Exist 12" San Sewer
Exist 15" San Sewer
ELCHU 59' ≈1261
ELCHD ≈1260
AS BUILT OCT. '74
Brooks & Kelly Consulting Engineers Phoenix, Arizona
CITY OF SCOTTSDALE McDONALD DRIVE BRIDGE APPROACHES Project B-7311-C
5892
SHEET 3 OF 16
P-024

MC DONALD DRIVE SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY





BWC = 215.5 - (2*9") = 214'

STA 49+
LOCATION PLAN
New 4-Span Cont. R.C. Slab Bridge
25'-0" & 36'-0" Clear Roadways
Scale: 1"=20'

GENERAL NOTES

Construction:
Standard Specifications. Arizona Highway Dept., 1969.

Design:
A.A.S.H.O. Specifications for Highway Bridges, 1969.

Loading Class:
MS 20 - 42

Allowable Stresses:
Class A Conc. fc = 1000 #/in², n=12
Class S Conc. fc = 1600 #/in², n=8

Reinforcing Steel shall conform to A.S.T.M. Specifications A 615 - Grade 40.

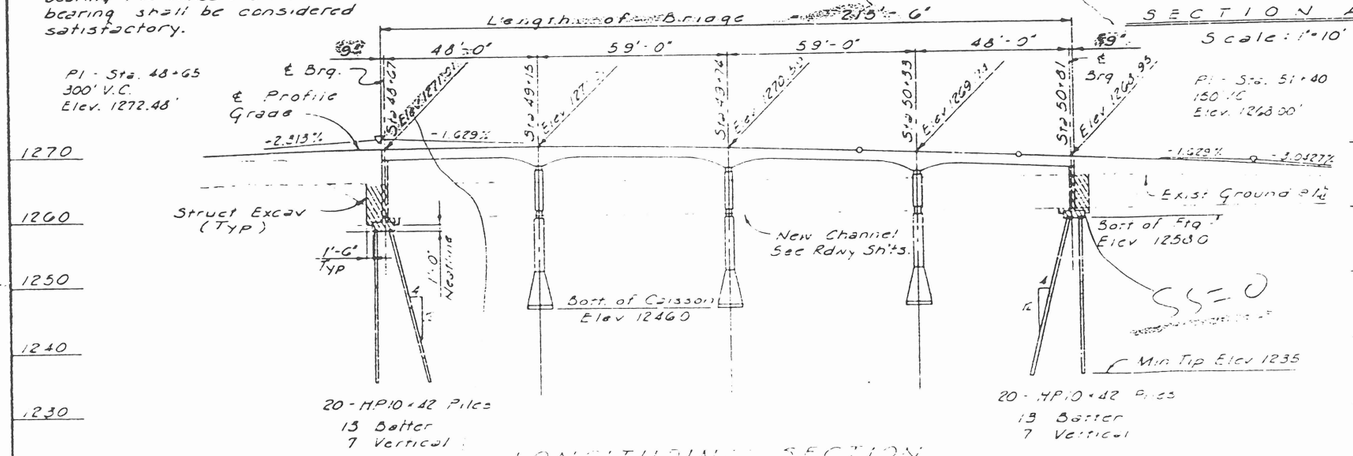
All dimensions for reinforcing steel shall be to center of bars unless otherwise noted.

Curbs and Sidewalks shall be poured to grade without camber after falsework has been struck.

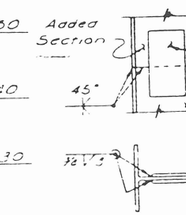
No dimensions to be scaled from drawings.

PILE NOTES

All Piles to be HP10 x 42 and driven to a min. bearing of 90 Tons @ a min Tip Elev 1235.
Any Pile driven within 3' of the min tip elevation and to a bearing 1¾ times the minimum bearing shall be considered satisfactory.



LONGITUDINAL SECTION
Scale: 1"=20' Horiz.: 1"=10' Vert.



SECTION A-A
Scale: 1"=10'

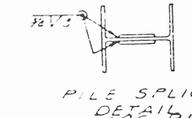
"**" - SEE C.O. No. 1 (Bridge)

QUANTITIES

ITEM	Struct Excav C.Y.	Spec. Comp. C.Y.	Concrete C.Y. "A"	Concrete C.Y. "S"	Reinf. Steel LBS.	Metal Hndrl L.F.	Piling HP 10-42 NO.	Piling HP 10-42 L.F.
Deck*				1006.27	270,100	829.33	40	~~840~~ 936.4
Piers				195.62	19,250			
2 Abut's	380	250	~~166.65~~ 166.65		~~17,313~~ 17,313			
Totals	380	250	~~166.65~~ 166.65	1221.89	~~306,663~~ 306,663	829.33	40	~~840~~ 936.4

* Includes Dados & Curbs

NOTE: When piling is to be spliced for further driving, upper section shall be lowered on section in place and tapped lightly to full bearing before butt welds are made. When piling is to be spliced without further driving, omit guide R's and make welds continuous across web.



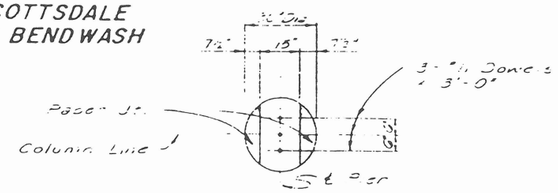
5897

CITY OF SCOTTSDALE
Scale As Noted | LOCATION PLAN | Drawing No. R-4-S
Date MAY 73 | Revised
STA 49+ McDONALD DRIVE BRIDGE OVER INDIAN BEND WASH
HOFFMAN-MILLER ENGINEERS INC. PHOENIX ARIZONA | Drawing Number 8 of 16

EOFRD = 1271.01

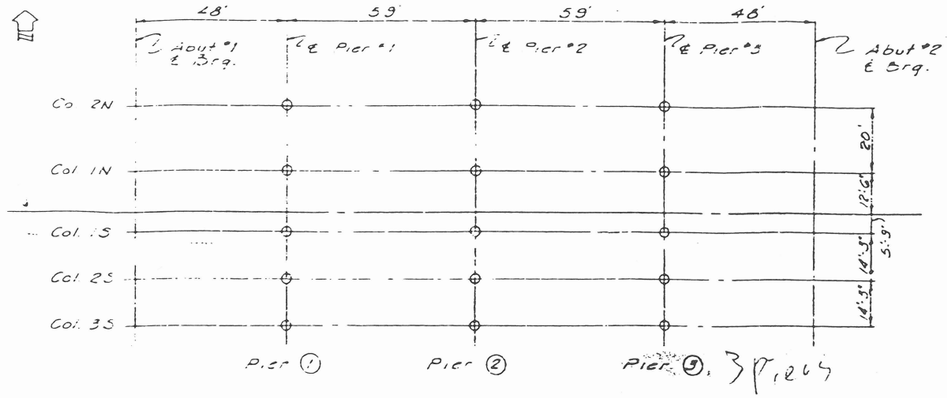
EOLF = 1271.01 - 2' = 1269.34

MC DONALD DRIVE SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY

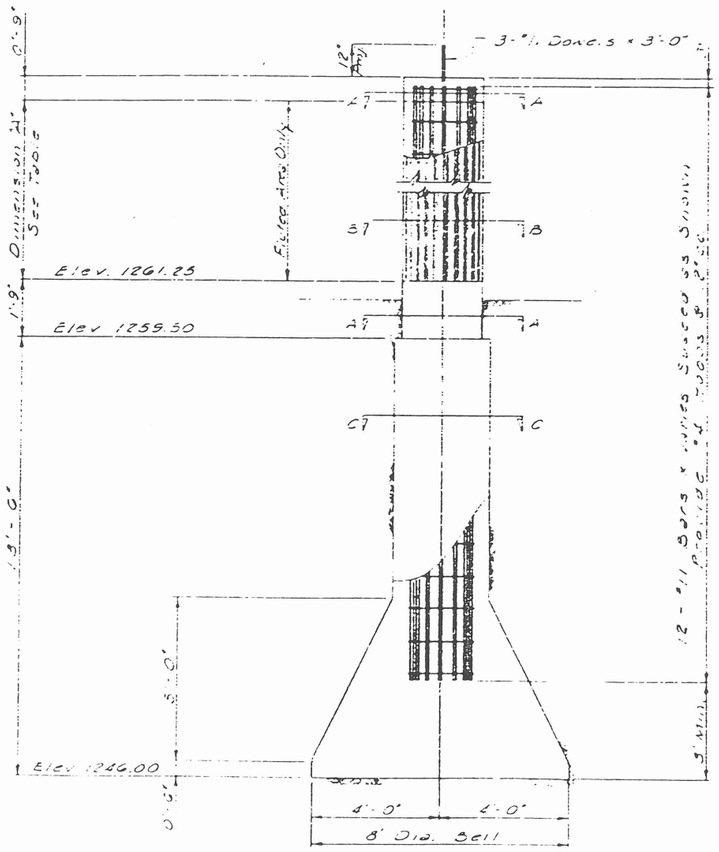


TOP VIEW

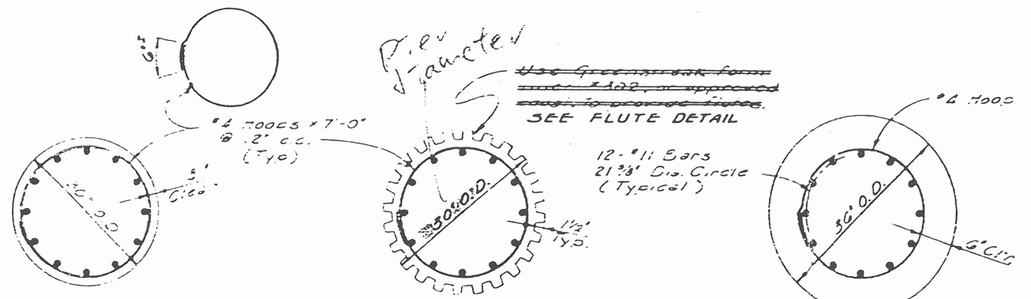
Section Line
℄ Survey ℄



PIER LAYOUT DIAGRAM
No Scale



TYPICAL PIER COLUMN
Scale: 1/2" = 1'-0"

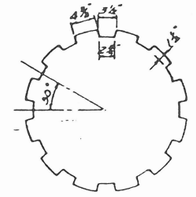


Pier Junction
Use Greenstreak form or approved equal to provide flutes.
SEE FLUTE DETAIL

COLUMN SECTIONS
Scale: 1" = 1'-0"

Dimension "A"	COLUMN LINE				
	1N	2N	1S	2S	3S
Pier (1)	5'-10 3/8"	5'-8 1/4"	5'-11 7/8"	5'-9 5/8"	5'-8"
Pier (2)	5'-3 3/8"	5'-3 1/8"	5'-6 3/8"	5'-4 3/8"	5'-3"
Pier (3)	4'-7 3/8"	4'-5"	4'-8 1/4"	4'-6 1/2"	4'-4 3/8"

DIMENSION TABLE



FLUTE DETAIL
Scale: 1" = 1'-0"

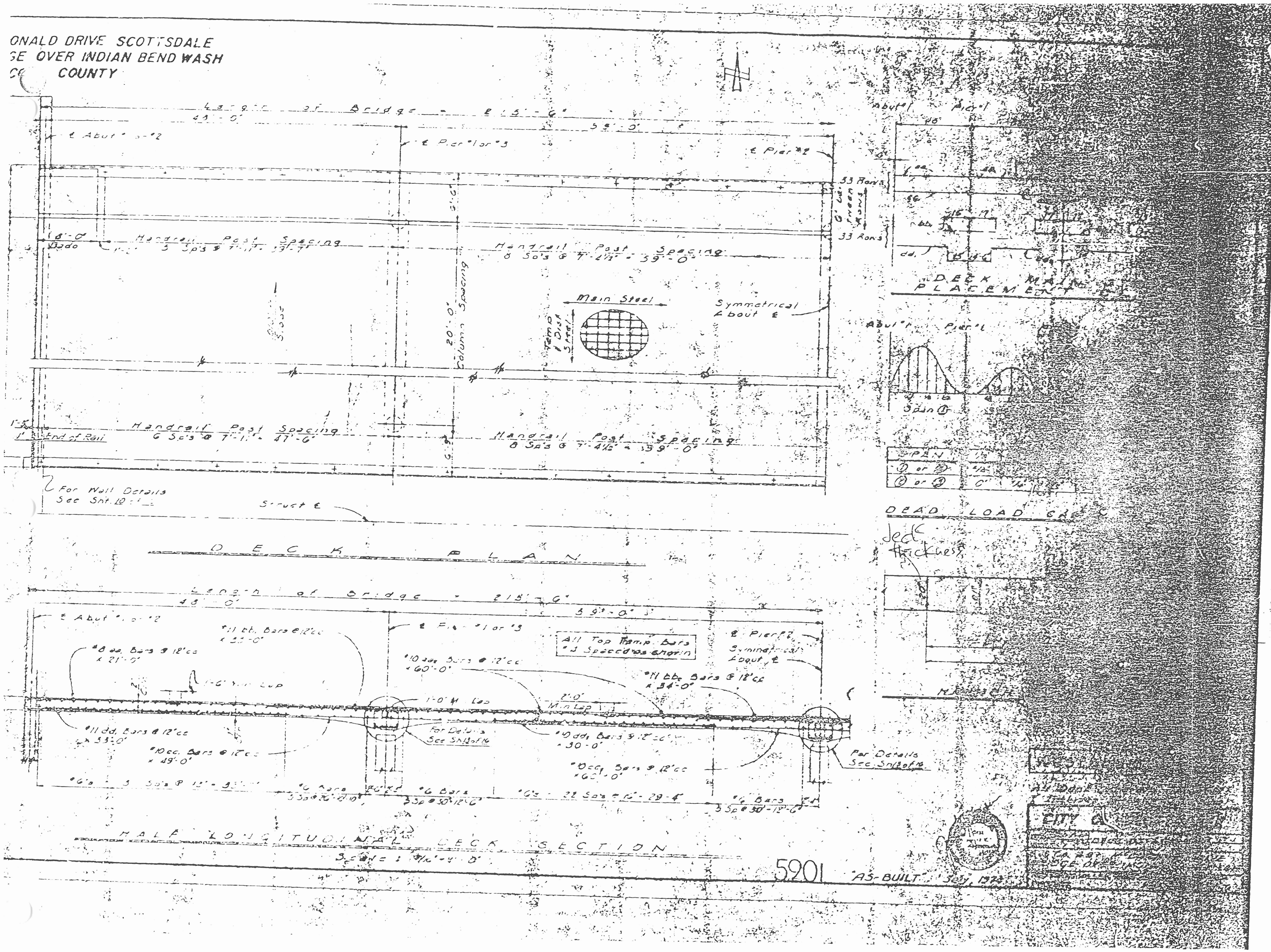
ALL PIER CONCRETE CLASS 'S'

CITY OF SCOTTSDALE

PIER DETAILS	DRAWN BY JVJ
STA 49 - McDONALD DRIVE BRIDGE OVER INDIAN BEND WASH	
HOFFMAN-MILLER ENGINEERS INC. PHOENIX ARIZONA	DRAWING NUMBER 11 of 13

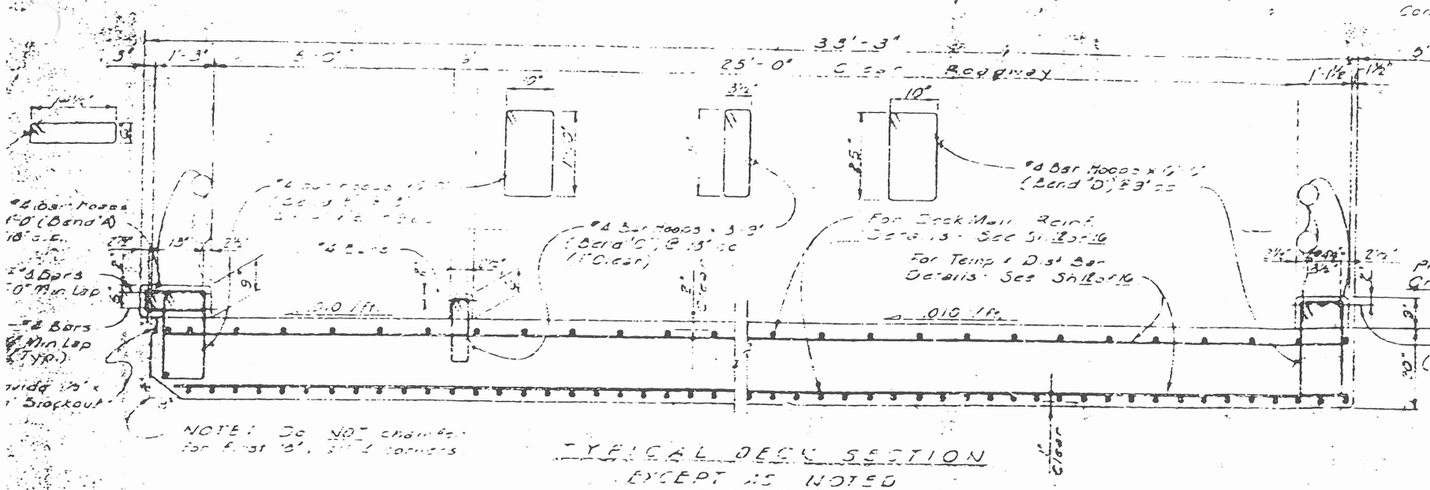
"AS-BUILT" July, 1974

5900

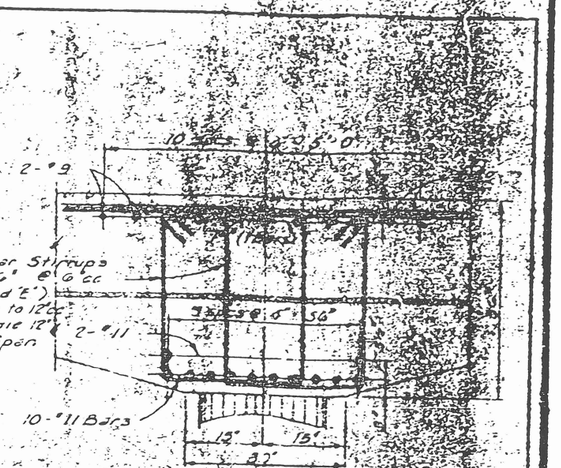


ONALD DRIVE SCOTTSDALE
GE OVER INDIAN BEND WASH
COUNTY
Handrail Post Spacing
8 Sp's @ 7'-4½" = 39'-0"
Main Steel
Symmetrical About ℄
20'-0" Column Spacing
33 Rows
33 Rows
Handrail Post Spacing
6 Sp's @ 7'-11" = 47'-6"
End of Rail
For Wall Details See Sht. 10
Struct ℄
DECK PLAN
DECK MAIN PLACEMENT
Span ①
DEAD LOAD
Deck thickness
Length of Bridge = 215'-6"
43'-0"
39'-0"
℄ Abut't 1 or 2
℄ Pier 1 or 3
℄ Pier 2
All Top Temp. Bars #4 Spaced as shown
#11 bb. Bars @ 12" cc × 33'-0"
#8 aa. Bars @ 12" cc × 21'-0"
#10 aa. Bars @ 12" cc × 60'-0"
#11 bb. Bars @ 12" cc × 34'-0"
Symmetrical About ℄
1'-0" Min. Lap
2'-0" Min. Lap
#11 dd. Bars @ 12" cc × 33'-0"
#10 cc. Bars @ 12" cc × 49'-0"
For Details See Sht. 8 of 16
#10 dd. Bars @ 12" cc × 30'-0"
#10 cc. Bars @ 12" cc × 60'-0"
For Details See Sht. 8 of 16
HALF LONGITUDINAL DECK SECTION
Scale: 3/16" = 1'-0"
5201
"AS-BUILT" July, 1973
CITY

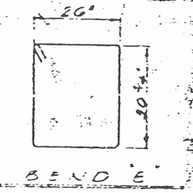
MC DONALD DRIVE SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
'COPA COUNTY



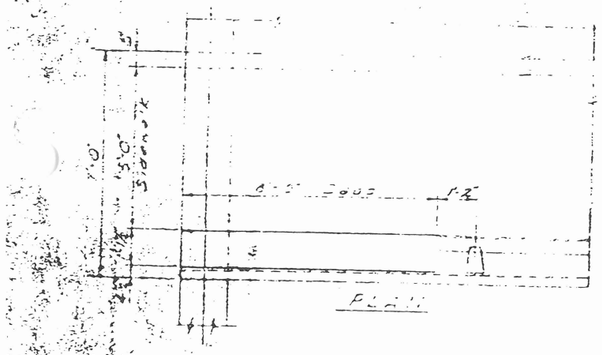
TYPICAL DECK SECTION
EXCEPT AS NOTED
Scale: ¾" = 1'-0"



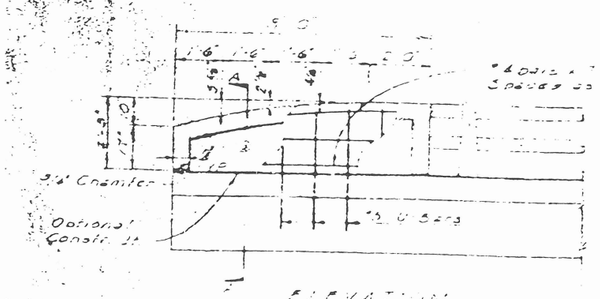
TRANSVERSE DECK REINFORCING DETAIL
Scale: 1" = 1'-0"



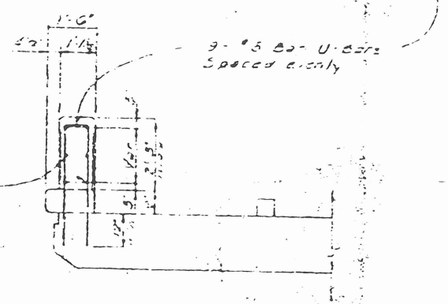
BEND 'E'



PLAN

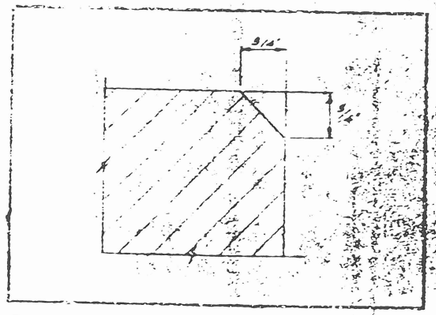


ELEVATION



SECTION 4A

DECK DETAILS
Scale: ¾" = 1'-0"



Chamfer all exposed corners and edges thus, unless otherwise noted.

WESTBOUND ONLY

All Deck Concrete Class 'S' Includes Drops & Curbs

CITY OF SCOTTSDALE		
Noted	DECK DETAILS	APB
STA 49 - McDONALD DRIVE BRIDGE OVER INDIAN BEND WASH		
HOFFMAN-MILLER ENGINEERS INC. PHOENIX	ARIZONA	15 of 16

5902 "AS-BUILT" July, 1974

AZ-MC-16

CITY OF SCOTTSDALE

CAPITAL IMPROVEMENTS ENGINEERING

BOX CULVERT INLET PROTECTION

WEST SIDE SCOTTSDALE RD. & McCORMICK PARKWAY

PROJECT NO. # **8502**

BID CALL # **82-43**

COUNCIL

HERB DRINKWATER (Mayor)

[illegible] BRUNER

WILLIE AYLENE GENTRY

[illegible] D. GILBRAITH

JEAN L. BLACK

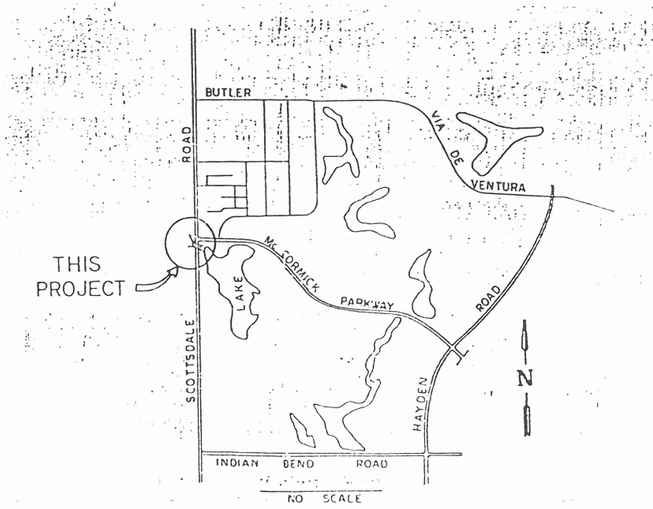
[illegible]

[illegible]

[illegible]

CITY ATTORNEY

[illegible]



SHEET INDEX

1 - - - - COVER SHEET & VICINITY MAP
2 - - - - PLAN, SECTIONS & NOTES

Dept. Head	DMP 1-27-82	1/27/82	Dick Schaner 1/28/82
Public Works Engineering	[illegible] 1-26-82	1/27/82	
Field Services	[illegible]	1/28/82	Dick Schaner 1/28/82
Parks	[illegible]	1/28/82	

NOT AS-BUILT

[illegible] Bill Adamson 1-11-82

16272

8502

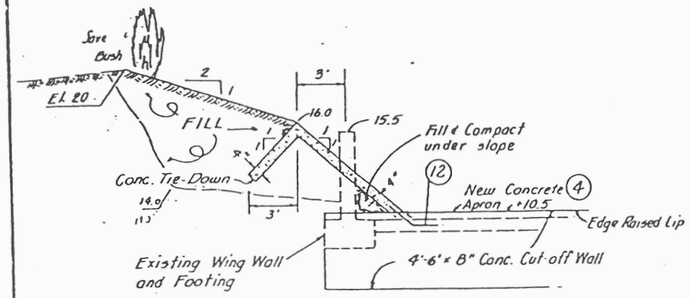
1 2

M-090

BID CALL # 82-43

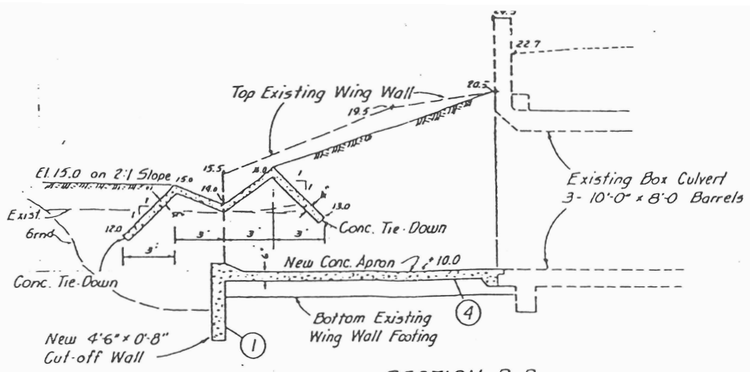
BOX CULVERT INLET PROTECTION - WEST SIDE SCOTTSDALE ROAD & McCORMICK PARKWAY

8-M-82 2A/11



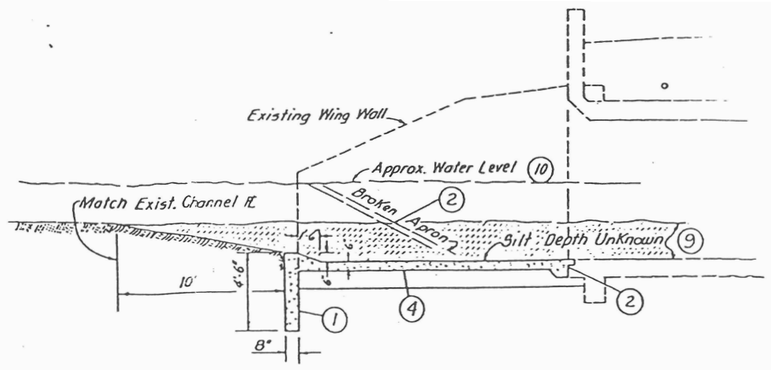
SECTION A-A

N.T.S.



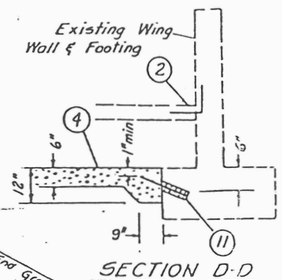
SECTION B-B

N.T.S.



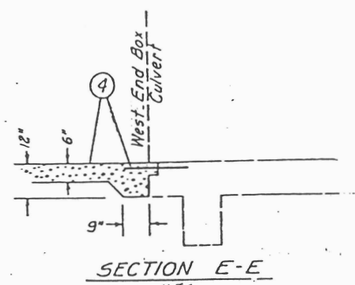
SECTION C-C

N.T.S.



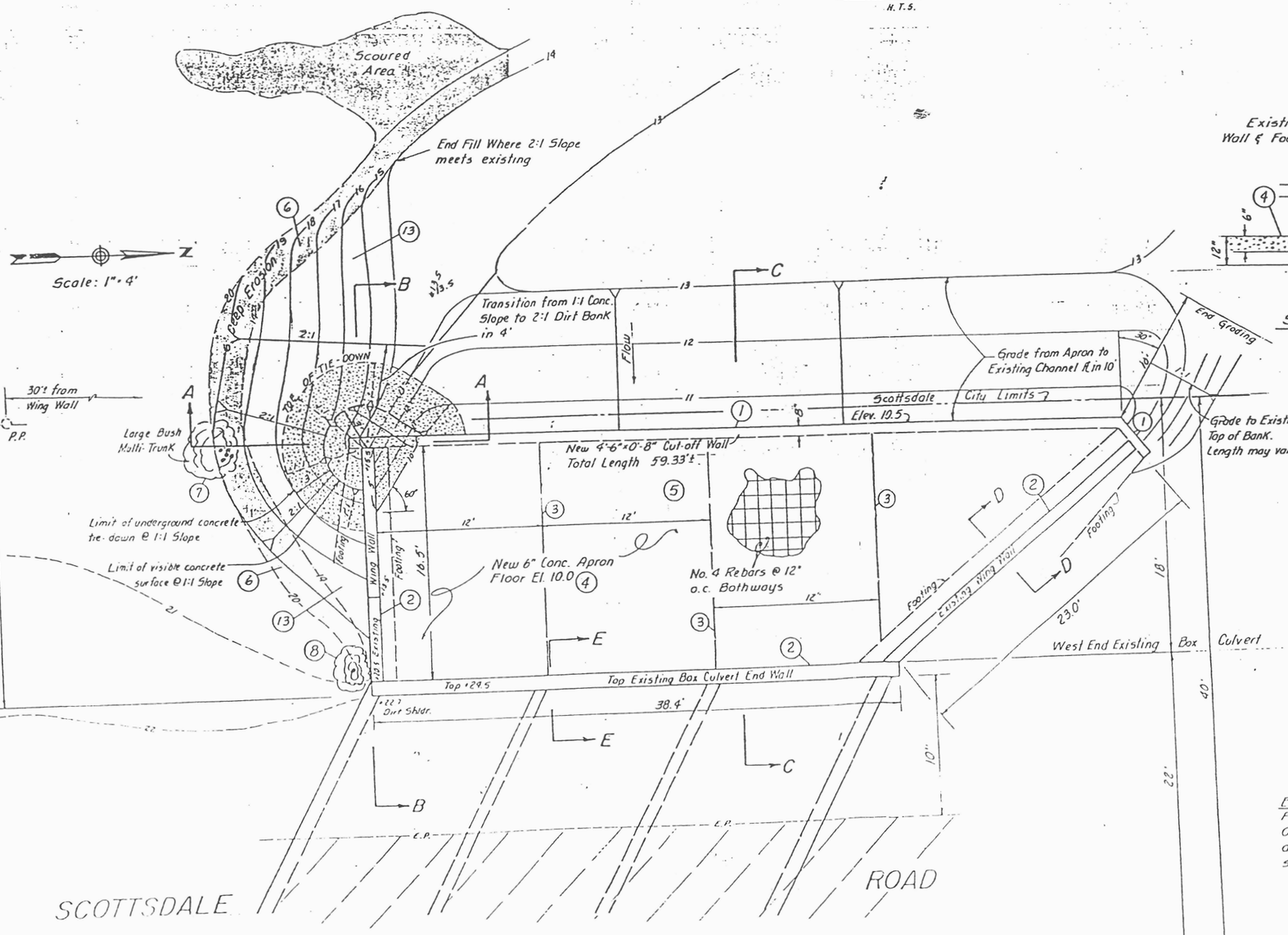
SECTION D-D

N.T.S.



SECTION E-E

N.T.S.



SCOPE OF WORK

1. New Apron Cut-off Wall to extend in front of existing wing wall footings (Both Sides).
2. Remove existing Broken Apron. Chip concrete from ties, cut ties in existing walls and grout holes to a smooth finish. Compact apron subgrade to 90%.
3. Expansion Joints in Apron.
4. Install New Concrete Apron, use existing ties if possible To anchor new Apron (See Section E-E) Modified A.D.O.T. Std. No. CWA-1, Plan No. B-06.10, or connect with dowels (See Section D-D).
5. A portion of the existing apron has been damaged and removed. Contractor to remove the remaining damaged apron to the floor of the Box (See Section C-C). Then pour new apron as shown. Old Apron may be used as Base for fill of Scoured Area (See Work Item 6).
6. Compact fill Slope (6' Deep Eroded Area) to design grade with hand held vibrator tamper or other means when working within 10' of bush.
7. Cut branches of large bush back to main trunk on north side only.
8. Remove Bush.
9. Silt to be removed from Box and Apron, and full length of Box.
10. Excavation work includes damming lake water ponding in Culvert; pumping the work area dry, and removal of Dam after work is completed. Contractor to decide how to Dam the water from the Lake. Method to be approved by the Engineer.
11. #6 Dowel x 1'-9" Lg. @ 12" O.C. Drill & Set in an approved non-shrink grout or epoxy 8" into existing concrete.
12. #4 Dowels extend into New Tie-Down Slope 1'-0" on 12" centers.
13. 9" Thick Class B Concrete on 12 gauge wire mesh throughout slope on surface of bank and Tie-down under new fill.

Elevation Datum

Floor of Existing Box is Assumed Elev 10.0. Other existing points are marked with a + and the Elev. relative to the Base 10.0 are shown next to the +.

16273

DATE	REVISION	BY

CITY OF SCOTTSDALE, ARIZONA

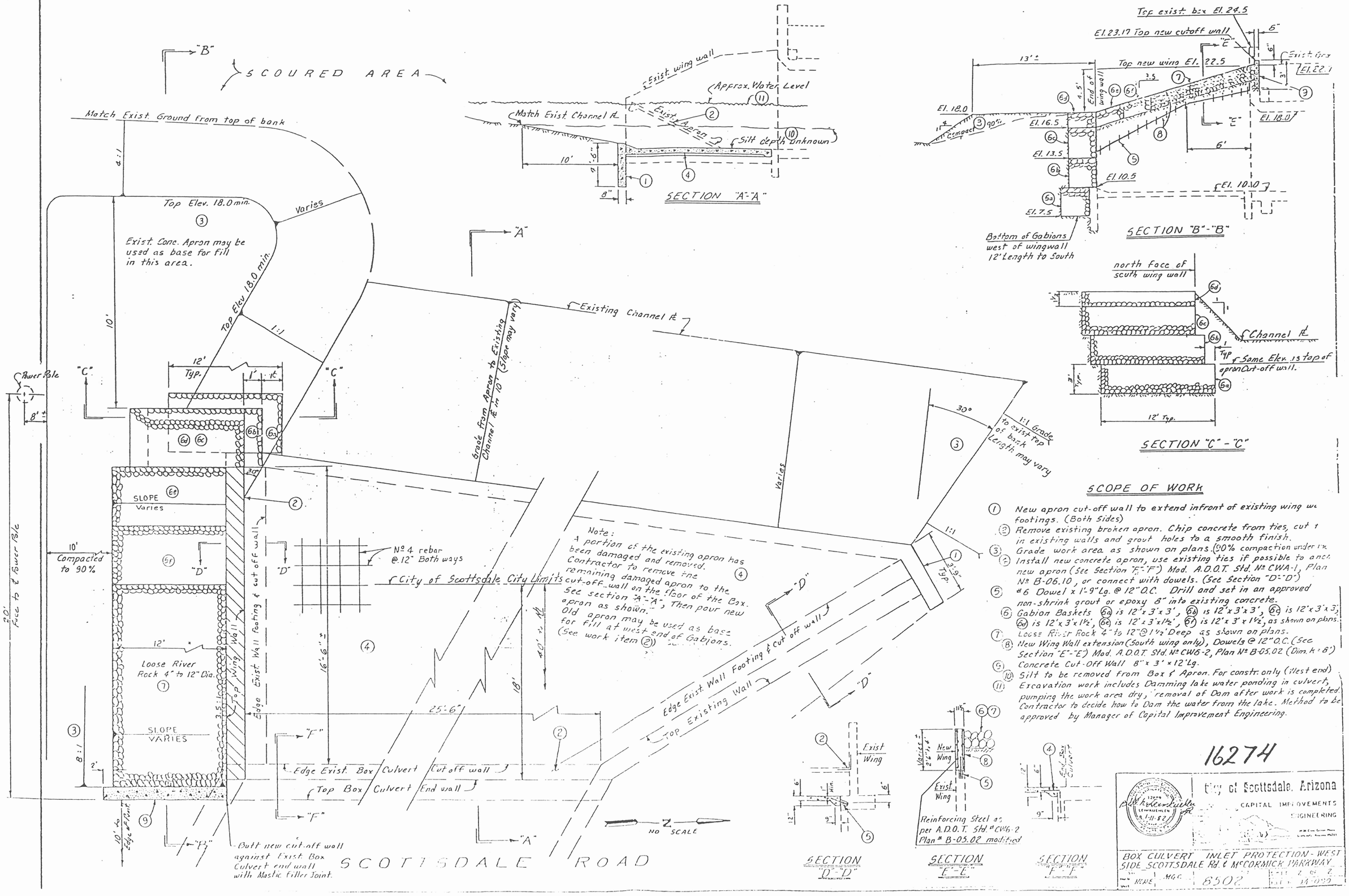
COMMUNITY DEVELOPMENT DEPARTMENT

CAPITAL IMPROVEMENTS ENGINEERING

3939 Civic Center Plaza
Scottsdale, Arizona 85251

BOX CULVERT INLET PROTECTION - WEST SIDE SCOTTSDALE RD. & McCORMICK PARKWAY.

SCALE	PROJECT	SHEET 2 OF 2	AS BUILT
1" = 4'	8502	DES. MGC CHK. BY BL	Date
HOR. N/A		DWG. M-090	By


"B"
SCOURED AREA
Match Exist. Ground From top of bank
4:1
Top Elev. 18.0 min.
Varies
Exist. Conc. Apron may be used as base for Fill in this area.
Top Elev. 18.0 min.
1:1
10'
12' Typ.
1' ± ℄
"C"
"C"
Power Pole
8' ±
SLOPE Varies
10' Compacted to 90%
2.0' Face to ℄ Power Pole
12' Loose River Rock 4" to 12" Dia.
Top Wing Wall
Edge Exist Wall footing & cut off wall
16'-6" ±
3.5:1
8:1
SLOPE VARIES
2'
10' ± Edge of Flow
"D"
"D"
№4 rebar @12" Both ways
City of Scottsdale City Limits
"F"
"F"
Edge Exist. Box Culvert Cut off wall
Top Box Culvert End wall
"B"
Butt new cut-off wall against Exist. Box Culvert end wall with Mastic Filler Joint.
"A"
Existing Channel ℄
Grade from Apron to Existing Channel ℄ in 10' (Slope may vary)
Varies
30°
1:1 Grade to exist top of bank Length may vary
1:1
3.9' Typ.
Edge Exist Wall Footing & Cut off wall
Top Existing Wall
"D"
40' ± ℄
18'
25'-6"
NO SCALE
SCOTTSDALE ROAD
"A"
Exist. wing wall
Approx. Water Level
Match Exist. Channel ℄
Exist. Apron
Silt depth Unknown
10'
1'-0"
8"
SECTION "A"-"A"
Top exist. box El. 28.5
El. 23.17 Top new cutoff wall
6"
"E"
Exist. Conc.
El. 22.1
13' ±
Top new wing El. 22.5
3.5
3'
End of wing wall
4.5'
El. 18.0
1' ± Compact
90°
El. 16.5
El. 13.5
El. 10.5
El. 7.5
"E"
El. 18.0
6'
El. 10.10
Bottom of Gabions west of wingwall 12' Length to South
SECTION "B"-"B"
north face of south wing wall
1
1
℄ Channel ℄
Typ
Same Elev. is top of apron Cut-off wall.
3' Typ.
12' Typ.
SECTION "C"-"C"
SCOPE OF WORK
(1) New apron cut-off wall to extend infront of existing wing wa footings. (Both Sides)
(2) Remove existing broken apron. Chip concrete from ties, cut r in existing walls and grout holes to a smooth finish.
(3) Grade work area as shown on plans. (90% compaction under Ite
(4) Install new concrete apron, use existing ties if possible to anch new apron (See Section "F"-"F") Mod. A.D.O.T. Std. № CWA-1, Plan № B-06.10, or connect with dowels. (See Section "D"-"D")
(5) #6 Dowel x 1'-9" Lg. @ 12" O.C. Drill and set in an approved non-shrink grout or epoxy 8" into existing concrete.
(6) Gabion Baskets (6a) is 12'x3'x3', (6b) is 12'x3'x3', (6c) is 12'x3'x3', (6d) is 12'x3'x1½', (6e) is 12'x3'x1½', (6f) is 12'x3'x1½', as shown on plans.
(7) Loose River Rock 4" to 12" @ 1½' Deep as shown on plans.
(8) New Wing Wall extension (South wing only), Dowels @ 12" O.C. (See Section "E"-"E") Mod. A.D.O.T. Std. № CWG-2, Plan № B-05.02 (Dim. k = 6')
(9) Concrete Cut-Off Wall 8" x 3' x 12' Lg.
(10) Silt to be removed from Box & Apron. For constr. only (West end)
(11) Excavation work includes Damming lake water ponding in culvert, pumping the work area dry, removal of Dam after work is completed. Contractor to decide how to Dam the water from the lake. Method to be approved by Manager of Capital Improvement Engineering.
Note: A portion of the existing apron has been damaged and removed. Contractor to remove the remaining damaged apron to the cut-off wall on the floor of the Box. See section "A"-"A", Then pour new apron as shown. Old apron may be used as base for fill at west end of Gabions. (See work item (2))
(4)
(2)
(5)
SECTION "D"-"D"
New Wing
Exist Wing
Varies 2'-6" ± 4"
Reinforcing Steel as per A.D.O.T. Std. # CWG-2 Plan # B-05.02 modified
SECTION "E"-"E"
End of Box
SECTION "F"-"F"
16274
City of Scottsdale, Arizona
CAPITAL IMPROVEMENTS
ENGINEERING
BOX CULVERT INLET PROTECTION - WEST SIDE SCOTTSDALE Rd. & McCORMICK PARKWAY
DES. MGC
DRN. MGC
CHK.
8502

TOWN OF PARADISE VALLEY

DOUBLETREE RANCH ROAD
INVERGORDON ROAD
PAVING AND BRIDGE PLANS

MAYOR
Barbara von Ammon

VICE MAYOR
J. Duncan Brock

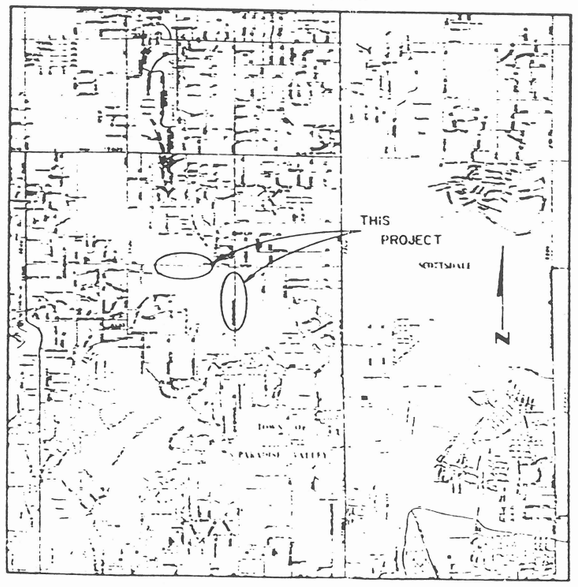
COUNCILMEN
William M. Fulton
John V. Long
Joy P. MacLean
Thomas E. Sunderland
Peter S. Wainwright

TOWN CLERK
Mary Ann Brines

TOWN ENGINEER
Gregory J. Peterka

TOWN MANAGER
Oscar A. Butt

VICINITY MAP



APPROVALS

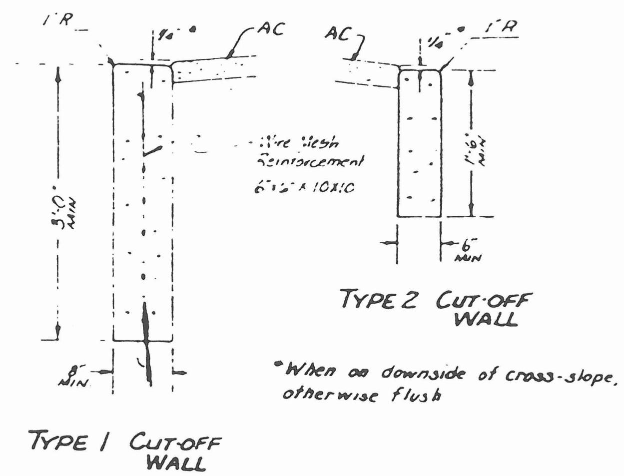
GREGORY J. PETERKA, P.E. — Date
Town Engineer, Town of Paradise Valley

HERBERT P. DONALD, P.E. — July 3, 1979 — Date
Chief Engineer & General Manager,
Flood Control District of Maricopa County

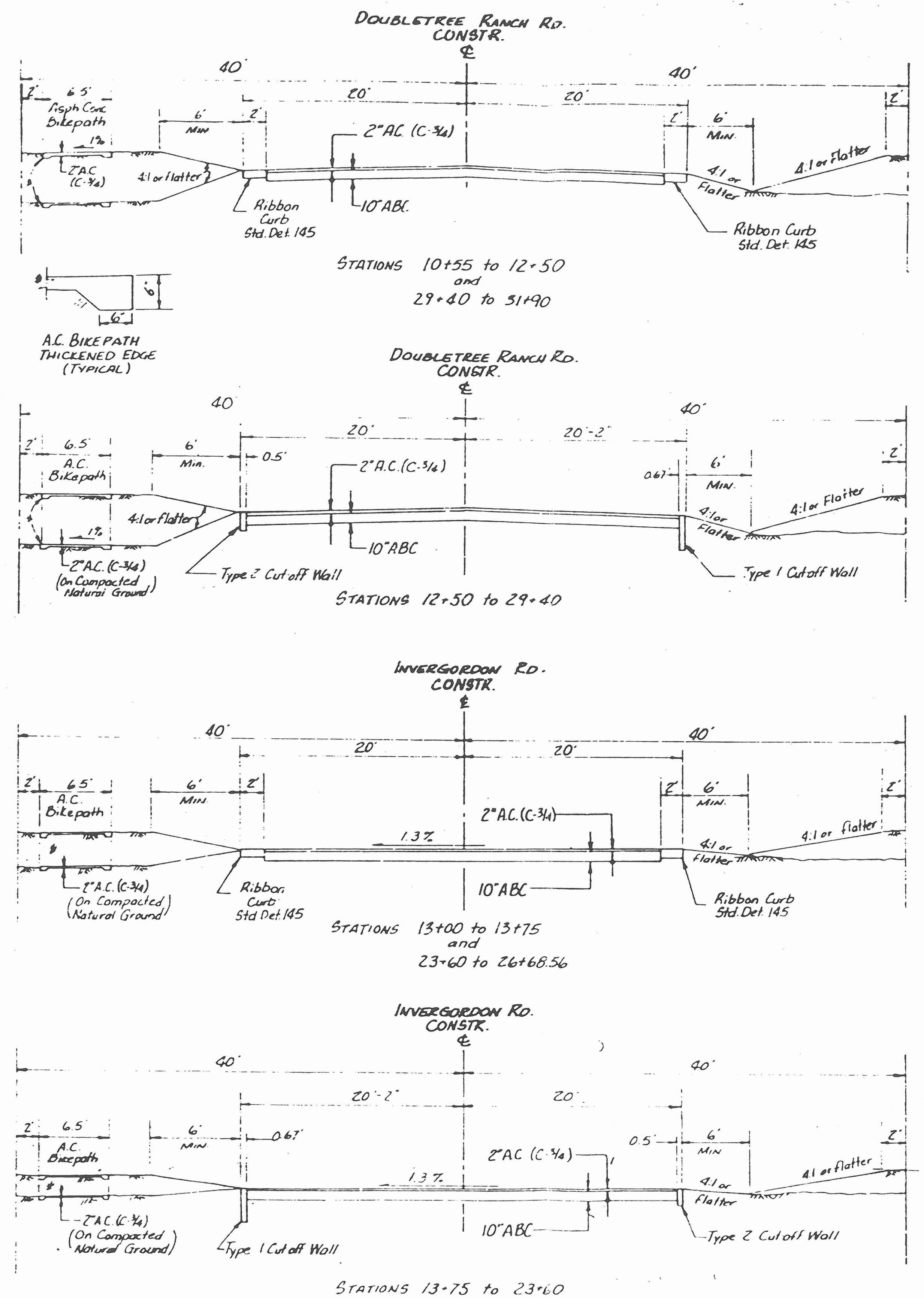
Prepared By:
RITOCH-HERZ-POWELL
Consulting Engineers
4545 N. 27th Avenue
Phoenix, Arizona 246-6538

RHP RITOCH-HERZ-POWELL

DOUBLETREE RANCH ROAD - INVERGORDON ROAD



Note: Type 1 & 2 Cut off wall shall have expansion joints at 30' max. intervals. See ADOT Std RW-1 "Typical Expansion Joint Detail" Only Type 1 Cut off Wall shall have 2-#6X18" dowels @ 18" centers at expansion joint.



GENERAL NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]

STANDARD DETAILS

City of Phoenix Standard Details

[illegible]	Encased Pipe for Canal Crossings
[illegible]	Barricade
145	Ribbon Curb
193	Survey Monument
200	Manhole Frame Grade Adjustment
362	Meter [illegible] Manhole Frame and Cover

Arizona Department of Transportation Details

C-15.07	Catch Basin Grate
CM-1	Misc. Details
CW6-5, CW6-7	Inlet or Outlet Wings
CWA-1	Outlet Apron
RW-1	Retaining Wall Details
BM-1	Miscellaneous Details for Bridge.
H-2-1	Double Handrail

INDEX

1	Cover Sheet
2	Typical Sections (This Sheet)
3-6	Roadway Plan and Profile Sheets Doubletree Ranch Road
7-9	Roadway Plan and Profile Sheets Invergordon Road
10	Bridge [illegible] Doubletree Ranch Road
11	Bridge [illegible] Invergordon Road
12	Golf Cart Path Details
13-14	Details
15	Bridge Detour - Invergordon Road
16-19	Water Line Relocation Plans

QUANTITIES

1.	Subgrade Preparation	17,904 S.Y.
2.	Aggregate Base Course	8,549 S.Y.
3.	Bituminous Prime Coat, MC-250	[illegible] Tons
4.	Asphaltic Concrete Pavement	17,904 S.Y.
5.	[illegible] Concrete Bike Path	[illegible] S.Y.
6.	[illegible]rvative Seal, SS-1	[illegible] Tons
7.	[illegible] Curb (Std. Det. 145)	[illegible] L.F.
8.	Modified Vertical Curb (Mod. Std. Det. 141)	106 L.F.
9.	Special Vert. Curb & Gut. & Cut-off Wall (Mod. Std. Det 146)	137 L.F.
10.	Pipe Handrail	393 L.F.
11.	Type 1 Cut-off Wall	[illegible],291 L.F.
12.	Type 2 Cut-off Wall	[illegible],178 L.F.
13.	Remove Detour	2,[illegible] S.Y.
14.	Remove Existing Roadway	3,[illegible] S.Y.
15.	Catch Basin (Std. Det. 210, Type F)	1 Ea.
16.	[illegible] Catch Basin	2 Ea.
17.	[illegible] Line Encasement (Std Det. [illegible])	140 L.F.
18.	[illegible] Reinforced Concrete Pipe ([illegible] D)	30 L.F.
19.	[illegible] Reinforced Concrete Pipe ([illegible] D)	202 L.F.
20.	[illegible] Corrugated Metal Pipe (14 gauge)	210 L.F.
21.	[illegible] Manhole with Water Tight Mun. Frame and [illegible] (Std. Det. [illegible])	3 Ea.
22.	[illegible] Manhole	2 Ea.
23.	Survey Monument (Std. Det. 193)	5 Ea.
24.	[illegible]	419 L.F.
25.	[illegible] (with Curb and Gutter)	57 L.F.
26.	[illegible] (with Curb)	108 L.F.
27.	[illegible] Barricade (Std. Det. 130)	33 L.F.
28.	[illegible] (NCHD [illegible] Det. C-122)	51 Ea.
29.	[illegible] Concrete (Bridge)	1053.5 C.Y.
30.	Reinforcing Steel (Bridge)	194,525 Lbs.
31.	[illegible] and Pump and Equipment	1 L.S.
32.	[illegible] Equipment, Controls and Wiring	1 L.S.
33.	D[illegible]	1,150 L.F.
34.	Valve Box and Cover (Type B)	1 Ea.
35.	[illegible]	2 Ea.
36.	[illegible] and Cover (Type E)	2 Ea.
37.	[illegible] 146	137 L.F.

LEGEND

Exist Pavement To Remain

New Pavement

Exist. Roadway To Be Removed

Bench Mark: B.C. in Hand Hole at Intersection of Doubletree Ranch Road and Invergordon Road
Elevation = 1376.90

DOUBLETREE RANCH ROAD
INVERGORDON ROAD
PAVING & BRIDGE PLANS
TOWN OF PARADISE VALLEY

RHP RITOCH-HERZ-POWELL Consulting Engineers
4545 North 27th Avenue / Phoenix, Arizona 85017

Designed by RLP	Drawn by JR	Project No. 79009
Checked by RTH	Scale 1"-6'	Sheet 2 of 19

Exist. Tel. Facilities to be Relocated by Others

Constr. 250 LF Type 2 Cut off Wall

Constr. 2383 S.Y. A.C. Pavement

Constr. 417 S.Y. A.C. Bikepath

Constr. 60 L.F. of Mod. Vert Curb See Det. Sht. (14)

Sta. PC. 18+64.72

Const. 125 LF Guard Rail (Bridge) w/ End Treatment See Details Sht. (14)

Golf Cart Ramp See Det. Sht. (12)

Sta. 19+20.07 BRIDGE See Sht. (10)

Constr. 46 L.F. Mod V Curb See Det. Sht. (14)

Pl. Sta 20+09.14 New Sur. Manu. Std. Det. 193

Δ = 20°00'00" Rt.
D = 06°59'44"
R = 819.02'
T = 144.42'
L = 285.89'

Constr. 113 LF Type 2 Cutoff Wall

See Sht. 3

STATION 15+50

MATCH LINE

DOUBLETREE RANCH ROAD

N82°05'48"E

Constr. ℄

Begin Bridge Sta. 18+80.60

End Bridge Sta. 19+83.20

INDIAN BEND WASH & Sta. 131+25.18

5' Curb Transition

Exist R/W

N58°38'38"W

S87°54'12"E

Rim 1330.90
Inv. W = 1319.48
Inv. E = 1319.65

Const. 26 LF Guard Rail (with V.C. & G). End Treat. @ West End. See Det. Sht. (14)

Const. 111 L.F. Guard Rail (Bridge).

Golf Cart Ramp See Det. Sht. (12)

Remove 18" CMP

Constr. 40 L.F. Type 1 Cut off Wall

Constr. 51 L.F. Guard Rail w/ Vert. Curb & Gutter w/ End Treatment See Det. Sht. 14

Constr. 326 L.F. Type 1 Cutoff Wall

Remove 1581 S.Y. Exist. Roadway

Reconstr. Exist. SS M.H. New Water tight MH Frame & Cover, Std. Det. 362 Rim = 1327.40

104 L.F. Sewer Line Easement Std. Det. 21

20+00

Exist. Ground @ Const ℄

Exist. Ground @ M17

Sta. BEGIN Grade Break P: 27.49

Sta. 19+83.20 Grade Break P: 27.49

Exist. Ground @ Const ℄

ELLC = 1325.4

DoubleTree

ELCHU = 1322.42

-0.1999%

0.0000%

-2.3692%

P: 29.15

P: 27.06

Station	Edge of Pvmt. Lt.	Centerline	Edge of Pvmt. Rt.	Comments
15+50.00	30.74	28.15	28.17	
15+75.00	29.70	28.10	27.96	
16+00.00	29.65	28.05	27.81	
16+25.00	29.60	28.00	27.65	
16+41.43	29.59	27.99	27.59	
16+50.00	29.55	27.95	27.55	Normal Crown
16+75.00	29.45	27.90	27.50	
16+91.00	29.45	27.85	27.35	
17+00.00	29.43	27.83	27.43	Normal Crown
17+25.00	29.65	27.80	27.40	
17+50.00	29.57	27.75	27.35	
17+75.00	29.64	27.70	27.29	
18+00.00	29.65	27.65	27.19	
18+25.00	29.62	27.60	27.08	
18+41.43	29.61	27.59	27.07	
18+50.00	29.60	27.55	26.97	
18+75.00	29.56	27.50	26.86	
18+91.00	29.54	27.49	26.84	Beg. Bridge
19+00.00	29.53	27.49	26.83	Beg. Full Super e=0.03 ft/ft
19+25.00	29.51	27.50	26.83	
19+50.00	29.49	27.49	26.83	
19+75.00	29.51	27.49	26.83	
19+83.20	29.51	27.49	26.83	End Bridge
20+00.00	29.55	27.54	26.92	
20+25.00	29.62	27.59	26.97	
20+50.00	29.68	27.64	27.01	
20+75.00	29.74	27.69	27.04	
21+00.00	29.78	27.74	27.06	

Low Flow Design Q = 1000 cfs
100 Year Q = 21,000 cfs

20+00

RHP RITOCH-HERZ-POWELL Consulting Engineers
4145 North 24th Avenue / Phoenix, Arizona 85017

DOUBLETREE RANCH ROAD
INVERGORDON ROAD
PAVING & BRIDGE PLANS
TOWN OF PARADISE VALLEY

DESIGNED BY	DRAWN BY	PROJECT NO.
RLP	PJR	79009
CHECKED BY	SCALE HOR. 1"=100' VERT. 1"=2'	SHEET 4 OF 19
RTH		

PLATE I. SINGLE PLAN AND PROFILE FULL DOT

PLAN
SURVEYED
PLOTTED
CHECKED
AS BUILT
DESIGNED NOTES BOOK
NO

PROFILE
SURVEYED
PLOTTED
CHECKED
AS BUILT
DESIGNED NOTES BOOK
NO

Constr 104 L.F. Guard Rail (Bridge) with End Treatment See Details Sheet (14)

Constr 115 LF Type 1, Cut off Wall

Constr 63 L.F. Special VC/G & Cut off Wall, See Det Sht (14)

Golf Cart Ramps See Detail Sht (12)

End Treatment See Sht (14)

Constr 76 L.F. Special VC/G & Cut off Wall, See Det Sht (14)

Constr 230 L.F. Type 1, Cut off Wall

Constr 397 S.Y. of Bike path

MATCH LINE STATION 16+00 See Sht 7

Begin Bridge Sta 17+66.16

S 58°38'38" E

Exist R/W

See Det 'A' Sht (14)

3' Curb Transition

Skew & Rt: 31°11'32"

INVERGORDON

S 00°09'50" W

Constr ℄ and M/A

End Bridge Sta 18+34.18

20+00

ROAD

MATCH LINE STATION 21+50 See Sht 9

Exist R/W

Constr 40 L.F. Type 2, Cut off Wall

Constr 108 L.F. Guard Rail (w/Curb) End Treatment @ North end See Det Sht (14)

INDIAN BEND WASH ℄

Constr 79 L.F. Guard Rail (Bridge) End Treatment @ South end See Det Sht (14)

INVERGORDON RD. Sta 18+06.56 = INDIAN BEND WASH ℄ 92+60.66

℄ Sta 18+06.56 Bridge See Sheet (11)

Constr 311 L.F. Type 2, Cut off Wall

Relocation of MT&T Line by Others

Constr 23.83 S.Y. A.C. Pavement

Golf Cart Ramp See Det Sht (12)

INVERGORDON ROAD

PLAN

PROFILE

1320 / 18 / 16 / 14 / 12 / 1310

17+11.06 Grade Break P = 15.78

19+11.02 Grade Break P = 15.78

-0.2611%

0.0000%

-0.0120%

Exist Ground @ ℄

P = 16.05

P = 15.35

ELL = 1314.4

ELL = 1314.4

Low Flow Design Q: 1000 cfs
100 Year Q: 21,000 cfs

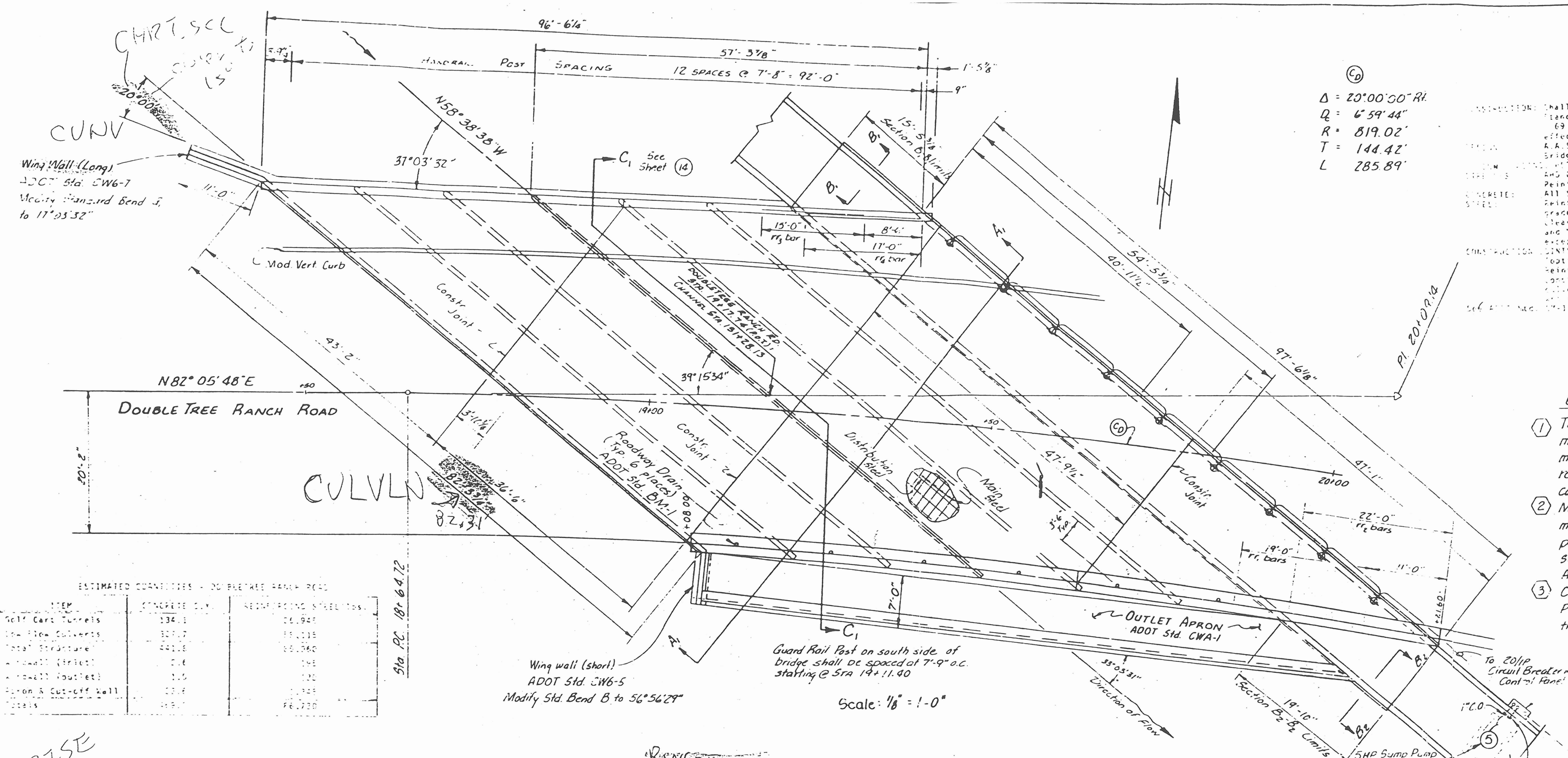
16 / 17 / 18 / 19 / 20+00 / 21

PLATE - SINGLE PLAN AND PROFILE SHEET

RHP RITOSH-HERZ-POWELL Consulting Engineers 4545 North 36th Avenue / Phoenix, Arizona 85017

DOUBLETREE RANCH ROAD
INVERGORDON ROAD
PAVING & BRIDGE PLANS
TOWN OF PARADISE VALLEY

DESIGNED BY	DRAWN BY	JOB NO.
RLP	PJR	79005
CHECKED BY	SCALE	SHEET
RTH	1"=40'	8 of 19



ESTIMATED QUANTITIES - DOUBLETREE RANCH ROAD

ITEM	CONCRETE C.Y.	REINFORCING STEEL lbs.
Golf Cart Tunnels	134.[illegible]	[illegible].945
Low Flow Culverts	307.7	[illegible]
Total Structure	441.8	[illegible].060
Wingwall (Inlet)	[illegible].6	[illegible]
Wingwall (Outlet)	[illegible]	120
Apron & Cut-off Wall	[illegible]	[illegible]
Totals	[illegible]	[illegible].730

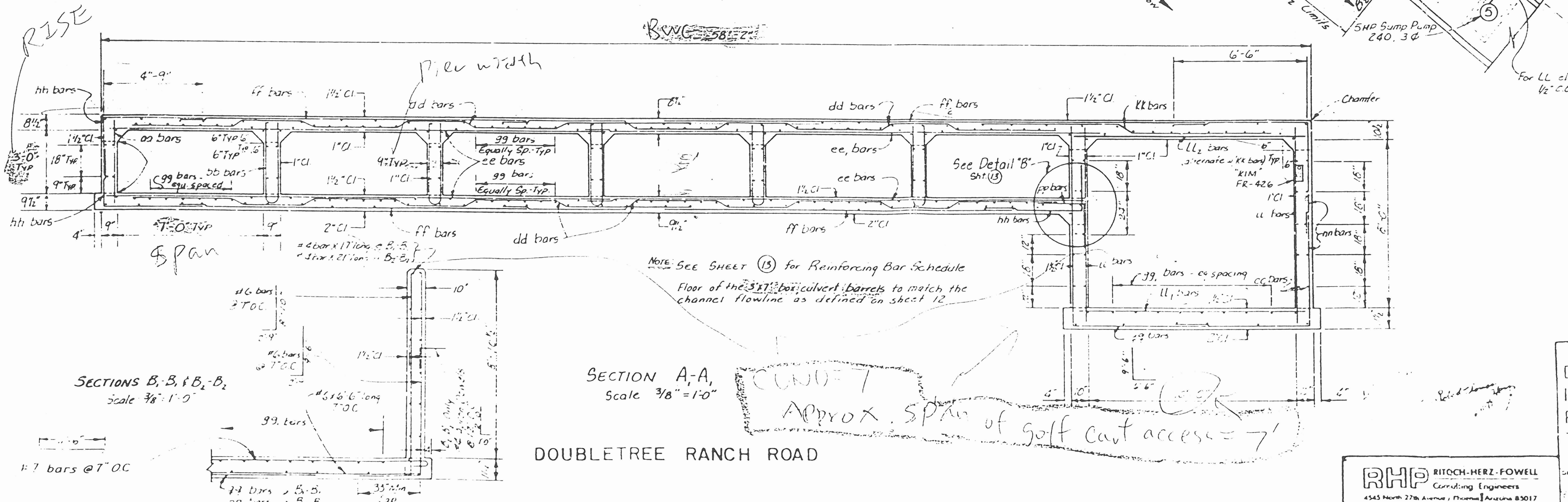
GENERAL STRUCTURAL NOTES

CONSTRUCTION: Shall be in accordence with Arizona Highway Dept. Standard Specifications for Road & Bridge Const., 69 Edition & Supplements thereto which are in effect at the date of request for bids.
DESIGN: A.A.S.H.T.O. Standard Specifications for Highway Bridges 1973.
DESIGN STRESSES: AHD Class "A" Concrete f'c=2500 psi (fc=1000psi); Reinforcing Steel fy 40 KSI (fs=20000 psi)
CONCRETE: All Structural Concrete shall be AHD Class "A".
STEEL: Reinforcing steel shall conform to ASTM spec. A-615 grade 40. All reinforcing steel shall have 2" clear cover unless noted otherwise. Structural and Miscellaneous steel shall conform to ASTM A-36 except as noted.
CONSTRUCTION JOINTS: Shall be formed in top slabs and walls (optional in floor slabs) and located as shown. Reinforcing steel shall project 1'-6" through all construction joints. Construction joints in the [illegible] culverts shall be made with ½" plywood [illegible] be left in place.
[illegible]

ELECTRICAL NOTES

1. The service-control panel functions may be combined if the enclosure is maintained ABOVE the high water line, readily accessible to pump and light and can be maintained from ground level.
2. Meter and service panel shall be pole mounted either on utility pole by permission or a contractor supplied service pole meeting utility standards ABOVE the high water line.
3. Control panel shall be mounted on a P1000 UNISTRUT FRAME secured at the base to the concrete ramp wall.

(2#14) 3#4, 1#6 1½"C
1 SERVICE PNL (See Sht 11)
2 100A 120/240 3¢, 4W METER

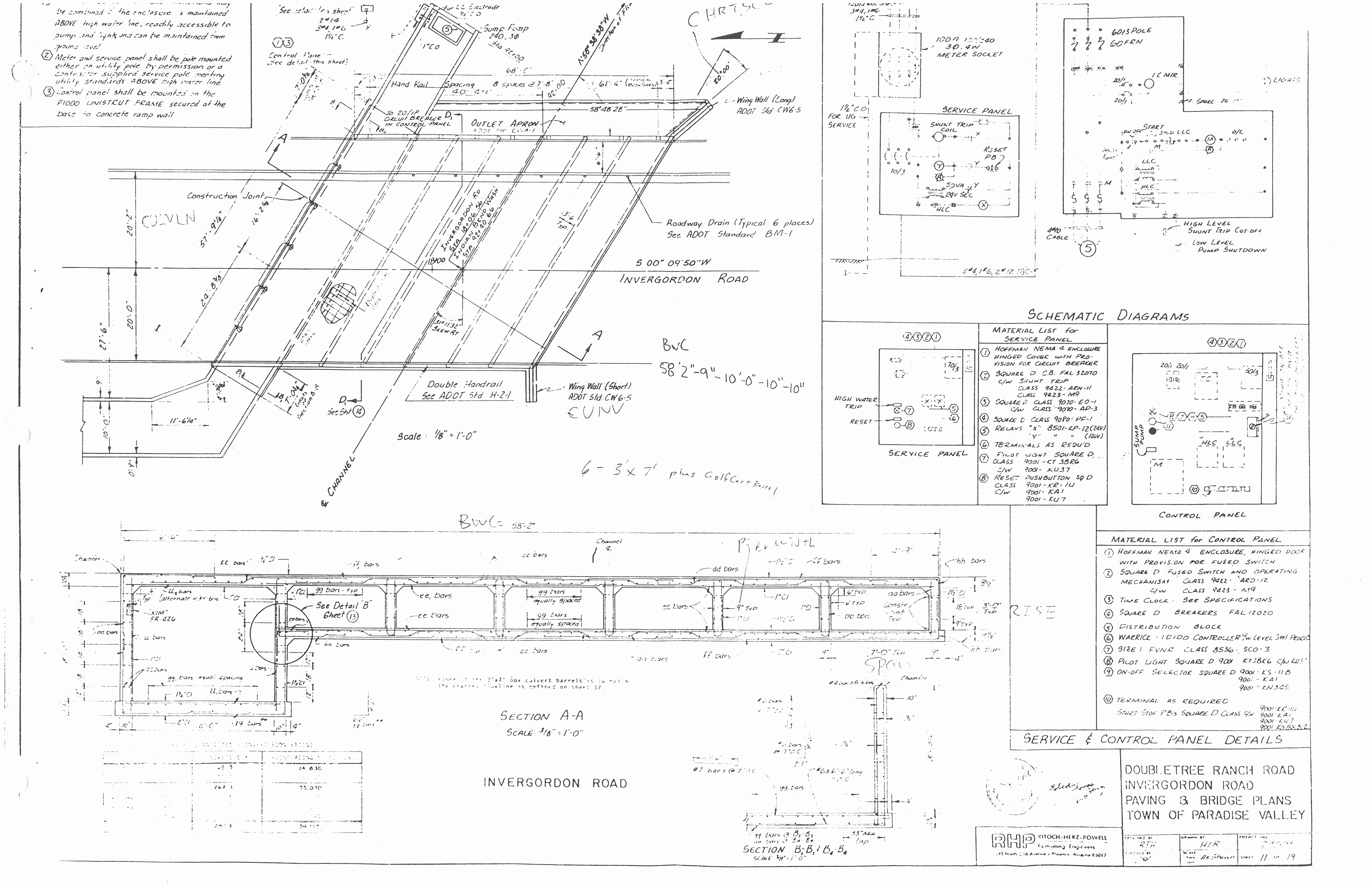


DOUBLETREE RANCH ROAD

DOUBLETREE RANCH ROAD
INVERGORDON ROAD
PAVING & BRIDGE PLANS
TOWN OF PARADISE VALLEY

RHP RITOCH-HERZ-FOWELL Consulting Engineers
4545 North 27th Avenue / Phoenix / Arizona 85017

Designed by RTH	Drawn by HIR	Project No. 79009
Checked by	Scale As Shown	Sheet 10 of 19


be combined if the enclosure is maintained ABOVE high water line, readily accessible to pump and lights and can be maintained from ground level
(2) Meter and service panel shall be pole mounted either on utility pole by permission or a contractor supplied service pole meeting utility standards ABOVE high water line
(3) Control panel shall be mounted on the P1000 UNISTRUT FRAME secured at the base to concrete ramp wall
Control Panel See detail this sheet
Sump Pump 240, 3Ø
Hand Rail Spacing
8 spaces @ 7'-8"
58°48'28"
Wing Wall (Long) ADOT Std CW6.5
OUTLET APRON
To 20/1P CIRCUIT BREAKER IN CONTROL PANEL
Construction Joint
Roadway Drain (Typical 6 places) See ADOT Standard BM-1
S 00° 09'50" W
INVERGORDON ROAD
INVERGORDON RD
INDIAN BEND WASH
Double Handrail See ADOT Std H-2-1
Wing Wall (Short) ADOT Std. CW6.5
Scale: 1/8" = 1'-0"
℄ CHANNEL
100 A 120/240 3Ø 4W METER SOCKET
1½" C.O. FOR UG SERVICE
SERVICE PANEL
SHUNT TRIP COIL
RESET PB
50VA 24V SEC
HLC
6013 POLE 60FRN
1C MTR
START
LLC
HIGH LEVEL SHUNT TRIP CUT-OFF
LOW LEVEL PUMP SHUTDOWN
4#10 CABLE
SCHEMATIC DIAGRAMS
MATERIAL LIST for SERVICE PANEL
(1) HOFFMAN NEMA 4 ENCLOSURE HINGED COVER WITH PROVISION FOR CIRCUIT BREAKER
(2) SQUARE D C.B. FAL 32070 C/W SHUNT TRIP CLASS 9422-ARN-11 CLASS 9423-M9
(3) SQUARE D CLASS 9070-EO-1 C/W CLASS 9070-AP-3
(4) SQUARE D CLASS 9080-PF-1
(5) RELAYS "X" 8501-KP-12 (24V) "Y" " " (120V)
(6) TERMINALS AS REQU'D
(7) PILOT LIGHT SQUARE D CLASS 9001-KT 38R6 C/W 9001-KU37
(8) RESET PUSHBUTTON SQ D CLASS 9001-KR-1U C/W 9001-KA1 9001-KU7
HIGH WATER TRIP
RESET
SERVICE PANEL
CONTROL PANEL
SUMP PUMP
MATERIAL LIST for CONTROL PANEL
(1) HOFFMAN NEMA 4 ENCLOSURE, HINGED DOOR WITH PROVISION FOR FUSED SWITCH
(2) SQUARE D FUSED SWITCH AND OPERATING MECHANISM CLASS 9422-ARD-12 C/W CLASS 9423-M9
(3) TIME CLOCK - SEE SPECIFICATIONS
(4) SQUARE D BREAKERS FAL 12020
(5) DISTRIBUTION BLOCK
(6) WARRICK - 1D1D0 CONTROLLER C/W LEVEL SWT PROBES
(7) SIZE 1 FVNR CLASS 8536 SCO-3
(8) PILOT LIGHT SQUARE D 9001 KT38R6 C/W KU37
(9) ON-OFF SELECTOR SQUARE D 9001-KS-11B 9001-KA1 9001-KN3G5
(10) TERMINAL AS REQUIRED
START STOP PB's SQUARE D CLASS C/W 9001-KR-1U 9001-KA1 9001-KU7
SERVICE & CONTROL PANEL DETAILS
BWC 58'2"-9"-10'-0"-10"-10"
6 - 3'x 7' plus Golf Cart Barrel
BWC = 58'-2"
See Detail "B" Sheet 13
99 bars equally spaced
SECTION A-A
SCALE: 3/16" = 1'-0"
INVERGORDON ROAD
SECTION B1-B1 & B4-B4
DOUBLETREE RANCH ROAD
INVERGORDON ROAD
PAVING & BRIDGE PLANS
TOWN OF PARADISE VALLEY
RHP RITOCH-HERZ-POWELL Consulting Engineers
11 of 14

CHANNEL ℄

130+00

131+00

N58°38'38"W

Sta 129+31.50

Expansion Joint w/Dowels @ 18"O.C. See ADOT Std. RW-1

Sta 130+03.50 Constr. Joint

Sta 131+68 Constr. Joint

Flow

132+00

Sta 132+38.00

Ramp Cut-off Wall H=4'-9" See Sht (13)

End Wall

Sump See Sht (13)

South Wall

North Wall

Section E-E See Sht. (13)

Section D-D See Sht. (13)

Section C-C See Sht. (13)

Section DD See Sht. (13)

Section EE See Sht. (13)

Constr. 84 L.F. Pipe Handrail Sta 129+45 to Sta 130+29

Constr. 104 L.F. Pipe Handrail Sta. 131+26 to Sta 132+30

Ramp Cut-off Wall H=4'-9" See Sht. (13)

GOLF CART UNDERPASS DOUBLETREE RANCH ROAD

Scale: 1"=10'-0"

ELCHU = 1322.42 - .357% x 50 ft ↑ measured from print

Knowing the Invert Profile and we can Approximate ELCHU

Invert.

Top - North & South Walls

+0.357%

℄ Channel ℄

Ramp Grade -12.00%

Bottom North Wall

Bottom South Wall

Constr. Joint

Ramp Grade +0.357%

Sump See Sht. (13)

+0.493%

Ramp Grade +12.000%

+1.088%

+0.493%

Channel ℄ Sta 129+14.11 Elev. 1321.32

Ramp Gr. Break Sta 129+45.00 Elev. 1321.48

Ramp Gr. Break Sta 131+55.00 Elev. 1322.38

Channel ℄ Sta 131+96.63 Elev. 1322.82

Sta 132+38.00 Elev. 1323.02

-1.50%

Channel ℄ Sta 131+96.63 Elev. 1322.82

PROFILE - DOUBLETREE RANCH ROAD

GOLF CART UNDERPASS

CHANNEL STATIONING +50

130+00 +50 131+00 +50 132+00

Sta 91+20.50 (Channel Sta.)

End Wall

Ramp Cut-off wall H=4'-9" See Sht (13)

Constr. 100 L.F. Pipe Handrail Sta 91+28.50 to Sta 92+28.50

1.35 Constr. Joint

1.60 Constr. Joint

South Wall

North Wall

Sump See Sht (13)

Sections C-C & E-E See Sht. (13)

½" Expansion Joint w/ Dowels @ 18"O.C. ADOT Std. RW-1

Channel Sta. 92+61.57 Rt. Invergordon Sta. 17+66.18

½" Expansion Joint w/ Dowels @ 18"O.C. See ADOT Std RW-1

Flow

GOLF CART UNDERPASS INVERGORDON ROAD

Scale: 1"= 10'-0"

Top Wall El: 15.25

West Wall

Side Handrail

INVERGORDON ROAD Sta 17+35 GRADE BREAK Top Wall Elev. 1315.27

MATCH LINE STA. 17+30.00 INVERGORDON RD

Sections CC & D-D See Sht. (13)

1.85 Constr. Joint

Constr. 105 L.F. Pipe Handrail Sta 16+45 to Sta 17+50

Ramp Cut-off Wall H=2'-0" See Sht. (13)

R/W

MATCH LINE STA. 17+30.00

17+00

16+50

℄ INVERGORDON RD

Top NORTH/SOUTH Walls +0.054%

+0.306%

+0.306% ℄ Channel ℄

Ramp Grade -12.00%

Bottom North Wall

Bottom South Wall

Ramp Grade +0.306%

Sump See Sht. (13)

Top East & West Walls -1.859%

Ramp Grade -12.00%

+1.50%

-1.50%

PROFILE - INVERGORDON ROAD

GOLF CART UNDERPASS

ELCHU = 1311.56

ELCHD = 1311.25

~~ELTRD = 1311.96 + 0.50%~~

~~ELCL = ELTRD - 0.11~~

CHANNEL STA 91+25 +50 92+00 +50 93+00 +40 +30 17+0

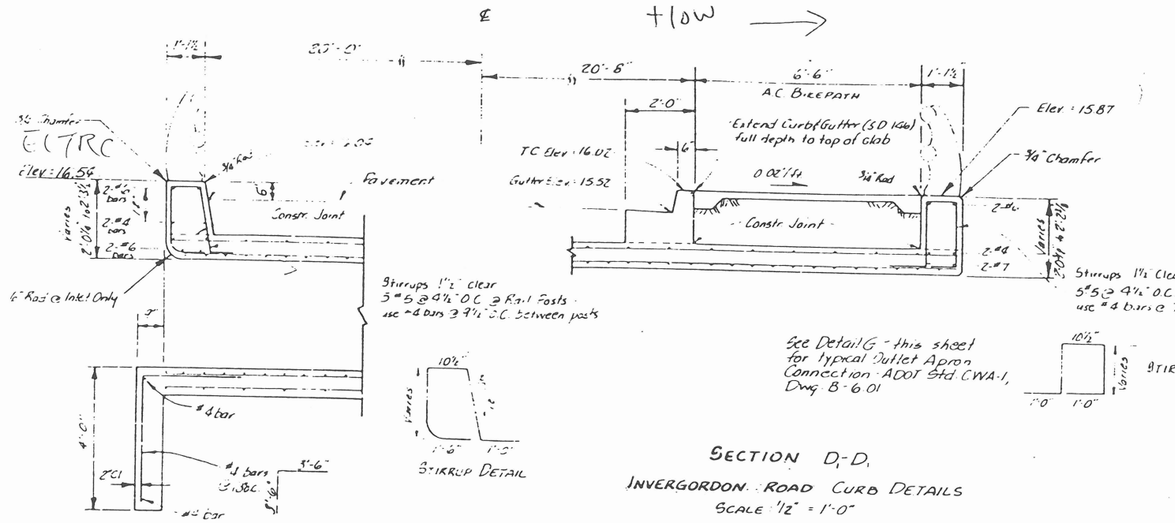
CHANNEL STATIONING

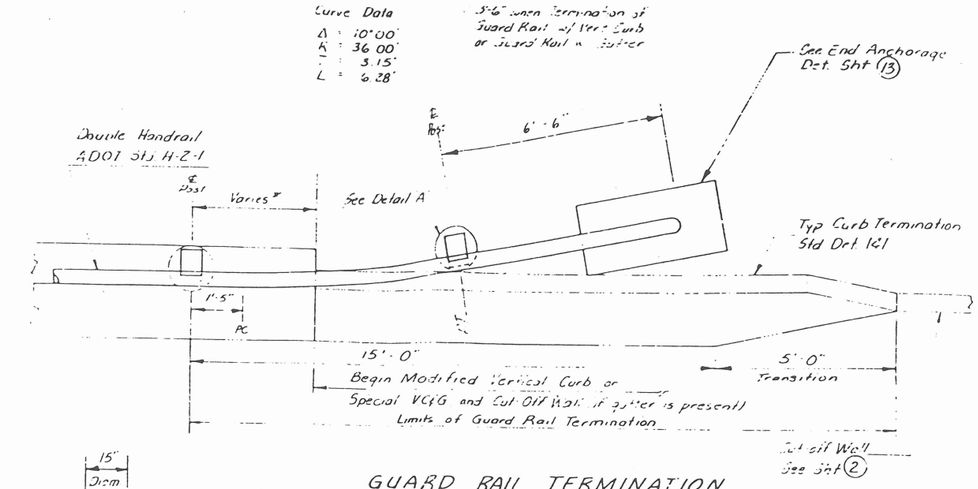
INVERGO

PLAN & PROFILE OF DOUBLETREE RANCH ROAD

DOUBLETREE RANCH ROAD
INVERGORDON ROAD
PAVING & BRIDGE PLANS
TOWN OF PARADISE VALLEY

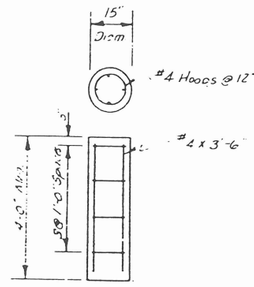
DESIGNED BY	DRAWN BY	PROJECT NO
KTH	H/R	79009
CHECKED BY	SCALE	SHEET
JMH	As Noted	12 of 19





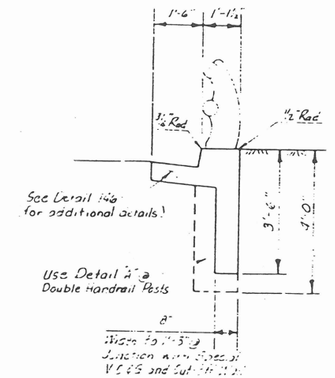
Guard Rail Termination

Scale: 1/2" = 1'-0"



Detail "A"

Scale: 1/2" = 1'-0"

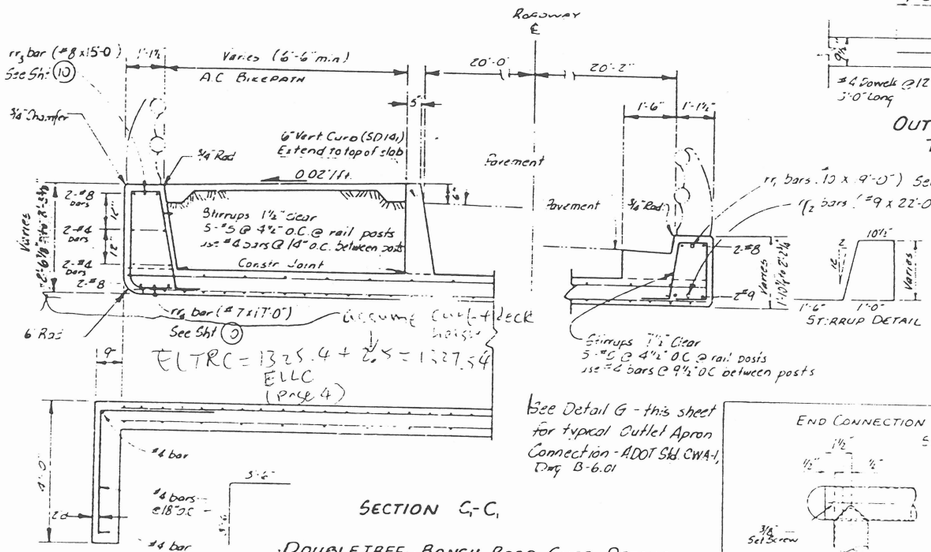


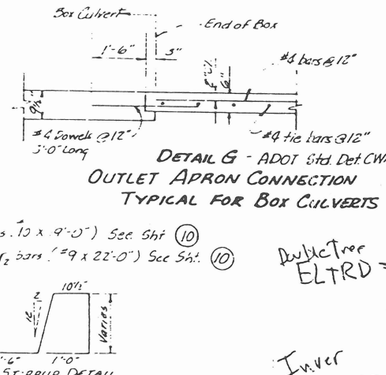
Guard Rail w/ Gutter

Scale 1/2" = 1'-0"

Guard Rail w/ Vert. Curb

Scale 1/2" = 1'-0"





Detail G - ADOT Std. Det. CWA-1 Outlet Apron Connection Typical for Box Culverts

Double Tree
ELTRD = ELLC + 2.5
= 1327.54

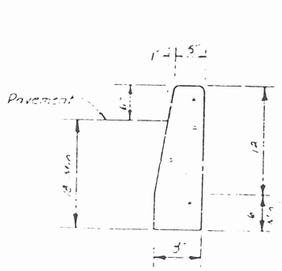
Inver
ELTRD 1315.87

Section C₁-C₁

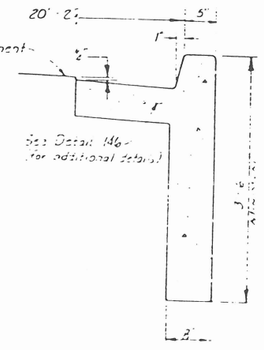
Doubletree Ranch Road Curb Details

Scale: 1/2" = 1'-0"

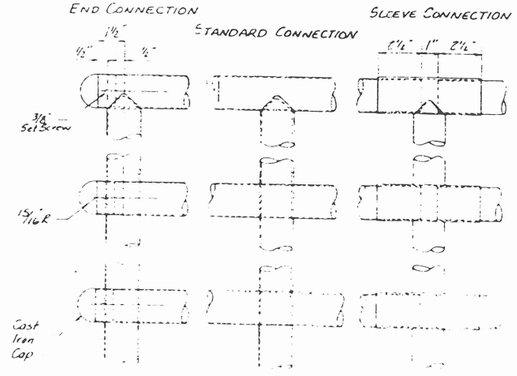
See Detail G - this sheet for typical Outlet Apron Connection - ADOT Std. CWA-1, Dwg. B-6.01

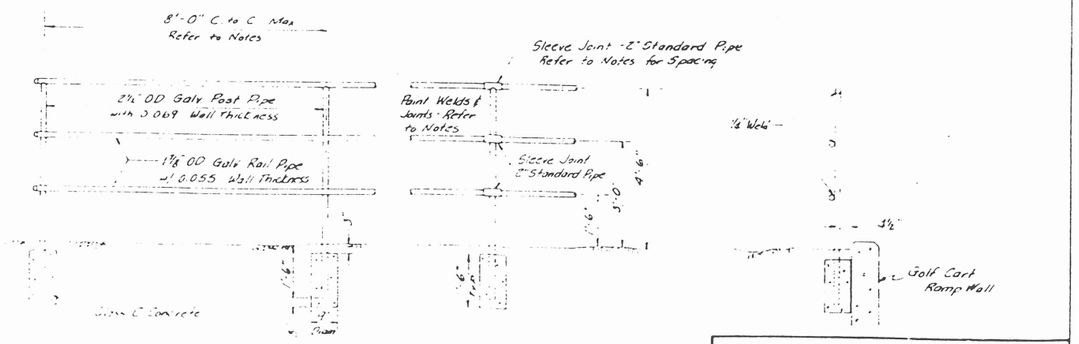


Modified Vertical Curb (Modified Det. 141)



Special Vert. Curb & Gutter and Cut-off Wall





Pipe Handrail Details

All dimensions are typical. Scale None

RHP Ritoch-Herz-Powell Consulting Engineers
4545 North 27th Avenue / Phoenix, Arizona 85017

Doubletree Ranch Road
Invergordon Road
Paving & Bridge Plans
Town of Paradise Valley

Designed by	Drawn by	Project No.
RTH	H/R	77009
Checked by	Scale	Sheet
JMR	As Noted	14 of 19

SHEA BLVD. – MAJOR STREETS
PHOENIX STREETS – MARICOPA COUNTY

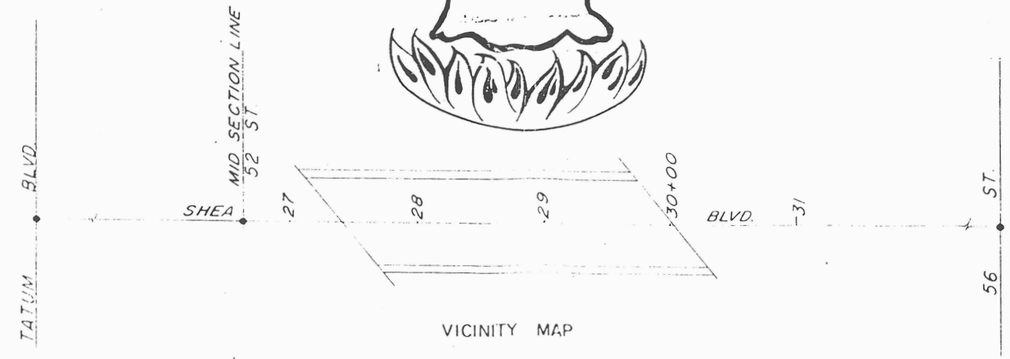
FHWA REGION	STATE	PROJ NO	SHEET NO	TOTAL SHEETS
9	ARIZ	BR 73143.	2	20

LENGTH OF PROJECT – 0.172 MI

CITY OF PHOENIX
ENGINEERING DEPARTMENT
DIVISION OF DESIGN
PROJECT NO. BR 73143.00
SHEA BLVD. BRIDGE
OVER
INDIAN BEND WASH

APPROVED _____ CITY ENGINEER — 11/21/75 DATE

APPROVED _____ CITY TRAFFIC ENGINEER — _____ DATE



VICINITY MAP

MAYOR
TIMOTHY A. BARROW

CITY COUNCIL

CALVIN C. GOODE	GARY PETER KLAHR
ROSENDO "ROSIE" GUTIERREZ	H.J. "JERRY" LEWKOWITZ
MARGARET T. HANCE	JIM WEEKS

CITY MANAGER	JOHN B. WENTZ
CITY ENGINEER & SUP'T. OF STREETS	JAMES E. ATTEBERY
CITY TRAFFIC ENGINEER	CHARLES E. HALEY
STREET MAINT. DIRECTOR	GARY P. FARMER

INDEX OF SHEETS

SHEET	1	FACE SHEET
SHEET	2	THIS SHEET
SHEETS	3 – 4	TYPICAL SECTION SHEETS
SHEETS	5 – 7	ROADWAY SHEETS
SHEETS	8 – 9	DETOUR SHEETS
SHEETS	10 – 20	BRIDGE SHEETS

HOFFMAN-MILLER ENGINEERS INC.
PHOENIX, ARIZONA

6-15-76
LOG NUMBER

	NO SERVICES WITHIN PROJECT	PLANS REVIEWED BY	PERMIT RECEIVED
ARIZONA PUBLIC SERVICE			
SALT RIVER POWER DISTRICT			
S W G & A			
MT. STATES TEL & TEL CO.			
COUNTY HIGHWAY DEPT.			
ARIZ. STATE HIGHWAY DEPT.			

11/9/01

Scale 1"=20'

Section Line & New Const. ℄

S 89° 32' 45" E

Detour Const. Easement
See Shts. 8 & 9 of 20 for
all Detour Details.

Exist. R/W

Exist. Ditch

18" VCP

MATCH LINE STA. 24+00

BM '2" I.P. in H.H. on Section
Line Tatum & Shea Blvds.
El. 1379.74.

66' El. Blk. Wall

66' El. Blk. Wall & Curb

76' El. Blk. Wall & Curb

66' El. Blk. Wall

66' El. Blk. Wall
Turning South

BM C.E. Brass Cap in Concrete
64' Rt. Sta. 19+78.00
El. 1363.50

31.5' El. E.F.W. Edge 36"
CMP, 17° Horiz.

31.5' El. E.F.E. Edge 36"
CMP, 14° Horiz.

25.5' 8" Steel Post

Approx. Exist. Grad
@ Const. ℄

64 60 56 52

17 18 19 20·00 21 22 23 24

6-15-76

CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT
SHEA BLVD.
AT
INDIAN BEND WASH

DES. DRD	DR. JSW	CK. NTS	SHEET NO.	TOTAL SHEETS
DATE 7/74	DATE 7/74	DATE 9/74	5	20
SCALE 1" = 40'-0" HORIZONTAL 4'-0" VERTICAL				

46904

9	ARIZ	BR-73143.00	6	20

HOFFMAN-MILLER ENGINEERS
CONSULTING
DES O.R.O. | DR J.S.W. | CK

West Edge, 500' Freeway Corridor

315.2 L.F. Cut-off Wall
315.2' x 4' Shoulder Paving

½" I.P. '16 cor. Sec. 20 T3N R4E

Exist. R/W

Detour Const. Easement
Detour Dtls. See Shts 8 & 9 of 20

328.6 L.F. Cut-off Wall
328.6' x 9' Shoulder Paving

Sta 26+40± - Sta. 30+98±
Abandoned 8" ACP W Remove as necessary for Const.

Grade to Match New Pvmt.

Adj. 2 Valve Covers to Grade-Type "A"

Pedestrian Ramp (Typ) See Detail ℄ Rt.

Adjust Valve Cover To Grade-Type "A"

End Flare Sta 31+71.75

Begin Flare Sta 33+09.25

STA. 24+00

STA. 34+00

Begin Taper Sta 25+19.05

New R/W

-0.003' /'

SHEA BLVD.

S 89°52'55" E

New A.C.P.

Sect. Line & Const ℄

MATCH LINE

Sawcut & Match Exist.

369.1 L.F. Cut-off Wall — 369.1' x 9' Shoulder Paving

23+99.3
Sta ~~24+00~~ - Sta. 27+13.44 Lt.
Sta ~~24+00~~ - Sta 27+67.14 Rt.
684.3 ~~682.64~~ L.F. cut off wall.

Block out cut off wall around M.H. as required for Const. & Adjust M.H. covers to grade.

Sta 26+38.49
3½" cor Sec 20 T3N R4E
Install new Survey Mon.
Phoenix Std. Dtl. 195

End Flare Sta 27+67.14

New Drainage Ditch. Match Exist. Ditch Sta. 26+70

Begin Flare Sta. 26+38.49

1½:1 (Typ.)

Backfill Exist. Ditches as Req'd See Spcl. Provisions.

New R/W

Begin Taper Sta 32+25.45
~~33+05.1~~

Sta. 29+77.36 - Sta. ~~33+09.25~~ Lt.
Sta. 30+31.06 - Sta. ~~33+09.25~~ Rt. ℄ 33+06.3
~~1612.52~~ L.F. cut off wall
605.3

End Taper Sta. 33+09.25

Sawcut & Match Exist.

MATCH LINE

℄ New Bridge Dtls. See Shts 10 - 20 of 20

100' Top of Bank to Top of Bank 100'

New Drainage Ditches. Match Exist. Ditches Sta. 33+00±

276.7 L.F. Cut-off Wall
276.7' x 9' Shoulder Paving

END PROJECT
Sta. 33+09.25

East Edge, 500' Freeway Corridor

Scale 1"=40'

BEGIN PROJECT
Sta. 24+00.00

BM — ½" I.P. in H.H. on Sect. Line
Sta. 26+38.49 El. 1358.00

18.5' ± S.M.H.
24.0' ± S.M.H.
42.6' ± Air Release Valve
41.8' ± Air Release Valve
38.0' ± Meter Box
39.0' ± W. Gd. Rail
30.2' ± C.M.P.

See Sheet 10 of 20 for Channel Excav. Quantities

21.2' ± Traffic Sign

See Sheet 10 of 20 for Utilities in Bridge area

28.2' ± Wal. Post

See Sheet 12 of 20 for Conc. Channel Lining Dtls.

Length of Bridge 263'-11"
℄ Brg. - ℄ Brg. 260'-0"

Roadway Crown Transition .020'/ft. - .010'/ft.

Match Exist. Pvmt. Sta 24+00 El. 1359.79

+.50

-0.2367%

Approx. Exist. Grnd. ℄ Const ℄

P.I. No V.C. Sta 26+07.00 El. 1359.30

+0.2000%

P.I. No V.C. Sta 27+01.00 El. 1359.50

Sta 27+40.29

0.3000%

Flow Line - New Drainage Ditch South Side

12.5' (Typ.)

EL(TR) Level @ El. 1359.50

Sta 30+04.21

P.I. V.C. Sta 30+35.25 El. 1359.50

P.I. 100' V.C. Sta 30+85.25 El. 1359.50 Corr. -0.125'

P.T. V.C. Sta 31+35.25 El. 1359.00

Flow Line - New Drainage Ditch North Side

Exist 33" V.C.P.

Roadway Crown Transition .010'/ft. - .020'/ft.

-1.0000%

P.C. V.C. Sta 32+59.25 El. 1357.76

P.I. 50' V.C. Sta 32+84.25 El. 1357.51 Corr. +0.062'

P.T. V.C. Sta 33+09.25 El. 1359.51

Match Exist. Pvmt. Sta 33+09.25 El. 1359.51

0.3000%

Flow Line - New Drainage Ditch South Side

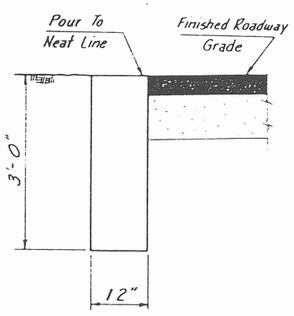
ELLC = 1359.5 - 1.5 = 1358.0

Dock Wall Excess (P-15)

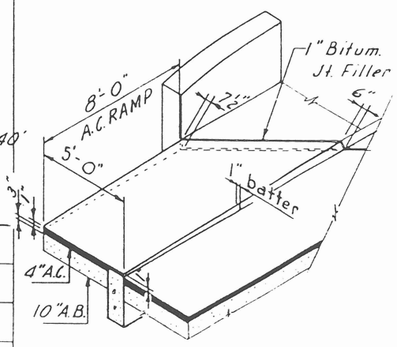
24 25 26 27 28 29 30+00 31 32 33 34

60 56 52 48

Note:
Cut Off wall to be Class "B" Concrete - f'c = 2500 psi



CUT OFF WALL
1,295.16 L.F.



6-15-76

PEDESTRIAN RAMP
No Scale

REMOVALS

ITEM	QUANTITY
Exist. A.C.P.	3,233 Sq Yds.

SHEET SUMMARY

ITEM	QUANTITY
Cut off Wall	1,295.16 L.F.

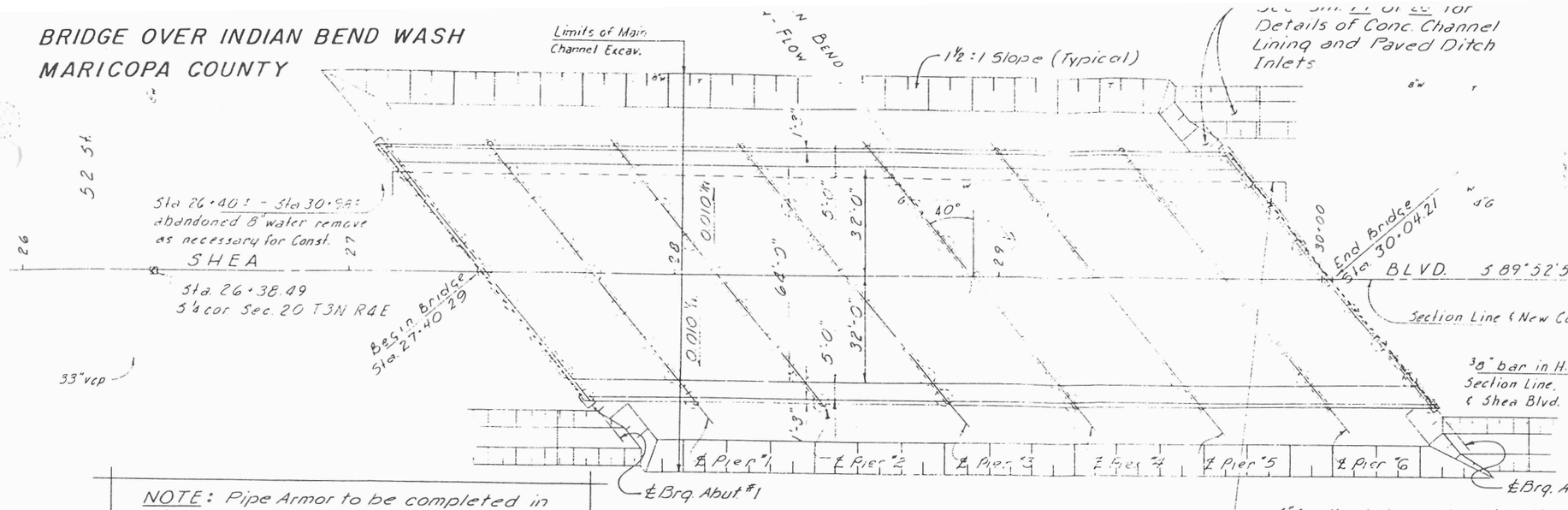
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

SHEA BLVD
@
INDIAN BEND WASH

DES. O.R.O.	DR. J.S.W.	CK.	SHEET NO.	TOTAL NO. SHEETS	
DATE 4-76	DATE 9-76	DATE	6	20	
SCALE 1" = 40' HORIZONTAL					
SCALE 1" = 4' VERTICAL					

46905

BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



NOTE: Pipe Armor to be completed in place as shown on plans prior to drilling for concrete caissons at piers and abuts. Channel shall not be excavated below Elev. 1353 before Pipe Armor has been placed as shown on plans. See Shts. 17 & 18.

BM - ½" I.P. in HH on Section Line
Sta. 26+38.49 - El 1358.00

Sta. 28+

L O C A T I O N P L A N

New 7 Span Reinforced Concrete Slab Bridge
64'-0" Clear Roadway 40° Skew Lt.
Scale 1"=20'-0"

4" Gas line to be realigned in bridge area as shown. Duct to carry gas line through bridge deck to be furnished by Arizona Public Service and installed by the Contractor. A.P.S. to be notified by the Contactor three days prior to scheduled time of duct installation See Sheets 15 & 16 of 20 for location of ducts.

Gas service in 4" line will be shut off during time of bridge construction. Abandoned portion of gas line, Sta. 27+14 - Sta. 29+90, to be removed as necessary for Const.

G E N E R A L N O T E S

CONSTRUCTION
Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction.

DESIGN
AASHTO Specifications for Highway Bridges 1973 Edition Revised to date.

LOADING
H-20-44.

ALLOWABLE STRESSES
Class A Concrete f_c = 1,200 #/in² ; n = 10
Class B Concrete f_c = 1,000 #/in² ; n = 12
Reinforcing Steel f_s = 20,000 #/in²

REINFORCING STEEL shall be intermediate grade 40,000 psi and conform to A.S.T.M. A-615.

ALL WELDING shall conform to American Welding Society Specifications for welded Highway and Railway Bridges.

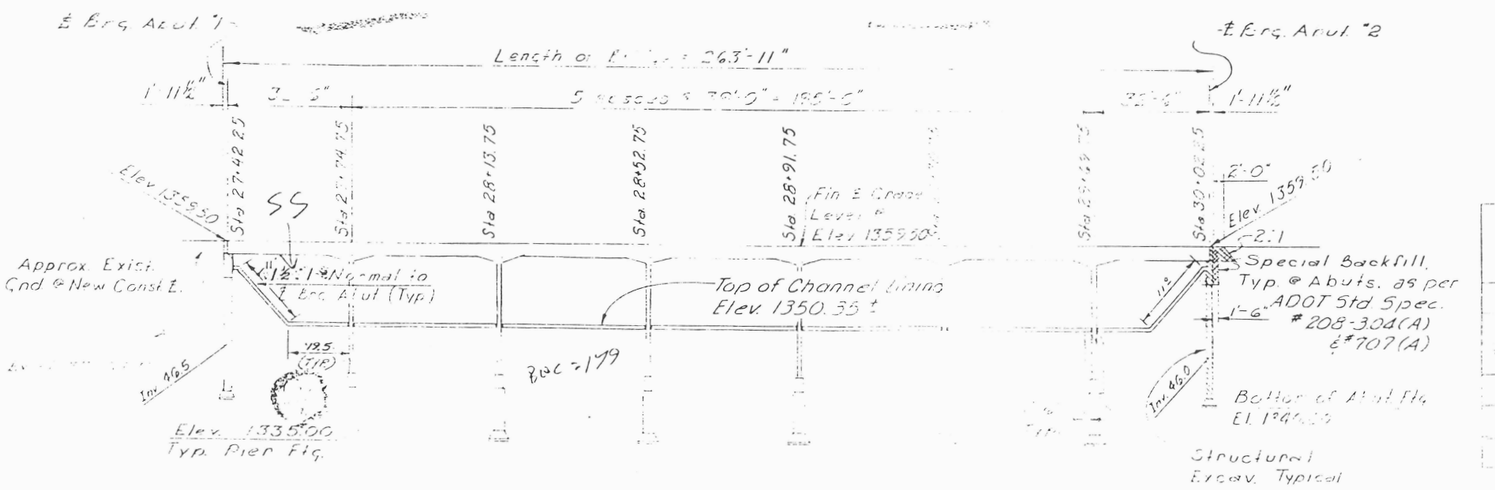
ALL DIMENSIONS for reinforcing steel shall be to center of bar & have 2" clear unless otherwise noted.

DIMENSIONS shall not be scaled from drawings.

CHAMFER all exposed corners & edges ¾" unless otherwise noted.

CURBS & SIDEWALKS shall be poured to grade without camber after falsework has been struck.

STRUCTURAL STEEL shall conform to A.S.T.M. A 36



S E C T I O N O N N E W C O N S T. ℄

Scales: 1"=20' Hor. 1"=10' Vert.

A P P R O X I M A T E Q U A N T I T I E S

ITEM	Struct. Excav. C.Y.	Special Backfill C.Y.	Class A Concrete C.Y.	Class B Concrete S.F.	Reinf. Steel Lbs.	H-2-1 Handrail Lin. Ft.
Deck *	—	—	1186.9	—	~~240,395~~ 240,290	485.75
2 Abutments	145	50	66.4	—	12,220	—
6 Piers	385	—	463.7	—	61,643	—
Channel Lining **	—	—	—	26,113	—	—
Total	530	50	1717	26,113	314,258	485.75

* Includes sidewalks, dados & parapets
** Includes paved ditch inlets & cutoff walls
Approx Channel Excavation = 7230 C.Y.

6-15-76

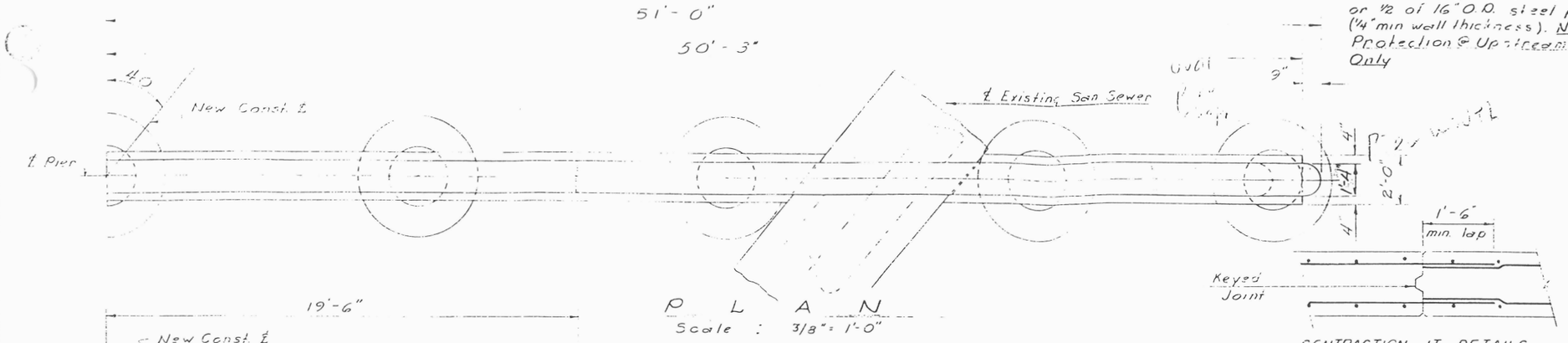
CITY OF PHOENIX

SCALE NOT EQ.	LOCATION PLAN	DRAWN BY J.S.M.
DATE APR. 74		REVISED

Sta 28+ SHEA BLVD BRIDGE OVER INDIAN BEND WASH
HOFFMAN-MILLER ENGINEERS INC.
PHOENIX ARIZONA
SHEET 10 of 21

46909 Project "BR 73143"

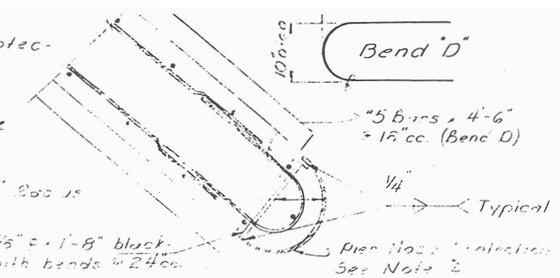
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



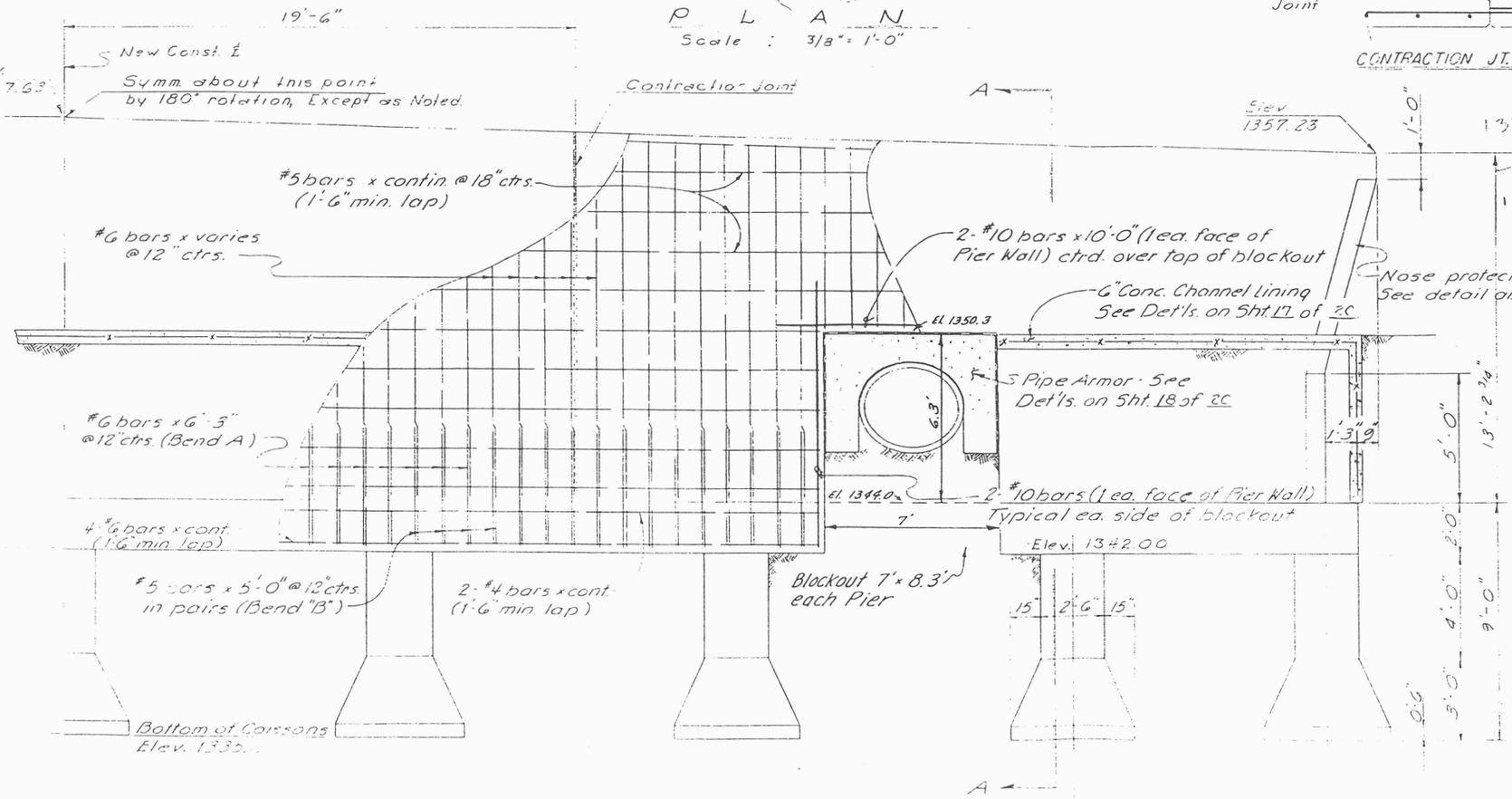
P L A N
Scale : 3/8" = 1'-0"

CONTRACTION JT. DETAILS

Note A:
Fabricate pier nose protection from ℄ 25'⅛" x ¼" min. or ½ of 16" O.D. steel pipe (¼" min wall thickness). Nose Protection @ Upstream Face Only

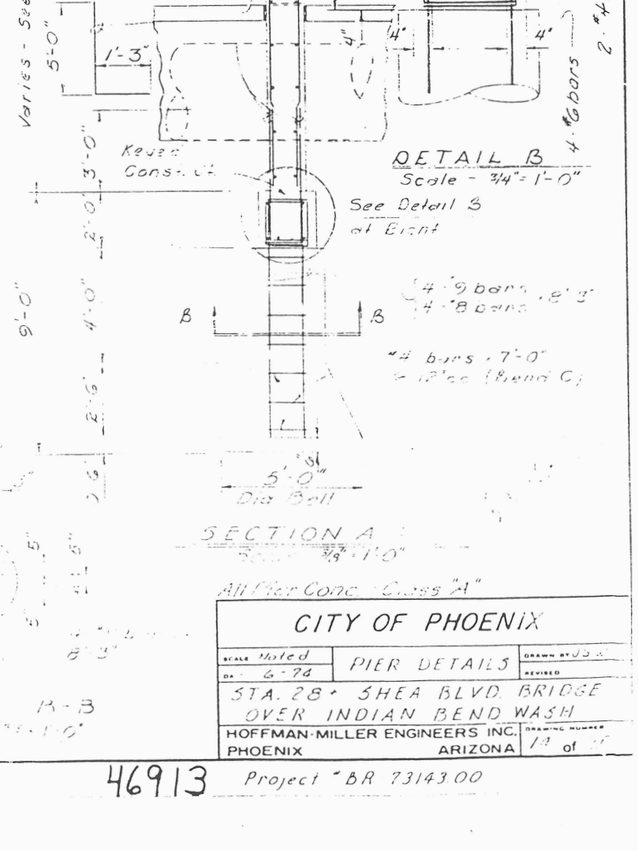


PIER NOSE PROTECTION
Scale: 1" = 1'-0"



Note: Exact location of each pipe & corresponding blockout to be determined in Field.

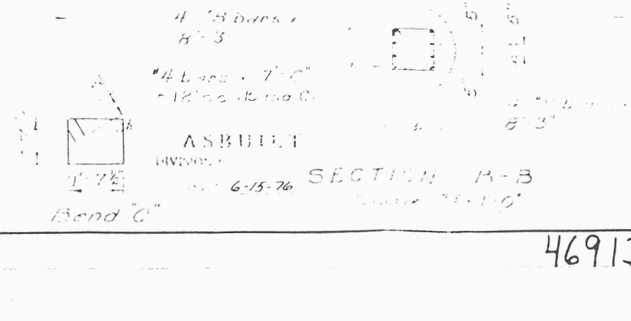
E L E V A T I O N
Scale 3/8" = 1'-0"



DETAIL B
Scale - 3/4" = 1'-0"

SECTION A-A
Scale 3/4" = 1'-0"

All Pier Conc. Class "A"



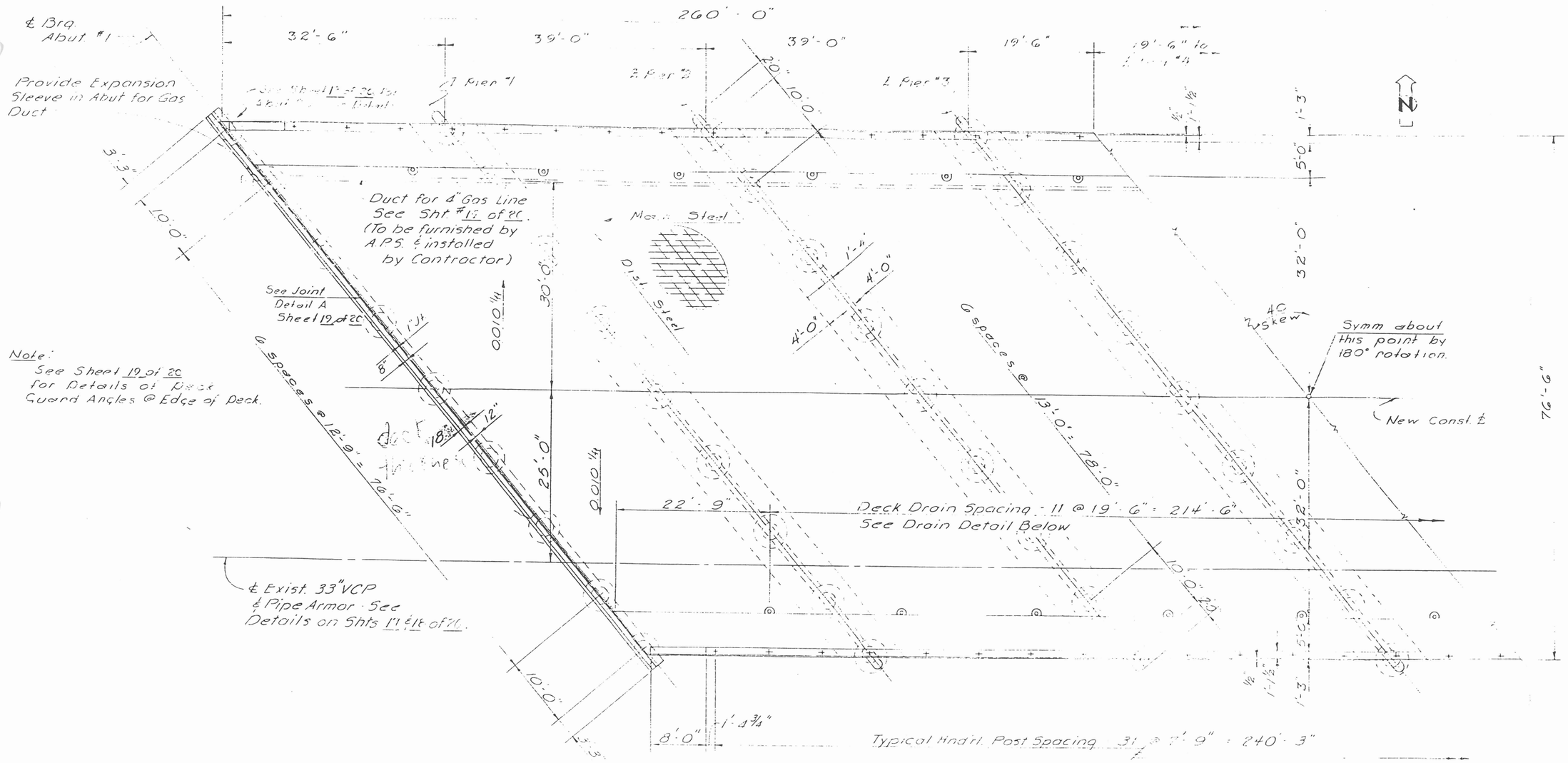
CITY OF PHOENIX		
SCALE Noted	PIER DETAILS	DRAWN BY JSA
DA 6-74		REVISED
STA. 28+ SHEA BLVD. BRIDGE OVER INDIAN BEND WASH		
HOFFMAN-MILLER ENGINEERS INC. PHOENIX ARIZONA		DRAWING NUMBER 19 of 20

46913 Project "BR 7314.00

SHEA BLVD. PHOENIX

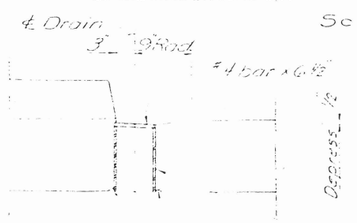
BRIDGE OVER INDIAN BEND WASH

MARICOPA COUNTY



HALF DECK PLAN

Scale 1/8" = 1'-0"



DRAIN DETAIL
24 Required

℄ Drain Cover & 1 1/2" Sch 40 pipe & weld bar to pipe with 1/4" fillet weld at each end. Galvanize after fabrication. Install bar perpendicular to ℄ of Shea Blvd.

All Deck Conc. - Class "A"

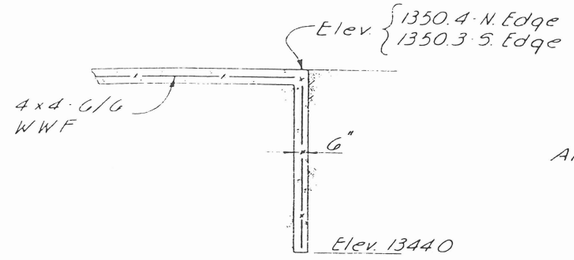
6-15-76

CITY OF PHOENIX

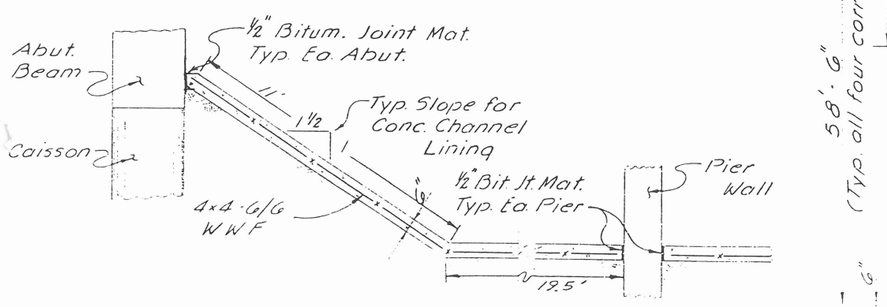
SCALE 1/8"=1'	DECK DETAILS	DRAWN BY JS
DATE 4-'74		REVISED
STA 28+ SHEA BLVD BRIDGE OVER INDIAN BEND WASH		
HOFFMAN-MILLER ENGINEERS INC. PHOENIX ARIZONA		DRAWING NUMBER 15 of 20

46914 Project "BR 731-3 00

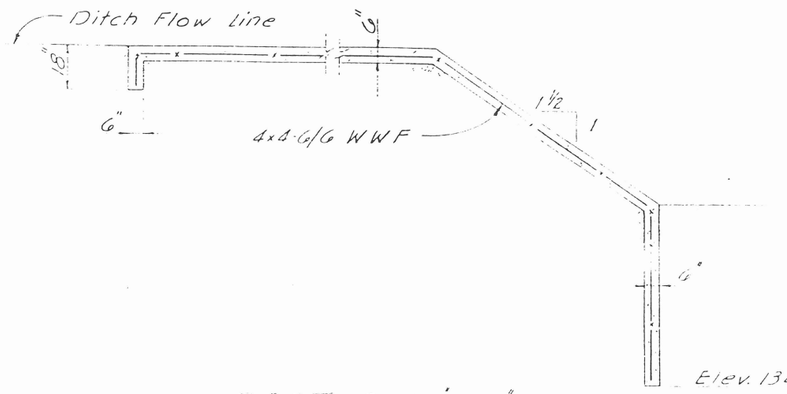
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



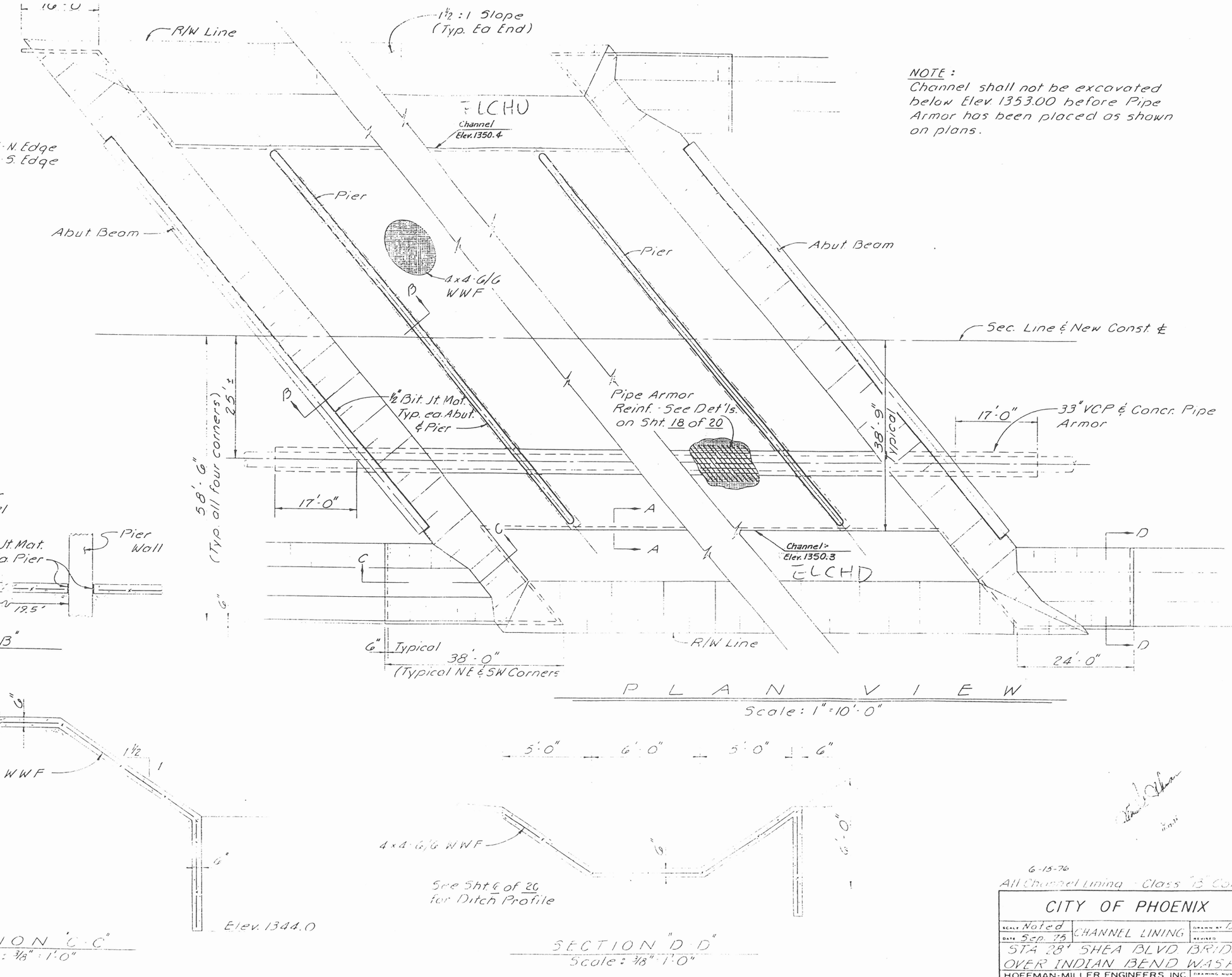
SECTION 'A-A'
Scale: 3/8"=1'-0"



SECTION 'B-B'
Scale: 3/8"=1'-0"



SECTION 'C-C'
Scale: 3/8"=1'-0"



PLAN VIEW
Scale: 1"=10'-0"

NOTE:
Channel shall not be excavated below Elev. 1353.00 before Pipe Armor has been placed as shown on plans.

SECTION 'D-D'
Scale: 3/8"=1'-0"

6-15-76
All Channel Lining - Class 'B' Conc

CITY OF PHOENIX		
SCALE Noted DATE Sep. 75	CHANNEL LINING	DRAWN BY DR REVISED
STA 28' SHEA BLVD BRIDGE OVER INDIAN BEND WASH		
HOFFMAN-MILLER ENGINEERS INC. PHOENIX ARIZONA		DRAWING NUMBER 17 of 20

46916

CITY OF PHOENIX
ENGINEERING DEPARTMENT
DIVISION OF DESIGN

PAVING
TATUM BOULEVARD
SHEA BOULEVARD
TO
PARADISE VILLAGE PKWY. SOUTH
PROJECT NO. P-824565

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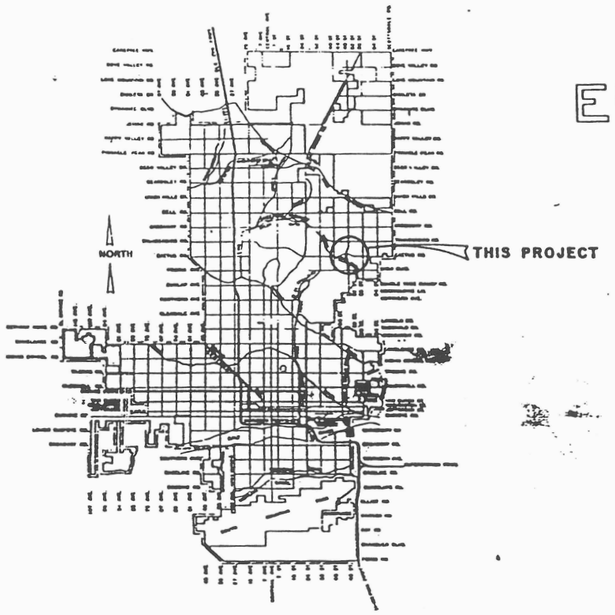
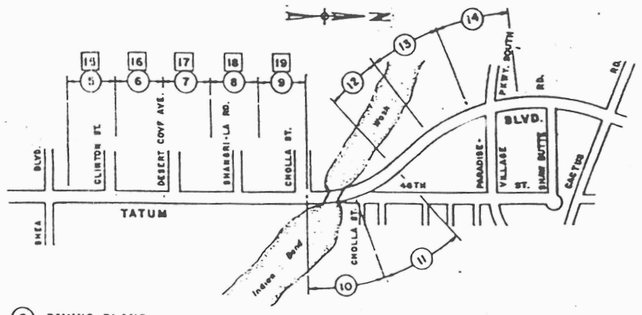
DISTRI



VICINITY MAP

APPROVED _____ 3-29-89
DIRECTOR AND ENGINEER, DESIGN — DATE

APPROVED _____ 3-29-89
DEPUTY STREET TRANSPORTION DIRECTOR — DATE



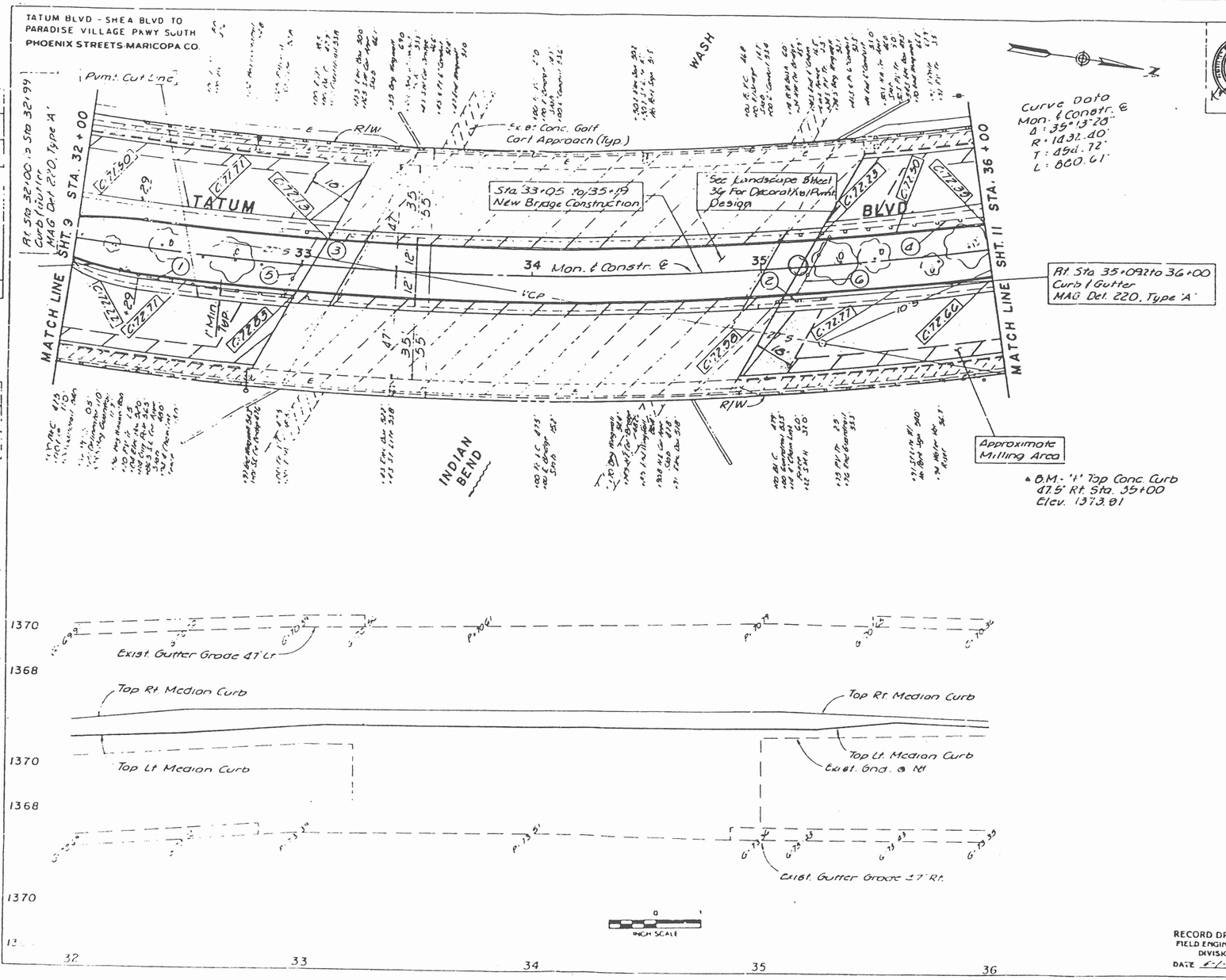
KEY MAP

CITY OF PHOENI
BENCH MARKS
1. 48TH ST. & SHEA BLVD.
B.C. IN H.H. ELEV. 1377.9
2. TATUM BLVD. & CACTUS
B.C. IN H.H. ELEV. 1376.9

DIBBLE & ASSOCIATES
CONSULTING ENGINEERS
PHOENIX - ARIZONA

CALL
263

TATUM BLVD - SHEA BLVD TO
PARADISE VILLAGE PKWY SOUTH
PHOENIX STREETS-MARICOPA CO.



▲ B.M. - '4' Top Conc. Curb
47.5' Rt. Sta. 35+00
Elev. 1373.81

DIBBLE & ASSOCIATES

MISCELLANEOUS REMOVALS

	Sta.	to Sta.	Side	Type	Unit
1	32+23	33+07	Rt.	Guardrail	85 L.F.
2	34+93	35+30	Rt.	Guardrail	32 L.F.
3	32+89	33+20	Lt.	Guardrail	31 L.F.
4	35+18	36+00	Lt.	Guardrail	80 L.F.
5	32+94	33+05	Lt./Rt.	Chain Link Fc.	28 L.F.
6	35+15	35+32	Lt./Rt.	Chain Link Fc.	30 L.F.

QUANTITIES

CURB & GUTTER - MAG DET. 220-A	191 L.F.
SNGL. CURB - MAG DET. 222-A	193 L.F.
ADJ. M.H. - RING & COVER	1 EACH

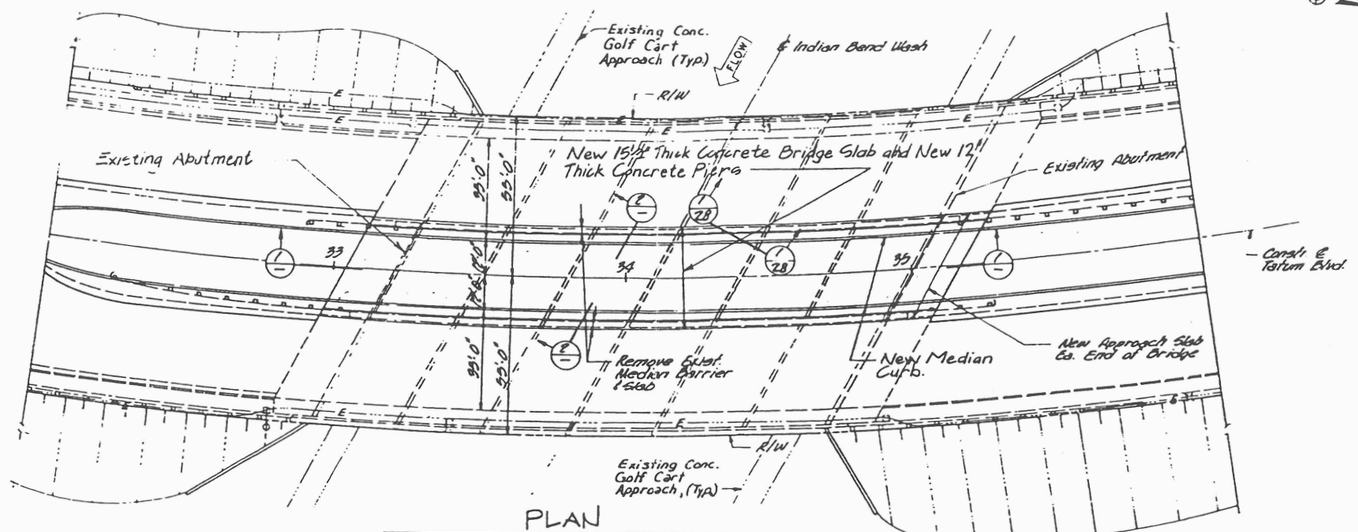
For Bridge Dtls. See Shts. 28-29
For Median Geometrics See Sht. 31

RECORD DRAWING
FIELD ENGINEERING
DIVISION
DATE 6-1-92

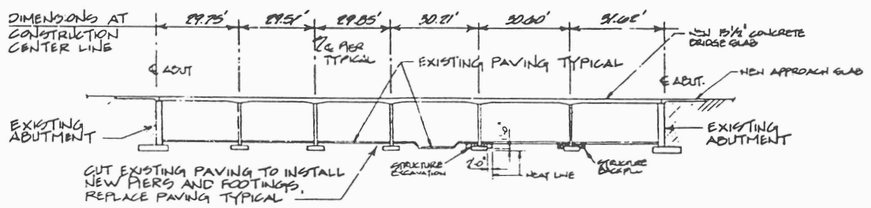
PAVING 110511
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT
TATUM BOULEVARD
SHEA BOULEVARD
TO
PARADISE VILLAGE PARKWAY SOUTH
P-824565

10 42

TATUM BLVD. - SHEA BLVD. TO
PARADISE VILLAGE PKWY. SOUTH
PHOENIX STREETS MARICOPA CO.

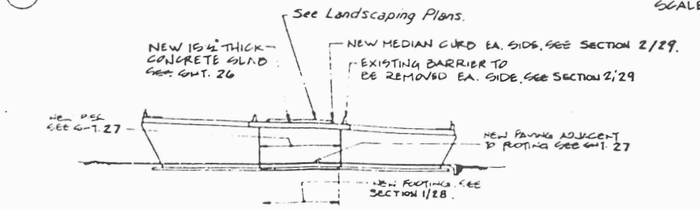


PLAN
SCALE 1"=20'-0"



1 LONGITUDINAL SECTION AT CONSTRUCTION CENTER LINE
SCALE 1"=20'-0"

BWP = 1815-2.5
= 178 FT.



2 TRANSVERSE SECTION
SCALE 1" = 20'-0"

0 1
INCH SCALE

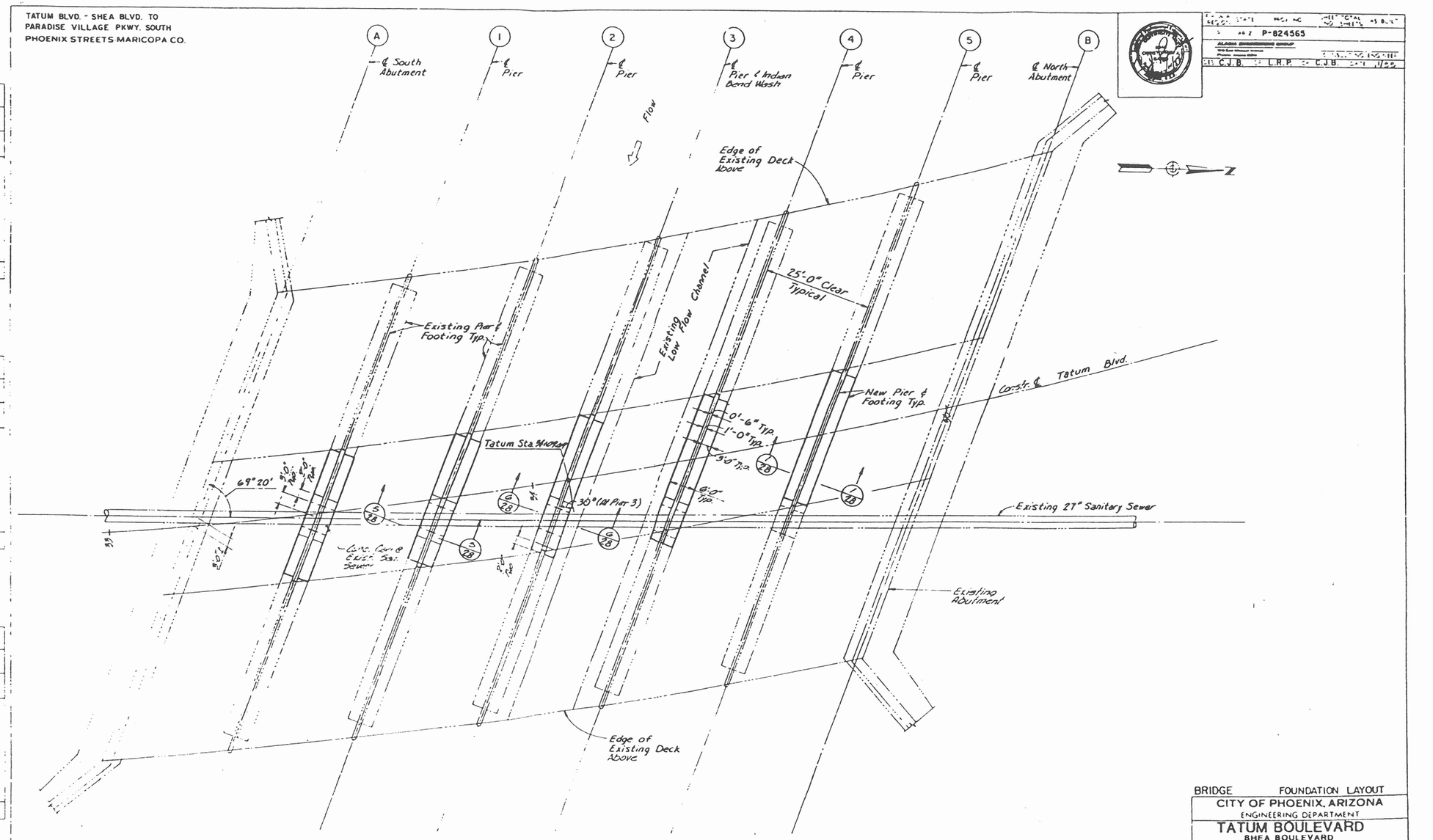
1105 25

RECORD DRAWING
FIELD ENGINEERING
DIVISION
DATE 6-1-72

BRIDGE GENERAL PLAN
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT
TATUM BOULEVARD
SHEA BOULEVARD
TO
PARADISE VILLAGE PARKWAY SOUTH
P-824565

DR.	L.R.P.	TR.	L.R.P.	SHEET NO	TOTAL SHEETS	AS BUILT
DATE	DATE	DATE				
SCALE 1" = 20'-0"				24	42	

TATUM BLVD. - SHEA BLVD. TO
PARADISE VILLAGE PKWY. SOUTH
PHOENIX STREETS-MARICOPA CO.



FOUNDATION LAYOUT
SCALE 1" = 10'-0"

0 1
INCH SCALE

110526

RECORD DRAWING
FIELD ENGINEERING
DIVISION
DATE 6-1-26

BRIDGE FOUNDATION LAYOUT
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT
TATUM BOULEVARD
SHEA BOULEVARD
TO
PARADISE VILLAGE PARKWAY SOUTH
P-824565

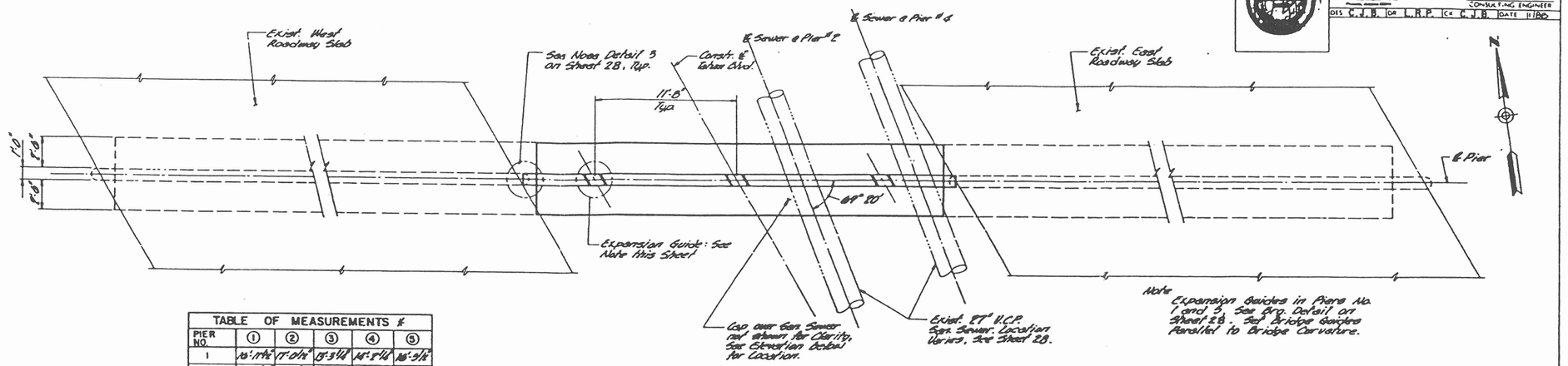
DES. H.P.	DET. C.J.B.	CK'D. L.H.P.	CK'D. C.J.B.	SHEET NO.	TOTAL SHEETS	AS BUILT
DATE	DATE	DATE	DATE	25	42	

SCALE 1" = 10'-0"

TATUM BLVD. - SHEA BLVD. TO
PARADISE VILLAGE PKWY. SOUTH
PHOENIX STREETS-MARICOPA CO.

F.H.W.A. REGION	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ	P-824565			

CONSULTING ENGINEER
DES C.J.B. DR L.R.P. CK C.J.B. DATE 11/80

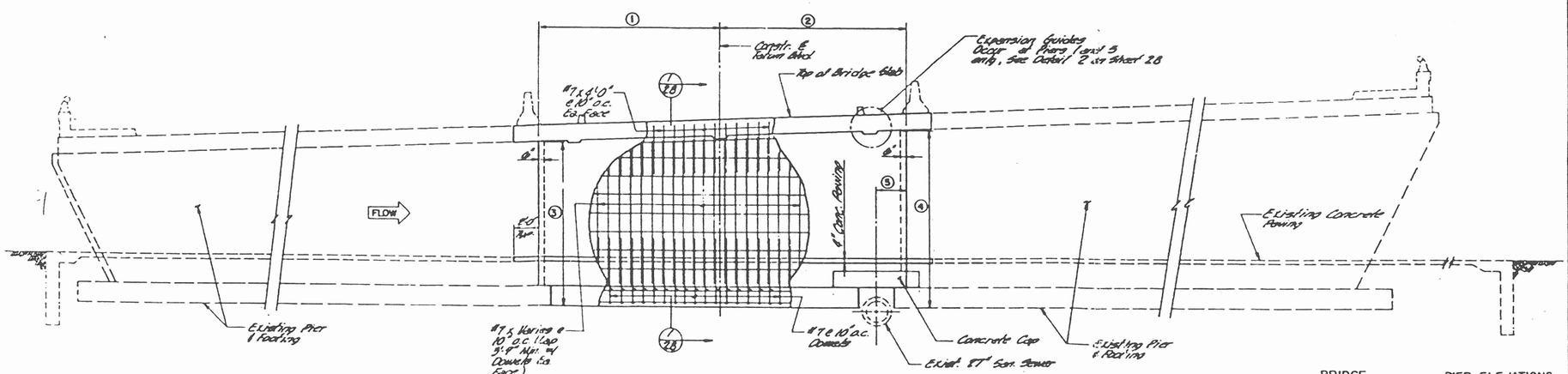


Note
Expansion Guides in Piers No. 1 and 3, See Strg. Detail on Sheet 28. Set Bridge Girders Parallel to Bridge Curvature.

TABLE OF MEASUREMENTS ℄					
PIER NO.	①	②	③	④	⑤
1	15'-1 7/16"	17'-0 1/4"	15'-3 1/8"	14'-5 1/16"	16'-9 1/2"
2	17'-1 3/4"	17'-5 3/4"	15'-4 7/8"	14'-5 15/16"	15'-6"
3	17'-4 1/8"	17'-5 1/4"	15'-4 9/16"	14'-5 1/16"	7'-10 1/4"
4	17'-7"	17'-7 3/16"	15'-5 1/4"	14'-5 1/16"	8'-6"
5	17'-9 3/4"	17'-10 1/4"	15'-5 3/4"	14'-4"	-(5'-7")

℄ Measurements Based on As-Built Plans. Verify Before Construction.

PLAN
SCALE 1/4"=1'-0"



TYPICAL PIER ELEVATION
(LOOKING NORTH)
SCALE 1/4"=1'-0"
0 1
INCH SCALE

REVISION BY CITY OF PHOENIX

NO	DESCRIPTION	DATE

REVISION BY CITY OF PHOENIX

NO	DESCRIPTION	DATE

110528

RECORD DRAWING
FIELD ENGINEERING
DIVISION
DATE 6-2-82

BRIDGE PIER ELEVATIONS
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT
TATUM BOULEVARD
SHEA BOULEVARD
TO
PARADISE VILLAGE PARKWAY SOUTH
P-824565

DES	DR	CK	DATE	SHEET NO.	TOTAL SHEETS	AS BUILT
C.J.B.	L.R.P.	C.J.B.	11/80	27	42	

SCALE 1/4"=1'-0"

REVISION BY CITY OF PHOENIX			
NO	DESCRIPTION	BY	DATE

REVISION BY CITY OF PHOENIX			
NO	DESCRIPTION	BY	DATE

REVISION BY CITY OF PHOENIX			
NO	DESCRIPTION	BY	DATE

TATUM BLVD. - SHEA BLVD. TO PARADISE VILLAGE PKWY. SOUTH PHOENIX STREETS-MARICOPA CO.

SEE DETAIL THIS SHEET FOR SLAB BRG. @ PIERS (1) AND (5)

TOP OF BRIDGE SLAB

#7 x 3'-3" @ 10" o.c. @ PIERS (2) (3) & (4) ONLY

½" x 5" CONT. PREMOLDED JOINT FILLER @ PIERS (2) (3) & (4) ONLY.

2'-4'-0" INTERMITTENT KEYS @ 10" o.c. TYP @ PIERS (2) (3) & (4) ONLY

4'-0"

℄ PIER

2 - #6 CONT.

2" CLEAR (TYPICAL)

#4 CONT. @ 18" o.c. (LAP 1'-6") EACH FACE

1' DEEP GAWKUT & BREAKOUT EXIST. CONC. PAVING FOR NEW PIER & FOOTING.

#7 - VARIES @ 10" o.c. LAP 5'-9" W/DOWELS

2'-0" LAP W/ EXIST. J.W.F.

VARIES

NEW CONCRETE PAVING REINF. W/ 6"x6" - W1.4 x W1.4 W.W.F.

EXIST. PAVING

#7 x 2'-4" @ 10" o.c. DOWELS

4"

#5 x 5'-0" @ 10" TOP TRANSV.

2'-6"

2'-6"

8 - #5 CONT. LONGIT.

1'-6"

SEE DETAIL 1 ON SHEET 24 FOR LIMITS OF STRUCTURAL EXCAVATION. IF OVER EXCAVATED BY CONTRACTOR THE OVER EXCAVATION WITHIN 5'-0" OF THE FOOTING SHALL BE FILLED WITH CLASS C CONCRETE.

(1) PIER SECTION

SCALE 1/2" = 1'-0"

#5 x 5" x 3'0" x CONT. w/ 3/8" ϕ x 2" ANCHORS @ ALT. LEGS @ 10". TYP.

½" BITUMINOUS JOINT FILLER CONT.

15'-0" ϕ

STD. 180° BEND

2½" CLR.

1'-0"

#4 @ 10"

℄ BRG. ABUT.

15 1/4"

2" CLR

#8 @ 9"

#5 @ 12"

#4 - 1'-0" @ 12" o.c. EPOXY GROUT TO EXIST. ABUT. w/ 1" EMBEDMENT CONTINUOUS C = 3/4" ELASTOMETRIC (NEOPRENE) BRG. PAD. (DUROMETER HARDNESS - 60) LAP C' MIN. AT SPLICES

3/4" STYROFOAM CONT. JOINT FILLER FILL WIDTH OF REMAINING BEARING.

BRG. PAD JOINT FILLER OR SEAT MAT'L

EXISTING ABUTMENT

1'-6" 6" 2"

℄ GRADE

TYPICAL BRIDGE GRADE

(2) SLAB @ ABUTMENT DETAIL

SCALE 1/2" = 1'-0"

EXIST. PIER

1" DEEP GAWKUT EA SIDE AND BREAKOUT EXIST. CONC.

NEW PIER

1'-0"

#4 x 2'-0" @ 18" o.c., ALT. w/ EXIST. #4 NOSE BARS EPOXY GROUT INTO EXIST. PIER w/ 7" EMBEDMENT

#7

#4 @ 18" o.c. HOOK AROUND NOSE BARS

0"

EXIST. NOSE BARS TO REMAIN.

(3) NOSE DETAIL

SCALE 1" = 1'-0"

1" 5"

#4 x CONT.

#4 x 3'-0" @ 12" o.c.

0"

(4) CURB DETAIL

SCALE 3" = 1'-0"

6'-0"

2-#9 x 10'-0" LAP w/#4 EA. SIDE OF GAW. GEWER

CONC. CAP & GAW. GEWER

FOOTING REINF. SEE DETAIL 1

#4 x 3'-0" @ 12" o.c. GRADE w/ TRANS REINF.

1'-0"

REINF. SIM DET.

TOP OF FOOTING

EXISTING 27" GAW. GEWER CONCRETE

(5) CONCRETE CAP DETAIL

at EXIST. FOOTING DRILL & EPOXY GROUT IN #4 x 30"

F.H.W.A. REGION	STATE	PROJ. NO	SHEET NO	TOTAL SHEETS	AS BUILT
9	ARIZ	P-824565			

CONSULTING ENGINEER

DES C.J.B. DR L.R.P. CK C.J.B. DATE 11/86

2-#9

FOOTING REINF. SEE DETAIL 1

CONCRETE CAP

TOP OF FOOTING

REMOVE TOP HALF OF EXIST. GAW. SEWER AND BACK-FILL WITH LOOSE MATERIAL PRIOR TO PLACING CONCRETE CAP.

EXIST. 27" GAW SEWER

FOOTING BEYOND

(6) CONCRETE CAP DETAIL

SCALE 1½" = 1'-0"

¼" CHAMFER x 0" LONG TILT TROWEL RADIUS GROOVE ON CORNERS

1'-8"

2"

#5 x 10'-0" o.c. @ CENTER OF PIER

CORNERS ℄

BRIDGE GRADE

BRIDGE SEAT NOTE: PLACE CONTINUOUS ON BRIDGE SEAT AND IN GROOVES FULL WIDTH OF BEARING. 2 LAYERS KRAFT REINFORCED ROOFING PAPER (30# MIN.) BOTTOM LAYER CEMENTED.

0" 0"

(7) SLAB BEARING ℄ PIERS (1) & (5)

SCALE 1" = 1'-0"

BRIDGE PIER DETAILS

CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

TATUM BOULEVARD
SHEA BOULEVARD
TO
PARADISE VILLAGE PARKWAY SOUTH

P-824565

DES	DR	QTY	CK	CK	SHEET NO	TOTAL SHEETS	AS BUILT
DATE	DATE	DATE	DATE	DATE			
SCALE AS SHOWN					28	42	

0 1 INCH SCALE

110529

RECORD DRAWING FIELD ENGINEERING DIVISION DATE 4-1-92

AZ-MC-16

CITY OF SCOTTSDALE
ARIZONA

THOMAS ROAD BRIDGE
PROJECT SD-7307-C
& APPROACHES PROJECT F-7549-C
1975

CITY COUNCIL

RICHARD CAMPANA — CHARLES H. SMITH
HERB R. DRINKWATER — HEINZ R. HINK, Ph.D.
MRS. BILLIE GENTRY — PAUL MESSINGER
F. D. ALESHIRE — CITY MANAGER
FERN ANDERSON NELL — CITY CLERK
DICK FILLER — CITY ATTORNEY

REVIEWED FOR IMPROVEMENTS
DIRECTOR OF PUBLIC WORKS
CITY ENGINEER

APPROVALS

CITY OF SCOTTSDALE DIRECTOR OF CAPITAL IMPROVEMENTS ENGINEERING — Date 11/19/76

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY — DATE

CITY — Date

CITY ENGINEER

HOFFMAN-MILLER
ENGINEERS INC.
PHOENIX, ARIZONA
(BRIDGE)

BROOKS & KELLY
CONSULTING ENGINEERS
PHOENIX, ARIZONA
(APPROACHES)

SHEET INDEX

1-	FACE SHEET	14-	BRIDGE LOCATION PLAN
2-	PLAN & PROFILE - DETOUR	15-	BRIDGE FOUNDATION DATA
3-	" " " - W. APPROACH (Paving & S.D.)	16-	W. BRIDGE ABUTMENT
3A-	PROFILE " " - W. APPROACH (Paving)	17-	E. BRIDGE ABUTMENT
4-	PLAN & PROFILE - APPROACHES AT BRIDGE (Paving)	18-	ABUTMENT SECTIONS
5-	" " " - E. APPROACH (Paving & S.D.)	19-	ABUTMENT DADO DETAILS
6-	" " " - 78TH STREET (Paving)	20-	PIER DETAILS
7-	" " " - SURFACE DRAINAGE	21-	DECK DETAILS
8-	" " " - 48" S.D. & CHANNEL BOTTOM	22-	DECK DETAILS
9-	" " " - E. APPROACH (S.D.)	23-	HANDRAIL DETAILS
10-	" " " - ACCESS RD. TO WELL SITE		
11-	DETAILS - PAVING & S.D.		
12-	" " " "		
13-	" " " "		

Revised Nov. '75 - Sheets 2 & 13
Revised Sept '75 - Sheets 4, 8, 9, 12 & 13

SHEET 1 OF 23

ADOT# 157
City 5-7-75

16484

CITY OF SCOTTSDALE PROPERTY

Construct Reinf Conc. Headwall with removable Trash Rack, Ariz. Hwy. Dept. Std. 14.01 "L" Modified per Det. Sheet 13. Headwall to be constructed after removal of Detour.

New Drain Ditch, per Det. Sheet 7

Sta. 413+15 to 414+10 Remove 95' L.F. Ex. 24" C.P. to E. & Plug to W.

Sta. 413+07 to 413+95° Lt. Remove 63' L.F. Ex 24" C.M.P. Ex 12"-V.B.I.C., 145' L.F. Ex 12"-M.I.C.I.P. Connect to to 24" C.I.P. & 12" Booster Dischg. & Constr. New 12"-M.I.C.I.P. per Det. Sheet 11.

Construct 2ea 48" R.C.P. CIII Culverts (L=145.18 & 148.77') with 22°30' Bends @ ℄. 54.5 Rt. Plug No. Ends with Temp Wooden Bulkheads. Constr. Headwall AND Std. C14.02 (Mod) per

MATCH LINE STA. 413+00 SHEET 3

Sta. 413+99° to 416+90°, Remove Abandoned 12" C.I.P. Water Line.

NOTE: Construction notes this sheet for Storm Drain & Channel Bottom only. See Sheet 4 for Paving constr. notes this area.

PROP. NEW LOC. 4'603 (By AP.S.)

60"-R (as Relocated)

12"-R (C.I.P.) as Relor.

Relocate 4"-G (By AP.S.)

Abandoned

To be Abandoned

Remove Conc. Culvert

Sta. 413+15° to 416+90° Remove Abandoned 4"-G (Steel).

THOMAS ROAD

Existing 60" C.P. (Abandoned)

6"-W to 2-3/4" Trans. (Exist. Tel.)

To Remain

Prop. R/W

Constr. Conc. Channel Bottom E. Bay Only per Det. Sheet 12

Remove 35° L.F. Ex. 18" C.I. Drain Pipe & Plug to W.

Grouted Rip-rap Bank Protection & New Conc. Box. per Well Site Det. Sheet 13.

Sta 412+80° to 416+30°, Remove Abandoned 60" C.P.

Remove Abond. 24" C.P. to Sta. 416+75 Rt. After Diverting Water into Channel

Detour - See Sheet 8

NOTE: Special Caution must be exercised during Construction in use of equipment over 60" Water Line in East Bay, due to Minimal Cover.

Proposed East Bank Line of Western Limits of Development.

Edge of Exist. Pvmt.

For Constr. of 36" S.D. This Area, See Sheet 9.

Existing Tel. M.H. To remain. Adj. to Grade (By Others)

SRVMUA - Existing 24" C.I.P.P.

Contractor to Divert Irr. Water During Constr. SRVWUA Permit Required.

417+70.08 ℄ Tel. MH 9.75 Rt. 39'

417+08.58 ℄ Tel. MH 10.12 Rt. 51'

MATCH LINE STA. 419+00 SHEET 5

SCALE: Horiz.-1"=20' Vert.-1"=4'

Paving Construction Details are Shown On Sheet 4.

See Sheet 9 for Profile

Thomas Rd., Elev. 1226.51

P.I. V.C. 415+21 El. 1233 Curve 1.43

Fin. ℄ Grade

End Bridge 416+61.5

℄ SD MH #4 Lt. 416+51.5

Begin Bridge 413+90.50

℄ Abut. #1 413+92

℄ Pier #2 414+93

℄ Pier #3 415+49

℄ Pier #4 416+05

℄ Abut. #2 416+50

Exist. ℄ Grade

Construct Conc. Channel Bottom East Bay Only per Detail Sheet 12

New 48" Culvert

Existing (SRVWUA)

Ex. 24"-W (Location Unconfirmed)

Exist. Box Culvert

Ex. 24" SRVWUA Pipe

Remove Abandoned 60" Pipe

Top Ex. Tel. Cond. 38.5' Rt.

Top Ex. Tel. Cond. 51' Rt.

New Channel Bottom @ N. Side of Bridge, El.= 16.0 @ S. " " " El.= 15.5 (See Detail-Channel Exc.-Sheet 11)

Remove Ex. 24"-W & Reloc. 12" M.I.C.I.P. per Det. Sheet 11

Ex. 12"-W. is Relocated

60" Pipe (as relocated)

12.10.00 Bottom of Footing Abut. #1 Piers #1 & #2

12.05.00 Bottom of Footing Piers #3 & #4 Abut. #2

Paving Construction Details are Shown On Sheet 4.

Tel. MH

Top Ex. Tel. Cond. 51' Rt. (To Remain)

Ex. 24" SRVWUA PIPE

Ex. 60" Pipe

Top Exist. UG Tel Conduits 38.5' Rt. (To Remain)

NOTE: FOR PROFILE OF NEW 36" S.D., Lt. & Rt., SEE SHEET 9

△ REV. NOV 75 - Added Dwl. 417+65 Rt & Lt., Rem. S.D. Str. Sta. 416+63.5 Rem. S.D. & Conn. @ W. Side 48" Pipe

△ REV. SEPT 75 - Added Barricades, & Rem. 36" S.D. Rt. Sta. 416+63.5

CITY OF SCOTTSDALE

SCALE NOTED	48" STORM DRAIN AND CHANNEL BOTTOM	DRAWN BY RCM
DATE 5-75		DESIGNED BY TFB

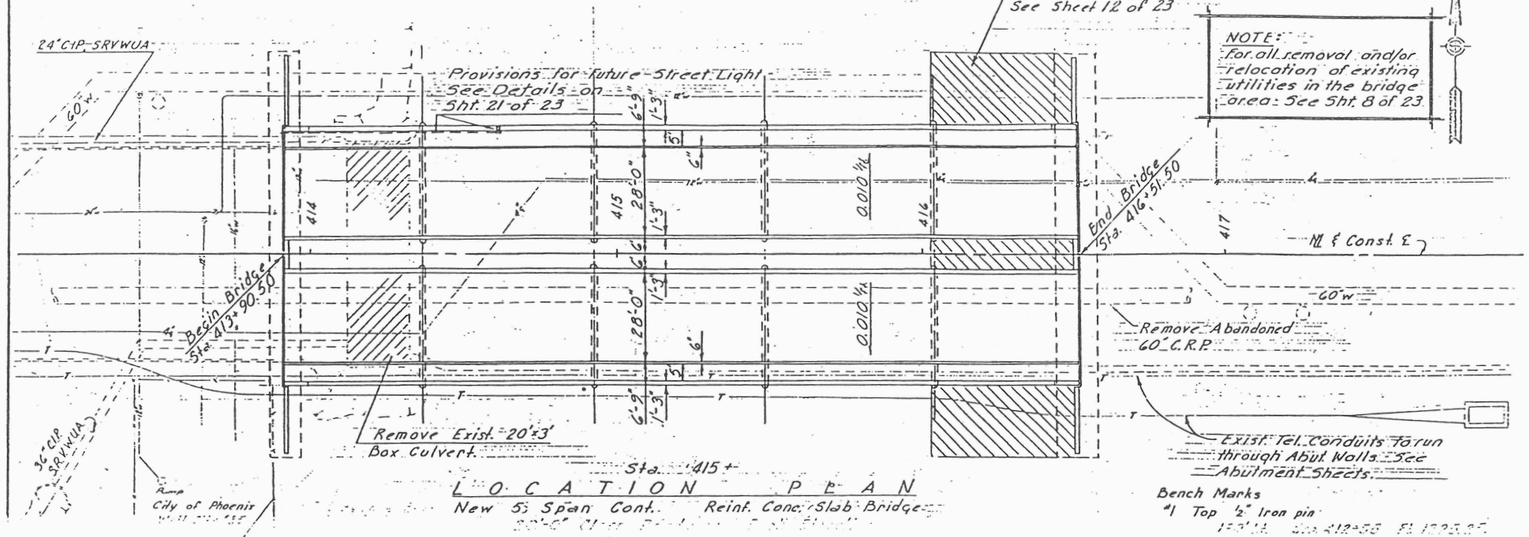
BRIDGE APPROACHES P-7549-C

BROOKS & KELLY CONSULTING ENGINEERS PHOENIX ARIZONA

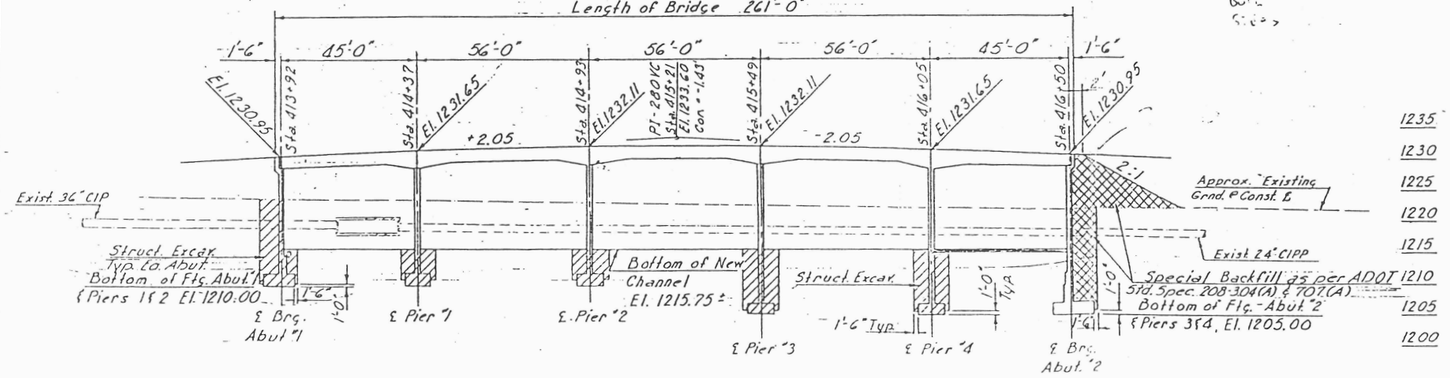
8 OF 23

TC-021-B

THOMAS ROAD SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



E(TRD) = 1233.6 − 1.43 = 1232.17
E(LC) = 1232.17 − 1.667 = 1230.5 (Rdwy. ⊥)
BWC = 261 − 1.5" × 2 = 258'



Note Elevations shown are ℄ New Const. E.

TYPICAL LONGITUDINAL SECTION
Scales —— 1" = 20'-0" horz. - 1" = 10'-0" vert.

GENERAL NOTES

Construction
Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction.

Design
A.A.S.H.T.O. Standard Specifications for Highway Bridges. 1973 Edition revised to date.

Loading
HS 20-44.

Allowable Stresses
Class "A" concrete — fc = 1200 psi n = 10
Class "AA" concrete — fc = 1600 psi n = 8

Reinforcing Steel shall conform to ASTM Specifications A 615 - Grade 40.

All Dimensions for reinforcing steel shall be to center of bars unless otherwise noted.

Parapets and Curbs shall be poured to grade without camber after falsework has been struck.

Dimensions shall not be scaled from these drawings.

All Welding shall conform to American Welding Society Specs. for welded Highway and Railway Bridges.

Structural Steel shall conform to A.S.T.M. A-36.

QUANTITIES

Item	Struct. Excav C.Y.	Special Backfill C.Y.	Concrete C.Y. "A"	Concrete C.Y. "AA"	Reinf. Steel Lbs.	H-2-1 H'drl L.F.
* DECK	—	—	—	1,295.59	366,275	1005.33
4 PIERS	750	—	370.00	—	45,230	—
2 ABUTMENTS	1,730	1,995	541.50	—	65,450	—
TOTALS	2,480	1,995	917.50	1295.59	476,955	1005.33

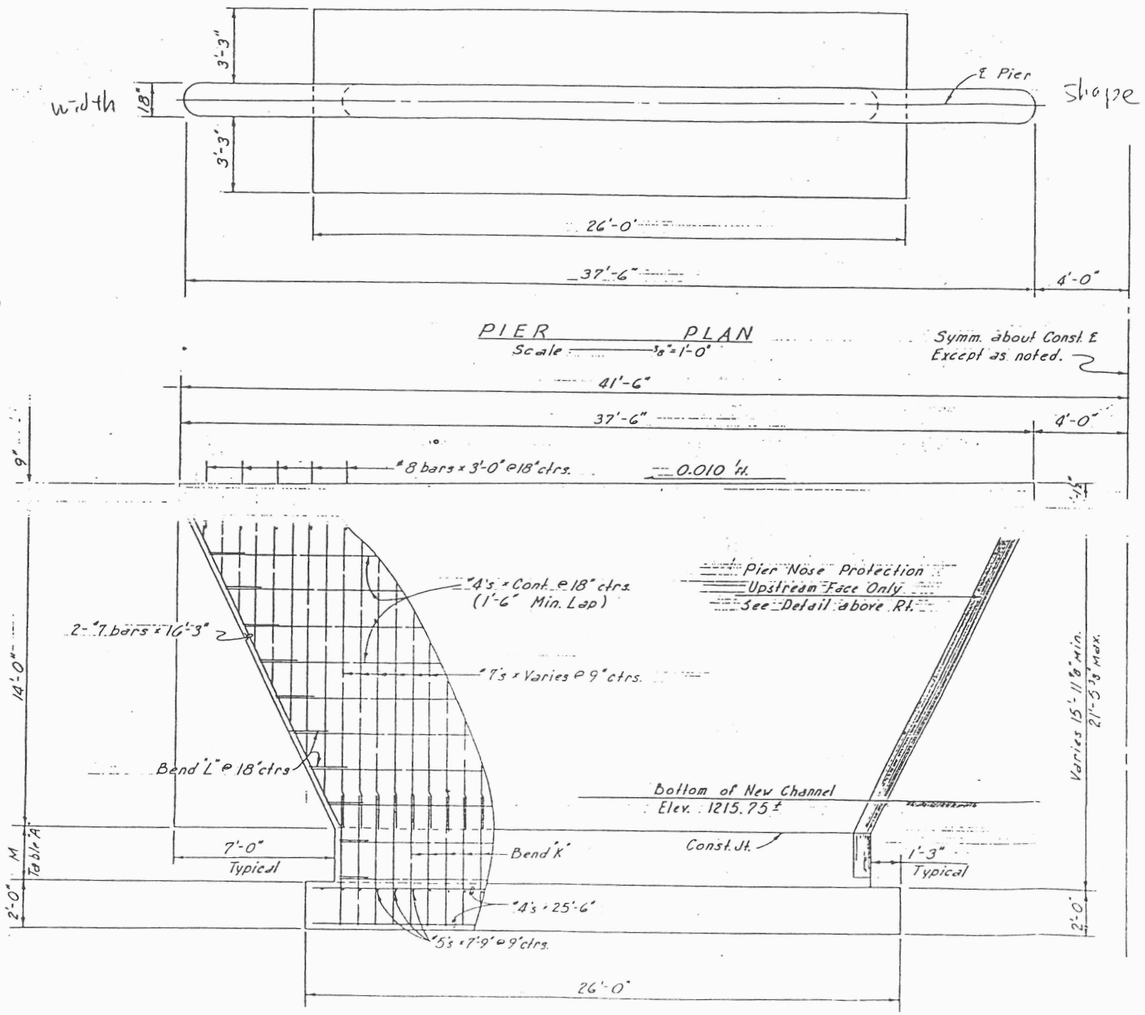
* Includes Dados, Parapets, and Curbs.

CITY OF SCOTTSDALE
SCALE Noted | LOCATION PLAN | DRAWN BY JSN
DATE 2-75 | DESIGN DRD
STA 415+ THOMAS ROAD
BRIDGE OVER INDIAN BEND WASH
HOFFMAN-MILLER ENGINEERS INC.
PHOENIX ARIZONA | DRAWING NUMBER 14 of 23

Proj. No. SD 7307

FC-227-14

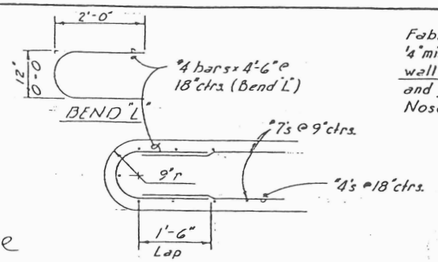
THOMAS ROAD SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



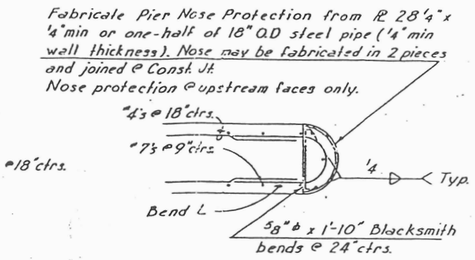
PIER PLAN
Scale — ⅜" = 1'-0"

Symm. about Const ℄ Except as noted.

PIER ELEVATION
Scale — ⅜" = 1'-0"



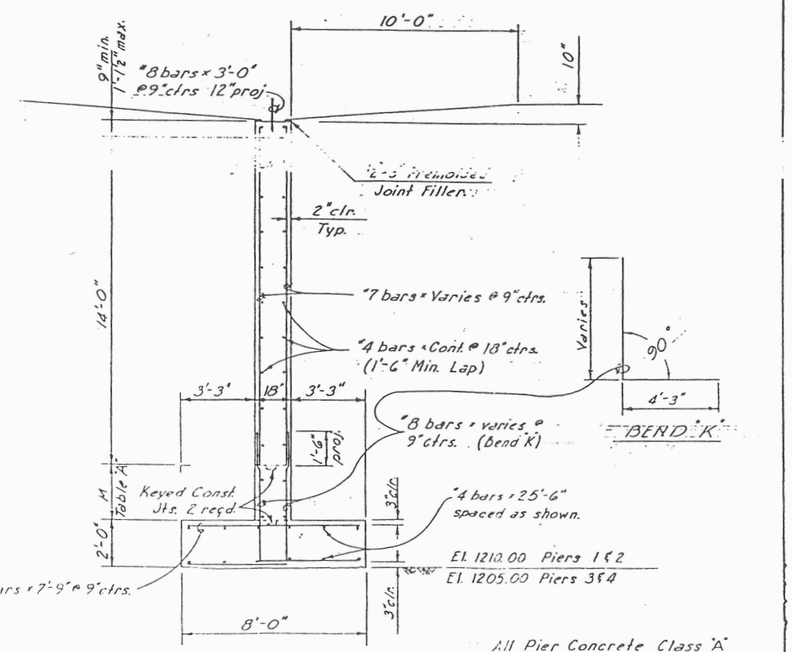
Downstream Face



Upstream Face

PIER NOSE DETAILS
Scale — ¾" = 1'-0"

TABLE "A"				
PIER	1	2	3	4
M	1'-11⅜"	2'-5⅜"	7'-5⅜"	6'-11⅜"



SECTION AA
Scale — ⅜" = 1'-0"

All Pier Concrete Class "A"

Registered Professional Engineer (Civil) Certificate Expires 9/30/78 Walter Hoffman Dec. 31, 1978 Arizona, U.S.A.

CITY OF SCOTTSDALE

As Noted	PIER DETAILS	Drawn by J.P.K.
Date 2-75		Design D.R.D.

STA. 415+ THOMAS ROAD
BRIDGE OVER INDIAN BEND WASH

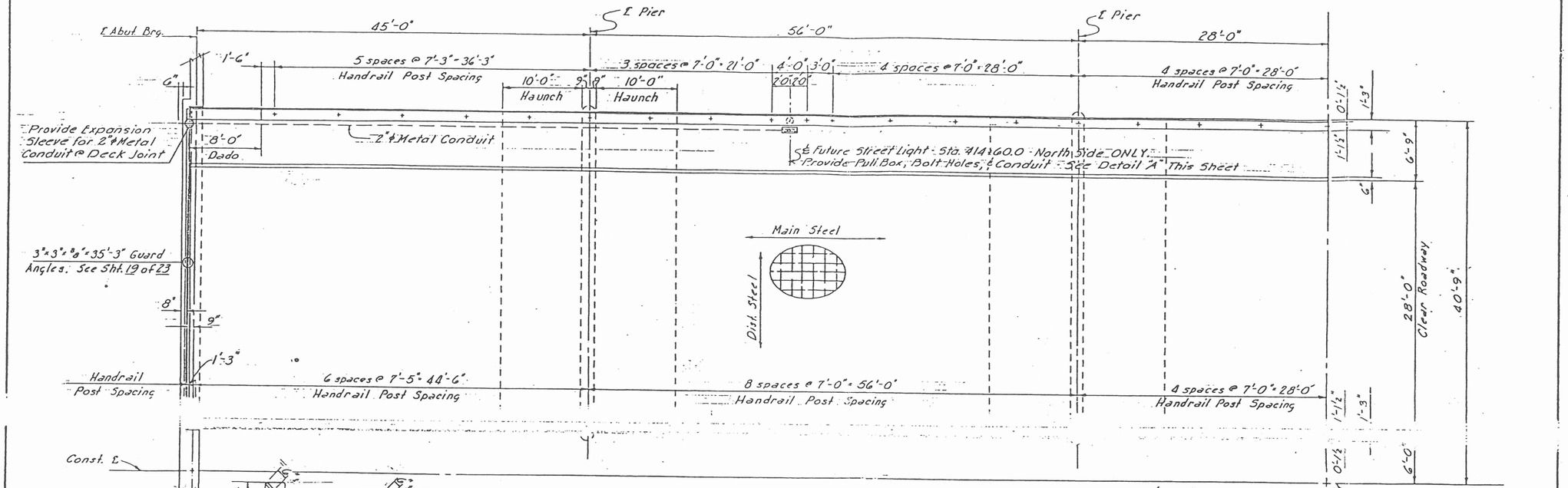
HOFFMAN-MILLER ENGINEERS INC.
PHOENIX ARIZONA

Drawing Number 20 of 23

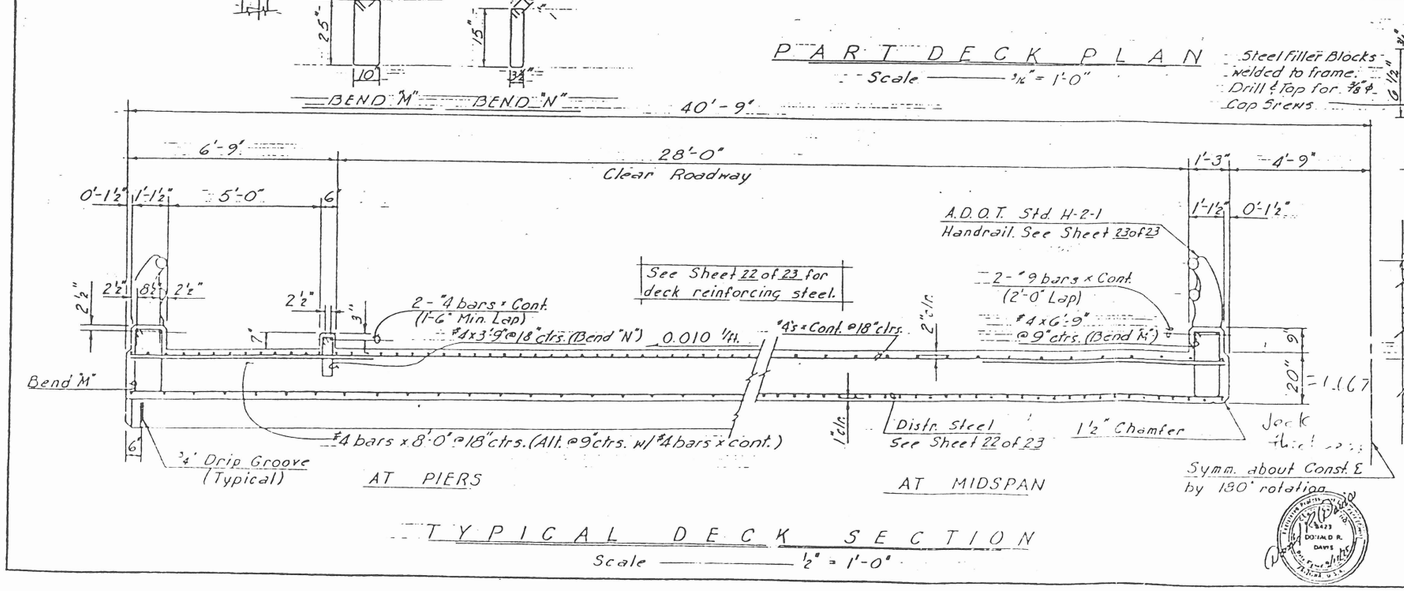
Proj. No. - SD7307

FC-027-R

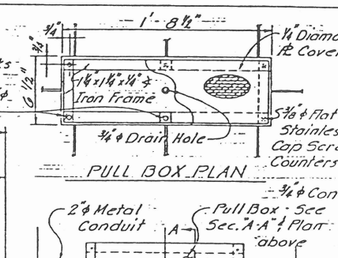
THOMAS ROAD SCOTTSDALE
BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



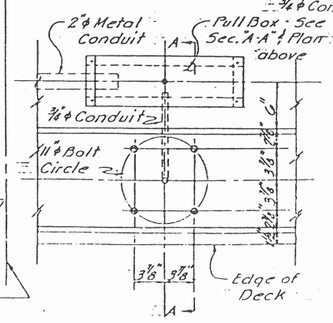
PART DECK PLAN
Scale — ⅛" = 1'-0"



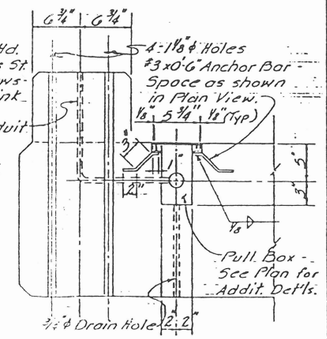
TYPICAL DECK SECTION
Scale — ½" = 1'-0"



PULL BOX PLAN



DETAIL "A"



SECTION "A-A"

All Deck Conc. Class "A-A"

CITY OF SCOTTSDALE

SCALE None	DRAWN BY JSW
DATE 2-75	DECK DETAILS
	CHKD. BY DRD

STA. 415+THOMAS ROAD
BRIDGE OVER INDIAN BEND WASH

HOFFMAN-MILLER ENGINEERS INC.
PHOENIX ARIZONA | 21 of 23

Proj. No. SD 7307

FC 022-21

CAPITAL IMPROVEMENTS ENGINEERING

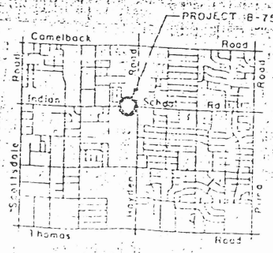
PROJECT NO. B-7501

INDIAN SCHOOL ROAD
BRIDGE OVER
INDIAN BEND WASH

COUNCIL

WILLIAM C. JENKINS (Mayor)
RICHARD CAMPANA
BILLIE GENTRY
DIANE CUSACK
HEINZ HINK, Ph.D.
JEFF SCHUBERT
CHARLIE SMITH

CITY MANAGER - E. D. ALESHIRE
CITY ATTORNEY - RICHARD FILLER
CITY CLERK - FERN A. NELL



VICINITY MAP

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET (THIS SHEET)
2	PLAN & PROFILE - INDIAN SCHOOL RD.
3&4	PLAN & PROFILE - DETOUR
5	TYPICAL SECTION & DETAILS
6&7	WATERLINE RELOCATION DETAILS
8	LOCATION PLAN
9	FOUNDATION DATA
10 - 18	BRIDGE DETAILS
19	HANDRAIL DETAILS
20-23	INLET - OUTLET - GRADING DETAILS
24&25	10" SANITARY SEWER
26	12" WATER LINE

HOFFMAN - MILLER
ENGINEERS
PHOENIX ARIZONA

APPROVED
FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
DATE

RICHARD C. BROWN
ASST. DEPARTMENT HEAD
FOR FIELD OPERATIONS

GEORGE IANNELLA
ENGINEERING SERVICES DIRECTOR

NOT AS-BUILT

SHEETS 20 & 22 REVISED AS OF 4-26-78

REVISION △ SHT. 25

16398

B-7501

Sta. 7+09 & Sta. 8+15 to Sta. 8+40. See Detail - Sht. 5 of 26. ADOT Stds. C-10.01, C-10.01.1 & C-10.03. Six (6) additional Flared Terminal Sections req'd.

Underground Electric

CALL FOR THE BLUE STAKES 263-1100 Blue Stake Center

INDIAN BEND WASH

REMOVE exist. as shown

REMOVE exist. fence as req'd. for New Constr.

1" Premolded Joint Filler. Typical @ all four corners of Bridge.

Install 15" RGRCP See Sheets 20 & 21 for all Details.

Future

REMOVE exist. C & G, S/W and A.C. Pavement

42" Water

Construct 180 S.F. Conc. Sidewalk Std. Detail 180

Construct 100 S.F. Conc. Sidewalk Std. Detail 180

Construct 36 L.F. Combined C & G Std. Detail 146

Construct 20 L.F. Combined C & G Std. Detail 146

Construct Median per Details Sht. 5

REMOVE exist. M.H. & lower exist. duct system below & By Others

45" Water (Abandoned) REMOVE as Req'd.

N 90°00'00" E (Assumed)

O P E N

Single Curb Std. Dtl. 142

Exist. 12" A.C.P. Water Line to be relocated. See Sht's 6 & 7

Rdwy. Drain

6" S — (Abandoned) REMOVE as Req'd.

Scales 1" = 20' Horiz. 1" = 4' Vert.

Telephone

4" Gas

8" Water

INDIAN SCHOOL ROAD

Mon. Line & New Construction ℄

New 8" Sanitary Sewer See Sheets 24 & 25.

Construct Median per Details Sht. 5

Construct 20 L.F. Combined C & G Std. Detail 146

Construct 100 S.F. Conc. Sidewalk Std. Detail 180

FUTURE Water Line Extension

Slump

2 Catch Basin

FUTURE Water Line Extension

Exist. R/W

New M.H. & 10" Sanitary Sewer. See Shts. 24 & 25.

New 12" Water Line See Sheet 26.

REMOVE exist. conc. hdwl's, pipe & lined ditch as req'd for New Constr.

Sta. 7+11.125 to Sta. 8+12.875 Construct New 3 Span Continuous R.C. Slab Bridge See Bridge Sheets

℄ Temporary Detour See Sheets 3 & 4.

New 10" Sanitary Sewer. See Shts. 24 & 25.

B.M. #2 - Top of N.E. Corner of Conc. Hdwl. @ 50' Rt. of Sta. 7+26. Elev. 1237.64

B.M. #3 - "+" on Top of Conc. Curb @ 34' Lt. of Sta. 11+00 Elev. 1235.82

78th Street ℳ

Hayden Rd. ℳ

Sta. 0+85.30

Sta. 14+00.00

5+00

10+00

Exist. Curb & Gutter @ Left

Left Gutter Grade

Ramp S/W and Depress Gutter Lip to Match Deck

G+75.2 Match Exist. C = 36.04 G = 35.45

7+11.125 Match Bridge C = 35.85 G = 35.35

8+12.875 Match Bridge C = 35.51 G = 35.01

8+33.0 Match Exist. C = 35.41 G = 34.93

NEW BRIDGE See Bridge Sheets

G+91.0 Match Exist. P = 1236.10

Begin Bridge

Fin. ℄ Grade

-0.3380%

End Bridge

8+33.0 Match Exist. P = 1235.62

Exist ℄ Grade

18" C.P.

6" W

Exist Curb & Gutter @ Right

℄ Exist Conc. Lined Ditch

Right Gutter Grade

New Floor Level @ Elev. 7225.75

24" C.P.

Depress Gutter Lip to Match Deck

Exist. Curb & Gutter @ Right

℄ Exist Conc. Lined Ditch

Indian School Rd.

6" San. Sewer (Abandoned)

8" San. Sewer

Telephone to be lowered by Others

45" Water (Abandoned)

12" Water (Exist)

New 10" San. Sewer

New 12" Water

42" Water

Bottom of Bridge Ftg's. Relocated 12" Water

TYP. SECTION SHOWING UTILITY LOCATIONS

NOTE #0

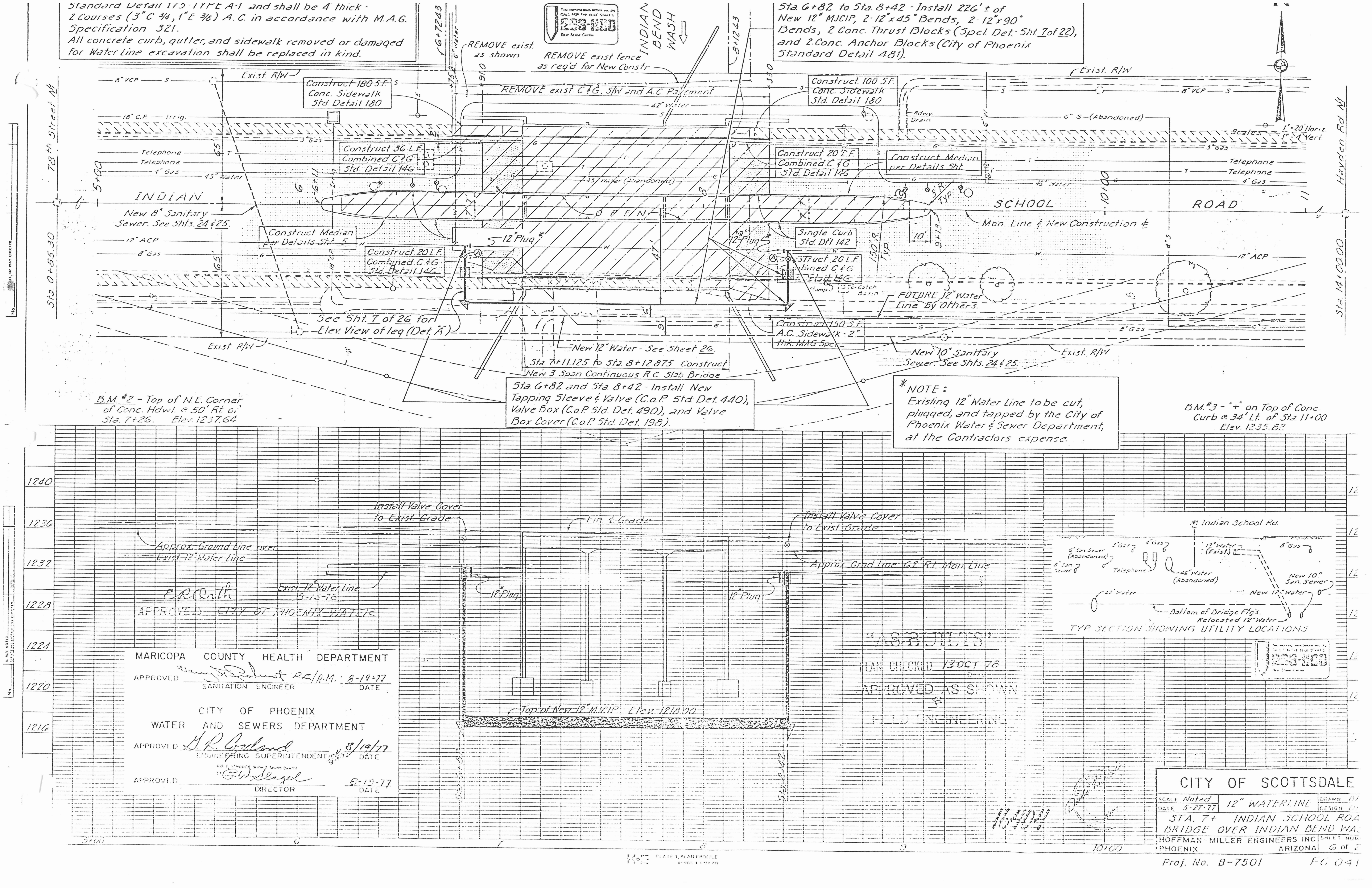
Contractor shall verify location and disposition of all utilities before proceeding with any excavation for New Bridge.

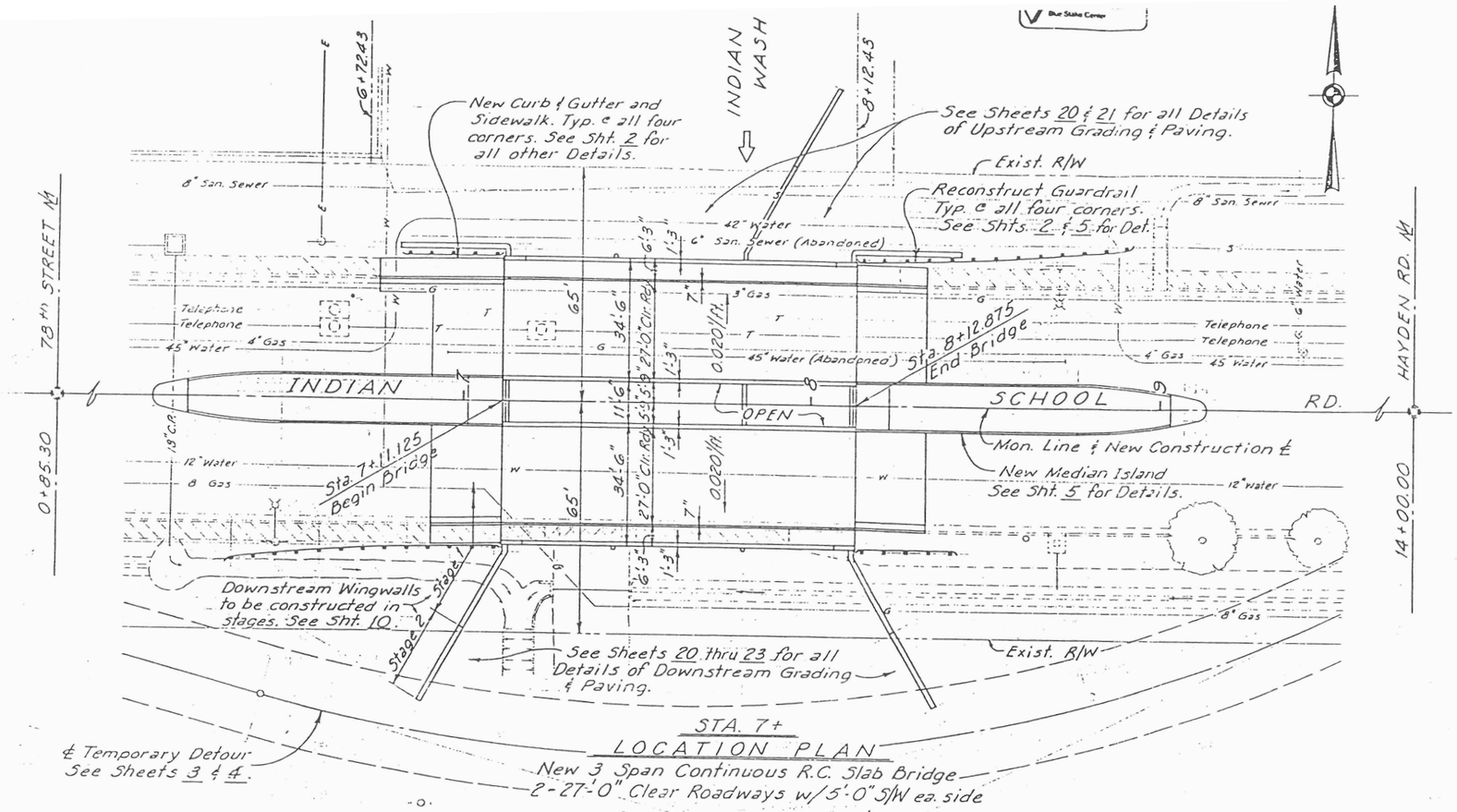
CALL FOR THE BLUE STAKES 263-1100 Blue Stake Center

9/11/77

CITY OF SCOTTSDALE		
SCALE Noted	PLAN & PROFILE	DRAWN NTS
DATE 5-27-77		DESIGN NTS
STA. 7+ INDIAN SCHOOL ROAD BRIDGE OVER INDIAN BEND WASH		
HOFFMAN-MILLER ENGINEERS INC PHOENIX ARIZONA		SHEET NUMBER 2 of 26

Proj. No. B-7501

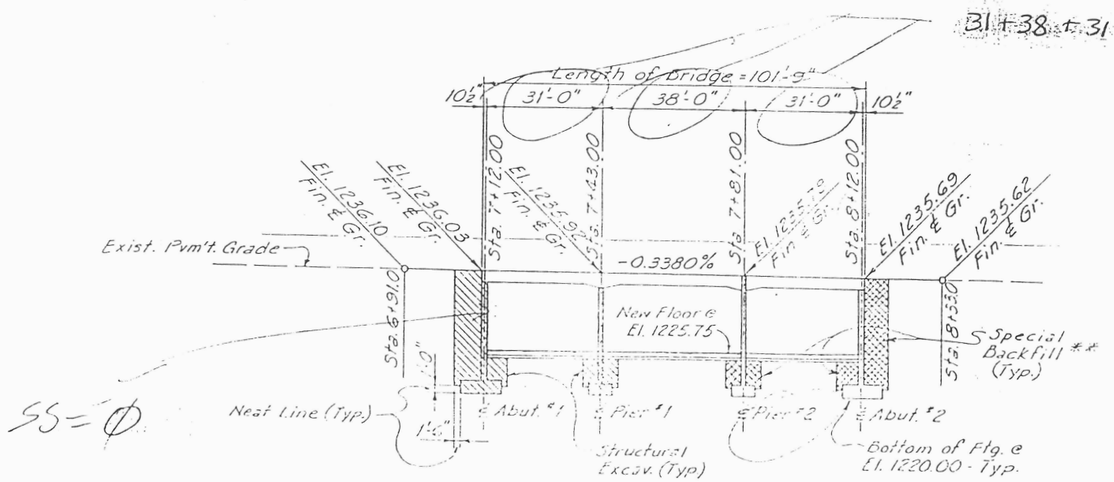

Standard Detail 175-TYPE A-1 and shall be 4 thick -
2 Courses (3"C 3/4, 1"E 3/8) A.C. in accordance with M.A.G. Specification 321.
All concrete curb, gutter, and sidewalk removed or damaged for Water Line excavation shall be replaced in kind.
INDIAN BEND WASH
Sta. 6+82 to Sta. 8+42 - Install 226' ± of New 12" MJCIP, 2-12"x45° Bends, 2-12"x90° Bends, 2 Conc. Thrust Blocks (Spcl. Det. Sht. 7 of 22), and 2 Conc. Anchor Blocks (City of Phoenix Standard Detail 481).
REMOVE exist. as shown
REMOVE exist fence as req'd for New Constr
Exist. R/W
Construct 180 S.F. Conc. Sidewalk Std. Detail 180
REMOVE exist. C&G, S/W and A.C. Pavement
Construct 100 S.F. Conc. Sidewalk Std. Detail 180
78th Street
Construct 36 L.F. Combined C&G Std. Detail 146
Construct 20 L.F. Combined C&G Std. Detail 146
Construct Median per Details Sht
Scales 1"=20' Horiz. 1"=4' Vert
Hayden Rd
Telephone
Gas
45" Water
INDIAN
SCHOOL
ROAD
New 8" Sanitary Sewer. See Shts. 24 & 25.
Mon. Line & New Construction ℄
Construct Median per Details Sht 5
12" Plug
Single Curb Std Dtl. 142
Construct 20 L.F. Combined C&G Std. Detail 146
12" ACP
8" Gas
Sta. 0+55.30
Sta. 14+00.00
FUTURE 12" Water Line by Others.
See Sht. 7 of 26 for Elev. View of leg (Det. "A")
Construct 150 S.F. A.C. Sidewalk - 2" Thk. MAG Spec.
New 12" Water - See Sheet 26.
New 10" Sanitary Sewer. See Shts. 24 & 25.
Sta 7+11.125 to Sta. 8+12.875 Construct New 3 Span Continuous R.C. Slab Bridge
Sta. 6+82 and Sta. 8+42 - Install New Tapping Sleeve & Valve (C.o.P. Std Det. 440), Valve Box (C.o.P. Std. Det. 490), and Valve Box Cover (C.o.P. Std. Det. 198).
*NOTE: Existing 12" Water Line to be cut, plugged, and tapped by the City of Phoenix Water & Sewer Department, at the Contractors expense.
B.M. #2 - Top of N.E. Corner of Conc. Hdwl @ 50' Rt. of Sta. 7+26. Elev. 1237.64
B.M. #3 - "+" on Top of Conc. Curb @ 34' Lt. of Sta 11+00 Elev. 1235.82
1240
1236
1232
1228
1224
1220
1216
Install Valve Cover to Exist. Grade
Fin. ℄ Grade
Approx. Ground Line over Exist. 12" Water Line
Approx. Grnd line 62' Rt Mon Line
Exist. 12" Water Line
12" Plug
APPROVED CITY OF PHOENIX WATER
Top of New 12" MJCIP Elev. 1218.00
"AS BUILTS"
PLAN CHECKED 13 OCT 78
APPROVED AS SHOWN
FIELD ENGINEERING
Indian School Rd.
New 12" Water
New 10" San. Sewer
Bottom of Bridge Ftg's.
Relocated 12" Water
TYP. SECTION SHOWING UTILITY LOCATIONS
MARICOPA COUNTY HEALTH DEPARTMENT
APPROVED 8-19-77 SANITATION ENGINEER DATE
CITY OF PHOENIX WATER AND SEWERS DEPARTMENT
APPROVED 8/19/77 ENGINEERING SUPERINTENDENT DATE
APPROVED 8-19-77 DIRECTOR DATE
CITY OF SCOTTSDALE
SCALE Noted
DATE 5-27-77
12" WATERLINE
STA. 7+ INDIAN SCHOOL ROAD BRIDGE OVER INDIAN BEND WASH
HOFFMAN-MILLER ENGINEERS INC PHOENIX ARIZONA
6 of 2
Proj. No. B-7501
FC 041



STA. 7+
LOCATION PLAN
New 3 Span Continuous R.C. Slab Bridge
2-27'-0" Clear Roadways w/5'-0" S/W ea. side

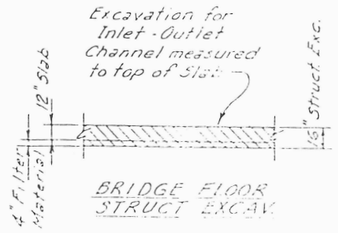
Scale ——— 1" = 20'

B.M. #2 - Top of N.E. Corner of Conc. Hdwl. @ 50' Rt. of Sta. 7+26. Elev. 1237.64



SECTION ON NEW CONSTRUCTION ℄

Scales ——— 1" = 20' Horiz.
1" = 10' Vert.



BRIDGE FLOOR STRUCT EXCAV.

** Spec. Bkfill at Piers and in front of Abuts. is required under Floor Area ONLY.

GENERAL NOTES

Construction:
Maricopa Association of Governments Uniform Standard Specifications for Public Works Construction revised to date.

Design:
A.A.S.H.T.O. Standard Specifications for Highway Bridges - 1973 Edition, revised to date.

Loading Class:
H S 20-44

Allowable Stresses:
Class "A" Concrete - f'_c = 3000 psi; f_c = 1200 psi; n = 10
Reinforcing Steel - f_s = 20,000 psi

Reinforcing Steel shall conform to A.S.T.M. Specification A615 - Grade 40.
Structural Steel shall conform to A.S.T.M. Spec. A 36 (u.n.o.).
Welding shall conform to American Welding Society Specifications for Welded Highway and Railway Bridges.
All dimensions for reinforcing steel shall be measured from the surface of the concrete to the center of the bar unless otherwise noted.
All bend dimensions shown for reinforcing are out to out of bar unless otherwise noted.
Barriers, Parapets & Curbs shall be poured to grade after deck falsework has been struck.
Chamfer all exposed edges and corners ¾" unless otherwise noted.
Special Backfill shall be in accordance with A.D.O.T. Standard Specs. 208-3.04(A) and 707(A).
Dimensions shall not be scaled from these drawings.
Paint & Painting shall conform to M.A.G. Specifications.
(Painting req'd on Pier nose protection ONLY)
Shop Coat - No. 1-B
Second Coat - No. 8
Finish Coat - No. 9
(Painting req'd. on Ret. Wall Ped. Handrail ONLY)
Shop Coat - No. 1-B
Second Coat - No. 8
Finish Coat - No. 10

APPROXIMATE QUANTITIES

Item	Struct. Excav. C.Y.	Special Bkfill C.Y.	Class "A" Concrete C.Y.	Reinf. Steel lbs.	H-2-1 Hdrail L.F.	Spcl Req Hdrail L.F.
Abutment Nº 1	915	380	201.05	15,810	–	84'-9"
Abutment Nº 2	895	370	198.18	15,690	–	84'-9"
Pier Nº 1	95	60	54.04	6340	–	–
Pier Nº 2	440	70	130.44	16,010	–	–
2 Decks *	–	–	397.24	51,250	179'-2"	
Conc. Floor	420	–	279.24	24,810		
TOTALS	2765	880	1260.39	130,010	179'-2"	169'-6"

* Includes Curbs, Handrail Parapets & Dados.
Steel Bridge Decking - 1205 Sq. Ft. - A.S.T.M. Spec. A 588

SS = ϕ

104826

CITY OF SCOTTSDALE

SCALE Noted	LOCATION PLAN	DRAWN BY
DATE 5-23-77		REVISED

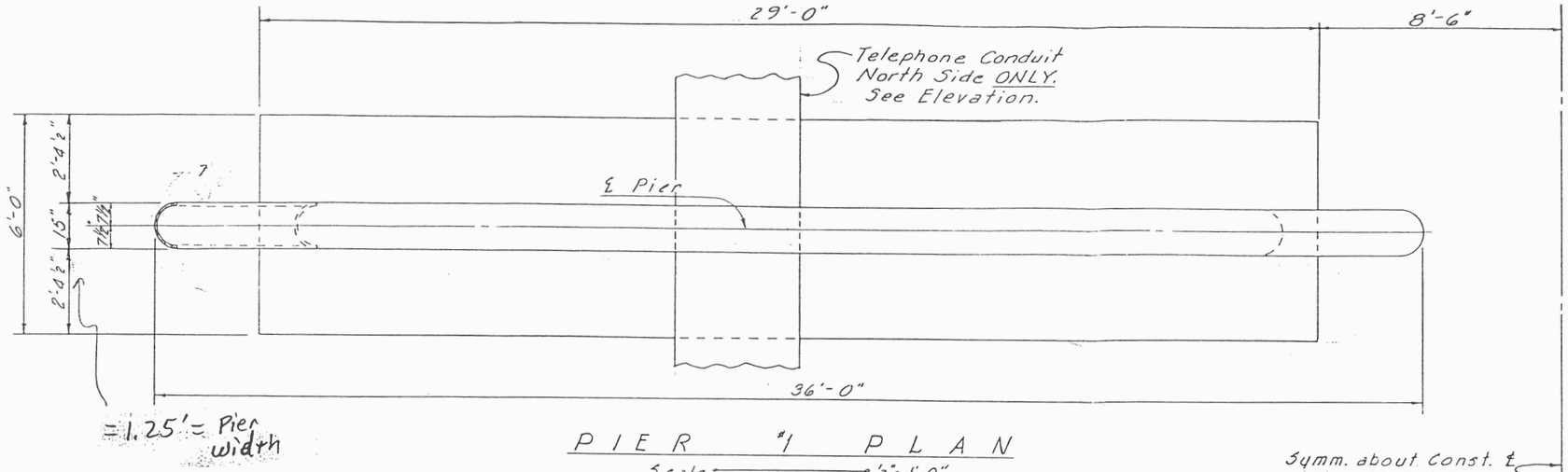
STA. 7+ INDIAN SCHOOL ROAD BRIDGE OVER INDIAN BEND WASH

HOFFMAN-MILLER ENGINEERS INC. PHOENIX ARIZONA

SHEET NO. 8 of

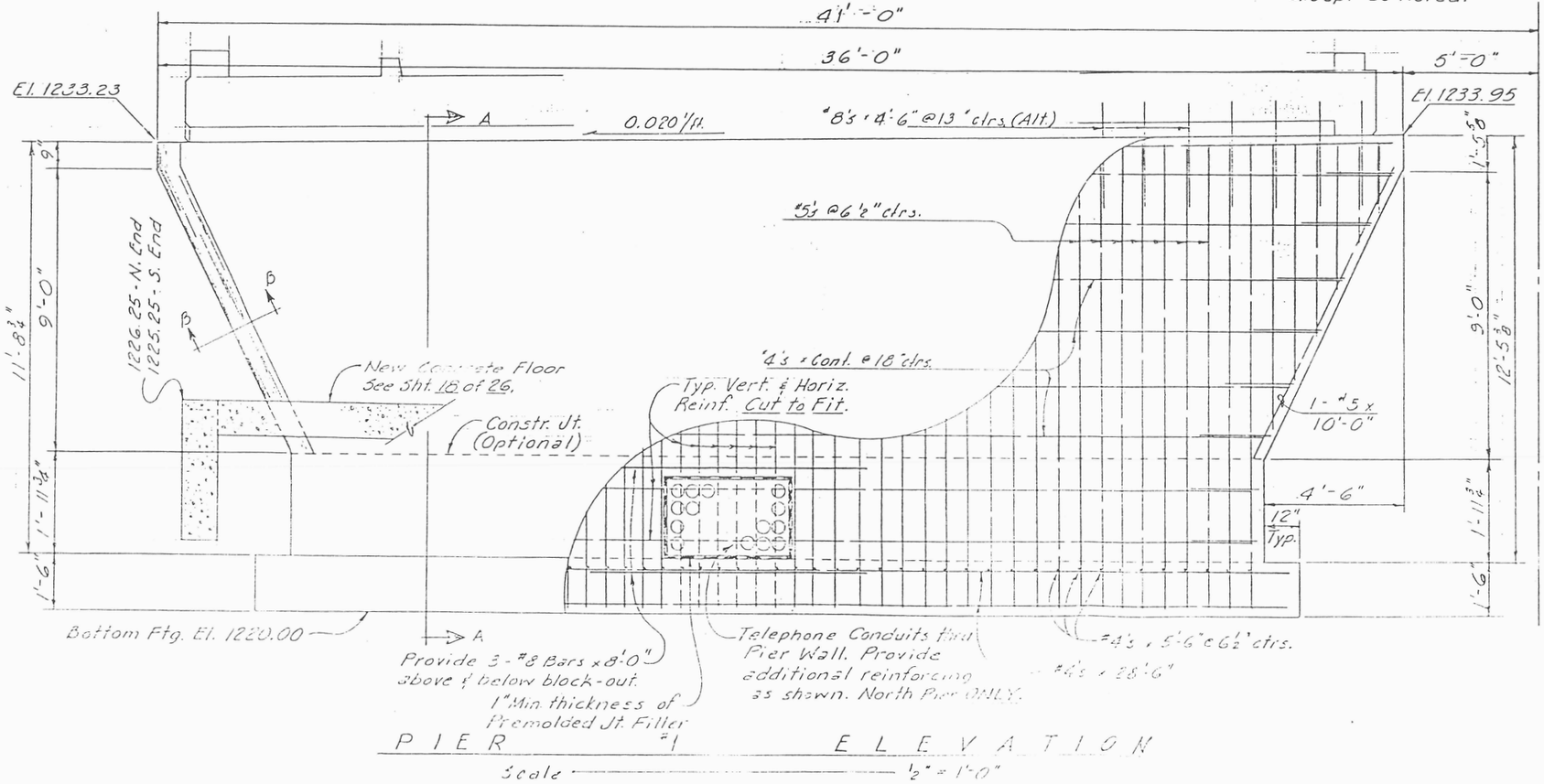
Proj. No. E-750i FC 041

BRIDGE OVER INDIAN BEND WASH
MARICOPA COUNTY



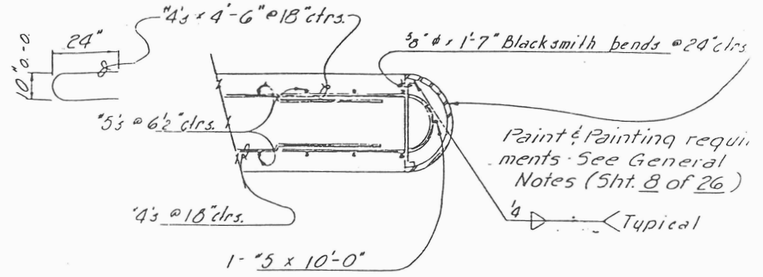
PIER #1 PLAN
Scale — ½"=1'-0"

Symm. about Const. ℄ by 180° Rotation except as noted.

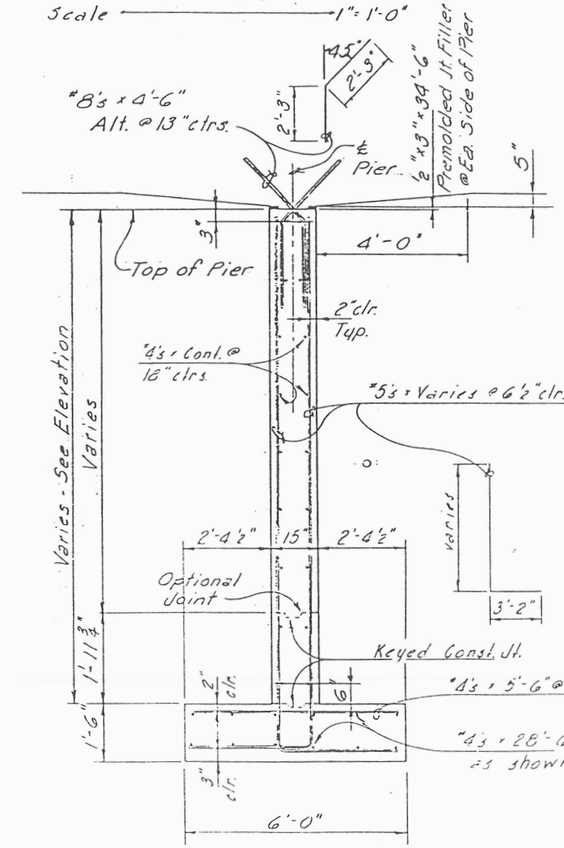


PIER #1 ELEVATION
Scale — ½"=1'-0"

23¾" = 10'-9" ¼" min. thickness or one-half of 15" o.d. steel pipe, ¼" min. wall thickness.
Pier Nose Protection @ Upstream Faces Pier "1 Comm.
Downstream to have plain 7½" Radius.



SECTION B-B
Scale — 1"=1'-0"



SECTION A-A
Scale — ½"=1'-0"

All Pier Conc. - Class "A"

CITY OF SCOTTSDALE

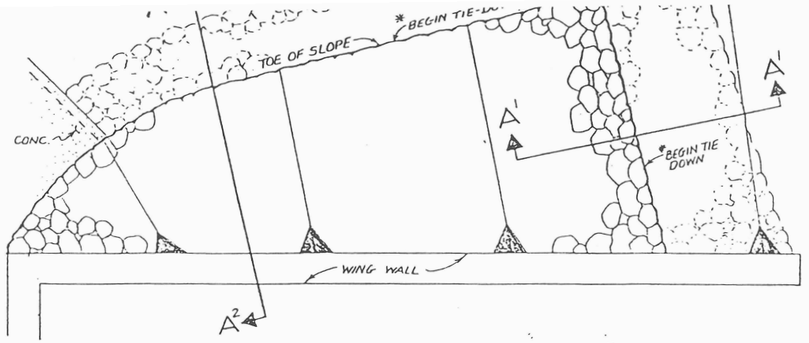
SCALE Noted	PIER #1	DRAWN BY JS
DATE July '92		REVISED

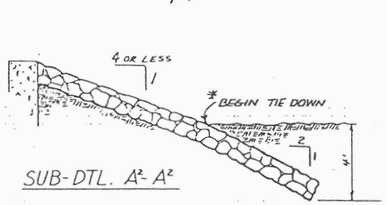
STA 7+ INDIAN SCHOOL ROAD
BRIDGE OVER INDIAN BEND WASH

HOFFMAN-MILLER ENGINEERS INC. PHOENIX ARIZONA — SHEET NO 19 of 26

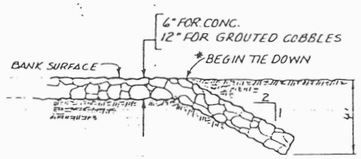
16911

Proj. No. B-7501 FC 041



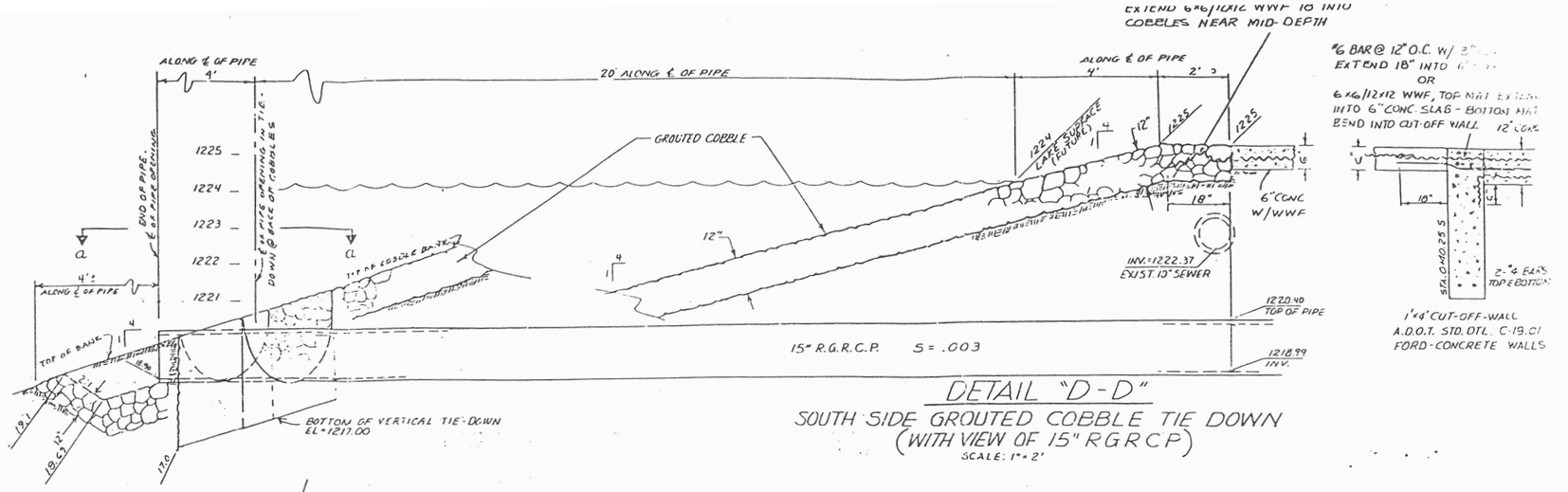


SUB-DTL. A^2-A^2

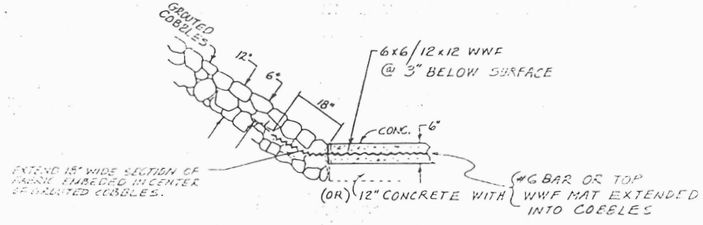


SUB-DTL. A'-A'

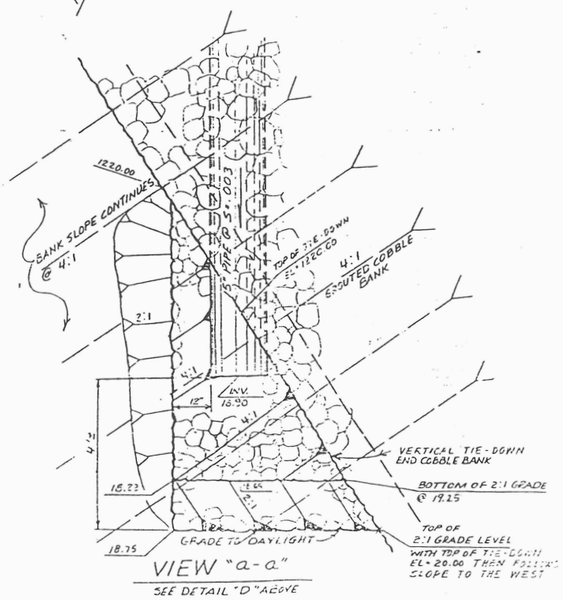
DETAIL "A"
COBBLE OR CONC. TIE-DOWN
ON SLOPE UPSTREAM & DOWNSTREAM END



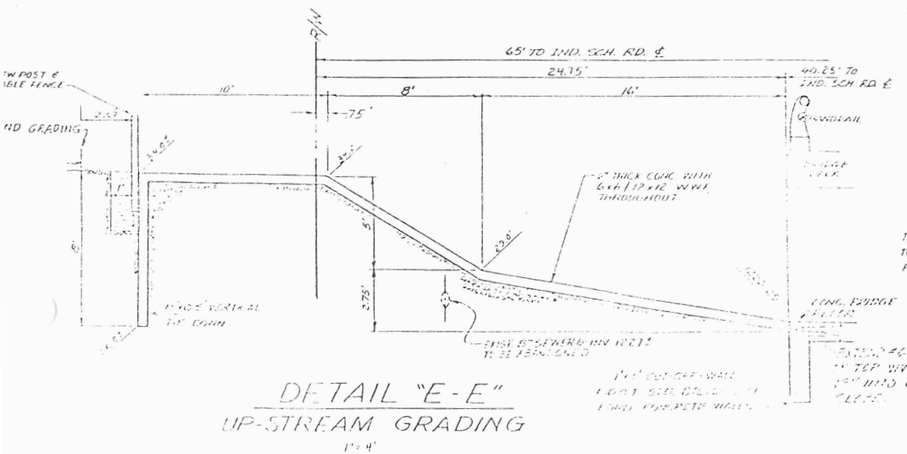
DETAIL "D-D"
SOUTH SIDE GROUTED COBBLE TIE DOWN
(WITH VIEW OF 15" RGRCP)
SCALE: 1"=2'



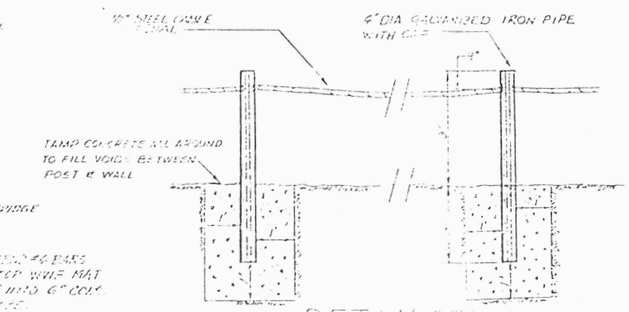
DETAIL "B-B"
COBBLE & CONC. JUNCTION



VIEW "a-a"
SEE DETAIL "D" ABOVE



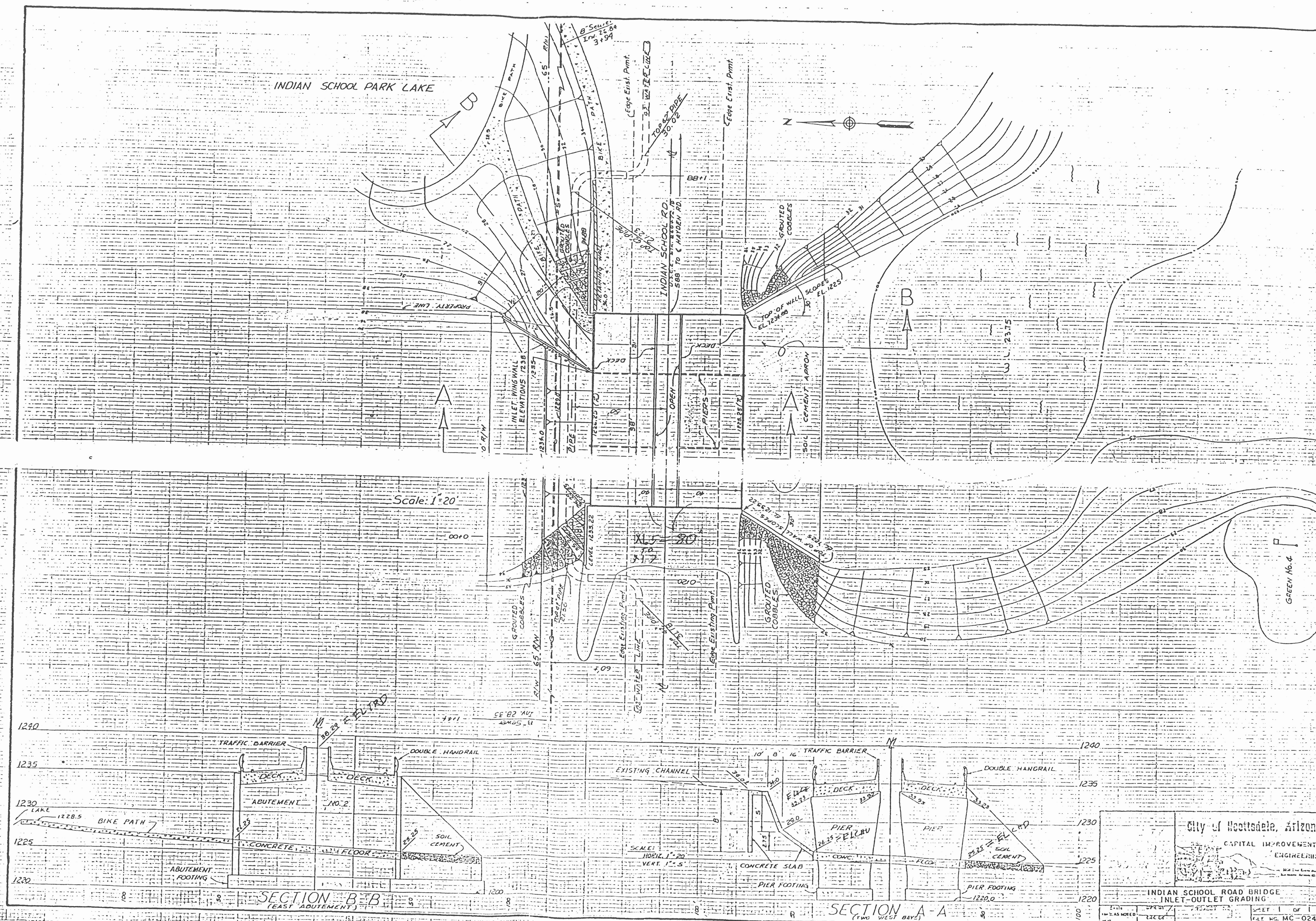
DETAIL "E-E"
UP-STREAM GRADING
1"=4'



DETAIL "C"

GRADING DETAILS

ME-MC-16



15804

AZ-170-16

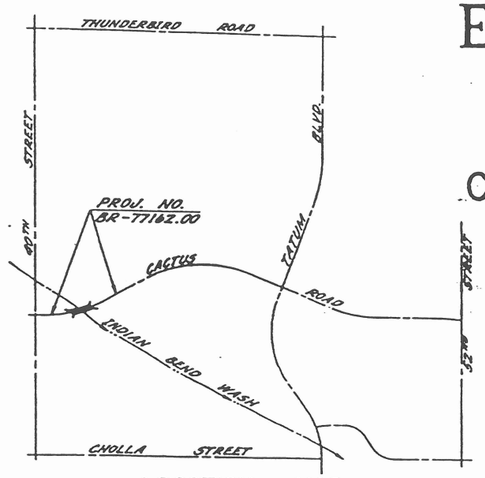
CACTUS ROAD——— MAJOR STREETS
PHOENIX STREETS – MARICOPA COUNTY

FHWA REGION	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS	AS BUILT
9	ARIZ.	BR-771A2.00	2	37	

LENGTH OF PROJECT
STA. 3+15 – STA. 16+00 = 1285 L.F.
NET & GROSS LENGTH = .2434 MILES

CITY OF PHOENIX
ENGINEERING DEPARTMENT
DIVISION OF DESIGN

CACTUS RD. BRIDGE OVER INDIAN BEND WASH



LOCATION MAP

APPROVED _____ CITY ENGINEER 6/28/79 DATE
APPROVED _____ CITY TRAFFIC ENGINEER 6-27-79 DATE

MAYOR

MARGARET T. HANCE

CITY COUNCIL

HOWARD ADAMS	JOY CARTER
CALVIN GOODE	KEN O'DELL
BARRY STARR	JIM WHITE

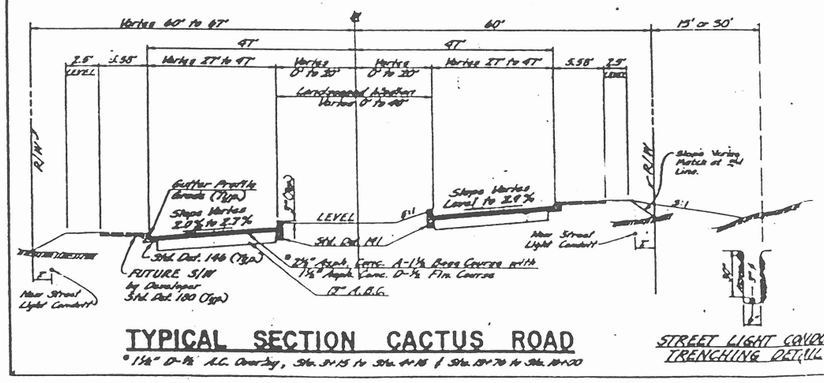
CITY MANAGER	MARVIN A. ANDREWS
CITY ENGINEER & SUP'T. OF STREETS	JAMES E. ATTEBERY
CITY TRAFFIC ENGINEER	DONALD C. MORGAN
STREET MAINT. DIRECTOR	GARY P. FARMER

INDEX OF SHEETS

SHEET NO.	TITLE
1	Face Sheet
2	Typical Section
3	Summary Notes
4	Roadway Summary
5-6	Roadway Plan and Profile
7-8	Storm Drain
9-10	Detour and Pavement Removal
11	Water Surface Profile and Grading
12	Bridge, General Plan
13	Bridge Footing and Floor Slab Plan
14	Bridge Abutment "A" Plan
15	Bridge Abutment "B" Plan
16	Bridge Abutment Elevations
17	Bridge Pier Plan and Elevation
18	Bridge Deck and Approach Slab Section
19	Bridge Pier and Abutment Section
20	Guard Rail Connection to Bridge
21	Storm Drain Connection to Bridge
22	Catch Basin Details
23	Storm Drain Barrier Gate Details
24	Bridge Handrail
25	Special S/W Ramp Details
26	Soil Borings
27	42nd St. Traffic Signal Conduit
28	Polychloroprene Joint Detail
29	Storm Drain Transition Structure
30-33	Guard Rail Details
34-35	Chain Link Cable Barrier Details
36-37	Landscape Details

ST-76052.02

SEE SHEET 2 OF STORM SEWER PLANS FOR INDEX OF SHEETS



TYPICAL SECTION CACTUS ROAD

*1½" D-½ A.C. Overlay, Sta. 3+15 to Sta. 4+18 & Sta. 13+70 to Sta. 16+00

VAL-TEC, INC.
Phoenix, Arizona

STREET LIGHT CONDUIT TRENCHING DETAIL

24X

LOG NUMBER

	NO SERVICES WITHIN PROJECT	PLANS REVIEWED BY	PERMIT RECEIVED
ARIZONA PUBLIC SERVICE			
SALT RIVER POWER DISTRICT			
U.S.W.U.W.A.			
MT. STATES TEL. & TEL. CO.			
COUNTY HIGHWAY DEPT.			
ARIZ. DEPT. OF TRANSPORTATION			
WATER & SEWERS DEPT.			

2 of 37

PHOENIX STREETS-MARICOPA COUNTY

SUMMARY NOTES

FHWA REGION	STATE	PROJ NO	SHEET NO	TOTAL SHEETS	AS BUILT
9	ARIZ	BR-77102.00	3	37	

Plans Built 4-01-77

VAL-TEC, INC.
Phoenix, Arizona

LEGEND

- BENCHMARK
- NEW SURVEY MONUMENT PER DETAIL 193
- NEW SURVEY MONUMENT PER DETAIL 195
- COMBINED CURB & GUTTER PER DETAIL 146
- PVMT. REPLACEMENT TYPE B SQ. YD. PER DETAIL 175
- EXISTING CONCRETE PAVEMENT
- CONCRETE SIDEWALK PER DETAIL 180
- CONCRETE DRIVEWAY OR ALLEY ENTRANCE PER DETAIL (No. ON PLANS)
- SIDEWALK RAMP PER DETAIL
- AVERAGE GROUND ELEVATION AT ℄
- BACKFILL TYPE
- EXISTING DITCH
- —IRR— EXISTING IRRIGATION LINES (NOTE PRIVATE, SALT RIVER OR R.I.D.)
- EXISTING IRRIGATION STRUCTURE
- EXISTING IRRIGATION STANDPIPE
- IRRIGATION STANDPIPE PER DETAIL 280
- IRRIGATION VALVE PER DETAIL 291
- IRRIGATION BERM
- NEW IRRIGATION STRUCTURE PER W.U.A. DRWGS.
- NEW JUNCTION BOX PER DETAIL 282
- —W— EXISTING WATER LINE
- EXISTING WATER VALVE-ADJUST EXIST. VALVE BOX PER DETAIL 201
- EXISTING WATER METER & BOX TO BE MOVED BY CITY & BOX ADJUSTED TO GRADE BY CONTRACTOR
- EXISTING FIRE HYDRANT
- NEW OR RELOCTED FIRE HYDRANT BY CITY
- EXISTING WATER VALVE OPERATING NUT ELEVATION
- —S— EXISTING SEWER LINE
- EXISTING MANHOLE- ADJUST TO GRADE PER DETAIL 200
- NEW MANHOLE
- CATCH BASIN, GUTTER INLET (LENGTH TO SCALE)
- CATCH BASIN, CURB INLET (LENGTH TO SCALE)
- CATCH BASIN, CURB & GUTTER INLET (LENGTH TO SCALE)
- —SD— EXISTING STORM DRAIN
- NEW PIPE FOR STORM DRAIN OR IRRIGATION LINE.
- —G— EXISTING GAS LINE
- —T— EXISTING TELEPHONE CONDUIT OR CABLE
- EXISTING STREET SIGN
- EXISTING TRAFFIC SIGN
- EXISTING UTILITY POLE
- EXISTING WIRE FENCE
- EXISTING WOOD FENCE
- MAIL BOX
- DOWN ANCHOR
- STREET LIGHT
- EXISTING TREE OR STUMP TO BE REMOVED - 12" AND OVER
- EXISTING PALM TO BE TRANSPLANTED BY OTHERS
- EASEMENT LINE
- EXISTING OR NEW R/W LINE
- PAVEMENT CENTER LINE AND OR MONUMENT LINE (℄ AND/OR ℄)

NOTES

WHEREVER NECESSARY, DEPRESS BACK OF DRIVEWAY TO A MAXIMUM OF 3" FOR DRAINAGE.

STANDARD DETAIL 214 PIPE COLLARS FOR 24"DIA. PIPE OR LESS SHALL BE INCIDENTAL TO THE COST OF THE PIPE.

CORRUGATED METAL PIPE SHALL BE BEDDED AND BACKFILLED IN ACCORDANCE WITH DETAIL 215.

PIPE CONNECTIONS TO EXISTING CONCRETE PIPE MAINS SHALL BE MADE IN ACCORDANCE WITH DETAIL 213 OR 274, WHICHEVER APPLIES. CONNECTION TO MAINS SHALL NOT BE CLOSER THAN 5', CENTER TO CENTER.

PIPE CONNECTIONS TO CORRUGATED PIPE MAINS SHALL BE MADE IN ACCORDANCE WITH DETAIL 215.

FOR PIPE CONNECTIONS TO NEW MAINS, THE CONTRACTOR SHALL PROVIDE FACTORY MADE WYES OR TEES. THE DETAIL OF THE FITTINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MANUFACTURE. IF CAST IN PLACE PIPE IS THE ALTERNATE USED FOR THE STORM DRAIN MAIN THE CONNECTIONS TO THE MAIN SHALL BE AS PER DETAIL 620 AS SHOWN IN THESE PLANS.

CATCH BASIN CONNECTOR PIPES SHALL BE LAID ON A STRAIGHT ALIGNMENT AND SLOPE UNLESS OTHERWISE SPECIFIED. IF BREAKS IN ALIGNMENT OR SLOPE ARE NECESSARY TO MEET FIELD CONDITIONS, THE MAXIMUM DEFLECTION SHALL BE 22-1/2° THE BEND SHALL BE MADE ACCORDING TO DETAIL # 214.

CONNECTOR PIPES SHALL CONNECT TO CATCH BASIN WALLS AT AN ANGLE NOT TO EXCEED 22-1/2° FROM PERPENDICULAR.

FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL HORIZONTAL AND VERTICAL CONTROLS ARE LOCATED ONLY APPROXIMATELY AND TO THE BEST AVAILABLE KNOWLEDGE.

DURING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANY TO FIND AND FLAG UNDERGROUND UTILITIES.

VERTICAL CONTROL IS BASED ON U.S.C. & G.S. ELEVATION DATUM.

STATIONS SHOWN ON PROFILE ARE ALONG CENTERLINE OF CONDUIT OR ON A LINE NORMAL TO CENTERLINE OF CONDUIT.

REINFORCED AND NON-REINFORCED CONCRETE PIPE SHALL BE BEDDED IN ACCORDANCE WITH DETAIL SHOWN ON THESE PLANS, OR M.A.G. SPECIFICATIONS, WHICHEVER APPLIES.

ASBESTOS CEMENT PIPE SHALL BE BEDDED IN ACCORDANCE WITH DETAIL SHOWN ON THESE PLANS OR M.A.G. STANDARD SPECIFICATIONS, WHICHEVER APPLIES.

DIMENSIONS LOCATING CATCH BASINS ARE FROM CENTERLINE OF STREET TO CENTERLINE OF CATCH BASIN OR TO FACE OF CURB, UNLESS OTHERWISE SPECIFIED.

ELEVATIONS SHOWN FOR CATCH BASINS ARE AT TOP OF THE PROPOSED CURB AT THE CENTERLINE OF THE CATCH BASIN, UNLESS OTHERWISE SPECIFIED.

SANITARY SEWER MAINS AND TAPS CROSSING OVER STORM DRAIN SHALL BE SUPPORTED PER DETAIL 22. OTHER UTILITIES SHALL BE SUPPORTED PER DETAIL 22 AS NOTED ON THE PLANS OR AS REQUIRED BY THE ENGINEER.

ALL EXISTING PRECAST CONCRETE SAFETY CURBS AND ALL EXISTING WOODEN PARKING CURBS, WHICH ARE INSIDE THE RIGHT OF WAY AND APPROXIMATELY PARALLEL TO THE NEW CURB LINE, SHALL BE RESET ON THE RIGHT OF WAY DIRECTLY OPPOSITE THEIR EXISTING LOCATION WITH THE BACK EDGE ON THE RIGHT OF WAY LINE. ALL OTHER PRECAST CONCRETE SAFETY CURBS INSIDE THE STREET RIGHT OF WAY SHALL BE SALVAGED FOR THE OWNER AND STOCKPILED FOR THE OWNER AT THE RIGHT OF WAY LINE.

EXISTING PRECAST CONCRETE SAFETY CURBS OUTSIDE THE RIGHT OF WAY WHICH ARE DISTURBED BY NEW CONSTRUCTION SHALL BE RESET IN THEIR ORIGINAL POSITION BY THE CONTRACTOR.

LEGEND (CONTINUED)

- EXISTING TREE TO BE REMOVED (NON PAY ITEM)
- EXISTING TREE TO REMAIN

NOTES

ALL EXISTING DRIVEWAYS AND ALL EXISTING ALLEYS SHALL BE CONNECTED TO THE NEW WORK IN ACCORDANCE WITH DETAIL 164 UNLESS OTHERWISE PROVIDED ON THE PLANS. EXISTING SURFACING SHALL BE REMOVED AND REPLACED AS NECESSARY.

THE SPACE BETWEEN THE BACK OF NEW SIDEWALKS AND EXISTING ASPHALTIC CONCRETE PARKING LOTS SHALL BE FILLED WITH 2" A.C.S.C. ON NATIVE SOIL. THE SPACE BETWEEN THE BACK OF NEW DRIVEWAY ENTRANCES AND EXISTING ASPHALTIC CONCRETE DRIVEWAYS SHALL BE FILLED WITH 2" A.C.S.C. ON 4" A.B.C..

THE SPACE BETWEEN THE BACK OF NEW SIDEWALKS AND EXISTING PRIVATE CONCRETE SIDEWALKS, AND BETWEEN THE BACK OF NEW DRIVEWAY ENTRANCES AND EXISTING CONCRETE DRIVEWAYS, SHALL BE FILLED WITH PORTLAND CEMENT CONCRETE. THE THICKNESS & CLASS SHALL MATCH THAT OF THE NEW SIDEWALK OR DRIVEWAY ENTRANCE.

EXISTING IRRIGATION BERMS DISTURBED BY NEW CONSTRUCTION SHALL BE GRADED AND COMPACTED TO ORIGINAL SHAPE, AS CLOSE TO ORIGINAL LOCATION AS POSSIBLE.

STRUCTURAL NOTES

DIMENSIONS FOR DEPTH OF REINFORCING STEEL ARE FROM FACE OF CONCRETE TO CENTER OF BARS, UNLESS OTHERWISE SPECIFIED.

ALL EXPOSED EDGES OF CONCRETE SHALL BE BEVELED OR ROUNDED.

ALL EXPOSED CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ARIZONA HIGHWAY DEPARTMENT STANDARD SPECIFICATION 502-3.13—FINISHING FORMED CONCRETE, UNLESS OTHERWISE SPECIFIED.

CALL FOR THE BLUE STAKERS 263-1100 Blue Stake Center

24X

CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

CACTUS RD. BRIDGE
OVER INDIAN BEND WASH

DR.	DES.	CK.	SHEET NO	TOTAL SHEETS	AS BUILT
			3	37	

8/10/76

65258

PHOENIX STREETS-MARICOPA CO.

CAUTION: Existing A.P.S. 69 KV Underground Feeder Line.

Daniel Dallas 4-4-79

BR-77162.00 5 37

Val-Tec, Inc.

See ADOT C-1001.1 Type 'A' For Dimensions

Future Sidewalk

40TH ST.

Alternate B.M.
32.2' Rt. Sta. -(1+54.46)
Chiseled "X" on Curb.
El. 1366.74

N. 88°47'00"E. 239.07'

Existing 12" & Traffic Signal Conduit & Junction Boxes

FUTURE 5' Conc. S/W By Developer

Existing 3" Conc. S/W By Developer

See Sheet No. 7

Existing 3" Conc. Match Exist.

New 1½" - D-½ A.C. Overlay

New Single Curb Std. Det. 191

See Sheet 7 Line "H"

See Sheet 6 For Guard Rail Note

Const. ℄

Sta. 7+00 Match Sht. 6

Dust Chain Link Fence to be Relocated to R/W Line

40' R.R. Ease.

Exist. Power Underground Lines

13.66' Rt. Sta. 3+28.59

New Item Slope and Drainage Easement. From Sta. 2+99 Rt. to Sta. 3+40 Rt. Approx. Gutter Lip to Match Roadway Cross-Slope

New Guard Rail (See Det. Print) I.D.O.T. Sta. C-1001 Det. 1A See Sheet 20 for Connection to Bridge Rail. See Detail Sheet 30 for Impact Attenuator.

New 3" Conc. Match Flush W/New Pvmt.

Sta. 2+99 Rt. Match Exist. Curb & Gutter

Curve No.	Sta. & Offset from Monument Line to Beginning of Curve	Radius	Delta	Length	Tan.	Sta. & Offset from Monument Line to End of Curve
1	3.00'Rt.Sta.3+09.38	423.56'	12° 11' 32"	90.35'	45.43'	4.44'Lt.Sta.3+99.15
2	4.44'Lt.Sta.3+99.15	423.56'	[illegible]	[illegible]	[illegible]	[illegible]
3	11.50'Rt.Sta.2+39.69	2047.51'	[illegible]	[illegible]	[illegible]	20.00'Rt.Sta. [illegible]

℄ CURVE DATA
R= 2025.40'
Δ= 28°13'21"
L= 1027.22'
e= 0.026

▲ B.M. - B.C. in H.H. @ Intersection of Cactus Rd. & 40th St. ELEV. 1385.31

NOTE: Subtract 0.32' for Equal Major Storm Drain Datum per Floyd M. Whitmore Engineering, Inc. Project No. ST-76052.02

NOTE: Curve data is; back of curb for curb lines; edge of pavement or face of curb for islands.

CACTUS ROAD

150' V.C. Design Speed = 52 M.P.H. SDs = 1000'+

Exist. Curb 47' Lt.

Exist. Gutter 47' Lt.

Match Exist. 2+15 Δ = 03°03' 6 = 03.93

P.I. 4+00 P.I. El. 83.57 Corr. = +0.39'

-0.419%

New Top Curb Lt.

+1.320%

Exist. Grad. 47' Lt.

New Gutter Lt.

B.V.C. 5+85 G = 06.01

P.I. 6+75 P.I. El. 89.20 Corr. = -1.33'

130' V.C. Design Speed = 55 M.P.H. SDs = 566'

Exist. Pvmt. @ ℄

Exist. Grad. @ ℄

Match Exist. 2+99 Δ = 03°03' 6 = 03.27

New Top Curb Rt.

+1.167%

Exist. Top Curb 47' Rt.

Exist. Gutter 47' Rt.

Exist. Pvmt. Rt.

New Gutter Rt.

Exist. Grad. 47' Rt.

B.V.C. 5+85 G = 06.01

P.I. 6+75 P.I. El. 89.20 Corr. = -1.33'

180' V.C. Design Speed = 55 M.P.H. SDs = 621'

1386
1382

0 1 2 3 4 5 6 7

24X

CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

CACTUS RD. BRIDGE . OVER INDIAN BEND WASH

DES. FOR DATE	DE. BY DATE	CK. BY DATE	SHEET NO	TOTAL SHEETS	AS BUILT
SCALE 1 - 40' HORIZONTAL 4' VERTICAL			5	37	

As-Staked 3-21-80

65260

VT 3-22

PHOENIX STREETS MARICOPA CO.

CAUTION: Exist. A.P.S. U.G. Feeder Line

STA. 7+00 MATCH SH. 5+00

Sta. 3+00 3'15 Rt. to Sta. 13+60 Rt. Ultrasss Gut. Lip

B.M. - B.C. in H.H. @ Intersection of Cactus Rd. & 40th St. ELEV. 1385.34

1388 1384 1380 1376 1392 1388 1384 1380 1376

7 8 9 10 11 12 13 14 15 16

Val-Tec, Inc.

Journal Sheet 41479

Sta. 12+18.18 Post Tension M.H. L.F. Elec. 7.93 L.F. New 15" R.G. R.C.P. Cl. II

"FUTURE" 5' Conc. S/W by Developer

NOTE: Curve data is back of curb for curb lines; edge of pavement or face of curb for islands.

Curve No.	Δ	Offset from Monument Line to Beginning of Curve	Radius	Delta	Length	Tan.	Offset from Monument Line to End of Curve
1		10.77'Lt.Sta.12+78.12	6.00'	147° 27' 05"	15.44'	20.35'	0.75'Rt.Sta.12+78.00
2		20.00'Lt.Sta.12+93.51	288.00'	15° 29' 34"	43.19'	21.29'	10.77'Lt.Sta.12+78.12
3		20.00'Lt.Sta. 8+68.88	2068.40'	2° 33' 15"	343.21'	171.80'	20.00'Lt.Sta.12+16.41
4		0.75'Lt.Sta. 4+56.08	2070.50'	11° 17' 27"	406.82'	204.63'	20.00'Lt.Sta. 8+49.88
5		20.00'Rt.Sta. 3+76.08	2068.40'	11° 04' 53"	401.20'	201.34'	20.00'Rt.Sta. 9+02.41
6		20.00'Rt.Sta. 3+42.81	34.33'	116° 09' 19"	67.08'	34.66'	13.73'Rt.Sta.10+76.39
7		13.73'Rt.Sta.10+24.39	286.93'	65° 52' 03"	34.46'	19.27'	10.80'Rt.Sta.11+32.11
8		10.80'Rt.Sta.12+09.85	230.00'	17° 14' 09"	69.19'	34.86'	0.75'Rt.Sta.12+78.00
9		10.00'Rt.Sta.11+32.41	2095.40'	2° 07' 40"	77.81'	38.91'	10.00'Rt.Sta.12+09.85
10		47.58'Lt.Sta.12+62.33	24.50'	90° 00' 00"	38.48'	24.50'	72.08'Lt.Sta.13+06.83
11		72.08'Lt.Sta.13+51.99	24.50'	90° 00' 00"	38.48'	24.50'	47.58'Lt.Sta.13+76.49

Design Speed = 45 m.p.h. SDs = 393'

Design Speed = 45 m.p.h. SDs = 354'

Design Speed = 55 m.p.h. SDs = 621'

Design Speed = 48 m.p.h. SDs = 419'

Design Speed = 48 m.p.h. SDs = 505'

-0.151%

+0.144%

+0.120%

-2.905%

+0.713%

24X

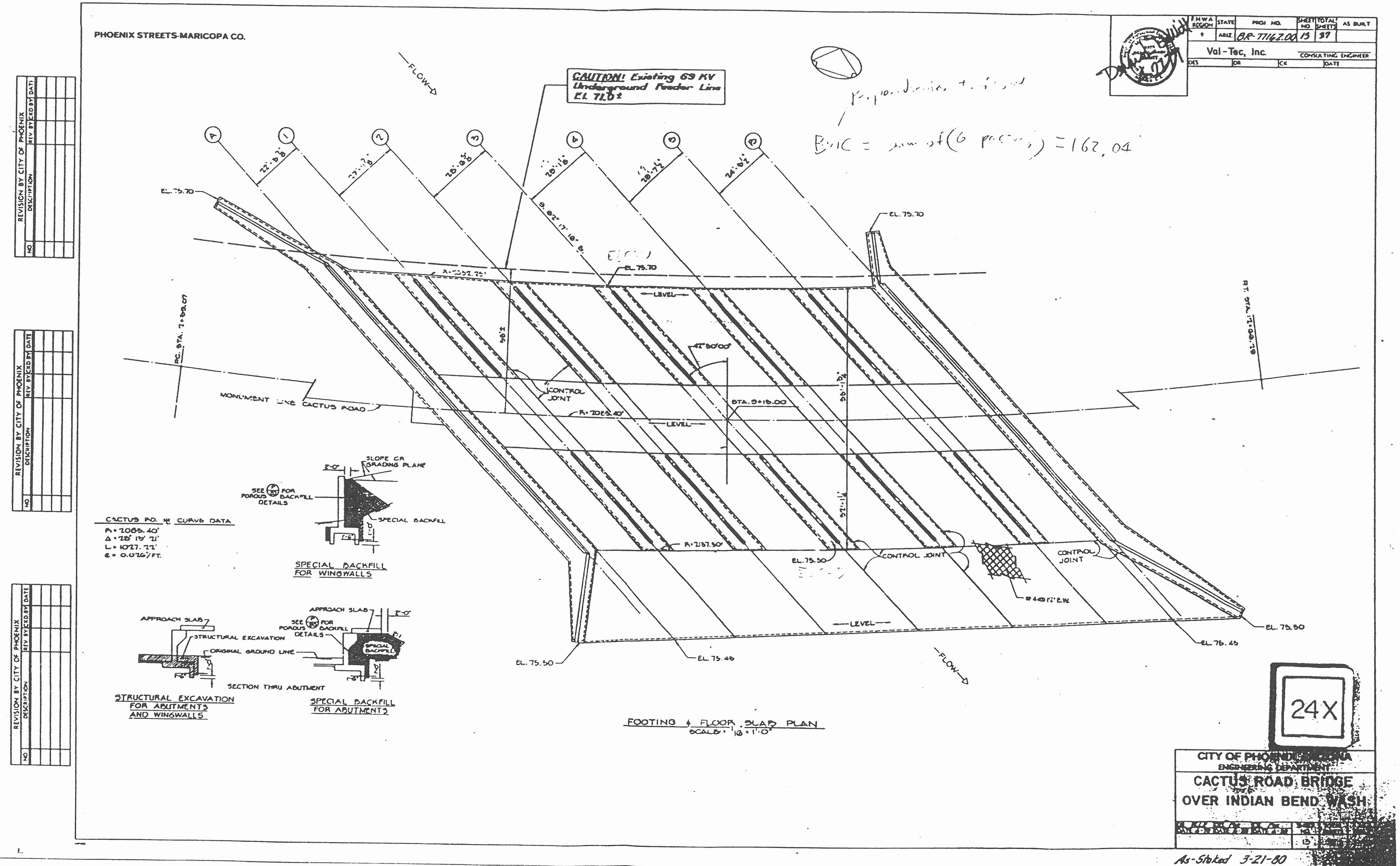
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

CACTUS RD. BRIDGE OVER INDIAN BEND WASH

CITY FOR		FILE NO.	SHEET NO.	TOTAL SHEETS
SCALE:	40' HORIZONTAL		37	
	4' VERTICAL			

65261

V13-22


PHOENIX STREETS-MARICOPA CO.
CAUTION! Existing 69 KV Underground Feeder Line EL 71.0±
FLOW
EL. 75.70
EL. 75.50
EL. 75.45
LEVEL
CONTROL JOINT
MONUMENT LINE CACTUS ROAD
STA. 5+18.00
CACTUS RD. ℄ CURVE DATA
R = 2085.40'
Δ = 28° 19' 21"
L = 1027.22'
E = 0.026'/FT.
SLOPE OR GRADING PLANE
SEE FOR POROUS BACKFILL DETAILS
SPECIAL BACKFILL
SPECIAL BACKFILL FOR WINGWALLS
APPROACH SLAB
STRUCTURAL EXCAVATION
ORIGINAL GROUND LINE
SECTION THRU ABUTMENT
STRUCTURAL EXCAVATION FOR ABUTMENTS AND WINGWALLS
SPECIAL BACKFILL FOR ABUTMENTS
FOOTING & FLOOR SLAB PLAN
SCALE: 1/8" = 1'-0"
REVISION BY CITY OF PHOENIX
NO
DESCRIPTION
REV BY
CKD BY
DATE
FHWA REGION
STATE
PROJ NO.
SHEET NO.
TOTAL SHEETS
AS BUILT
9
ARIZ
BR-7716Z.00
13
37
Val-Tec, Inc.
CONSULTING ENGINEER
DES
DR
CK
DATE
24X
CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT
CACTUS ROAD BRIDGE
OVER INDIAN BEND WASH
As-Staked 3-21-80

PHOENIX STREETS-MARICOPA CO.

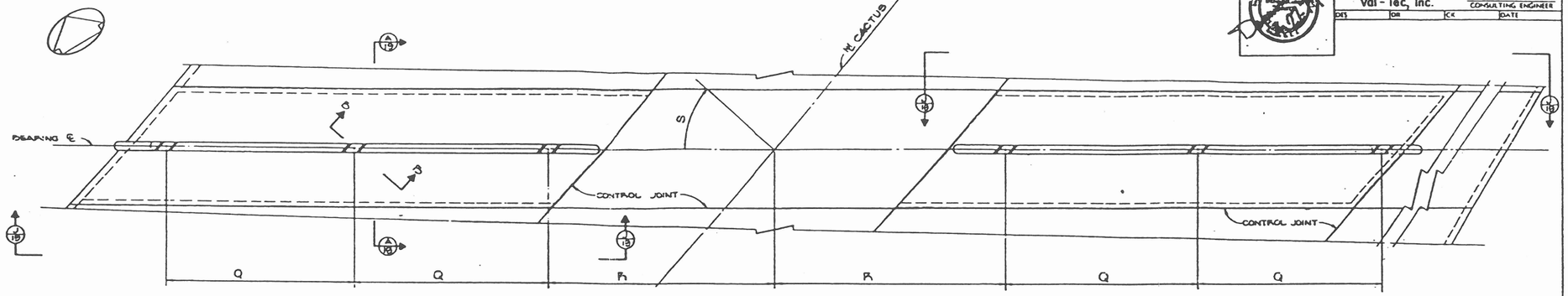
FHWA REGION	STATE	PROJ NO	SHEET NO	TOTAL SHEETS	AS BUILT
9	ARIZ	BR-77162.00	19	37	

Val-Tec, Inc. — CONSULTING ENGINEER

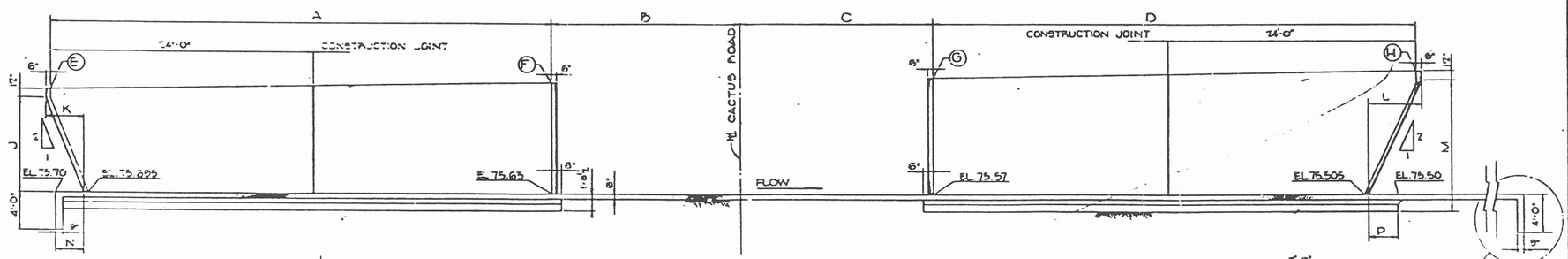
DES | DR | CK | DATE

REVISION BY CITY OF PHOENIX

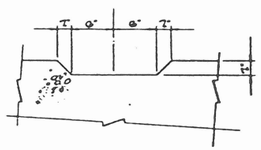
NO	DESCRIPTION	REV BY/CKD BY	DATE



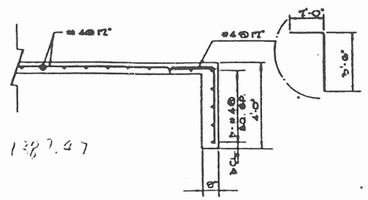
PIER PLAN
SCALE: 3/16"=1'-0"



PIER ELEVATION
SCALE: 3/16"=1'-0"



SECTION B-B
BRIDGE GUIDE
SCALE: 1½"=1'-0"



DETAIL "A" CUTOFF WALL
SCALE: 3/8"=1'-0"

DETAIL "A"

ELEV = 1387.6

ELEV = 1387.47

P. 19

TABLE OF DIMENSIONS

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
PIER 1	55'-0 3/8"	71'-1 7/8"	71'-0 1/8"	55'-5 1/2"	84.81	85.75	86.49	87.43	8'-1 3/8"	4'-0 11/16"	5'-5 9/16"	17'-7 11/16"	3'-0 3/8"	3'-0 1/2"	71'-8"	75'-8"	44°38'29"
PIER 2	53'-11 3/8"	70'-9 1/8"	70'-7 5/8"	52'-4 3/8"	84.77	85.71	86.44	87.39	8'-0 3/8"	4'-0 7/16"	5'-5 5/16"	17'-7 5/16"	3'-0 1/2"	3'-0 5/8"	NONE	NONE	45°54'25"
PIER 3	52'-11 3/4"	70'-4 7/8"	70'-3 3/8"	51'-6 3/8"	84.71	85.65	86.39	87.33	8'-0 1/16"	4'-0 1/16"	5'-5"	17'-6 1/2"	3'-0 1/4"	3'-0 1/16"	NONE	NONE	47°30'00"
PIER 4	52'-0 3/8"	70'-0 3/4"	69'-11 3/8"	50'-8 3/8"	84.65	85.59	86.33	87.28	7'-11 3/8"	3'-11 11/16"	5'-4 3/8"	17'-5 13/16"	2'-11 15/16"	3'-0 3/8"	NONE	NONE	41°29'30"
PIER 5	51'-1 3/4"	69'-8 3/4"	69'-7 5/8"	49'-11 3/8"	84.57	85.52	86.26	87.21	7'-10 7/16"	3'-11 3/16"	5'-4 3/16"	17'-5"	2'-11 3/8"	3'-0 1/2"	20'-0"	24'-0"	40°20'53"

24X

CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

CACTUS ROAD BRIDGE OVER INDIAN BEND WASH

DR	DES	CK	CK	SHEET NO	TOTAL SHEETS
DATE	DATE	DATE	DATE	19	37

As-Staked 3-21-80

658

PHOENIX STREETS-MARICOPA CO.

FHWA REGION	STATE	PROJ NO	SHEET NO	TOTAL SHEETS	AS BUILT
9	ARIZ	BR-7716200	19	37	

Val Tec, Inc. — CONSULTING ENGINEER

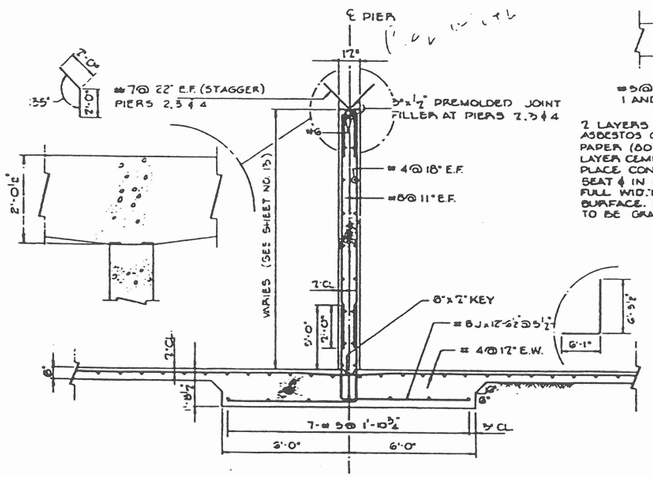
DES | DP | CK | DATE

REVISION BY CITY OF PHOENIX

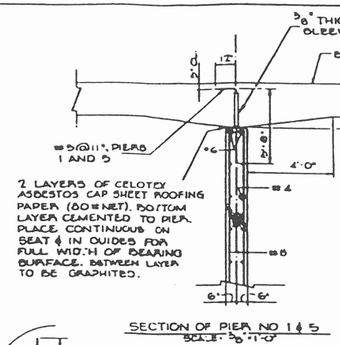
NO	REVISION	DESIGNED BY	DRAWN BY	CHECKED BY	DATE

REVISION BY CITY OF PHOENIX

NO	REVISION	DESIGNED BY	DRAWN BY	CHECKED BY	DATE

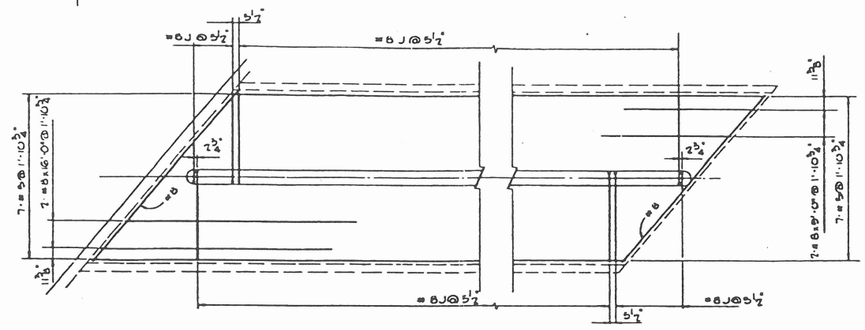


SECTION A-A
SCALE: 3/8" = 1'-0"

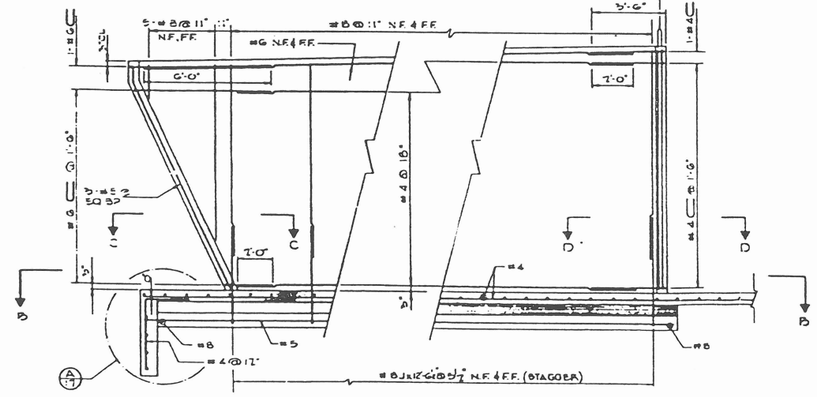


2 LAYERS OF CELOTEX ASBESTOS CAP SHEET ROOFING PAPER (60# NET). BOTTOM LAYER CEMENTED TO PIER. PLACE CONTINUOUS ON SEAT & IN GUIDES FOR FULL WIDTH OF BEARING SURFACE. BETWEEN LAYER TO BE GRAPHITED.

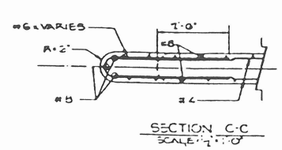
SECTION OF PIER NO 1 & 5
SCALE: 3/8" = 1'-0"



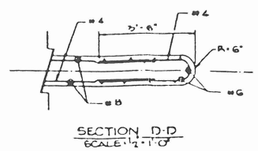
SECTION B-B
BOTTOM STEEL
SCALE: 1/4" = 1'-0"



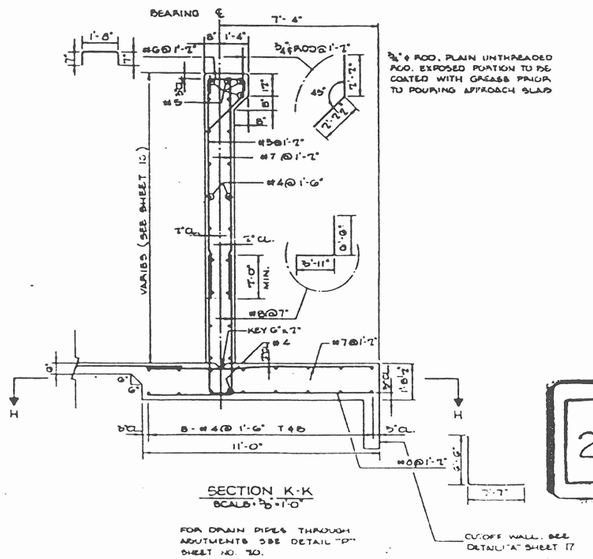
ELEVATION J-J
SCALE: 3/8" = 1'-0"



SECTION C-C
SCALE: 1" = 1'-0"



SECTION D-D
SCALE: 1" = 1'-0"

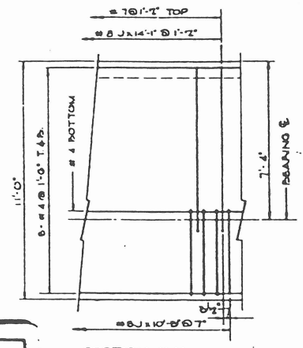


3/4" ø POD. PLAIN UNTHREADED ROD. EXPOSED PORTION TO BE COATED WITH GREASE PRIOR TO POURING APPROACH SLAB

CUTOFF WALL. SEE DETAIL "A" SHEET 17

SECTION K-K
SCALE: 3/8" = 1'-0"

FOR DRAIN PIPES THROUGH ABUTMENTS SEE DETAIL "D" SHEET NO. 20.



SECTION H-H
SCALE: 3/8" = 1'-0"

24X

CITY OF PHOENIX, ARIZONA
ENGINEERING DEPARTMENT

CACTUS ROAD BRIDGE OVER INDIAN BEND WASH

DR	DES	CK	SHEET NO.	TOTAL SHEETS	AS BUILT
DATE	DATE	DATE	19	37	

652

SECTION 4: Hydraulic Analysis

4.5 Special Problems/Solutions

4.5 Special Problems and Solutions

Indian Bend Wash is one of the most hydraulically complex water courses within the State of Arizona. Even though the computational routines within HEC-2 can handled the analysis of the wash, care is required to ensure unique features are not neglected. Intermediate flows can be split into low-flow and high-flow channels with a compound channel connecting several sequential lakes. The lakes may be controlled by concrete weir outlet structures.

Many of the bridges within the study reach are designed to be overtopped. The Curry Road Bridge, McKellips Road Bridge, and Sweetwater Drive box culvert were specifically designed to convey the relatively small, frequent flows. Larger infrequent flows overtop the structures. At these locations the wash is typically a broad compound channel. The channel forms a portion of a golf course at Curry and McKellips Roads.

The Special Bridge Method in HEC-2 which is capable of handling the energy losses associated with low flow, pressure flow, weir flow or combinations thereof, was used to compute water surface elevations at all bridges.

Low flows from McDonald Drive to Indian School Road are contained within a trapezoidal, grass lined channel along the west side of Hayden Road. High flows overtop Hayden Road and are also conveyed in a grass-lined high flow channel along the east side of Hayden Road. During higher flows the high flow and the low flow channels are hydraulically connected down stream to Jack Rabbit Road. From Jackrabbit Road to 900ft upstream of Chaparral Road high flows are hydraulically disconnected or split. Due to the very broad, flat dip section, 900 ft upstream of Chaparral Road, high flows overtop Hayden Road, hydraulically connecting the high and low flow channels. High flows again become hydraulically disconnected at Chaparral Road to approximately 1000 ft. upstream of Indian School Road, where Hayden Road dips, hydraulically connecting the high and low flow channels.

Analysis of these areas include: 1) hydraulically connected areas are treated as simple cross sections in the HEC-2 analysis; 2) hydraulically disconnected areas are treated as separate channels with their own HEC-2 analysis; and 3) an iterative process was utilized to balance upstream and downstream water surfaces based on the discharges in the low-flow channel and the high flow channel. A hydraulically connected HEC-2 analysis was first performed to determine the initial distribution of flow between the high flow and low flow channels.

SECTION 4: Hydraulic Analysis

4.6. Floodway Modeling

4.6 Floodway Modeling

Following completion of the natural 100-year floodplain profile models for Indian Bend Wash, floodway models were developed.

The floodway model for Indian Bend Wash was developed starting at the Salt River confluence (station 0.00). The initial computed floodway was plotted on work maps and reviewed. Adjustments were made and encroachment stations set by Method 1 based on the following criteria:

- Maximizing width within the channel
- Top widths to be uniform as possible
- Avoid excessive velocities
- Achieve goal of 1.0 foot or less surcharge

SECTION 4: Hydraulic Analysis

Final Results/Computer Runs

Negative surcharges which occur in the floodway water surface are due to flow accelerations caused by local constrictions, such as bridges, or relative changes in specific energy due to the narrower floodway configuration.

In a few instances, the HEC-2 output shows a floodway top width greater than the floodplain top width. This occurs where high ground exists within the natural floodplain at a particular cross-section and it is not counted as water-surface width, or where the cross section is within an area of ineffective flow which has been encroached out of the model.

The differences between floodplain/floodway widths scaled from the work maps and those output from the HEC-2 model are also attributable to high points in the floodplain that are not counted as flow width by the model, or ineffective flow areas that are encroached-out of the model. In addition, scaled widths will not match HEC-2 output widths in the split-flow areas, since two runs were used to accurately model these reaches. Small differences between scaled widths and model widths are attributed to the accuracy of the plotting program.

```
AC
C
C    118
C     37 TOE OF GRADE CONTROL STRUCTURE
C     37 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
C  0.437 begin file 01ibw.dwg
C  0.475TOE OF GRADE CONTROL STRUCTURE
C  0.4756 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
C  0.491TOP OF GRADE CONTROL
C  0.4912 PIERS IN LEFT BANK AREA
C  0.776CURRY ROAD
C  0.776DOWNSTREAM EDGE
C  0.791CURRY ROAD
C  0.791UPSTREAM EDGE
C   1.04begin file 02ibw.dwg
C  1.554MCKELLIPS ROAD
C  1.554DOWNSTREAM EDGE
C   1.57MCKELLIPS ROAD
C   1.57UPSTREAM EDGE
C  1.582begin file 03ibw.dwg
C   1.77NON-EFFECTIVE FLOW AREA REMOVED
C  1.787NON-EFFECTIVE FLOW AREA REMOVED
C  1.794NON-EFFECTIVE FLOW AREA REMOVE
C  1.799NON-EFFECTIVE FLOW AREA REMOVED
C  1.827NON-EFFECTIVE FLOW AREA REMOVED
C  2.178begin file 04ibw.dwg
C  2.629MCDOWELL ROAD
C  2.629DOWNSTREAM EDGE
C     52MCDOWELL ROAD
C     52UPSTREAM EDGE
C  2.653DOWNSTREAM TOE OF SILL
C  2.658DOWNSTREAM TOP OF SILL
C  2.662UPSTREAM TOP OF SILL
C  2.663UPSTREAM TOE OF SILL
C   2.77NON-EFFECTIVE FLOW AREA REMOVED
C  2.775NON-EFFECTIVE FLOW AREA REMOVED
C   2.81NON-EFFECTIVE FLOW AREA REMOVED
C  2.936NON-EFFECTIVE FLOW AREA REMOVED
C   3.03NON-EFFECTIVE FLOW AREA REMOVED
C   3.22begin file 05ibw.dwg
C   3.28MURRAY LANE
C  3.409NON-EFFECTIVE FLOW AREA REMOVED
C  3.488NON-EFFECTIVE FLOW AREA REMOVED
C   3.49NON-EFFECTIVE FLOW AREA REMOVED
C  3.504NON-EFFECTIVE FLOW AREA REMOVED
C   3.51NON-EFFECTIVE FLOW AREA REMOVED
C  3.548NON-EFFECTIVE FLOW AREA REMOVED
C   3.59NON-EFFECTIVE FLOW AREA REMOVED
C    3.6NON-EFFECTIVE FLOW AREA REMOVED
C   3.66NON-EFFECTIVE FLOW AREAS REMOVED
C   3.76NON-EFFECTIVE FLOW AREA REMOVED
C   3.76THOMAS ROAD
C   3.76DOWNSTREAM EDGE
C   3.78THOMAS ROAD
C     78UPSTREAM EDGE
C  3.977begin file 06ibw.dwg
C   4.25OSBORN ROAD
C   4.83begin file 07ibw.dwg
C  4.855INDIAN SCHOOL ROAD
```

```
C  4.855DOWNSTREAM EDGE
C   4.87INDIAN SHCOOL ROAD
C   4.87UPSTREAM EDGE
C   4.99GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
     99AREA BETWEEN STA. 9685 AND STA. 9909
     5.3NON-EFFECTIVE FLOW AREA REMOVED
C   5.36CAMELBACK ROAD
C   5.36DOWNSTREAM EDGE
C   5.36begin file 08ibw.dwg
C  5.372CAMELBACK ROAD
C  5.372UPSTREAM EDGE
C    5.9CHAPARREL ROAD
C    5.9begin file 09ibw.dwg
C    6.4begin file 10ibw.dwg
C   6.82NON-EFFECTIVE FLOW AREA REMOVED
C   6.88MCDONALD DRIVE
C   6.88DOWNSTREAM EDGE
C   6.88NON-EFFECTIVE FLOW AREA REMOVED
C   6.88begin file 11ibw.dwg
C  6.893MCDONALD DRIVE
C  6.893UPSTREAM EDGE
C  7.102GR DATA ADJUSTED FOR FLOODWALL
C  7.481begin file 12ibw.dwg
C   7.67NON-EFFECTIVE FLOW AREA REMOVED
C  7.979INDIAN BEND ROAD
C  7.979BASE OF DROP STRUCTURE
C  7.992begin file 13ibw.dwg
C  7.992INDIAN BEND ROAD
C  7.992UPSTREAM EDGE OF DROP STRUCTURE
C    239NON-EFFECTIVE FLOW AREA REMOVED
     556begin file 14ibw.dwg
C  9.128SCOTTSDALE ROAD
C  9.128DOWNSTREAM EDGE
C   9.15SCOTTSDALE ROAD
C   9.15UPSTREAM EDGE
C  9.754begin file 16ibw.dwg
C  10.32begin file 17ibw.dwg
C   10.4INVERGORDON ROAD
C   10.4DOWNSTREAM EDGE
C  10.41INVERGORDON ROAD
C  10.41UPSTREAM EDGE
C  10.99begin file 18ibw.dwg
C  11.15DOUBLETREE ROAD
C  11.15DOWNSTREAM EDGE
C  11.17DOUBLETREE ROAD
C  11.17UPSTREAM EDGE
C  11.55begin file 19ibw.dwg
C  12.54begin file 20ibw.dwg
C  12.54SHEA BOULEVARD
C  12.54DOWNSTREAM EDGE
C  12.56SHEA BOULEVARD
C  12.56UPSTREAM EDGE
C  13.25begin file 21ibw.dwg
C  13.38TATUM BOULEVARD (48TH STREET)
C  13.38DOWNSTREAM EDGE
     .4TATUM BOULEVARD
C    3.4UPSTREAM EDGE
C  14.02begin file 22ibw.dwg
C  14.44CACTUS ROAD
C  14.44DOWNSTREAM EDGE
```

```
C  14.47CACTUS ROAD
C  14.47UPSTREAM EDGE
T1      IBW #5
T2
*
J      10       2                                          20000  1167.3
J2      1              -1                              -1      -6
J3    110             150            200
NC                            0.2     0.4
NH      1   0.04510712.68
* TOE OF GRADE CONTROL STRUCTURE
* 6 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
* begin file 01ibw.dwg
X1 0.437       74 9163.8510337.92
GR  1190     8930     1188 9053.44     1184 9163.85     1180 9237.96     1178 9265.79
GR  1176 9296.39     1174 9323.25     1172     9442     1172 9618.63     1172 9671.75
GR  1172 9689.28     1170 9693.83     1168   9698.3     1166 9702.21     1164 9705.07
GR  1162 9707.76     1160 9712.66     1158 9729.91     1156 9734.07     1154 9738.22
GR  1152 9742.37     1150 9746.52     1148 9750.67     1146   9759.2     1146     9800
GR  1190 9800.01     1190   9805.5     1146 9805.51     1144     9880     1190 9880.01
GR  1190   9885.5     1144 9885.51     1144   9960.5     1190 9960.51     1190     9966
GR  1144 9966.01     1144    10041     119010041.01     1190 10046.5     114410046.51
GR  1144    10121     119010121.01     1190 10126.5     114410126.51     1144 10201.5
GR  119010201.51     1190    10207     114410207.01     114410232.09     114610248.85
GR  115010281.79     115210289.35     115410296.35     115610302.17     115810320.11
GR  116010322.65     1162 10325.2     116410327.74     116610330.29     116810332.83
GR  117010335.38     117210337.92     117210359.48     117010365.32     116810370.73
GR  116810400.32     117010480.33     117010576.35     117010576.36     117010646.14
GR  117010665.06     116810674.19     116810695.43     117010712.68
N'                            0.2     0.4
1       1   0.04510712.68
ET                     7.1                              9700    10331
* TOE OF GRADE CONTROL STRUCTURE
* 6 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
X1 0.475       74 9163.8510337.92     200      200      200
X3      0     1158
GR  1190     8930     1188 9053.44     1184 9163.85     1180 9237.96     1178 9265.79
GR  1176 9296.39     1174 9323.25     1172     9442     1172 9618.63     1172 9671.75
GR  1172 9689.28     1170 9693.83     1168   9698.3     1166 9702.21     1164 9705.07
GR  1162 9707.76     1160 9712.66     1158 9729.91     1156 9734.07     1154 9738.22
GR  1152 9742.37     1150 9746.52     1148 9750.67     1146   9759.2     1146     9800
GR  1190 9800.01     1190   9805.5     1146 9805.51     1144     9880     1190 9880.01
GR  1190   9885.5     1144 9885.51     1144   9960.5     1190 9960.51     1190     9966
GR  1144 9966.01     1144    10041     119010041.01     1190 10046.5     114410046.51
GR  1144    10121     119010121.01     1190 10126.5     114410126.51     1144 10201.5
GR  119010201.51     1190    10207     114410207.01     114410232.09     114610248.85
GR  115010281.79     115210289.35     115410296.35     115610302.17     115810320.11
GR  116010322.65     1162 10325.2     116410327.74     116610330.29     116810332.83
GR  117010335.38     117210337.92     117210359.48     117010365.32     116810370.73
GR  116810400.32     117010480.33     117010576.35     117010576.36     117010646.14
GR  117010665.06     116810674.19     116810695.43     117010712.68
NC                            0.2     0.4
NH      3    0.03 9220.78    0.025 9811.16     0.0310626.72
ET                     7.1                              9215    9830
* TOP OF GRADE CONTROL
*       RS IN LEFT BANK AREA
X1  .491       40 9170.12 9837.16      280      280      280
GR  1186     8952     1184 9075.22     1184 9170.12     1182 9171.44     1180 9173.94
GR  1178 9176.47     1176 9179.74     1174 9182.92     1172 9188.69     1170 9192.29
GR  1168 9196.14     1166 9200.68     1164   9205.6     1162   9210.7     1160 9220.78
```

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GR  1160    9250    1190 9250.01    1190  9255.5    1160 9255.51    1160    9335
GR  1190 9335.01    1190  9340.5    1160 9340.51    1162 9654.14    1164 9811.16
GR  1166 9816.57    1168  9821.9    1170 9829.22    1172 9837.16    1172 9856.62
GR  1170 9867.75    1170  9876.8    1170 9896.02    1170 9916.03    117010032.27
    7010039.53    117210274.66    117410553.09    117210560.87    117210626.72
N                             0.2     0.4
NH     3    0.03 9885.31   0.025 10122.1    0.0311377.17
ET                   7.1                              9770   10210
X1 0.568      40 9701.2110341.42  424.93  389.71     410
GR  1192    9144    1190 9225.58    1188 9306.04    1186 9314.78    1184 9323.51
GR  1182 9332.25    1180 9340.99    1178 9350.02    1176 9363.76    1174 9417.64
GR  1172    9468    1170 9478.82    1168  9489.2    1168 9518.79    1170 9543.53
GR  1172 9594.95    1174 9619.79    1174 9637.31    1172 9701.21    1170 9717.65
GR  1168 9732.21    1166 9746.54    1164 9885.31    1162 9900.69    1160  9996.1
GR  116010023.98    116210112.42    1164 10122.1    116610196.38    116810303.23
GR  117010321.79    117210341.42    117210405.99    117010435.22    1170 10507.2
GR  117010609.96    1170 10686.3    117210699.01    117410890.61    117411377.17
NC                            0.2     0.4
NH     3    0.03 9893.67   0.02510097.58    0.0310976.15
ET                   7.1                              9875   10230
X1 0.663      33 9771.7210397.52  544.19  415.42     500
X3    10
GR  1172    9080    1172 9177.87    1172  9228.5    1174 9553.21    1174 9771.72
GR  1172 9787.02    1170 9802.23    1168  9831.2    1168 9847.47    1168 9893.67
GR  1166 9900.09    1164 9906.54    1162 9912.99    1160 9919.44    1160 9923.58
GR  116210039.72    116410057.27    116610068.48    116810097.58    116810158.46
GR  116810232.13    117010290.13    117010291.49    117010356.64    117210377.07
GR  117410397.52    117410429.62    117010682.86    117210735.29    117410747.43
GR  117610848.76    1176 10873.9    117610976.15
P                             0.3     0.5
    3   0.035 9922.97   0.02510098.75   0.035   11420
ET          5.1     7.1           9860   10295    9900   10255
X1 0.758      31 9752.0410403.66  611.05  348.82     500
GR  1178    8674    1178 9547.75    1178 9745.53    1178 9752.04    1176 9782.78
GR  1174 9799.41    1172 9816.74    1170  9916.7    1168 9922.97    1162 9980.03
GR  1162 9988.27    116210073.39    116410079.73    116610086.07    116810092.41
GR  117010098.75    117210353.22    117410368.96    117610385.25    117810403.66
GR  117810423.73    117610432.22    1172 10456.4    117210691.22    117410737.54
GR  117410774.83    117210779.21    1172 10785.1    117410794.07    117610869.99
GR  1176   11420
NC                           0.3     0.5
NH     1    0.0211323.37
ET                   7.11                             9845   10250
* CURRY ROAD
* DOWNSTREAM EDGE
X1 0.776      39  9412.910577.52      99      99      99
X3    10
GR  1176    9000    1178 9234.29    1180  9405.7    1180  9412.9    1178 9595.17
GR  1176 9669.52    1174 9758.07    1172 9837.13    1170 9924.66    1168 9927.47
GR  1166 9931.33    1166 10078.4    116810081.45    117010084.85    117210232.78
GR  117410350.92    117610386.51    117810449.82    118010517.22    118010539.44
GR  118010577.52    118010625.96    117810626.54    117610627.25    117410627.83
GR  117210628.27    117010628.65    1170 10630.8    117210635.28    117410636.38
GR  117610637.19    117810637.97    118010638.55    118010772.97    117810853.18
GR  117810974.47    117810998.45    117611318.65    117611323.37
                             0.3     0.5
NH     1    0.0210996.43
ET                   7.11                             9790   10235
SB  1.05     1.5     2.6       0     133       4  482.46       0 1165.02  1164.6
* CURRY ROAD
```

```
* UPSTREAM EDGE
X1 0.791       34 9425.9210521.03       78       78       78
X2                     1 1168.76 1171.44                     2
X3    10
P      -5  9545.9    1180     1178 9906.74 1171.44 1168.7610060.83 1171.44 1168.76
B        10329.58    1174     117410521.03    1180        0
GR  1177     8933    1177 8997.79    1178 9201.48    1180 9282.54    1180 9425.92
GR  1178   9545.9    1176 9617.52    1174 9676.65    1172 9834.04    1170 9904.66
GR  1168 9906.74    1166 9910.86    1166 10057.8    116810060.83    117010063.93
GR  117210164.48    117410329.58    117610376.83    117810433.03    118010521.03
GR  118010584.85    117810585.29    117610585.76    117410586.05    117210586.33
GR  117010586.72    117010588.29    117210592.46    117410593.84    117610594.33
GR  117810594.66    118010595.37    118010851.02    117810996.43
NC                              0.2      0.4
NH     3   0.035 9928.36     0.0310089.42    0.03510940.04
ET                     7.1                              9770    10270
X1 0.852       40  9715.410339.78      320      320      320
X3    10
GR  1178     8943    1178 9107.42    1178 9418.08    1176 9518.36    1176 9563.08
GR  1176   9657.8    1176   9666.2    1178 9680.07    1180   9695.5    1180   9715.4
GR  1178 9727.68    1176 9740.69    1174 9764.66    1172 9928.36    1170   9936.1
GR  1168 9944.82    116610056.03    116810061.29    117010066.63    117210072.51
GR  117410089.42    117410132.28    117410303.28    117610317.33    117810328.64
GR  118010339.78    1180 10360.7    117810365.36    117810418.66    117810426.58
GR  117810486.19    117610583.52    117610586.34    117810588.75    118010601.21
GR  117810702.34    117810708.49    118010716.28    118010721.77    118010940.04
NH     3   0.035 9810.86     0.0310207.63    0.03511168.83
ET                     7.1                              9716.1910218.74
X1 0.947       37 9650.1610301.87      500      500      500
GR  1180 9617.62    1182 9627.04    1184 9646.42    1184 9650.16    1182 9657.58
GR  1180   9668.3    1178 9691.91    1176 9728.09    1176 9792.63    1176 9810.86
GR  1176 9877.27    1176   9901.7    1174 9912.67    1172 9921.26    117010058.47
GR  117210064.94    117410071.37    117610077.64    117610115.08    117610207.63
GR  117810238.78    1180 10255.1    1182 10271.6    118410288.75    118410301.87
GR  118210309.85    1182 10386.7    118210402.73    118210418.81    118210597.66
GR  118210699.96    118210779.23    118210793.79    118210808.46    118210887.61
GR  118210990.94    118211168.83
NC                              0.2      0.4
NH     3   0.035 9910.54     0.0310127.17    0.03510284.34
ET                     7.1                              9664.5 10178.8
* begin file 02ibw.dwg
X1  1.04       25 9623.58 10275.3      500      500      500
X3    10
GR  1184     8497    1182 9205.28    1182 9432.55    1184 9457.55    1186 9488.53
GR  1186 9623.58    1184 9636.99    1182 9657.74    1180 9910.54    1178     9921
GR  1176 9930.32    1174 9938.97    1174 9987.17    117410015.01    117410058.87
GR  117610065.12    117810127.17    117810161.47    117810176.14    118010227.32
GR  118210236.96    1184 10246.4    118610255.93    1186 10275.3    118410284.34
NC                              0.2      0.4
NH     3   0.035 9771.93     0.0310006.96    0.03511381.67
ET                     7.1                              9628.4 10127.1
X1 1.136       52 9550.06 10217.4      435      544      500
X3    10
GR  1188     8669    1188 8717.52    1186 8754.36    1186 8839.33    1188 8871.64
GR  1192 8924.29    1194 8955.42    1194 8975.75    1192 9016.23    1190 9052.24
GR  1188 9112.16    1188 9183.51    1190   9194.7    1192 9200.38    1194 9206.25
GR  1194 9208.36    1192 9215.99    1190 9223.33    1188 9233.05    1186 9340.63
GR  1186 9426.35    1188 9550.06    1186   9561.2    1184 9572.57    1182 9620.39
GR  1182 9704.49    1182 9771.93    1178 9823.94    1176 9832.85    1176 9965.08
GR  1178 9974.14    1182 9993.65    118410006.96    118410021.74    118210060.13
```

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 GR  118210138.26     118410152.24     118610166.23     118810180.21     1188 10217.4
 GR  118610314.61     118610339.59     118610411.22     118610568.87     118610580.88
 GR  118610674.24     118410723.08     118410733.87     1186 11267.9     118611302.08
 GR  118611325.84     118611381.67
                                0.2      0.4
 N.      3   0.035 9914.04     0.0310124.32    0.03511771.51
 ET                      7.1                              9780.6 10210.9
 X1 1.231       51 9703.1110334.06      470      527      500
 X3     10
 GR  1188     8728     1190 8735.99     1192 8746.05     1194 8760.54     1194 8785.41
 GR  1192 8799.48     1190 8806.12     1188 8812.62     1186 8975.85     1184 9163.99
 GR  1186 9250.28     1188 9260.67     1190  9304.4     1190 9393.42     1190 9416.03
 GR  1190 9591.61     1188 9604.03     1186 9637.89     1186 9673.44     1188 9682.01
 GR  1190 9695.67     1190 9703.11     1188 9711.88     1186 9720.59     1184 9729.35
 GR  1182 9821.89     1182 9855.18     1182 9914.04     1180 9929.26     1178 9936.95
 GR  1176 9944.58     117610078.68     117810086.61     118010097.94     118210124.32
 GR  118410288.42     118610303.69     118810318.81     119010334.06     119010367.39
 GR  118810387.81     1188 10512.3     118810853.45     118810899.17     118810944.31
 GR  118610956.43     1186 10989.2     118811078.32     118811212.37     119011612.99
 GR  119011771.51
 NC                             0.2      0.4
 NH      3   0.035 9903.36     0.0310106.84    0.03512183.72
 ET                      7.1                              9881    10107
 X1 1.326       53 9706.2410338.43      470      548      500
 X3     10
 GR  1188     8820     1190 8973.57     1192 8991.11     1194 9008.63     1194 9173.98
 GR  1192 9189.19     1190 9202.86     1188 9221.15     1188 9661.89     1190 9673.72
 GR  1190 9706.24     1188 9715.03     1186  9731.4     1186 9869.01     1186 9903.36
 GR  1184 9911.74     1182 9920.14     1180 9928.91     1178  9937.7     1176 9946.24
      17610068.73     117810077.08     118010085.33     118210095.66     118410106.84
      .18410167.58     118410187.45     118610298.73     118810315.74     119010329.02
 GR  119210338.43     119210353.58     119010360.68     118810465.53     118810484.64
 GR  118810640.74     118810642.96     119010701.54     119010803.65     119010903.34
 GR  119010906.44     118810936.88     118810988.65     118811096.41     118811160.48
 GR  118811188.08     1188 11206.6     118811299.59     118811303.33     119011451.81
 GR  119211555.36     119411762.14     119612183.72
 NC                             0.3      0.5
 NH      3   0.035 9885.94     0.0310126.67    0.03511470.01
 ET                      7.1                              9895.5 10100.6
 X1  1.42       41 9681.9210335.16      500      500      500
 X3     10
 GR  1190     9200     1190 9645.67     1192 9653.42     1192 9681.92     1190 9699.89
 GR  1188 9720.43     1186 9740.38     1186 9804.81     1186 9885.94     1184 9916.24
 GR  1182 9922.96     1180 9929.67     1178 9936.24     1176 9943.04     117610067.93
 GR  117810077.38     118010086.91     118210095.46     118410102.44     118610126.67
 GR  118810270.28     119010294.17     1192    10306    119410323.08     119410335.16
 GR  119210345.48     119010392.17     119010445.59     119010534.09     119010572.13
 GR  1190 10612.3     119010740.19     119210788.55     119210858.54     119210946.63
 GR  119210949.54     119210951.94     119210954.72     119011192.36     119011332.79
 GR  119211470.01
 NC                             0.3      0.5
 NH      3   0.035 9944.59     0.0310103.11    0.03511278.88
 ET                      7.1                              9857.1110198.86
 X1 1.515       27 9678.3810370.31      606      348      497
 Y-      10
         92     9268     1194 9564.49     1194 9678.38     1192 9699.95     1190 9722.62
 GR  1188 9944.59     1186 9952.21     1184 9959.41     1182 9965.64     1180 9971.78
 GR  1178 9977.69     1178 10062.9     118010072.38     118210081.47     118410088.84
 GR  118610095.46     118810103.11     119010319.67     119210330.32     1194 10343.2
 GR  119410370.31     119210380.04     119010774.55     119010856.27     119210954.64
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GR  119211057.77     119011278.88
NC                            0.3      0.5
NH     1    0.0211491.36
ET                    7.1                           9779.610230.74
*     LLIPS ROAD
      NSTREAM EDGE
X1 1.554       30 9409.9810640.64      190      190      190
X3    10
GR  1196     9298     1196 9301.21     1196 9304.78     1196 9409.98     1194 9486.72
GR  1192   9599.9     1190 9627.64     1188 9784.59     1186 9977.07     1184 9979.07
GR  1182 9980.71     1180 9982.29     1178 9985.39     1177 9985.45     1177    10039
GR  117810039.21     118010040.79     118210042.17     118410043.28     118610044.55
GR  118810183.06     1190 10313.9     119210366.63     119610628.52     119610640.64
GR  119410746.65     119211029.71     119211401.27     119211490.74     119211491.36
NC                             0.3      0.5
* The cidubg i fier width provide accuracy of the modeling
NH     1    0.0210564.80
ET                    7.1                           969010189.45
SB  0.95      1.5      2.6        0       42     0.01  374.64        0 1177.07 1176.69
* MCKELLIPS ROAD
* UPSTREAM EDGE
X1  1.57       57 9331.3910344.36       91       91       91
X2                     1 1185.99  1187.8
X3    10
BT    -7 9331.39     1195        0 9660.17     1188     1188 9928.24     1188     1186
BT       9997.94     1188     118610184.04     1189     118910208.83     1190        0
BT      10344.36     1195        0
GR  1194     9142     1195   9163.7     1195 9172.81     1195 9210.22     1195 9331.39
GR  1194 9417.94     1193 9443.65     1192 9509.32     1191 9547.17     1190 9563.19
GR   189     9630     1189 9634.36     1189 9642.65     1188 9659.04     1188 9660.17
     188 9789.56     1188 9801.79     1188 9834.98     1188 9837.46     1188 9844.25
GR  1188 9856.44     1188 9896.54     1188 9898.82     1188 9928.24     1187 9939.31
GR  1186 9939.52     1185 9940.04     1184 9940.41     1183 9940.78     1182 9941.21
GR  1181 9941.69     1180   9942.1     1179   9942.5     1178 9942.82     1177   9943.2
GR  1177 9956.96     1177 9981.58     1177 9985.76     1178 9986.03     1179 9986.35
GR  1180 9986.67     1181 9986.98     1182 9987.33     1183   9987.7     1184 9988.03
GR  1185 9988.55     1186 9988.79     1187 9989.19     1188 9997.94     118910184.04
GR  119010208.83     119110222.35     119210235.81     119310253.14     119410281.68
GR  119510344.36     1195 10564.8
NC                             0.3      0.5
NH     1    0.0310262.87
ET                    7.1                           9693.6710228.49
* begin file 03ibw.dwg
X1 1.582        8    960010262.87  225.54  138.23   48.75
X3    10
GR  1195     9600     1190 9634.79     1185 9972.28     1180 9976.55     118010040.62
GR  118510046.05     119010228.49     119510262.87
NC                            0.2      0.4
NH     3    0.03 9771.88    0.0210097.77    0.0311413.67
ET                    7.1                           9693.5610220.55
X1  1.61       70 9619.7310289.62      210      210      210
X3    10
GR  1193 9142.84     1192 9270.09     1192 9485.31     1192 9558.96     1192 9569.08
GR  1191   9575.2     1190 9578.72     1189 9581.72     1188 9584.53     1188 9585.12
GR  1189 9588.34     1190 9591.44     1191 9594.34     1192 9596.66     1193 9598.95
     94 9601.19     1195 9603.49     1196 9605.86     1196 9619.73     1195 9626.27
G.  1194 9632.27     1193 9637.75     1192 9642.88     1191 9648.22     1190   9665.1
GR  1189 9694.29     1188 9716.13     1187   9721.6     1186 9762.66     1185 9771.88
GR  118510097.77     118610102.59     118610105.47     118510111.52     118510128.96
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     9110551.03    119110625.03    119110705.47    119210739.97    119210762.88
C    19110853.59    119110864.21    1192 11161.7    119311284.64    119411413.67
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NH     3    0.03 9955.93    0.02 10083.3    0.0311220.17
ET                     7.1                          9704.9710206.07
X1 1.705       90 9646.4410322.93     500     500     500
X3    10
GR  1195    8816    1196  8825.7    1197 8831.44    1197  8915.8    1196 8929.41
GR  1196 9050.96    1196  9076.8    1196 9096.44    1196 9131.92    1195 9239.53
GR  1193 9322.14    1193 9360.82    1193 9409.32    1192 9497.92    1191 9500.06
GR  1191 9505.93    1192 9510.06    1193 9529.83    1193 9533.43    1193 9536.92
GR  1194 9550.28    1195 9594.62    1196  9616.3    1197 9620.16    1198 9626.64
GR  1198 9646.44    1197 9652.32    1196 9657.99    1195 9662.47    1194 9666.81
GR  1193 9671.21    1192 9679.42    1191 9690.89    1190 9704.42    1189 9721.04
GR  1188 9740.68    1187 9756.27    1186 9761.91    1185 9771.91    1185 9832.25
GR  1186 9839.39    1187 9879.22    1187 9944.64    1186 9950.13    1185 9955.93
GR  1185 10083.3    118610087.25    118710117.36    118810156.43    118910205.66
GR  119010232.79    119110259.62    119210277.74    119310282.96    119410286.95
GR  119510290.97    119610295.91    119710301.57    119810307.15    119910315.43
GR  119910322.93    119810325.25    119710327.54    119610329.15    119510330.71
GR  119410332.17    119310333.71    119210335.27    119210338.85    1192 10351.5
GR  119210523.78    119210544.86    119210700.94    119310733.49    1193 10750.3
GR  119310810.97    119310837.05    119210852.15    119210864.91    119210883.45
GR  119210893.95    119311027.97    119411075.34    1194 11110.4    119411111.54
GR  119411159.08    119311186.41    119311187.34    119411193.32    119411220.17
                                0.2     0.4
     3    0.03 9819.49    0.0210114.01    0.0310328.06
ET                     7.1                          9762.5310158.31
* NON-EFFECTIVE FLOW AREA REMOVED
X1  1.77       55 9615.2710292.96  439.02  280.86     350
X3    10
GR  1205    8798    1204 8912.07    1203 9057.88    1202 9091.16    1202 9186.43
GR  1202    9296    1201  9303.4    1200 9312.49    1199 9365.22    1198 9403.18
GR  1198    9512    1199 9517.12    1200 9521.95    1201 9526.36    1201 9615.27
GR  1200 9621.69    1199 9628.18    1198 9632.61    1197 9636.57    1196 9640.26
GR  1195 9644.13    1194 9647.99    1193 9652.95    1192 9658.88    1191 9745.53
GR  1190 9751.04    1189 9761.05    1188 9779.92    1187 9798.93    1186 9811.33
GR  1185 9819.49    118510114.01    118610117.94    118710126.59    118810142.97
GR  118910157.46    119010184.23    119110202.46    119210214.83    119310222.34
GR  119410230.97    119510239.16    119610247.62    119710258.09    119810268.16
GR  119910274.02    1200 10280.3    120110286.53    120210292.96    120210313.89
GR  1201 10316.9    120010319.98    119910322.91    119810325.49    119710328.06
NC                              0.2     0.4
NH     3    0.03  9805.7    0.0210118.83    0.0311380.33
ET                     7.1                          9771.2710148.71
* NON-EFFECTIVE FLOW AREA REMOVED
X1 1.787       74 9655.23   10229       74       55       62
X3    10
GR  1205    8735    1205 8779.33    1205 8785.65    1204 8986.48    1203 9145.92
GR  1202 9154.23    1202 9186.15    1202 9189.39    1202 9192.98    1202 9274.16
C   1201 9300.68    1200 9506.23    1200 9520.94    1201 9531.87    1201 9655.23
     00 9672.02    1199 9721.46    1198 9730.24    1197  9739.1    1196 9746.39
GR  1195 9752.25    1194 9757.26    1193  9762.5    1192 9767.88    1191 9773.06
GR  1190    9778    1189 9783.27    1188 9788.63    1187 9793.82    1186 9800.26
GR  1185  9805.7    118510118.83    118610126.03    118710131.88    1188   10137
GR  118910141.97    119010146.97    119110151.65    119210156.25    119310159.87
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GR  1194 10163.4     119510167.57     119610171.66     119710175.87     119810179.97
GR  119910183.62     120010187.47     120110191.56     120210196.21     120210196.99
GR  120210204.83     1202  10229      120210267.41     120210276.63     120110279.52
GR  120010281.87     119910284.31     119810287.05     119710289.81     1196 10292.8
G    9510295.51      119410298.22     119310301.04     119310380.25     119310432.64
G    9310531.98      119410608.71     119410714.36     119410776.46     119410928.74
GR  119410976.89     119411282.16     119411293.91     119411380.33
NC                                0.2      0.4
NH     3   0.03510185.44     0.0310236.65    0.03510520.51
ET                    7.1                          10007.3810408.07
* NON-EFFECTIVE FLOW AREA REMOVE
X1 1.794       50 9792.16 10506.2       68       46       55
X3    10
GR  1206     8913     1206 9014.03     1206 9039.78     1205 9082.48     1204 9109.86
GR  1204 9113.69     1205 9135.74     1205 9145.79     1204 9186.42     1204 9205.77
GR  1204 9207.06     1204 9259.42     1204 9259.68     1203 9384.23     1202 9398.32
GR  1202 9401.78     1202 9517.07     1201 9570.03     1200  9694.1     1200 9708.52
GR  1200 9792.16     1199 9857.71     1198     9881     1197 9900.13     1196 9913.34
GR  1195 9927.87     1194  9977.6     119310009.43     119210114.95     119110185.44
GR  119010201.92     118910205.65     118810208.57     118810229.99     118910231.19
GR  1190   10233     119110236.65     119210312.78     119310362.79     119410475.14
GR  119510477.49     119610479.46     119710481.74     119810483.89     119910486.91
GR  120010499.92     120110503.18     1202 10506.2     120210517.74     120110520.51
NC                                0.2      0.4
NH     3   0.035 9953.87     0.03     9998    0.03510275.40
ET                    7.1                          9752.5310172.83
* NON-EFFECTIVE FLOW AREA REMOVED
X1 1.799       50 9546.0510253.73       25       25       25
X3    10
GR  208     8496     1207 8516.96     1206 8702.59     1206 8758.62     1206 8819.18
    205 8831.41     1205 8860.44     1205 8870.04     1204 8970.82     1203 9129.24
GR  1202 9260.29     1201 9317.14     1200 9389.23     1200 9400.31     1200 9437.99
GR  1200 9457.63     1200 9462.73     1200 9484.89     1200 9546.05     1199 9608.94
GR  1198 9627.08     1197 9650.72     1196 9668.17     1195 9683.71     1194 9700.49
GR  1193 9791.93     1192 9953.87     1191 9959.61     1190 9964.67     1189 9968.29
GR  1188 9971.94     1188 9985.48     1189 9989.19     1190 9992.63     1191 9995.53
GR  1192     9998     119310102.96     1194 10222.4     119510224.98     119610227.43
GR  119710229.92     119810240.67     119910245.79     120010248.48     120110251.02
GR  120210253.73     120210266.41     120110269.61     120010272.54     1199 10275.4
NC                                0.2      0.4
NH     3   0.03510024.29     0.0310055.07    0.03510912.52
ET                    7.1                          9694.0710193.59
* NON-EFFECTIVE FLOW AREA REMOVED
X1 1.827       75 9566.0510230.02      112      175      144
X3    10     1192
GR  1206     8695     1206  8772.4     1206 8780.69     1205  8787.1     1205  8801.2
GR  1205 8841.37     1204 8943.31     1204 8976.14     1204 8986.34     1203  9073.4
GR  1203 9094.44     1203  9107.5     1203  9127.3     1203 9132.11     1203 9144.38
GR  1203 9146.02     1202 9233.83     1201  9289.9     1200 9408.41     1200 9554.17
GR  1200 9566.05     1199 9660.43     1198 9664.77     1197 9669.06     1196 9674.87
GR  1195 9680.96     1194 9692.37     1193 9905.64     1193 9925.23     1193 9933.19
GR  1193 9972.79     1193 9975.33     119210024.29     119110026.34     119010028.89
GR  118910033.48     118910049.96     119010051.95     119110053.54     119210055.07
GR  119310110.11     119310123.78     119310141.05     119410191.88     119510194.79
GR  119610197.88     119710200.85     119810203.97     119910206.69     1200 10209.3
    0110211.87     120210214.44     120310217.07     120410228.87     120410230.02
GR  120310235.36     120210238.49     120110242.78     120010242.99     119910243.29
GR  119810243.57     119710243.93     119610244.33     119510244.73     119410244.99
GR  119310410.23     1193 10415.5     119410465.91     119510502.22     119610598.71
GR  119710670.84     1198 10782.9     119910805.65     119910833.86     119910912.52
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NH     3    0.03 9903.74     0.0210216.22     0.0311028.44
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GR  1206     8662     1205 8768.83     1205 8778.76     1204 9108.75     1203 9124.66
GR  1202 9258.91     1201 9544.61     1200 9717.86     1199 9739.52     1199 9759.19
GR  1199 9762.51     1198 9769.56     1197 9776.03     1196 9780.69     1195 9785.23
GR  1194 9814.12     1193 9853.84     1192 9895.21     1191 9903.74     119110216.22
GR  119210228.73     119310275.09     119410293.81     119510308.85     119610335.23
GR  119710346.74     119810353.24     120010367.81     120110375.56     1202 10382.4
GR  120310389.44     120410396.22     120410431.17     120410486.11     120510584.82
GR  120510935.06     120410948.67     120310969.96     120210985.16     120210996.03
GR  120311002.67     120311014.02     120211022.26     120211028.44
NC                              0.2     0.4
NH     4   0.035 9952.92     0.03 9985.91    0.03510500.07     0.0510941.56
ET                    7.1                          9830.1610468.78
X1  1.99       42 9812.9810585.58      500      500      500
X3     10
GR  1203     9694     1202 9762.51     1201  9774.9     1200 9812.98     1199  9818.2
GR  1198 9823.09     1197 9827.25     1196 9830.98     1195 9835.28     1194 9840.68
GR  1194 9856.27     1194 9857.03     1193 9919.54     1193 9952.92     1193 9971.63
GR  1192 9985.91     1192 9986.98     1192 9995.69     1191 9997.87     119110016.16
GR  119210017.83     119310070.85     119410199.04     119510249.28     119610258.28
GR  119610262.49     119610282.81     119610323.29     119610377.74     119710500.07
GR  119810514.32     119910526.66     120010537.98     1201 10549.4     120210559.41
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GR  120410934.65     120510941.56
NC                              0.2     0.4
N      4   0.035 9973.15     0.0310049.88    0.03510336.33     0.0510861.83
                      7.1                          9817.4710443.11
X1 2.047       47 9757.5410645.14      280      350      308
X3     10
GR  1208     9094     1207 9292.16     1207 9323.44     1207 9329.67     1206 9354.23
GR  1205 9400.84     1204 9447.85     1204 9473.36     1204 9757.54     1203 9762.96
GR  1202  9768.6     1201 9774.81     1200 9782.88     1199 9790.79     1198  9817.8
GR  1197 9850.03     1196 9860.25     1195 9945.56     1195 9955.95     1195 9957.96
GR  1195 9958.03     1194 9973.15     1193 9991.99     1192 9993.86     1191 9995.37
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ET            5.1      7.1             9780    10317     985010267.14
* NEAR ROOSEVELT STREET
X1  2.08       53 9774.3210695.02   144.85   307.83      192
X3     10
GR  1209     9053     1208 9220.94     1208 9294.67     1208 9294.93     1208 9329.82
GR  1208 9330.48     1207 9350.13     1206 9397.97     1205 9462.21     1204 9503.15
GR  1204 9511.94     1205 9575.91     1205 9621.39     1204  9626.3     1204 9642.88
GR  1205 9664.38     1205 9701.08     1205 9719.51     1205 9724.45     1204 9743.98
GR  1203 9758.06     1202 9774.32     1201 9787.84     1200 9795.05     1199 9807.08
GR  1198 9813.64     1197 9831.84     1196 9861.72     1196 9867.36     1196 9873.52
      95 9919.44     119410031.55     119310033.18     119210035.51     119110037.69
GR  119110042.01     119210043.57     119310045.28     1194 10046.8     119510050.54
GR  119610055.59     119710074.47     119810125.31     1198 10139.5     119810166.58
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* basin file 04ibw.dwg
          78       58 9795.4710469.41     500     500     500
X1        10
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GR  1210 9594.03    1210 9644.66    1210 9719.72    1210 9774.71    1210 9795.47
GR  1209    9799    1208  9801.9    1207 9804.85    1206 9807.84    1205 9810.79
GR  1204 9815.09    1203 9823.16    1202 9830.37    1201 9836.95    1200 9867.13
GR  1199 9898.84    1198 9935.61    1197 9963.29    1196 9978.99    1195 9993.86
GR  1194 9995.88    119510018.23    119610036.71    119610088.16    119610140.51
GR  119710193.16    119810234.06    119910272.05    120010343.39    120110387.23
GR  120210401.51    1203 10415.6    120410424.41    1205 10442.5    120610455.87
GR  120710469.41    120710501.68    120710534.27    120810552.61    120810556.42
GR  120710568.18    120610575.62    120510612.06    1205    10679   120610740.54
GR  120710755.09    120710847.35    1206 10931.5
NC                              0.2     0.4
NH     3   0.035  9972.1     0.0310115.06   0.03510777.76
ET                    7.1                           9841.6510294.52
X1 2.273       53 9749.8110350.71     500     500     500
X3    10
GR  1213    8990    1213 9041.01    1213 9112.35    1213  9134.3    1213 9153.15
GR  1213 9190.05    1213    9217    1212 9257.89    1212 9299.93    1212 9303.49
GR  1212 9306.29    1213 9512.35    1213 9547.14    1212 9749.81    1211 9754.68
GR  1210 9759.57    1209 9764.07    1208 9767.67    1207 9771.19    1206 9774.58
GR  1205 9778.15    1204 9783.01    1203 9788.18    1202 9793.14    1201 9802.13
GR  1200 9813.34    1199  9832.7    1198 9868.06    1197  9972.1    119410014.12
GR   19510016.19    119610019.66    119710115.06    119810197.78    119910254.28
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NC                              0.2     0.4
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X1 2.367       60  9797.510299.01     500     500     500
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GR  1215 9038.19    1214 9328.92    1214 9397.61    1214 9426.65    1214 9485.58
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GR  119810163.88    119910231.98    1200 10262.9    120110270.19    120210274.99
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X1 2.462       58 9689.8510263.74     500     500     500
          17    8818    1216 9028.14    1215 9167.48    1215 9174.61    1215 9256.69
GR  1215 9313.13    1215 9339.38    1215 9395.18    1215 9418.45    1214 9423.83
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GR  120110164.74    120210172.42    120310179.74    120410183.95    1205   10188
G    J610192.27     120710196.79    120810201.05    120810235.89    120810237.29
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ET            5.1     7.1          9890.23 10260.6 9890.23 10260.6
X1 2.557       56 9791.9110374.06     500     500     500
X3    10    1196
GR  1218    8751    1218 8753.19    1219 8890.67    1219 8893.95    1218 9074.26
GR  1218  9224.1    1219  9260.1    1220 9263.13    1220 9270.69    1219 9274.56
GR  1218 9305.27    1217  9368.9    1217 9377.83    1217 9392.49    1216 9431.33
GR  1216 9458.92    1216 9458.93    1216 9530.35    1216 9612.37    1215 9626.54
GR  1215 9667.16    1215 9719.76    1212  9762.1    1212 9791.91    1212 9793.44
GR  1211 9809.93    1210 9813.69    1209 9816.92    1206 9826.34    1205 9829.58
GR  1204 9832.55    1202 9838.91    1200 9845.13    1198 9854.34    1197 9888.39
GR  1196 9898.21    1195 9904.18    1194 9907.69    119410075.96    119510079.42
GR  119610082.76    119910184.35    120010214.58    120110236.13    120310262.86
GR  120410272.78    120510282.76    120610290.08    1207 10296.9    1209 10358.8
GR  121010374.06    121010441.04    121010630.29    121010633.46    121010639.58
GR  121010654.57
NC                          0.3     0.5
NH     3   0.035 9769.69    0.02 10018.6   0.035   10300
ET            5.1     7.1          9789.6910077.24 9789.6910077.24
X1  2.61       42  9640.210164.92     283     283     283
X3    10
GR  1215    9345    1215 9348.41    1215 9390.87    1215 9505.88    1214 9520.76
     214 9525.29    1215 9564.13    1215 9564.19    1212 9586.49    1212 9625.19
GR  1212 9629.73    1212  9632.7    1212  9640.2    1210  9653.2    1209 9660.63
GR  1206 9677.72    1205    9683    1202 9701.93    1201 9708.64    1200 9716.85
GR  1198  9738.2    1197 9751.44    1197 9759.25    1197 9769.69    1196 9810.55
GR  1195 9910.49    1194 9921.15    1194 9979.45    1195 9984.94    1195 9991.57
GR  119510013.15    1196 10018.6    119910050.51    120010061.03    120110075.62
GR  120310097.22    120510107.27    120610113.18    120710118.97    120910124.27
GR  121010164.92    1210   10300
NC                          0.3     0.5
NH     3   0.035 9812.52    0.0210012.21   0.03510467.02
ET            5.1     7.1          980010053.24    980010053.24
X1  2.62       38  9655.610127.36      50      50      50
X3    10
GR  1215    9332    1215 9333.54    1215 9377.26    1215 9487.92    1215 9546.62
GR  1215 9551.17    1211 9641.47    1210  9655.6    1209 9669.88    1208 9676.96
GR  1206 9698.14    1205 9711.62    1204 9735.05    1202 9759.98    1200 9768.24
GR  1199 9773.79    1198 9787.09    1197 9799.65    1196 9810.82    1196 9812.52
GR  1196 9992.57    119610012.21    1199 10032.2    120010035.85    120110040.13
GR  120210045.34    120310053.47    120510072.87    120610082.43    1207   10095
GR  120910107.75    121010127.36    121110244.02    121110244.74    121010251.81
GR  121010307.42    121110465.93    121110467.02
NC                          0.3     0.5
NH     3   0.035 9819.64    0.02 10058.8   0.03510480.44
ET                  7.1                         9826.29   10040
* MCDOWELL ROAD
     STREAM EDGE
   .629      52 9819.64   10035      50      50      50
X3    10
GR  1220    8626    1219 8812.55    1218 8973.06    1217  9115.4    1216 9234.31
GR  1215 9296.81    1214 9392.08    1213 9433.02    1212 9489.29    1211 9625.23
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GR  1211 9638.11    1210 9819.64    1209 9820.71    1208 9820.74    1207 9820.85
GR  1206 9820.87    1205 9820.94    1204 9821.19    1202 9821.23    1203  9821.3
GR  1201 9821.46    1200 9821.56    1197 9821.63    119710000.29    1196 10000.3
GR  1196 10015.4    119710016.78    1197 10022.2    119710031.93    119810033.13
G    9910034.12     120010034.51    120110034.52    120210034.53    120310034.54
     20410034.55    120510034.56    120610034.57    120710034.58    120810034.62
GR  120910034.66    121010034.68    1211   10035    1211 10058.8    121010147.57
GR  1209 10243.4    120910387.14    121010442.22    121010446.73    121010453.08
GR  121110480.41    121110480.44
NC                          0.3     0.5
NH     3   0.035 9817.87    0.0210033.69    0.03510446.77
ET                  7.1                         9818.6310032.57
SB  1.05     1.5     2.6       0     214     7.5 2244.65       0 1198.33 1197.83
* MCDOWELL ROAD
* UPSTREAM EDGE
X1 2.652       57 9813.9410034.15     120     120     120
X2                    1  1209.2 1210.87                     2
X3    10
BT    -2 9813.94 1210.87 1209.2010034.15 1210.87 1209.20
GR  1219    8858    1218 9003.71    1217  9063.9    1217 9105.79    1217 9114.63
GR  1216 9239.18    1215 9320.71    1214  9350.2    1213 9395.01    1213 9404.78
GR  1213 9415.07    1211 9552.91    1211 9553.27    1211 9561.08    1211  9622.8
GR  1211 9630.65    1210 9813.94    1210 9815.05    1210  9816.7    1209 9817.87
GR  1208 9818.31    1207 9818.62    1206 9818.63    1205 9818.64    1204  9818.7
GR  1203 9818.71    1202 9818.72    1201 9818.73    1200 9818.74    1199 9818.75
GR  1198 9818.89    1197  9818.9    1197   10008    119610008.14    119610022.95
GR  119710026.93    119710027.69    119810029.11    120010031.23    120110031.34
GR  120210031.46    120310031.69    120410031.93    120510032.17    120710032.97
GR  120810033.33    120910033.69    121010034.15    121010108.48    121010165.08
G   21010181.04     120910280.35    120910317.54    120910320.92    1209 10345.4
     21010426.07    121110446.77
NC                          0.3     0.5
NH     3   0.035 9817.87    0.0210033.69    0.03510446.77
ET                  7.1                         9818.6310032.57
* DOWNSTREAM TOE OF SILL
X1 2.653       57 9813.9410034.15       7       7       7
X3    10
GR  1219    8858    1218 9003.71    1217  9063.9    1217 9105.79    1217 9114.63
GR  1216 9239.18    1215 9320.71    1214  9350.2    1213 9395.01    1213 9404.78
GR  1213 9415.07    1211 9552.91    1211 9553.27    1211 9561.08    1211  9622.8
GR  1211 9630.65    1210 9813.94    1210 9815.05    1210  9816.7    1209 9817.87
GR  1208 9818.31    1207 9818.62    1206 9818.63    1205 9818.64    1204  9818.7
GR  1203 9818.71    1202 9818.72    1201 9818.73    1200 9818.74    1199 9818.75
GR  1198 9818.89    1197  9818.9    1197   10008    119610008.14    119610022.95
GR  119710026.93    119710027.69    119810029.11    120010031.23    120110031.34
GR  120210031.46    120310031.69    120410031.93    120510032.17    120710032.97
GR  120810033.33    120910033.69    121010034.15    121010108.48    121010165.08
GR  121010181.04    120910280.35    120910317.54    120910320.92    1209 10345.4
GR  121010426.07    121110446.77
NC                          0.3     0.5
NH     1    0.0210437.97
ET                  7.1                         9789   10013
* DOWNSTREAM TOP OF SILL
X1 2.658       69 9782.3910015.26       9       9       9
X3    10
     .20    9452    1219 9520.97    1218 9523.16    1217 9525.18    1216 9527.21
    1215 9529.24    1214 9531.31    1213 9533.26    1212 9535.46    1211 9542.33
GR  1211 9590.43    1211 9591.01    1211 9599.12    1211 9634.69    1210 9704.69
GR  1210 9717.69    1211 9746.59    1212 9760.89    1213  9768.8    1214 9776.03
GR  1214 9782.39    1213 9782.68    1212 9783.11    1211 9783.36    1210 9783.75
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GR  1209 9784.26    1208 9785.93    1207 9787.59    1206  9789.3    1205 9791.08
GR  1204 9792.86    1203 9794.62    1202 9796.43    1201 9805.65    1200  9808.2
GR  1200 9812.48    1200 9990.59    1196 9993.78    119610007.29    119710009.42
GR  1198 10010.5    119910011.53    120010012.23    120110012.41    120210012.55
G   0310012.65     120410012.83    120510012.98    120610013.13    120710013.29
G   0810013.54     121010013.64    120910013.66    121210014.29    121310014.47
GR  121510015.26    1215 10093.1    121410119.42    121310128.77    121210135.16
GR  121110141.61    121010163.61    121010188.82    121010253.72    120910304.64
GR  120910310.83    121010326.88    1211 10365.8    121210437.97
NC                          0.3     0.5
NH     1    0.0210437.97
ET                    7.1                       9789.8110013.91
* UPSTREAM TOP OF SILL
X1 2.662       68 9782.3910015.26       9       9       9
X3    10
GR  1220     9452    1219 9520.97    1218 9523.16    1217 9525.18    1216 9527.21
GR  1215 9529.24    1214 9531.31    1213 9533.26    1212 9535.46    1211 9542.33
GR  1211 9590.43    1211 9591.01    1211 9599.12    1211 9634.69    1210 9704.69
GR  1210 9717.69    1211 9746.59    1212 9760.89    1213  9768.8    1214 9776.03
GR  1214 9782.39    1213 9782.68    1212 9783.11    1211 9783.36    1210 9783.75
GR  1209 9784.26    1208 9785.93    1207 9787.59    1206  9789.3    1205 9791.08
GR  1204 9792.86    1203 9794.62    1202 9796.43    1201 9805.65    1200  9808.2
GR  1200 9812.48    1200 9990.59    1196 9993.78    119610007.29    119710009.42
GR  1198 10010.5    119910011.53    120010012.23    120110012.41    120210012.55
GR  120310012.65    120410012.83    120610013.13    120710013.29    120810013.54
GR  121010013.64    120910013.66    121110013.82    121210014.29    121510015.26
GR  1215 10093.1    121410119.42    121310128.77    121210135.16    121110141.61
GR  121010163.61    121010188.82    121010253.72    120910304.64    120910310.83
GR  121010326.88    1211 10365.8    121210437.97
N                           0.3     0.5
N      3   0.035 9746.02    0.0210025.49    0.03510436.02
ET                    7.1                       9793.9610190.51
* UPSTREAM TOE OF SILL
X1 2.663       83 9775.9110025.49       9       9       9
X3    10
GR  1221     8786    1220 8853.71    1220 8857.82    1220  8861.4    1219 8873.77
GR  1219 8885.15    1219 9004.91    1219 9031.04    1219 9036.16    1219 9076.19
GR  1219 9336.08    1218  9349.9    1218 9382.32    1219 9386.04    1220 9389.42
GR  1220 9436.77    1219 9527.07    1218 9529.07    1217     9531    1216  9533.1
GR  1215 9535.11    1214 9537.15    1213 9539.14    1212 9541.59    1211 9547.97
GR  1211  9595.6    1211 9596.37    1211 9609.03    1211 9630.85    1211  9723.1
GR  1212 9746.02    1213 9762.79    1214 9775.91    1214 9782.46    1213 9782.71
GR  1212 9782.95    1211  9783.3    1210 9783.53    1209 9783.74    1208 9784.78
GR  1207 9785.64    1206 9786.46    1205 9787.39    1204 9788.34    1203 9789.33
GR  1202 9790.68    1201 9792.58    1200 9794.67    1199 9797.01    1198 9799.28
GR  1197 9999.99    1196 10001.8    1196 10014.9    119710016.79    1198 10019.1
GR  120010021.82    120110021.96    120210022.19    1203 10022.5    120410022.73
GR  1205 10022.9    120610023.01    120710023.09    120810023.17    121110023.21
GR  120910023.22    121010023.37    121510025.49    121510120.18    121410132.71
GR  121310137.83    121210142.84    121110148.16    121010171.44    1210 10188.4
GR  1211 10205.1    121110252.37    121010281.71    121010291.47    121110313.93
GR  121210345.22    121210351.79    121210436.02
NC                          0.3     0.5
NH     5   0.03510048.15    0.05 10139.2    0.0310202.39    0.0210289.31   0.035
N  10604
                      7.1                       9849.4510205.41
X   2.7       63  9735.8 10327.3      200      200      200
X3    10
GR  1219     9236    1220 9523.86    1221 9550.31    1221 9639.56    1220 9664.51
GR  1219   9674.1    1218 9680.75    1217 9687.23    1216 9693.93    1215 9706.71
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GR  1215  9716.4     1215  9735.8     1215 9745.85     1215 9749.31     1214 9761.06
GR  1213 9764.34     1212 9767.67     1211 9770.91     1209  9783.4     1208 9789.73
GR  1207 9794.45     1206 9799.12     1205 9803.97     1204 9808.94     1203  9814.3
GR  1202 9820.84     1201 9827.47     1200 9834.37     1199 9857.55     1199 9863.03
    200  9910.5     1200 9911.55     1199  9986.3     119910003.74     1200 10007.9
    200 10015.2     120210048.15     120210116.21     120110123.68     120010131.44
GR  1199 10139.2     1199 10179.6     120010185.76     120110189.83     120210194.03
GR  1203 10198.2     120410202.39     120410235.49     120410247.02     120510289.31
GR  120610296.17     120710299.41     120810302.78     120910305.86     1210   10309
GR  121110312.22     121210315.21     121310318.22     121410321.49     1215 10327.3
GR  121510578.96     121410593.54     1213   10604
NC                                0.3      0.4
NH     6   0.035 9854.45     0.02 9962.96     0.0510108.65    0.03510287.12     0.02
NH 10387   0.03510703.66
ET                     7.1                            9857.9910309.51
X1 2.746       78 9715.0210422.25      190      190      190
X3    10
GR  1221     9079     1221 9701.92     1220 9708.59     1219 9715.02     1218 9721.37
GR  1217 9731.52     1216 9734.52     1215  9755.2     1215 9757.96     1215  9762.7
GR  1215 9777.18     1215 9787.19     1215 9803.77     1215  9810.3     1214 9814.05
GR  1213  9817.9     1212 9821.58     1211 9825.38     1210 9829.11     1209  9832.9
GR  1208 9836.24     1207 9839.55     1206 9842.89     1205 9846.28     1204 9849.44
GR  1203 9851.09     1202 9852.67     1201 9854.45     1201 9929.38     1201 9931.83
GR  1200 9962.96     1202 9965.06     1203 9968.08     1204 9971.72     1205 9975.36
GR  1206 9979.02     1207 9986.68     1207 9992.02     1206 9999.54     120510001.76
GR  120510017.11     120610020.97     1207   10072     120710074.53     120610095.91
GR  120510099.26     120410103.41     120310108.65     120210241.47     1201 10245.7
GR  120010249.43     119910253.06     119910282.49     120010287.12     120110291.54
GR  120210294.91     120310298.54     1204   10302     120510307.19     120510311.44
GR  120410338.72     120410346.63     1205   10387     1206 10393.8     120710397.21
    120810400.74     120910404.12     121010407.26     121110410.47     121210413.16
GR  121310415.59     121410418.05     121510422.25     121510642.04     121410672.19
GR  121410676.06     121410695.45     121310703.66
NC                                0.3      0.4
NH     7   0.035 9727.83     0.02 9791.61    0.035  9934.1     0.0510070.53    0.035
NH 10312     0.0210413.34    0.03510696.92
ET                     7.1                            9808.4410343.73
* NON-EFFECTIVE FLOW AREA REMOVED
X1  2.77       55  9624.510439.14      150      150      150
X3     0     1202
GR  1221     9401     1220 9426.54     1219 9439.82     1219 9452.44     1220 9475.41
GR  1221 9492.88     1221 9613.09     1220  9624.5     1218 9651.66     1217 9695.27
GR  1215 9705.23     1214 9710.36     1213 9715.53     1211 9727.83     1211 9778.46
GR  1210 9791.61     1209 9797.98     1208 9801.81     1207 9805.05     1206 9808.05
GR  1205 9811.25     1204 9814.56     1203 9819.17     1202 9834.09     1202 9887.18
GR  1202 9892.12     1202 9900.01     1208 9924.74     1208  9934.1     120610012.69
GR  1207 10017.3     120710070.53     120510084.14     1204 10097.3     120310099.58
GR  120110172.26     120110254.91     120210270.63     120310277.82     120310288.02
GR  1203   10312     120410318.25     120510321.95     120510329.46     120510391.82
GR  120710413.34     120910420.57     1210   10424     1211 10427.1     1213 10431.9
GR  121510439.14     121610474.17     121610549.76     1215 10674.5     121510696.92
NC                                0.3      0.4
NH     7   0.035 9732.96     0.02 9784.99    0.035 9914.98     0.0510091.22    0.035
NH 10326     0.0210407.51    0.03510714.35
ET                     7.1                            9798.9910344.82
    EFFECTIVE FLOW AREA REMOVED
X1  2.775       67 9637.5110442.69       25       25       25
X3     0     1203
GR  1219     9195     1220 9198.85     1221 9402.83     1220 9420.82     1219 9434.24
GR  1219 9472.01     1219 9637.51     1218 9646.31     1217  9656.7     1216 9667.88
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 GR  1215 9680.38    1214 9690.44    1213 9698.76    1212 9706.21    1211 9714.59
 GR  1210 9732.96    1210 9751.02    1210 9772.54    1210    9778    1210 9784.99
 GR  1209 9794.53    1208 9798.49    1207 9801.14    1206 9803.64    1205 9806.34
 GR  1204 9810.75    1203 9818.05    1203 9898.09    1204 9900.98    1205 9903.86
 G     06 9907.51    1207 9911.33    1208 9914.98    1208 9945.76    1207 9986.74
 GR   206 9992.29    120610014.18    120710019.05    120710091.22    120610107.36
 GR  120510111.69    120410127.31    120310130.43    1202 10146.9    120210239.21
 GR  120510262.93    120610275.06    120710276.92    120710286.33    1206   10326
 GR  120510334.78    120510394.54    120610407.51    120710414.02    120810417.79
 GR  120910421.63    121010425.55    121110429.32    121210432.41    121310435.33
 GR  121410438.32    121510442.69    121610478.28    1216 10560.2    121510669.31
 GR  121510700.28    121510714.35
 NC                          0.3     0.4
 NH     7   0.035 9708.81    0.02 9791.82   0.035 9966.93   0.04510016.35   0.035
 NH 10276    0.0210388.35   0.03510721.15
 ET                  7.1                         9788.8210358.92
 X1  2.78      54 9630.2610463.99      25      25      25
 GR  1220    9182    1219 9418.98    1219 9422.93    1219 9432.24    1220  9598.4
 GR  1220 9630.26    1219 9635.06    1218 9639.56    1217  9643.9    1216 9649.66
 GR  1215 9665.76    1214 9684.57    1213  9695.4    1212  9700.4    1211 9708.81
 GR  1209 9791.82    1208 9798.03    1207 9801.68    1206 9805.31    1205 9809.01
 GR  1204 9811.34    1204 9874.55    1204 9879.35    1204 9896.73    1205 9900.53
 GR  1206 9904.27    1207 9908.28    1208 9912.33    1208 9966.93    1207 9992.04
 GR  1206 9994.48    120610013.06    120710016.35    120710162.25    120710224.63
 GR  1207   10276    120610350.43    120510354.41    120510354.98    120610388.35
 GR  120710398.79    120810403.27    120910407.66    121010413.23    121110419.65
 GR  121210427.24    121310434.19    121410442.61    1215 10448.5    121610463.99
 GR  121610571.63    121510670.87    121510705.87    121510721.15
 NC                          0.3     0.4
 N      4   0.035 9704.27    0.02 9892.57   0.04510010.59   0.03510727.09
 E                  7.1                         9792.5210364.25
 X1  2.79      60 9633.9110470.22      50      50      50
 GR  1221    9382    1220  9442.7    1219 9483.21    1218 9488.23    1218 9500.77
 GR  1219 9502.63    1220 9504.71    1220 9633.91    1219 9635.68    1218 9637.65
 GR  1217 9639.68    1216 9641.52    1215 9643.46    1214 9645.26    1213 9647.18
 GR  1212  9649.1    1211 9650.98    1211 9655.28    1211 9703.08    1210 9704.27
 GR  1209 9708.23    1209 9720.56    1210  9725.3    1210  9733.7    1209  9742.4
 GR  1208 9795.39    1207 9800.88    1206 9804.61    1206 9868.15    1206 9870.24
 GR  1206 9887.57    1207 9892.57    1208 9898.67    1209 9954.03    1209 9977.29
 GR  1208 9987.05    1207 9989.63    1206 9991.76    1205 9998.35    120510002.53
 GR  120610004.96    120710007.26    120810010.59    120810039.37    1208 10055.4
 GR  120810075.39    120710105.06    120710140.66    120810334.78    120810341.64
 GR  120810366.66    121210384.86    121310389.17    121410447.34    121510454.77
 GR  121610470.22    121610538.54    121510638.97    1215 10713.9    121510727.09
 NC                          0.3     0.4
 NH     4   0.035 9886.54    0.0210016.13   0.04510077.61   0.03510794.25
 ET                  7.1                         9883.5210446.84
 * NON-EFFECTIVE FLOW AREA REMOVED
 X1  2.81      46 9671.3210555.73      83      83      83
 GR  1221    9366    1221 9443.09    1221 9490.74    1220 9534.09    1220 9582.54
 GR  1220 9596.24    1220 9636.17    1221 9647.34    1221 9671.32    1220 9680.24
 GR  1219 9696.63    1218 9711.67    1217 9740.19    1216 9753.44    1215 9772.71
 GR  1214 9787.25    1213 9789.63    1212 9791.62    1211 9793.65    1210 9797.25
 GR  1210 9815.14    1210 9818.32    1209 9830.15    1208 9886.54    1208 9968.52
 G   20910016.13    120910030.12    120810033.44    120710036.82    1206 10041.1
 (     0610072.89    120710077.61    120810113.83    1209 10415.9    121010444.48
 GR  1210 10445.8    1211 10483.4    121110483.56    121110527.96    121210549.89
 GR  121310555.73    121410556.37    121510634.57    121510643.72    121510650.04
 GR  121510794.25
 NC                          0.3     0.4
```

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 NH     5   0.035 9803.46     0.02 9841.42    0.035 9961.49    0.045 9989.89    0.035
 NH 10810
 ET                  7.1                            9869.2310426.85
 X1 2.82       41 9723.2510662.58       67       67       67
 X3    10
 GR  1221     9196     1221 9420.95     1221 9460.45     1220 9500.73     1219 9502.82
 GR  1218 9504.93     1218 9518.31     1218 9723.25     1217 9754.77     1216 9762.87
 GR  1215 9766.28     1214 9769.61     1213 9772.99     1212 9776.54     1211 9784.18
 GR  1210 9789.04     1209 9803.46     1209 9805.66     1209 9841.42     1209 9842.49
 GR  1209 9894.84     1209 9961.49     1210 9982.16     1210 9989.89     120910091.65
 GR  120910320.09     121010439.68     121110474.96     121210494.41     121310508.89
 GR  121410545.37     121510602.43     121610617.83     121710627.46     121810640.71
 GR  121810662.58     121710675.06     121610690.92     121510791.85     121410800.28
 GR  1214    10810
 NC                              0.3      0.4
 NH     6   0.035 9808.71     0.02 9921.92    0.035  9997.4   0.04510024.43     0.02
 NH 10218   0.03510800.41
 ET                  7.1                            9880.6110439.13
 X1 2.827       52 9733.25 10655.9       35       35       35
 X3    10     1209
 GR  1222     9164     1221 9366.08     1221 9407.18     1221 9407.56     1221 9426.72
 GR  1221 9438.09     1220 9511.22     1219 9514.27     1218 9517.23     1218 9628.99
 GR  1218 9733.25     1217 9751.47     1216 9761.33     1215 9771.27     1214  9784.6
 GR  1213     9789     1212 9794.15     1211 9801.59     1210 9808.71     1209 9921.92
 GR  1209 9970.88     1209  9997.4     1208  9999.5     120710001.36     120610003.28
 GR  120610013.46     120710016.94     120810020.12     120910024.43     120910066.75
 GR  120810095.08     120710114.07     1207   10218     120810228.14     120910413.07
 GR  121010450.95     121110518.42     121110542.77     121110583.54     121210594.98
 GR  121310601.23     121410607.76     121510614.87     121610624.29     121710634.29
 GR  121810643.06     1218 10655.9     121710665.06     121610674.38     121510685.65
 GR  121510761.92     121510800.41
 NC                              0.3      0.4
 NH     4   0.03510009.79   0.04510047.23     0.02   10280   0.03510801.11
 ET                  7.1                            9877.8410451.79
 X1 2.841       52 9768.4310633.14       65       65       65
 X3    10     1209
 GR  1222     9297     1222 9300.15     1221 9369.46     1220 9389.15     1220 9408.13
 GR  1220 9515.22     1219 9519.35     1218 9523.95     1217 9538.18     1217 9540.45
 GR  1218 9563.34     1218 9768.43     1217 9775.14     1216 9780.42     1215 9784.02
 GR  1214 9788.87     1213 9794.25     1212 9799.56     1211 9805.01     1210 9810.26
 GR  1209 9817.59     1209 9817.96     120910009.79     120810010.25     120710010.84
 GR  120610011.38     120610047.23     1206   10280     1207 10280.8     1208 10286.2
 GR  120910350.12     121010500.76     121110535.11     121110537.26     121110581.93
 GR  121210601.76     1213 10606.3     121410611.02     121510615.75     121610620.71
 GR  121710625.74     121810633.14     121810637.68     121710644.75     121610655.79
 GR  121510671.67     121410697.08     121410707.81     121410720.84     121410726.54
 GR  121510792.76     121510801.11
 NC                              0.3      0.4
 NH     4    0.02 9865.29     0.03 10041.8   0.04510062.55   0.03510743.42
 ET           5.1      7.1            9780    10510  9811.510382.86
 * NON-EFFECTIVE FLOW AREA REMOVED
 X1 2.936       45 9732.7710732.03      500      500      500
 X3    10
 GR  1221     9297     1221 9357.15     1221 9447.85     1221 9462.75     1221  9464.2
 GR  1220 9531.68     1219 9589.56     1218 9665.33     1217 9732.77     1216 9740.37
 GR  1215 9745.97     1214  9751.5     1213 9757.38     1212 9768.25     1212 9775.34
 GR  1212 9803.44     1212  9806.9     1212 9816.11     1212 9835.54     1212 9865.29
 GR  1211 9905.38     1210 9963.03     1209 10041.8     120810044.94     120710048.43
 GR  120710062.55     120810159.61     120810220.19     120910266.53     121010448.01
 GR  121010462.75     121010506.05     121110678.23     121210701.82     121310710.79
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GR  121410714.62     1215 10718.2     121610721.65     121710725.06     121810728.58
GR  121910732.03     121910732.74     121810736.18     121710739.73     121610743.42
NC                                0.3      0.4
NH     5   0.035  9553.4     0.02 9690.18     0.03 9993.53    0.045 10045.1     0.03
       62
L                5.1      7.1             9580    10350 9615.5310198.16
* NON-EFFECTIVE FLOW AREA REMOVED
X1  3.03       38 9539.4710520.72      500      500      500
X3    10
GR  1222     9098     1222 9162.41     1222 9226.31     1222 9259.33     1222 9262.31
GR  1221 9265.22     1220 9344.34     1219 9395.09     1218 9499.01     1217 9525.25
GR  1216 9539.47     1215  9553.4     1214 9597.07     1214 9603.98     1214 9612.57
GR  1214  9642.2     1214 9667.77     1213 9690.18     1212 9697.21     1211  9905.7
GR  1210 9993.53     1209 9995.77     1208  9998.1     120710000.36     120710011.53
GR  120810014.76     1209 10045.1     121010169.23     121110304.29     121210350.99
GR  121310397.43     121310416.89     1213 10446.9     121410515.55     121510520.72
GR  121510547.42     1214   10562     1217   11162
NC                                0.3      0.4
NH     6   0.035 9742.79     0.02 9886.72     0.03     9958    0.045 9994.08     0.03
NH 10249   0.03510568.30
ET                      7.1                           9662.2510244.62
X1 3.125       50 9536.0110550.72      500      500      500
X3    10
GR  1222     9129     1221 9137.75     1221  9145.2     1221 9174.09     1221 9176.99
GR  1222 9192.38     1222 9245.37     1222 9292.46     1222 9295.71     1221 9299.95
GR  1221 9321.29     1221 9329.29     1220  9382.3     1219 9536.01     1218 9552.75
GR  1217 9562.21     1216 9570.99     1215 9578.75     1214 9584.46     1213 9589.71
GR  1212 9742.79     1211 9824.85     1211 9886.72     1211     9958     1210 9969.69
GR  1209 9971.79     1208 9973.74     1207 9975.62     1206 9977.73     1206 9979.61
    207 9990.82     1208 9992.24     1209 9994.08     121010136.99     121110178.14
    212   10249     121310338.65     121310472.22     121310489.76     1214 10497.6
GR  121510504.43     121610513.77     121710522.92     121810530.64     121910537.44
GR  122010544.12     122110550.72     122110551.65     122010557.31     1218 10568.3
NC                                0.3      0.4
NH     4    0.02 9645.32    0.035 9694.63     0.0210015.73    0.03510487.95
ET                      7.1                           9559.9310204.11
* begin file 05ibw.dwg
X1  3.22       40  9493.410276.72      500      500      500
X3    10     1211
GR  1221     9063     1220 9070.53     1219 9083.38     1219 9092.53     1219 9105.66
GR  1219 9113.81     1219  9493.4     1218 9516.25     1217 9542.72     1217 9551.57
GR  1217 9554.25     1216 9558.17     1215 9561.97     1214     9571     1214 9592.51
GR  1214 9611.57     1214 9637.24     1214 9645.32     1213 9678.68     1212 9685.78
GR  1211 9690.74     1210 9694.63     121010015.73     121110020.72     121210029.73
GR  121310107.03     121410174.24     121510194.43     121610214.17     121710241.54
GR  121810256.88     121910263.05     122010268.99     122110276.72     122110286.07
GR  122010293.03     121910379.46     121810431.32     121810480.53     121810487.95
NC                                0.3      0.4
NH     3   0.035 9509.39     0.02 9761.98    0.03510599.36
ET                      7.1                           9586.5610194.81
X1  3.27       46 9463.9310397.22      265      265      265
X3    10
GR  1226     8671     1226 8686.28     1225 8748.82     1224 8811.09     1223 8872.46
GR  1222 8926.35     1222 8952.09     1222  8991.8     1221 9076.61     1220 9083.26
GR  1220 9140.24     1221 9169.82     1221 9282.64     1220 9463.93     1219 9479.02
    218 9484.58     1217 9491.85     1216 9499.49     1215 9504.99     1214 9509.39
GR  1214 9619.87     1214 9702.88     1214 9704.98     1214 9761.98     1213 9829.75
GR  1213 9977.49     1213  9980.8     1211 9984.56     121110026.57     121210042.76
GR  1213 10090.2     121410150.96     121510262.13     121610272.03     121710282.98
GR  121810295.91     121910313.92     122010379.02     122010397.22     122010452.26
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GR  122110558.62    122210570.28    122310579.52    122310587.05    122210594.29
GR  122110599.36
NC                          0.3     0.4
NH     1   0.03510621.41
F                          7.1                          9705.4610310.04
    RAY LANE
X1  3.28       30 9585.1310525.03      55      55      55
X3    10
GR  1225     8830    1224 8871.39    1223 9000.45    1223 9038.37    1223  9041.1
GR  1222 9120.73    1221 9183.73    1220 9196.72    1220 9217.35    1220 9219.21
GR  1220 9248.85    1221 9546.74    1221 9585.13    1220 9595.59    1219 9638.66
GR  1218 9647.87    1216 9663.12    1215 9669.49    1214 9673.23    1214 9798.43
GR  1213  9892.7    121310285.59    121410362.24    121510400.98    121610418.48
GR  121810460.47    1219 10479.8    122010502.02    122110525.03    122110621.41
NC                              0.3     0.4
NH     3   0.035 9924.11    0.0210068.25   0.03511134.77
ET                         7.1                          9960.8710612.57
* NON-EFFECTIVE FLOW AREA REMOVED
X1 3.409       48 9769.8310722.73  328.53  522.49  489.92
X3    10    1215
GR  1225     9173    1224 9216.52    1223 9275.01    1222 9303.47    1222 9342.35
GR  1222 9452.49    1221 9465.36    1221 9468.49    1221 9470.75    1221 9483.43
GR  1221 9491.88    1221 9517.63    1221 9633.44    1221 9723.16    1221 9769.83
GR  1220 9794.15    1219 9807.76    1218 9809.46    1217 9810.97    1216 9814.49
GR  1215  9820.8    1214 9834.11    1214 9924.11    121410068.25    121510072.31
GR  121610075.68    121610131.66    121610141.87    121610189.77    121510335.47
GR  121510392.16    121610433.73    121610444.02    121510451.09    121510684.46
GR  1216 10687.5    121710691.59    121810705.59    121910706.68    122010708.07
GR  122110722.73    122210826.26    122210829.57    122210848.24    122210959.95
G   222 11030.2     122211039.75    122111134.77
                                0.3     0.4
NH     3   0.035 9847.67    0.02 9995.84   0.03511255.38
ET                         7.1                          9910.4110546.63
* NON-EFFECTIVE FLOW AREA REMOVED
X1 3.488       69 9827.1211168.98      420     420     420
X3    10    1215
GR  1228     8774    1228 8848.65    1228 8850.42    1227 8882.23    1227 8940.08
GR  1227 9012.65    1226 9177.27    1226  9198.9    1226 9216.08    1225 9256.81
GR  1224 9337.93    1223 9419.71    1223 9458.14    1223 9477.05    1222 9514.23
GR  1222 9520.19    1222 9573.98    1221 9590.28    1220 9609.18    1219 9638.64
GR  1218 9645.31    1217 9654.57    1216 9665.51    1216 9787.58    1217  9796.6
GR  1218 9798.56    1219 9801.13    1220 9804.59    1221 9805.67    1222 9806.74
GR  1222 9827.12    1221 9828.88    1220 9830.14    1219 9831.77    1218  9833.7
GR  1217 9833.71    1216 9837.36    1215 9841.67    1214 9847.67    1214 9995.84
GR  121510004.16    121610010.53    121710016.13    121710244.07    121710265.17
GR  121710272.18    121710300.87    121710302.08    121710322.87    121810446.63
GR  121910569.27    122010576.85    122110583.78    122110598.04    122010602.89
GR  1219 10614.7    121910653.67    122010818.88    122110887.23    122211037.62
GR  122311040.95    122411055.74    122511149.12    122511168.98    1225 11182.8
GR  122511186.93    122511243.72    122511248.37    122411255.38
NC                              0.3     0.4
NH     3   0.035 9897.77    0.0310309.86   0.035   11335
ET                         7.1                          9969.7510604.51
* NON-EFFECTIVE FLOW AREA REMOVED
X1  3.49       55 9897.7711237.68      30      30      30
      0    1215
GR  1228     8839    1227 8910.48    1227  8910.5    1227 8926.25    1227 9051.98
GR  1226 9288.46    1225 9307.85    1224 9380.57    1224 9463.49    1224  9536.9
GR  1223 9554.32    1223 9594.45    1223 9595.23    1222 9606.61    1221  9614.9
GR  1219 9630.95    1218 9639.26    1217 9648.28    1216  9658.4    1216  9782.8
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GR  1217 9799.49    1218 9805.03    1219 9810.03    1220 9823.51    1221 9844.22
GR  1222 9862.58    1222 9897.77    1221 9905.76    1220 9915.43    1219 9925.26
GR  1218 9932.91    1217 9938.15    1216 9942.52    1215 9949.28    1214 9970.94
GR  121410014.51    121510036.48    121610055.19    1217 10072.7    1218 10263.7
    1810309.86      121710351.17    121710394.01    121810508.68    121910628.97
    21910656.74     121910725.84    122010877.19    122110966.22    122211149.39
GR  122311156.29    122411164.97    122511237.68    122511245.11    1224   11335
NC                          0.3     0.4
NH     3    0.03 9966.11   0.03510354.05    0.0311333.05
ET                  7.1                         9936.2210578.63
* NON-EFFECTIVE FLOW AREA REMOVED
X1 3.504       58 9900.5211240.74       50      50      50
X3    10
GR  1228    8870    1227 9035.81    1226 9089.55    1226 9092.98    1226 9281.45
GR  1224 9514.87    1223 9551.19    1223 9582.31    1223  9589.1    1222  9595.2
GR  1221 9601.26    1220 9606.88    1219 9614.18    1218  9625.9    1218 9629.39
GR  1219  9648.8    1220 9662.51    1221 9677.63    1222 9689.35    1223 9700.48
GR  1223 9900.52    1222 9913.51    1221 9923.52    1220 9934.16    1219 9941.31
GR  1218 9947.72    1217 9954.22    1216 9966.11    1216 9997.01    121710048.31
GR  121810066.85    121910103.02    121910125.24    121810137.42    121710196.26
GR  121710200.55    121810227.85    121910250.07    121910272.28    1218 10280.2
GR  121710354.05    121710356.68    121810484.52    121810541.43    121810592.92
GR  121910724.94    122010837.77    122110955.05    122110975.38    122110992.54
GR  122211066.75    1223 11098.7    122311146.63    122311161.98    122411176.48
GR  122511240.74    122511244.78    122411333.05
NC                          0.3     0.4
NH     2   0.035 10208.4    0.0311338.17
ET                  7.1                         9909.2710556.71
* NON-EFFECTIVE FLOW AREA REMOVED
Y   .51       53 9854.7511125.82       35      35      35
    10
GR  1228    8860    1227 8982.85    1227  9032.7    1227 9035.16    1226 9278.17
GR  1225 9293.21    1223 9486.82    1223 9537.39    1224 9621.72    1224 9673.23
GR  1224  9774.3    1224 9778.85    1223 9818.01    1223 9846.56    1223 9854.75
GR  1222 9869.03    1221 9878.13    1220 9898.32    1219 9912.72    1218 9926.45
GR  1217 9939.45    1216 9949.27    1216 9986.24    1217 9998.98    121810003.82
GR  121810005.19    121710011.21    121610022.56    121610031.91    121710039.46
GR  121810060.26    121810112.45    1218 10208.4    121810250.97    121810484.18
GR  121810493.05    121810561.87    121910697.55    122010821.94    1221 10979.2
GR  122211030.87    122311075.12    122411084.34    122511125.82    122511135.11
GR  122411147.27    122311156.16    122311161.43    122411172.92    122511236.35
GR  1225 11243.4    122411329.58    122411338.17
NC                          0.3     0.4
NH     3   0.035 9890.02    0.0310066.65   0.03511325.14
ET           5.1     7.1            9668   10778 9778.4410438.07
* NON-EFFECTIVE FLOW AREA REMOVED
X1 3.548       62 9756.2711167.19      200     200     200
X3     0
GR  1228    8765    1228 8912.51    1228 8919.38    1228 9093.19    1228 9133.43
GR  1227 9136.28    1226 9139.16    1226 9142.35    1226 9238.93    1225  9250.5
GR  1224 9261.57    1224 9483.84    1224 9590.94    1223 9751.53    1224 9756.27
GR  1224  9767.8    1223 9772.88    1222 9778.03    1221 9782.95    1220 9787.84
GR  1219 9792.74    1218 9797.13    1217 9809.62    1217 9810.87    1217  9877.7
GR  1216 9890.02    1215 9910.14    1215 9959.02    1216 9973.24    1217 9984.44
GR  1217 9992.53    1216 9994.34    1215 9995.94    1214 9997.45    121410014.47
    1510018.79      1216 10023.2    121710024.98    121710032.98    121710066.65
    21810100.82     121910273.71    122010314.63    122110324.94    122210338.07
GR  122210343.39    122110358.43    122010365.79    122010510.27    122010543.41
GR  122010635.84    122010679.51    122010735.14    1221 10899.1    122211007.13
GR  1223 11066.9    122311072.21    122311129.87    122411156.28    122511167.19
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GR  122511317.18    122411325.14
NC                          0.3     0.4
NH     3   0.035 9822.45    0.03 9986.06   0.03511375.01
ET           5.1     7.1            9719   10676 9779.6610376.77
*      EFFECTIVE FLOW AREA REMOVED
X.  .59       64 9752.65 11227.8      83      105       98
X3     0
GR  1228    8909    1228 8920.89    1227 8926.24    1227 8940.26    1227 9095.87
GR  1226 9107.25    1225 9117.61    1224 9181.29    1224 9197.67    1224 9211.13
GR  1224 9221.16    1225 9243.45    1225 9267.64    1225 9312.12    1225 9336.11
GR  1225 9358.13    1225 9396.28    1224    9437    1224  9476.6    1224 9561.04
GR  1224 9599.27    1224 9697.59    1224 9718.29    1224 9723.03    1224 9741.65
GR  1224 9752.65    1223 9757.66    1222 9762.78    1218 9779.66    1217 9784.17
GR  1216 9790.54    1215 9822.45    1215 9845.66    1215 9858.52    1215 9986.06
GR  1215 9994.06    121510016.35    121610026.89    121710032.37    121710045.08
GR  121710072.68    121810078.98    121910212.43    1220 10249.4    122010253.93
GR  122010276.77    1220 10334.2    121910359.57    121910472.85    122010482.02
GR  122110495.81    122110500.25    122110506.11    122110619.69    122110792.53
GR  122210914.47    122311035.12    122411146.96    122411150.51    122411171.06
GR  122511183.85    1226 11227.8    122611323.82    122511375.01
NC                          0.3     0.4
NH     3   0.035 9773.31    0.0310000.87   0.03511392.71
ET           5.1     7.1          9725.5   10548 9725.4810277.34
* NON-EFFECTIVE FLOW AREA REMOVED
X1   3.6       44 9713.7311126.37     142      141      142
GR  1227    8818    1228 8846.98    1228 8925.14    1227  9067.9    1226 9143.92
GR  1226 9242.39    1226 9255.23    1226 9297.88    1226 9318.13    1225 9359.01
GR  1224 9407.54    1224 9416.76    1224 9689.54    1224 9694.26    1224 9713.73
GR  1223 9720.15    1222 9726.15    1221 9731.12    1220 9736.02    1219 9740.99
G   218 9745.51    1217 9749.42    1216 9753.35    1215 9773.31    121510000.87
(   21610006.83    1217 10011.9    121710025.18    1217 10053.9    121810081.45
GR  121910093.32    122010249.25    1221 10393.4    122210812.07    122310832.07
GR  122310995.48    122311072.51    122411105.99    122511116.61    122611126.37
GR  122611144.57    122611170.82    122611348.04    122511392.71
NC                          0.3     0.4
NH     3   0.035 9771.55    0.03 9997.57   0.03511348.92
ET           5.1     7.1          9618.5 10303.4 9628.4710073.39
* NON-EFFECTIVE FLOW AREAS REMOVED
X1  3.66       69 9601.5110282.26     340      255      305
GR  1230    8900    1230 8916.86    1229 8926.14    1228 8946.41    1227 9147.76
GR  1226 9286.28    1226 9323.77    1226 9379.15    1226 9403.63    1227 9429.49
GR  1227 9439.16    1226 9462.57    1225 9475.94    1225 9476.76    1225 9484.71
GR  1225 9499.06    1225 9515.59    1225 9548.84    1226 9576.67    1226 9601.51
GR  1225 9606.46    1224 9611.14    1223 9616.89    1222 9623.25    1221 9629.16
GR  1220 9635.45    1219 9642.51    1219 9650.78    1220 9721.43    1220 9735.08
GR  1219 9742.53    1218 9755.06    1217  9761.6    1216 9771.55    1215 9887.07
GR  1215 9900.67    1215 9955.45    1215 9997.57    121510000.02    121610006.76
GR  121710013.09    121710026.44    121610030.83    121510033.99    121410036.47
GR  121410044.25    121510048.77    121610056.84    121710065.15    121810073.39
GR  121910081.19    122010089.54    1221    10101   122210191.49    122310282.26
GR  122310470.39    122210490.89    1222 10493.4    122310572.31    122410731.59
GR  1225 10768.3    122610919.13    122611053.28    122611132.09    122711222.18
GR  122711234.81    122611264.77    122611285.03    122611348.92
NC                          0.3     0.4
NH     3   0.035 9689.95    0.03 9995.02   0.03511516.28
                      7.1                          9683.6610020.76
X1  3.71       75 9642.1910111.05     360      280      303
X3    10
GR  1230    9022    1229 9023.67    1229 9059.33    1229 9096.92    1228 9315.02
GR  1228 9319.93    1228 9359.61    1228 9398.31    1228 9422.24    1228 9460.43
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GR  1229  9562.3    1229 9571.33    1228 9579.45    1227 9597.75    1227 9614.22
GR  1227 9642.19    1226 9645.95    1225 9661.47    1224 9665.74    1223 9670.04
GR  1222 9674.34    1221 9678.65    1220 9683.66    1219 9689.95    1218 9739.17
GR  1217    9745    1216  9797.3    1216 9951.32    1217  9966.6    1218    9979
G     19 9987.55    1220 9995.02    122110066.47    1222 10073.2    122310079.84
      22410085.38    122510090.21    122610095.11    122710108.23    122810111.05
GR  122810115.53    122710122.05    122610135.05    122510139.46    122410143.99
GR  122310148.51    122210153.38    122110158.19    122010162.81    121910167.07
GR  121810170.93    1218 10179.3    121910183.89    122010186.22    122110188.15
GR  122210190.02    122310194.38    122410200.78    122510239.09    122610246.85
GR  122710269.15    122710355.36    122710355.64    122710456.22    122610458.16
GR  122410547.93    122410604.28    122510887.61    122611280.02    122711298.02
GR  1227   11300    1227 11342.8    1227   11361    122611390.03    122611516.28
NC                             0.3     0.5
NH     3   0.035 9672.39     0.03 10076.3   0.03511541.85
ET                     7.1                          9683.44 9988.29
X1  3.73       68 9672.39 10076.3     103       74       82
X3    10
GR  1229    9015    1229  9078.4    1228 9188.53    1227 9343.74    1227    9349
GR  1228 9514.47    1228 9602.33    1227 9616.32    1226 9672.39    1225 9676.02
GR  1224 9679.75    1223 9683.67    1222 9687.71    1221 9691.69    1220 9708.44
GR  1219  9714.4    1217 9736.29    1217 9948.82    1218 9963.42    1219 9992.76
GR  122010030.96    122110053.48    122210058.46    1223 10062.2    122510069.23
GR  122710073.93    1228 10076.3    122810084.55    122710092.95    1226   10100
GR  122510109.89    122410118.12    122310125.39    122210136.26    122010143.72
GR  121810154.71    121810165.84    121910171.75    122010174.41    122110176.14
GR  1223 10181.2    122410186.81    122510192.01    1226 10212.2    1226 10234.3
GR  122610264.47    122710274.99    1228 10354.2    122810373.03    122810476.15
GR  122810484.41    122710486.26    122610487.93    122510539.78    122410579.04
G   22410615.59    122510642.58    122510721.05    122510950.79    122510988.05
      22511009.08    122511039.01    122511093.78    122711325.02    1227 11329.3
GR  122711388.44    122611396.11    122611541.85
NC                             0.3     0.5
NH     1    0.0211554.21
ET                     7.1                          977010002.01
* NON-EFFECTIVE FLOW AREA REMOVED
* THOMAS ROAD
* DOWNSTREAM EDGE
X1  3.76       49 9752.4510011.34     174      174      174
X3    10                     9770    123210002.01    1232
GR  1228    9045    1227  9138.5    1226  9242.5    1226 9452.02    1227 9499.93
GR  1228 9567.68    1230 9640.14    1231 9690.06    1232 9727.87    1232 9752.45
GR  1230 9752.91    1228 9752.99    1229 9752.99    1227 9753.17    1226 9753.44
GR  1225  9753.5    1224 9753.83    1223 9754.06    1222 9754.24    1220  9755.2
GR  1219 9755.62    1217 9769.67    1217 9966.17    1215 9983.68    1215  9984.1
GR  1216  9988.7    121810006.31    121910006.79    122010007.23    122110007.64
GR  122310008.63    122410009.13    122510009.63    122610010.22    122810011.34
GR  122910011.95    123010012.36    123210048.95    123110096.48    1230 10140.6
GR  122910185.99    1228   10248    122710296.89    122610342.61    122510427.93
GR  122510646.36    122510651.91    122510774.21    122611554.21
NC                             0.3     0.5
NH     1    0.0211582.94
ET                     7.1                          977010002.01
SB  1.05     1.5     2.6       0     258       6    3654       0 1217.83 1217.33
* THOMAS ROAD
     REAM EDGE
    3.78       62 9734.25 10009.7    85.5    85.5    85.5
X2                     1 1232.33    1234                    2
X3    10                     9770    123310002.01    1233
BT    -2 9737.19    1234 1232.33 10009.7    1234 1232.33
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GR  1228    9135    1228 9162.85    1227 9216.05    1227 9271.51    1226 9376.43
GR  1226 9396.96    1227 9404.76    1227 9407.78    1227 9410.91    1228 9423.41
GR  1229 9452.17    1229 9454.14    1229 9483.16    1230  9501.7    1231 9511.42
GR  1233 9734.25    1232 9737.19    1231 9740.22    1230 9743.31    1229 9744.66
G     28 9745.01    1227 9745.24    1226 9745.35    1225 9745.52    1224 9745.58
L     23 9745.73    1222 9745.94    1221 9746.19    1220 9746.37    1219 9746.51
GR  1218 9746.69    1217    9747    1217 9967.38    1216 9971.27    1216 9977.23
GR  1217 9980.82    1218  9999.5    1219 9999.88    122010000.16    122110000.55
GR  122210000.94    122310001.31    122410001.67    1225 10002.2    122610002.44
GR  122710002.89    122810003.37    122910003.72    123010004.01    1231 10009.7
GR  123110023.56    123010032.87    122910037.77    122810067.09    122710286.15
GR  122610303.66    122610387.42    122610405.39    122611048.95    122611312.25
GR  122611358.25    122711582.94
NC                          0.3     0.5
NH     1   0.03511586.41
ET                    7.1                          9776.94   10063
X1 3.811      73 9604.2910196.19   151.9   171.9  159.85
X3    10
GR  1229    9105    1229 9188.93    1229  9212.1    1228 9232.73    1227 9271.49
GR  1227 9318.56    1227 9392.39    1226 9421.55    1226 9436.15    1228 9463.83
GR  1229  9465.7    1230 9476.49    1231 9501.96    1232 9519.56    1233 9528.85
GR  1234 9537.65    1235 9543.45    1235 9604.29    1234 9617.72    1233 9632.01
GR  1232 9646.93    1231 9662.85    1230 9671.56    1229  9674.7    1228 9677.85
GR  1227 9681.23    1226 9684.49    1225 9691.32    1224 9699.93    1223 9704.88
GR  1222 9713.44    1221 9724.65    1220 9741.69    1219  9813.3    1218 9972.88
GR  1217 9989.49    121710000.63    121810010.49    1219    10063    1222 10135.8
GR  122310140.12    122410143.66    122510147.37    122610151.12    122710155.01
GR  122810158.89    122910162.86    123010167.14    123110173.48    123210183.73
GR  123210196.19    123110202.07    123010207.92    1229 10213.1    122810217.31
G   122710286.82    122610287.33    122510287.65    122410288.07    122310288.41
L   122210288.79    122210313.16    122310313.96    1224 10315.1    122510321.19
GR  122610733.49    122711070.56    122711081.48    122711099.95    122711117.75
GR  122711367.21    122711373.59    122711586.41
NC                          0.3     0.5
NH     1   0.03511632.05
ET                    7.1                          9800   10320
X1 3.883      44  9712.410402.79   356.6   327.01  339.16
X3    10
GR  1228    9507    1227 9536.29    1227  9570.9    1229 9574.61    1230 9576.27
GR  1231 9587.74    1232 9621.26    1232  9712.4    1230 9719.69    1229  9723.4
GR  1228 9726.99    1227 9730.62    1225 9739.45    1224 9744.08    1223 9749.12
GR  1222 9754.22    1220    9863    1219 9899.16    1218 9950.61    1217 9993.38
GR  121810040.55    121910107.43    122010127.77    122110140.29    122110195.98
GR  122010209.27    1220 10271.2    122110294.95    1230 10383.8    123110388.37
GR  123310402.79    123210409.74    123010415.96    122710425.43    122610442.71
GR  1226 10512.9    122811099.57    122811106.31    122811110.05    122811374.11
GR  122811393.72    122811497.79    122811503.12    122811632.05
NC                          0.3     0.4
NH     3   0.036 9706.07    0.0310039.44    0.03610211.45
ET                    7.1                         9581.8310156.09
* begin file 06ibw.dwg
X1 3.977      45 9533.25 10197.1     500     500     500
X3    10
GR  1230    9290    1230 9515.22    1231 9522.21    1232 9527.79    1233 9533.25
GR  1233 9548.28    1232 9552.53    1231 9556.54    1230 9560.61    1229 9564.62
      28 9568.62    1227 9572.53    1226 9576.54    1225 9580.72    1224 9584.99
G.    23 9589.22    1222  9593.5    1222 9647.79    1222 9706.07    1221 9724.43
GR  1220 9753.73    1219 9882.33    1218 9897.42    1218 9911.05    1219 9932.68
GR  1220 10022.7    122110030.12    122210039.44    122210096.21    122210099.38
GR  122310123.25    122410131.57    122410156.54    122410158.99    122510164.43
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GR  123110189.27    1232 10193.1    1233 10197.1    123310207.59    123210211.45
NC                              0.3     0.4
NH     3   0.036 9843.05    0.0310171.06   0.03610469.45
                        7.1                             9637.6110176.26
X1   072       50 9572.0610308.17     500     500     500
X3    10
GR  1232    9335    1231  9450.2    1231 9467.29    1231 9490.72    1230 9547.72
GR  1232 9572.06    1231 9577.79    1230 9583.76    1229 9589.89    1228 9595.85
GR  1227 9601.95    1226 9608.74    1226 9646.78    1227 9657.61    1227 9664.44
GR  1226 9680.74    1225 9755.84    1225 9762.21    1225 9793.14    1224  9799.5
GR  1223 9805.63    1222 9813.98    1221 9843.05    1220 9984.08    1219 9995.14
GR  121810001.93    121810011.24    121910016.03    122010025.44    122110059.18
GR  122110065.39    122110165.99    122210171.06    122310176.26    122410181.51
GR  122510186.76    122610192.16    122710197.65    122810203.25    122910209.02
GR  123010238.99    123110257.26    123210263.38    123210265.61    123210275.07
GR  123310308.17    1233 10379.1    123310393.88    123310442.38    123210469.45
NC                              0.3     0.4
NH     3   0.036 9744.21    0.02    9990   0.03610460.69
ET                      7.1                             9577.8410199.71
X1 4.167       32 9543.1410233.84     500     500     500
X3    10    1220
GR  1234    9305    1235 9334.33    1235 9353.24    1235 9407.29    1235 9479.84
GR  1233 9543.14    1231 9554.85    1230  9560.7    1229 9566.35    1228 9572.11
GR  1227 9577.84    1226 9583.56    1225 9589.28    1224  9594.8    1223 9600.54
GR  1222 9613.96    1220 9714.65    1219 9734.15    1218 9739.22    1217 9744.21
GR  1217    9990    121910002.29    122010048.25    122110167.82    122310194.23
GR  122510203.09    122710211.89    123210233.84    123310343.79    123210377.07
GR  1231 10398.2    123410460.69
N                               0.3     0.4
     3   0.036 9735.84    0.0310016.59   0.03610371.24
ET                      7.1                             9489.8510055.46
X1  4.22       59  9441.210152.59     250     250     250
X3    10
GR  1235    8939    1236 8943.31    1237 8947.28    1238 8951.12    1238 8952.39
GR  1237  8954.2    1236 8960.98    1235 8963.85    1235 8984.14    1235 9118.28
GR  1235 9230.98    1235  9441.2    1234 9447.15    1233 9447.59    1232 9452.06
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GR  1221 9554.62    1220 9561.75    1220  9579.6    1221 9587.21    1222 9593.66
GR  1223 9601.77    1224 9615.99    1225 9637.14    1225  9683.7    1224 9716.48
GR  1223 9735.84    1222 9761.39    1221  9775.1    1220 9808.84    1220 9843.53
GR  1221  9906.2    1221 9979.96    1220  9984.7    1220 9996.45    122110016.59
GR  122210045.98    122310050.79    122410055.46    122510060.19    122610064.73
GR  122710069.67    122810074.73    122910085.38    123010094.88    123110100.76
GR  123210113.34    123310152.59    123410195.43    123510371.24
NC                              0.3     0.4
NH     3   0.036 9623.06    0.02 9978.55   0.03610597.27
ET                      7.1                             9548.8110034.72
* OSBORN ROAD
X1  4.25       58 9420.5810125.51     200     200     200
X3    10
GR  1235    8885    1235 8899.81    1236 8947.81    1236 8981.82    1235 9120.48
GR  1235 9170.27    1235 9247.81    1234 9284.72    1233 9420.58    1232 9431.21
GR  1231 9436.23    1230  9442.9    1229  9449.8    1228 9456.21    1227 9471.45
     26 9491.13    1225 9501.87    1224 9517.99    1223 9529.63    1222  9538.7
GR  1222 9563.46    1223 9582.68    1223 9623.06    1222  9798.9    1222 9884.77
GR  1222 9896.51    1222 9915.57    1222  9927.9    1222 9936.52    1222 9978.55
GR  1221 9984.96    1220  9990.8    122010017.66    122110022.89    122210028.29
GR  122310034.72    122410048.17    122510057.57    122610065.46    122710072.54
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GR  123310113.55    123410125.51    123410160.62    123310170.54    123210181.16
GR  123110206.54    123110222.94    123110227.13    1231 10244.4    123110268.43
GR  123010464.91    123010567.91    123110597.27
N                              0.3     0.4
    3   0.036 9616.84    0.0310006.88   0.03610464.85
ET                   7.1                          9606.1610028.54
X1  4.29       61 9346.0710095.64      215     215     215
X3    10
GR  1235    8754    1235 8803.05    1235 8830.31    1235 8849.79    1234 8878.57
GR  1234 8881.41    1235 8899.17    1235 8902.71    1235 8925.54    1236 8986.43
GR  1236 9030.48    1236 9052.58    1236  9074.6    1235 9239.96    1234 9346.07
GR  1233 9354.87    1232 9360.13    1231 9367.19    1230 9374.64    1229  9385.1
GR  1228 9440.96    1228 9463.93    1228 9489.77    1227 9526.32    1226 9543.04
GR  1225 9555.05    1224 9594.16    1223 9616.84    1222 9667.26    1222 9731.68
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GR  1221 9974.74    1221 9993.28    1222 9997.07    122310000.87    122410006.88
GR  1225 10014.1    122610021.26    122710028.54    122810035.97    122910047.02
GR  123010069.77    123110076.68    123210083.31    123310090.09    123410095.64
GR  123410112.32    123310116.41    123210120.37    123110124.26    1230 10128.2
GR  123010152.11    123010158.17    123010202.62    123110389.19    123110395.97
GR  123110464.85
NC                             0.3     0.4
NH    3   0.036 9645.67    0.0310121.65   0.03610393.44
ET                   7.1                          9663.1210113.31
X1 4.356       52 9471.7910154.93      285     285     285
X3    10
GR  1239    8975    1238 8979.92    1237 8985.03    1236 8997.26    1235  9015.7
GR  1235 9024.82    1236  9064.8    1236 9194.12    1235 9376.85    1234 9471.79
G   233 9476.11    1232 9480.23    1231 9484.18    1230 9488.31    1229 9492.34
    228  9496.4    1227 9500.44    1226 9504.39    1226 9524.88    1226 9540.36
GR  1226  9578.3    1226 9623.48    1225 9645.67    1224 9684.99    1223 9982.96
GR  122210000.54    122210013.35    122310041.34    122410084.86    122710121.65
GR  122810125.89    122910130.15    123010134.19    123110138.37    123210142.68
GR  123310146.81    123410150.82    123510154.93    123510168.01    123410171.37
GR  123310174.71    123210177.99    1231 10181.4    123110193.66    123110195.78
GR  123110208.82    123110212.41    123110226.38    123110235.42    123110323.03
GR  1231 10357.6    123110393.44
NC                             0.3     0.4
NH    3   0.036  9598.4    0.0310095.61   0.03610623.32
ET                   7.1                          9534.1510125.28
X1 4.451       39 9503.8810185.38      500     500     500
X3    10
GR  1236    9154    1235 9300.29    1235 9385.38    1235 9503.88    1234 9508.61
GR  1233 9513.11    1232 9517.65    1231 9522.15    1230 9526.72    1229 9531.28
GR  1228 9535.84    1227 9540.42    1226  9598.4    1224 9969.25    1223  9993.7
GR  122310003.12    122410019.23    122510095.61    1226 10144.7    1227 10148.7
GR  122810152.69    122910156.71    123010160.63    123110164.78    123210168.98
GR  123310173.14    123410177.16    123510181.43    123610185.38    1236 10199.6
GR  123510203.47    1234 10207.4    123310211.43    123310221.43    123310227.42
GR  123310228.71    123410554.89    123410556.39    123410623.32
NC                             0.3     0.4
NH    3   0.03610227.97    0.0310457.23   0.03611000.78
ET                   7.1                          9943.1810474.79
X1  546       57 9876.0910706.51    199.6  504.33  382.96
    10
GR  1236    9500    1236 9636.84    1236 9739.28    1236 9876.09    1236 9894.25
GR  1235 9899.35    1234 9904.34    1233 9909.53    1232 9914.55    1231 9919.64
GR  1230 9924.42    1229 9929.32    1228 9933.91    1227  9938.7    1226 9978.56
GR  122510044.64    122410050.52    122410065.92    122510077.44    122610088.74
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GR  122710096.65    122810105.04    1229 10113.3    123010121.73    123010123.54
GR  122910143.22    1228 10186.5    122710217.93    122610227.97    122610457.23
GR  122710464.79    1228 10471.4    122910478.01    123010484.61    123110493.63
GR  123210504.04    123310519.66    123410578.21    123510595.49    123610621.58
G   123610657.09    123510661.92    123410667.67    123410685.64    123410687.08
Gk  123410693.58    123510694.17    123610694.68    1237 10696.1    123710706.51
GR  123710741.38    123810820.69    123810862.12    123810881.54    123810897.09
GR  123810914.77    123911000.78
NC                              0.3     0.4
NH     3   0.03610213.31    0.0310328.72   0.03610767.13
ET                    7.1                          9898.9210396.03
X1  4.64       55 9748.9810448.11     433     433     433
X3    10
GR  1238     9219    1238 9257.87    1238 9278.44    1237 9284.75    1237 9296.99
GR  1238   9339.9    1238 9344.05    1238 9438.75    1238 9453.92    1237   9544.8
GR  1237 9571.95     1237 9681.78    1237 9681.86    1237 9705.07    1236 9748.98
GR  1235 9755.25     1234 9761.51    1233 9767.73    1232 9773.97    1231 9841.17
GR  1230 9849.21     1229 9857.76    1228  9866.3    1227 9875.04    1226 9932.08
GR  1225 9989.55     1225 10024.7    122610041.41    122710075.96    122810104.95
GR  122910132.74    122910170.19    122810213.31    122810218.61    122810301.16
GR  122810328.72    1229 10398.8    123010402.69    123110406.58    1232 10410.4
GR  123310414.43    123710430.01    123810442.35    123910448.11    123910448.73
GR  123810450.57    123810581.32    123910586.18    124010590.94    1241 10608.8
GR  124110662.56    124010682.68    123910702.33    123810755.25    123810767.13
NC                              0.3     0.4
NH     3   0.03610023.27    0.0310426.33   0.03611096.26
ET                    7.1                          9898.11 10352.1
X1 4.735       52  9662.510479.06     490     490     490
X3    10
C   240     9032    1239  9145.4    1239 9147.42    1239 9226.71    1238 9377.88
G.  237 9464.89     1237 9512.97    1238 9519.04    1239 9525.24    1239 9533.62
GR  1238 9538.26    1237 9543.11    1237 9601.67    1237  9662.5    1236 9704.41
GR  1235 9709.28    1234 9714.34    1233 9719.36    1232 9724.45    1231  9729.4
GR  1230 9734.39    1229 9739.39    1228 9760.73    1227 9847.15    122610012.47
GR  122610023.27    122710154.83    122810269.94    122910426.33    123010431.12
GR  1231 10435.9    123210440.69    123310445.46    123410450.33    123510455.13
GR  123610460.02    123710465.14    123810479.06    1239 10521.7    123910526.09
GR  123810586.48    123810609.09    123910618.36    123910798.96    123910828.58
GR  124010844.45    124010849.01    123910869.42    123910889.31    123910899.74
GR  123910926.82    124011096.26
NC                              0.3     0.5
NH     3   0.036 9501.63    0.02   10091   0.03610690.33
ET                    7.1                          9468.7610072.38
* begin file 07ibw.dwg
X1  4.83       32 9273.2810197.34     500     500     500
X3    10    1228
GR  1244     8608    1243 8724.27    1242 8800.86    1241 8933.78    1240 9087.02
GR  1240 9104.74     1240 9123.22    1239 9273.28    1238 9302.72    1237 9319.31
GR  1235 9445.08     1234 9452.64    1233 9460.15    1232 9467.11    1230 9479.65
GR  1229 9486.03     1228 9492.78    1227 9498.28    1226 9501.63    1226   10091
GR  122910103.97    123010111.13    123110118.23    123210126.62    123410145.69
GR  123510158.47    123610163.81    123910197.34    123910279.94    123910660.12
GR  123910671.97    123910690.33
NC                              0.3     0.5
NH     5   0.036 9295.32    0.02 9421.28   0.035 9968.06    0.0210010.48   0.036
N   65
ET                    7.1                          9474.5910108.22
X1  4.85       52 9295.32 10225.3     100     100     100
X3    10    1228
GR  1244     8608    1243 8754.91    1242  8808.6    1241 8925.52    1240 9004.17
```

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GR  1239 9124.36    1239 9146.53    1239 9165.77    1239 9168.35    1238 9295.32
GR  1237 9322.08    1237 9421.28    1237 9436.04    1235 9460.08    1234 9466.43
GR  1233 9472.64    1232 9479.26    1232 9528.01    1233 9539.23    1234  9547.3
GR  1235 9558.45    1236 9570.25    1237 9584.23    1237 9642.03    1237 9654.85
      37 9698.11    1236  9800.1    1235 9822.84    1234 9839.19    1233 9901.75
G.    232 9912.71   1231 9922.27    1230 9938.55    1228 9940.59    1227 9945.88
GR  1226 9968.06    122610010.48    122710040.25    122910073.36    123010073.46
GR  1231 10089.1    1232 10095.3    123310100.65    1234 10113.1    123510154.83
GR  123610183.92    1238 10225.3    123910294.84    1240 10301.4    124010452.28
GR  123910663.06    1239   10665
NC                            0.3     0.5
NH     1    0.02   10661
ET            5.1     7.1            9419   10187  9469.510087.08
* INDIAN SCHOOL ROAD
* DOWNSTREAM EDGE
X1 4.855       48 8954.2810660.11      25      25      25
X3    10
GR  1244     8640    1243 8752.52    1242 8797.36    1241 8866.28    1240 8954.28
GR  1239 9044.12    1238 9206.69    1237 9306.57    1237 9411.28    1237 9418.59
GR  1238 9442.17    1238  9465.4    1237 9467.55    1236  9469.5    1235 9471.54
GR  1234 9473.45    1233  9477.5    1233 9518.66    1234 9523.01    1235 9526.89
GR  1236 9531.62    1237 9536.25    1237 9767.89    1237 9872.68    1237 9901.43
GR  1236 9917.23    1235 9950.48    1234 9951.48    1233 9951.51    1232 9951.64
GR  1231 9951.88    1230 9951.92    1229 9952.17    1228  9952.3    1228   10057
GR  122910057.05    123010057.06    123210057.33    123410057.66    123510057.67
GR  123610058.05    123610060.62    123610085.82    123710130.23    123810234.02
GR  123910330.33    124010660.11    1240   10661
NC                            0.3     0.5
NH     1    0.0210575.86
F             5.1     7.1            9329   10182 9379.43 9992.27
      .05     1.5     2.6       0   98.25     2.5  666.42       0    1228 1227.08
* INDIAN SHCOOL ROAD
* UPSTREAM EDGE
X1  4.87       43 8868.2910575.86      84      84      84
X2                      1 1235.04 1240.07                       2
X3    10
BT    -7 8868.29    1240       0 8914.29    1239       0 9131.79    1238       0
BT       9386.51  1237.8    123510000.38  1237.8    123510448.72    1239       0
BT      10575.86    1240       0
GR  1243     8610    1243 8629.84    1243 8632.94    1242 8695.23    1241 8744.09
GR  1240 8868.29    1239 8914.29    1238 9131.79    1238 9192.39    1238 9198.52
GR  1237 9386.51    1236 9390.06    1235  9393.6    1234 9397.56    1234 9430.31
GR  1235 9430.84    1236 9433.19    1237  9437.1    1238 9448.22    1239 9449.21
GR  1239 9456.76    1238 9546.97    1238 9555.14    1238 9580.17    1237  9869.8
GR  1236 9870.13    1235 9870.23    1234 9870.32    1233 9870.42    1230 9870.71
GR  1229     9871    1228  9871.6    1228 9962.81    1229 9966.65    1230 9968.59
GR  1231  9968.7    1233 9968.82    1234  9968.9    1237 9969.13    1235 9969.14
GR  123810000.38    123910448.72    124010575.86
NC                            0.3     0.5
NH     5   0.035 9285.72    0.02 9465.83    0.03 9907.77    0.0210347.83   0.035
NH 10653
QT     2   17000   17000
ET            5.1     7.1            9358   10321 9458.1210071.19
X1 4.873       58 9102.8810347.83      15      15      15
X3    10
      44     8635    1243 8760.99    1242 8788.72    1241 8831.14    1241 8857.99
GR  1241 8914.98    1241 8921.68    1241 8934.31    1241 8975.13    1241 8985.29
GR  1240 9006.75    1240 9044.27    1240 9102.88    1238 9201.68    1238 9225.57
GR  1238 9232.79    1238 9280.15    1238 9285.72    1238 9436.53    1238 9437.15
GR  1237 9465.83    1236 9471.82    1235 9477.38    1234 9482.69    1234 9528.22
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GR  1235 9548.89     1236 9609.15     1237 9636.34     1237 9662.52     1236 9700.89
GR  1235 9729.28     1234 9863.79     1234 9867.54     1235 9871.61     1235 9882.37
GR  1234 9896.47     1233 9907.77     1232 9916.86     1231 9923.34     1230 9931.01
GR  1229 9939.94     1229 9970.55     1230 9977.35     1230 10047.8     123010060.06
    3110061.94     123210064.52     123310067.03     123410069.62     123510071.96
    123710077.13     123810081.87     123910087.82     123910334.64     123910339.13
GR  124010347.83     1241 10647.7     1241   10653
NC                              0.3      0.5
NH      6   0.035 9282.31     0.02 9418.69     0.03 9478.84     0.02     9875   0.025
NH 10083   0.03510672.96
ET             5.1      7.1             9270    10085 9440.1210065.97
X1 4.892        41 9135.3410208.18       100      100      100
X3     10
GR  1245     8573     1244 8677.22     1243 8708.59     1243 8713.14     1243  8771.5
GR  1243   8821.9     1243 8822.01     1242 9079.73     1241 9135.34     1240 9140.11
GR  1238 9154.14     1238 9170.06     1238 9282.31     1237 9376.01     1237 9418.69
GR  1237 9435.78     1236 9445.57     1235 9450.74     1233 9459.02     1230 9470.97
GR  1228 9478.84     1228     9875     1229 9881.91     1230 9886.56     1231 9891.32
GR  1233 9915.42     1234 9923.56     1235 9931.62     1236 9939.94     1236 9955.99
GR  123510009.63     123510029.73     123710071.77     123810075.96     1240    10083
GR  124110208.18     124010326.13     124010406.65     124110629.78     124110660.21
GR  124210672.96
NC                              0.2      0.4
NH      7   0.035 9295.47     0.02 9409.09     0.03 9496.08     0.02 9863.05     0.03
NH   9932   0.02510215.23    0.03510704.68
ET                     7.1                              9355.8810092.01
X1 4.924        46 8970.8910215.23       173      173      173
X3     10
GR  1245     8488     1244 8610.18     1244 8641.74     1244 8747.52     1244 8762.18
    1244 8865.31     1241 8970.89     1239 9118.12     1237 9187.14     1236  9224.2
    1235 9269.69     1235 9281.34     1237 9295.47     1237 9336.41     1236 9374.22
GR  1235 9409.09     1233 9449.11     1232  9465.2     1231 9474.41     1230 9482.94
GR  1228 9496.08     1228 9863.05     1229 9867.84     1230 9872.78     1231 9877.76
GR  1232 9882.85     1233 9898.33     1234 9907.32     1235 9915.55     1236 9923.71
GR  1237     9932     1237  9953.6     1236 9957.28     123710071.59     123810075.87
GR  124010084.33     124110215.23     124010302.58     1240 10344.2     124110357.34
GR  124110507.49     124010521.66     124010525.96     124210644.63     124210656.32
GR  124210704.68
NC                              0.2      0.4
NH      7   0.035 9302.78     0.02 9447.47     0.03 9487.47     0.02 9637.85     0.03
NH9888.3   0.02510025.92    0.03510654.99
ET                     7.1                              9020.65  9992.9
X1 4.952        60 8905.5310063.08    289.6      150      150
X3     10
GR  1244     8775     1243 8891.25     1242 8905.53     1241 8914.57     1240 8921.65
GR  1239 8956.83     1238  9011.7     1237 9020.65     1236 9027.41     1235 9034.28
GR  1234   9044.3     1233 9102.78     1232 9171.36     1230 9205.06     1229 9235.64
GR  1229 9279.01     1230   9287.2     1231 9294.92     1232 9302.78     1233 9312.35
GR  1233 9346.09     1232 9447.47     1228 9487.47     1228 9637.85     1229  9640.6
GR  1230 9643.19     1231  9653.8     1228  9797.2     1229 9801.42     1230 9807.34
GR  1231 9811.72     1232 9815.65     1233 9819.52     1234 9823.18     1235 9845.97
GR  1236  9858.9     1237 9867.46     1238  9879.7     1238  9888.3     1237 9901.12
GR  1236 9941.58     1236 9948.99     123710007.83     123810012.36     123910016.82
GR  124010021.36     124110025.92     124210063.08     124210133.02     124110229.58
    124010246.04     124010255.34     124010278.08     124110293.72     124110451.49
    124110525.17     1242 10586.5     124210598.63     124210607.53     124310654.99
NC                              0.2      0.4
NH      5   0.035 9485.19     0.02 9491.18    0.035 9936.79    0.02510086.17    0.035
NH 10209
ET                     7.1                              9051.29 9985.79
```

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* GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
* AREA BETWEEN STA. 9685 AND STA. 9909
X1  4.99      58 8972.8810099.11  347.89  595.08  499.13
X3    10
GR  1244    8777    1243 8801.34    1242 8808.28    1241 8972.88    1240 9000.08
GR  1239 9011.44    1238 9023.37    1237 9061.56    1236 9068.44    1235 9075.27
GR  1234 9082.09    1233 9132.72    1233  9277.9    1233 9292.43    1232 9391.93
GR  1231    9411    1230 9418.36    1229 9425.75    1231 9441.81    1232 9449.93
GR  1233 9460.65    1234 9471.44    1235 9485.19    1235 9489.25    1235 9491.18
GR  1236  9524.3    1236 9540.38    1236 9544.97    1236 9594.94    1235 9600.82
GR  1234 9606.29    1233  9611.8    1232 9617.19    1231 9632.49    1230    9649
GR  1230 9684.12    1241    9685    1241 9909.34    1241 9936.79    1240 9941.38
GR  1239 9946.03    1238 9951.12    1237 9957.71    1236 9966.56    1235 9977.15
GR  1234 9985.79    1233 9994.27    123310031.41    123410042.05    123510049.87
GR  123610065.37    1237 10074.6    123810077.99    123910082.15    124010086.17
GR  124110090.97    124210099.11    1242   10209
NC                              0.2     0.4
NH     3   0.035 9784.95    0.02  9883.9   0.025 9925.39
QT     2   13655   13655
ET                    7.1                       9294.08 9869.25
X1  5.11      32 9260.46 9925.39  192.95  604.15   491.9
X3    10
GR  1244    9049    1243 9073.98    1243 9092.01    1244 9141.74    1244 9260.46
GR  1243 9268.68    1242  9274.1    1238 9294.74    1237 9318.32    1236  9321.7
GR  1235  9327.7    1234 9333.69    1233 9533.05    1232 9714.16    1231 9729.05
GR  1230 9734.82    1230 9737.76    1231 9742.01    1232 9748.36    1233 9754.78
GR  1234 9761.21    1235 9767.19    1236 9773.22    1237  9779.1    1238 9784.95
GR  1239 9831.22    1240 9866.32    1240 9869.25    1240  9883.9    1241 9890.95
GR  1242 9898.67    1242 9925.39
N                               0.2     0.4
     3   0.035  9833.8    0.02    9853   0.025 9923.63
ET                    7.1                       9351.59 9773.41
X1 5.205      32 9252.28 9923.63     306     501     429
X3    10
GR  1242    9020    1243  9103.2    1244 9110.65    1244 9252.28    1243 9274.76
GR  1242 9284.19    1241 9290.04    1240 9295.91    1239 9302.01    1238 9308.01
GR  1237 9354.56    1236 9387.75    1235 9397.35    1234 9407.35    1233 9726.86
GR  1232 9733.85    1231 9739.27    1231 9740.08    1232 9744.52    1233 9753.85
GR  1234 9773.41    1235 9788.18    1236  9833.8    1236 9846.68    1236    9853
GR  1237 9895.88    1238 9900.44    1239 9905.14    1240 9909.73    1241 9914.34
GR  1242 9918.98    1243 9923.63
NC                              0.2     0.4
NH     3   0.035 9736.34    0.02  9868.6   0.025 9918.99
ET                    7.1                       9265.39 9733.15
* NON-EFFECTIVE FLOW AREA REMOVED
X1   5.3      33 9021.99 9906.44  714.64  474.02  574.42
X3    10
GR  1247    8788    1247 9021.99    1247 9026.17    1246 9031.46    1245  9032.8
GR  1244 9035.08    1243    9050    1242 9130.02    1241 9217.55    1240 9241.04
GR  1239 9285.48    1238 9288.81    1237 9292.43    1236 9455.45    1235 9574.55
GR  1235 9694.72    1235 9695.42    1234 9708.03    1234 9718.89    1235 9725.26
GR  1236 9730.97    1237 9736.34    1238 9741.44    1239 9746.41    1240 9751.51
GR  1241 9756.54    1241 9767.74    1240 9819.03    1240  9868.6    1241 9883.05
GR  1242  9894.7    1243 9906.44    1243 9918.99
N                               0.2     0.4
     2   0.030  9794.1   0.025 9902.36
E                     7.1                       9300 9728.91
X1 5.357      41 8762.06  9807.9     310     310     310
X3    10
GR  1250    8568    1250 8572.39    1250 8762.06    1249  8891.1    1249 8999.97
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GR  1249  9002.7    1248 9022.47    1247 9030.97    1247 9099.71    1247 9101.21
GR  1246 9104.43    1245 9107.98    1244 9116.77    1243 9151.15    1242 9199.34
GR  1241 9295.56    1241 9317.05    1241 9327.57    1240  9337.4    1239  9345.4
GR  1238 9354.56    1237 9366.03    1236 9590.29    1236 9620.29    1236 9669.96
      35 9687.02    1235 9689.11    1236 9728.91    1237 9744.29    1238     9754
GR  1239 9762.62    1240 9769.66    1241 9783.51    1242 9788.86    1243  9794.1
GR  1244  9799.5    1244  9807.9    1244 9850.49    1244 9879.29    1244 9896.05
GR  1244 9902.36
NC                            0.3     0.5
NH     1    0.02 9934.75
ET                    7.1                          9265.58 9706.67
* CAMELBACK ROAD
* DOWNSTREAM EDGE
* begin file 08ibw.dwg
X1  5.36       27    8565 9934.75     100      100      100
X3    10
GR  1251     8565    1250 8621.75    1249  8674.8    1248 8728.04    1247 8782.21
GR  1246 8848.66    1245 8922.65    1244 9009.14    1244 9024.64    1244 9029.99
GR  1243 9158.66    1242 9238.47    1241  9291.4    1240 9342.34    1239 9371.92
GR  1239 9372.08    1239 9397.01    1239  9531.9    1239 9569.23    1239 9569.85
GR  1240 9606.12    1241 9661.78    1242 9706.67    1243 9747.41    1244 9807.77
GR  1245 9905.41    1245 9934.75
NC                            0.3     0.5
NH     1    0.02 9933.11
ET                    7.1                          9264.15  9697.9
* CAMELBACK ROAD
* UPSTREAM EDGE
X1 5.372       22    8582 9933.11      80       80       80
X3    10
      251    8582    1251  8611.1    1250 8655.79    1249 8712.65    1248 8774.82
     1247 8811.37    1246 8896.88    1245     9006    1244 9098.89    1243 9180.84
GR  1242 9252.59    1241 9297.16    1240 9347.83    1239 9431.09    1239 9477.47
GR  1240 9557.26    1241  9596.7    1242 9630.41    1243 9657.68    1244  9697.9
GR  1245 9864.86    1245 9933.11
NC                            0.3     0.5
NH     4   0.035 9610.24    0.02 9672.07   0.035 9795.21    0.02 9888.98
ET                    7.1                          9262.49 9682.08
X1 5.385       49 9221.14 9795.21      70       70       70
X3    10
GR  1251     8582    1252 8589.94    1252 8591.08    1251 8598.81    1250 8701.02
GR  1249  8709.2    1249     8719    1249 8761.82    1248 8843.26    1248 8851.46
GR  1248 8868.16    1247 8901.98    1246 8999.57    1246 9029.73    1247 9067.51
GR  1248 9073.56    1249 9075.38    1249 9221.14    1248 9223.09    1247 9224.99
GR  1246     9227    1245 9229.01    1244 9231.02    1243 9233.03    1242 9262.49
GR  1241 9302.59    1240 9337.07    1240 9473.28    1241 9486.46    1242 9546.28
GR  1242 9559.94    1241 9578.62    1240 9585.22    1239 9593.59    1238 9600.56
GR  1237 9605.43    1236 9610.24    1236 9672.07    1237 9677.09    1238 9682.08
GR  1239 9686.92    1240  9692.1    1240 9762.67    1241 9766.98    1242 9771.27
GR  1243  9775.4    1244 9779.66    1245 9795.21    1246 9888.98
NC                            0.2     0.4
NH     4   0.035 9480.76    0.02 9603.61   0.035 9790.58    0.02 9834.51
ET                    7.1                          9278.1 9711.23
X1 5.492       36 9215.04 9807.97     440      440      440
X3    10
GR  1250     9081    1251 9095.03    1251 9215.04    1250 9237.78    1249 9248.19
      48  9252.3    1247 9256.25    1246 9260.31    1245 9264.46    1244  9268.7
GR  1243 9272.74    1242 9277.01    1241 9281.06    1240 9285.31    1240 9357.48
GR  1240 9358.39    1240 9407.18    1240 9451.57    1239 9480.76    1238 9495.94
GR  1237 9499.19    1236 9502.37    1236 9523.27    1237  9527.7    1238 9532.17
GR  1239 9603.61    1240 9661.58    1241 9732.65    1242 9737.52    1243  9742.5
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GR  1244 9747.61    1245 9752.48    1246 9790.58    1246 9807.97    1246  9810.9
GR  1246 9834.51
NC                          0.2     0.4
NH     4   0.035 9630.11    0.02 9700.76   0.035 9818.44    0.02 9859.12
(      2   12972   12972
E                    7.1                          9364.78 9743.69
X1 5.587      41  9332.7 9845.66     500      500      500
X3    10
GR  1253    9224    1253  9332.7    1252 9336.14    1251 9339.08    1250 9341.96
GR  1249 9344.75    1248 9347.67    1247 9350.39    1246 9353.23    1245 9356.18
GR  1244 9358.93    1243  9361.8    1242 9364.78    1241 9367.46    1240 9376.62
GR  1239 9381.67    1238 9399.56    1238 9401.96    1239 9407.44    1239 9415.73
GR  1238 9422.66    1238 9431.44    1239  9475.2    1239 9553.35    1239 9593.85
GR  1239 9602.82    1238 9615.24    1237 9625.32    1236 9630.11    1236 9700.76
GR  1237  9708.1    1238  9720.8    1239 9743.69    1242 9762.39    1243 9767.44
GR  1244 9772.22    1245  9777.1    1246 9781.68    1247 9818.44    1248 9845.66
GR  1248 9859.12
NC                          0.2     0.4
NH     4   0.035 9443.02    0.02 9522.81   0.035    9790    0.02 9866.03
QT     2   12928   12928
ET                   7.1                          9417.67 9736.96
X1 5.682      54 9340.02 9839.19     500      500      500
X3    10
GR  1255    9147    1254 9180.65    1254 9233.45    1254 9340.02    1253 9342.61
GR  1252 9345.07    1251 9347.57    1250 9350.11    1249 9352.72    1248 9355.25
GR  1247  9357.7    1246 9360.21    1245 9362.69    1244  9365.2    1243 9367.93
GR  1242 9373.52    1241 9380.22    1240 9387.06    1239 9398.56    1238 9418.64
GR  1237 9438.39    1236 9443.02    1236 9522.81    1237 9534.01    1238 9540.69
GR  1239 9550.28    1240 9560.85    1240 9565.76    1239 9577.51    1239 9595.44
(    240  9645.2    1241 9677.26    1241 9687.59    1240 9698.37    1239 9745.95
(    238 9768.97    1238 9770.54    1239 9786.92    1240 9787.46    1241 9788.01
GR  1242 9788.35    1243 9788.76    1244 9789.17    1245 9789.59    1246     9790
GR  1247 9790.43    1248 9790.84    1249 9791.27    1250 9791.86    1250 9792.35
GR  1250 9796.95    1251 9827.65    1252 9839.19    1252 9866.03
NC                          0.2     0.4
NH     2   0.035 9784.25    0.02 9836.39
QT     2   12836   12836
ET                   7.1                          9417.14  9736.3
X1 5.777      59 9324.75 9836.39     500      500      500
X3    10
GR  1255    9183    1255 9215.17    1256  9243.6    1257 9313.64    1257 9324.75
GR  1256 9342.38    1255  9345.4    1254 9347.27    1253 9349.34    1252 9351.39
GR  1251 9353.31    1250 9355.34    1249 9357.27    1248 9359.26    1247 9361.25
GR  1246 9363.29    1245 9365.22    1244 9367.22    1243 9369.21    1242 9371.15
GR  1241 9373.14    1240 9375.04    1239 9377.06    1238 9378.96    1237 9385.44
GR  1236 9389.09    1236 9445.35    1237  9455.7    1238 9469.67    1239 9479.43
GR  1240 9505.05    1241 9508.76    1242 9512.29    1242 9535.29    1241 9546.11
GR  1240    9555    1239 9564.02    1238 9572.47    1237 9577.63    1236  9580.9
GR  1236 9601.93    1237 9606.61    1238 9623.48    1239 9714.54    1240  9736.3
GR  1241 9741.45    1242 9746.73    1243 9751.76    1244     9757    1245 9762.13
GR  1246 9767.31    1247 9772.46    1248 9777.64    1249 9782.84    1249 9784.25
GR  1249 9790.62    1250 9821.17    1251 9833.63    1251 9836.39
NC                          0.2     0.4
NH     4   0.035 9445.81    0.02 9523.51   0.035 9789.51    0.02 9907.05
QT     2   11769   11769
(                    7.1                          9307.86 9737.13
X1 5.867      57 9130.14 9835.35     465      465      465
X3    10
GR  1255    8593    1255 8607.76    1255 8650.45    1254 8739.53    1254 8739.85
GR  1255  8750.5    1256 8825.04    1256 8844.09    1255 8853.28    1255 8861.29
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GR  1255 8875.26    1255 8883.59    1255  8885.5    1255 8891.57    1256 8894.54
GR  1256 8915.79    1256 8995.73    1256 9130.14    1255 9136.06    1254 9141.87
GR  1253  9149.3    1252 9159.63    1251 9169.35    1250 9178.91    1249 9191.49
GR  1248 9200.06    1247 9207.58    1247 9218.75    1247 9267.89    1246 9309.09
    45 9347.26      1244 9374.64    1243 9395.83    1242 9402.99    1241 9411.28
    240 9421.75     1239 9437.52    1238 9445.81    1238 9523.51    1239 9535.39
GR  1240 9553.62    1241 9601.71    1242 9624.65    1243 9638.95    1244 9649.12
GR  1245  9656.8    1245 9665.46    1244 9724.52    1244 9752.93    1245 9768.79
GR  1246 9772.96    1247 9777.09    1248 9781.34    1249 9785.43    1250 9789.51
GR  1251 9835.35    1251 9907.05
NC                          0.3     0.5
NH     2   0.035 9768.78    0.02 9915.64
QT     2   11706   11706
ET                  7.1                         9293.06 9744.14
X1 5.871       51 9104.06 9834.26      20       20       20
X3    10
GR  1255    8592    1255 8605.73    1255 8664.42    1255 8746.49    1256  8790.8
GR  1256 8832.29    1255 8849.05    1255 8889.77    1256 8892.52    1256 8913.25
GR  1256 8990.66    1256 9104.06    1255 9110.23    1254 9115.83    1253 9127.05
GR  1252 9144.24    1251 9157.41    1250 9167.91    1249 9177.42    1248 9184.11
GR  1248 9225.52    1248 9254.81    1247 9285.67    1247 9298.01    1247 9308.34
GR  1246 9311.78    1245 9323.12    1245  9333.6    1245 9349.92    1244 9379.21
GR  1243 9409.49    1242 9433.72    1241  9466.4    1241 9483.28    1242 9526.69
GR  1243 9541.29    1244 9560.49    1245  9595.6    1246 9619.44    1247 9633.47
GR  1247 9673.21    1246 9703.73    1246 9719.04    1246 9744.14    1246 9768.78
GR  1247 9772.63    1248 9776.77    1249 9780.78    1250 9785.46    1251 9834.26
GR  1251 9915.64
NC                          0.3     0.5
NH     1    0.0210744.02
     2   11500   11500
                    7.1                         9270    9790
* CHAPARRAL ROAD
* DOWNSTREAM EDGE
X1 5.886       37    8587 9953.17      78       78       78
X3    10
GR  1255    8587    1254 8765.66    1254 8772.18    1254 8772.48    1253 8834.79
GR  1252 8891.37    1251 9141.28    1250 9339.47    1250 9643.08    1250 9770.92
GR  1250 9780.22    1251 9853.62    1251 9953.17    1250 9953.84    1249 9954.69
GR  1248 9955.38    1247 9956.05    124710055.03    124810056.07    124910059.94
GR  125010068.72    125110080.58    125110085.15    125010098.44    125010104.59
GR  125110148.42    125210161.26    125310180.92    125310212.54    125310267.51
GR  125410448.81    125410460.68    125410470.06    125510543.98    125610705.93
GR  125610739.43    125610744.02
QT     2   17000   17000
NC                          0.3     0.5
NH     1    0.0210773.99
ET                  7.1                         9139.610019.51
SB  1.25     1.5     2.6       0    105.5       3  402.83        0 1246.93 1246.53
* CHAPARREL ROAD
* begin file 09ibw.dwg
X1   5.9       29  8629.110773.99      80       80       80
X2                    1 1250.86 1252.36                     2
X3    10
BT   -10  8629.1    1254        0 8963.13    1251        0 9192.33    1250        0
BT       9690.89    1250        0 9848.85    1251        0 9917.591251.394  1250.5
        10022.241251.995  1250.510023.01    1252        010268.61    1253        0
B.       10773.99    1257        0
GR  1254    8562    1254 8575.35    1254  8629.1    1253 8751.91    1252 8879.92
GR  1251 8941.11    1251 8963.13    1251 9074.65    1250 9192.33    1250 9690.89
GR  1250  9732.3    1250 9737.52    1251 9848.85    1251 9917.59    1250 9918.65
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GR  1249  9919.8    1248 9920.77    1247 9921.55    124710019.51    1248   10020
GR  124910020.71    125010021.57    125110022.24    125210023.01    125310268.61
GR  125410426.37    125510577.42    125610696.08    125710773.99
NC                              0.3     0.5
     4   0.035  9770.5    0.02 9933.46   0.025 10090.3   0.03510217.95
                       7.1                          9184.410057.13
X1 5.925       46 8915.7910095.26      130     130     130
X3     0    1250
GR  1254    8606    1255 8689.89    1255 8915.79    1254 8927.96    1253 8940.16
GR  1252 8971.34    1251 9031.13    1250 9130.02    1249 9165.45    1248  9232.7
GR  1248    9329    1249 9380.85    1250 9412.26    1251 9432.85    1252 9451.41
GR  1252 9471.75    1251 9500.06    1250 9525.06    1249 9541.84    1248 9548.76
GR  1248 9553.39    1249 9556.06    1250  9697.6    1251  9770.5    1251 9775.65
GR  1251 9781.98    1252 9813.95    1252 9816.13    1252  9868.5    1253 9902.81
GR  1253 9927.78    1252 9933.46    1251 9939.41    1250 9945.61    1249 9951.77
GR  1248 9958.05    124810057.13    124910070.25    125010074.38    125110078.23
GR  125210082.26    125310086.18    1254 10090.3    125510095.26    125610168.69
GR  125610217.95
NC                              0.2     0.4
NH     6   0.035 9166.71    0.02 9281.23   0.035  9767.4    0.02 9924.35   0.029
NH 10136   0.03510228.33
ET                      7.1                          9163.15 10067.7
X1 5.966       48 9059.6110162.98      360     360     360
X3    10    1250
GR  1257    8657    1257 8677.47    1256  8729.6    1256 8730.36    1256 8841.41
GR  1255 8933.18    1255 8961.29    1256 9022.27    1256 9059.61    1255 9078.68
GR  1254 9085.02    1253 9091.35    1252 9097.56    1251 9116.65    1248 9166.71
GR  1248 9281.23    1249 9296.47    1250 9320.03    1250 9331.12    1249 9364.71
GR  1248 9379.58    1248 9731.02    1249 9736.77    1250 9755.97    1251 9762.81
GR  1252  9767.4    1253 9772.64    1253 9776.06    1253 9781.46    1254 9820.47
    1254 9831.85    1254 9866.91    1254  9901.1    1253 9924.35    1252 9934.42
GR  1251 9943.66    1250 9953.26    1249 9963.23    1249 10067.7    125010100.88
GR  125110114.88    125210125.65    125310131.24    1254   10136    1255 10144.9
GR  125610155.07    125610162.98    125610228.33
NC                              0.2     0.4
NH     6   0.035 9352.92    0.02 9645.25   0.035 9820.08    0.02 9903.15   0.025
NH 10069   0.03510137.61
ET                      7.1                          9218.7310060.29
X1  6.06       42 9151.3410080.75      500     500     500
X3    10    1250
GR  1257    8954    1256 8969.47    1256 8991.43    1256 9103.87    1255 9123.28
GR  1255 9137.28    1256 9146.71    1257 9148.99    1258 9151.34    1258 9179.66
GR  1257 9180.91    1256 9192.64    1255 9218.73    1254 9223.89    1253 9229.36
GR  1252 9235.91    1251 9271.69    1250  9299.8    1249 9327.18    1248 9352.92
GR  1248 9645.25    1249 9676.26    1250 9722.28    1251 9745.17    1252  9758.2
GR  1253 9792.84    1254 9812.51    1255 9820.08    1255 9903.15    1254 9918.53
GR  1253 9929.95    1252 9936.48    1251 9942.86    1250 9949.08    1250 9994.73
GR  125110044.94    125210052.27    125310059.46    125410065.25    1255   10069
GR  125610080.75    125710137.61
NC                              0.2     0.4
NH     4   0.035 9295.57    0.02 9723.69   0.035 9861.73    0.02 9911.44
QT     2   11920   11920
ET                      7.1                          9251.11 9788.32
X1 6.155       41 9099.22 9871.03      500     500     500
X3    10    1250
     61    9044    1260 9099.22    1259 9124.62    1258 9145.04    1257 9149.56
GR  1256 9153.82    1255 9157.91    1254 9162.58    1253 9169.44    1252  9177.3
GR  1251 9188.21    1250 9194.15    1249 9198.88    1248 9204.21    1248 9241.26
GR  1249 9246.69    1250  9252.7    1250 9256.55    1249 9279.67    1248 9295.57
GR  1248 9459.73    1249 9511.81    1249 9514.71    1248  9569.2    1248 9723.69
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GR  1249 9733.49    1250  9764.2    1251  9786.1    1252  9801.5    1253 9810.99
GR  1253 9816.79    1253 9821.36    1254 9850.33    1255 9852.16    1256 9861.73
GR  1257 9871.03    1257 9873.42    1257 9883.78    1257 9906.75    1257 9907.85
GR  1257 9911.44
                                0.2     0.4
NH     4   0.035 9563.51    0.02 9663.52   0.035 9870.63    0.02 9922.46
ET                   7.1                          9367.86 9840.66
X1  6.25       35    9214 9881.31     500     500     500
X3    10     1250
GR  1263     9214    1262 9231.21    1261 9244.33    1260 9254.12    1259 9261.92
GR  1258 9326.76    1257 9338.37    1256 9348.67    1255 9355.64    1254  9361.6
GR  1253 9367.86    1252 9430.77    1251 9463.22    1250 9510.34    1249 9563.51
GR  1248 9600.19    1248 9663.52    1248 9737.95    1248 9748.79    1249 9753.93
GR  1250  9781.4    1251 9806.19    1252 9812.91    1253 9823.38    1253 9826.25
GR  1253 9831.34    1254 9850.09    1255 9860.47    1256 9865.24    1257 9870.63
GR  1258 9875.99    1259 9881.31    1259 9883.66    1259 9892.05    1259 9922.46
NC                              0.2     0.4
NH     3   0.035 9396.49    0.03 9860.82    0.02 9870.12
ET                   7.1                          9356.23 9790.71
X1 6.345       38 9278.21 9870.12     500     500     500
X3    10
GR  1260     8988    1261 9024.95    1262 9060.04    1262 9084.02    1261 9085.55
GR  1260 9087.08    1259  9088.6    1258 9090.28    1258 9099.36    1259 9264.93
GR  1260 9266.06    1261 9266.96    1262 9268.21    1262 9278.21    1261 9297.77
GR  1260  9309.3    1259 9317.98    1258 9326.23    1257 9334.38    1256 9343.59
GR  1255 9396.49    1255 9480.04    1255 9523.35    1255  9532.8    1255 9677.92
GR  1254  9770.4    1253 9790.71    1253  9791.9    1254 9795.29    1255 9799.09
GR  1256 9803.76    1257 9809.09    1258 9815.25    1258 9817.17    1258 9823.84
GR  1259 9852.39    1260 9860.82    1261 9870.12
                                0.2     0.4
     1    0.02 9913.97
ET                   7.1                              9307 9762.21
* JACKRABBIT ROAD
* DOWNSTREAM EDGE
X1  6.39       16 9220.02 9836.22     230     230     230
X3    10
GR  1261     8807    1261     8900    1261 8946.59    1262 9064.91    1262 9220.02
GR  1261 9250.03    1260 9285.34    1259     9307    1258 9335.28    1257 9414.65
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GR  1261 9913.97
QT     2   17000   17000
NC                              0.2     0.4
NH     4    0.03 9801.95    0.02 9936.53   0.02510225.37   0.03510807.58
ET                   7.1                          9232.1310071.89
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X1   6.4       28 9165.7410275.27      38      38      38
GR  1262     8605    1262 9012.69    1262 9165.74    1261 9215.64    1260 9231.58
GR  1259 9259.69    1258 9331.39    1257 9383.82    1257  9517.2    1258 9709.45
GR  1259 9783.19    1260 9801.95    1261 9841.06    1261 9917.74    1260 9936.53
GR  1259 9955.76    1258 9972.53    125810098.75    125910200.36    126010225.37
GR  126010231.17    126010243.17    126110275.27    1262   10276    126210378.46
GR  1263 10547.5    1264 10649.4    126510807.58
NC                              0.2     0.4
NH     4   0.035  9860.9    0.02 9931.02   0.02510072.22   0.035 10167.8
ET                   7.1                          9120.1610061.11
     44       37 9096.6210097.45     230     230     230
GR  1262     8969    1262 8976.19    1263 9009.53    1263 9009.63    1262 9096.62
GR  1261 9103.92    1260 9111.39    1259 9120.16    1258 9154.64    1258 9625.24
GR  1259 9663.24    1259 9663.87    1258  9720.1    1257 9800.26    1257 9802.47
GR  1258 9806.67    1259 9812.71    1259 9815.45    1259 9817.41    1260 9852.82
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GR  1261  9860.9    1262 9868.68    1262 9872.27    1262 9879.54    1262 9922.59
GR  1261 9931.02    1260 9935.32    1259 9939.77    1258 9943.99    125810039.91
GR  125910064.29    126010068.32    126110072.22    126210076.13    1263   10081
GR  126410097.45    1264 10167.8
                                0.2     0.4
     4   0.035 9890.51    0.02 9947.08   0.02510100.79   0.03510309.13
ET                   7.1                          9130.6910070.87
X1  6.53       49 9107.03 10137.9     500     500     500
GR  1264     8844    1264 9032.33    1264 9049.56    1263 9107.03    1262 9114.53
GR  1261 9122.43    1260 9130.69    1259 9139.47    1259 9439.99    1259 9460.52
GR  1259 9463.06    1259 9742.08    1259 9744.69    1260     9758    1260 9758.93
GR  1259 9767.51    1259 9825.08    1259 9826.61    1260 9880.83    1261 9885.76
GR  1262 9890.51    1263 9893.64    1263 9895.09    1263 9899.12    1263 9935.81
GR  1262 9947.08    1261 9950.87    1260 9954.42    1259 9961.29    1258 9972.86
GR  1257 9975.43    1256 9978.01    1255 9984.79    1255 9990.37    1256 9993.13
GR  1257 9995.88    1258 9999.03    125910075.87    126010078.64    126110081.58
GR  1262 10084.8    126310087.37    126410089.77    126510092.31    1266 10098.3
GR  126610100.79    1266 10106.8    1267 10137.9    126710309.13
NC                              0.2     0.4
NH     4   0.035 9871.84    0.02 9926.59   0.02510068.59   0.03510109.49
ET                   7.1                          9114.25 10040.1
X1  6.63       47 9081.3610109.49     500     500     500
X3     0    1258
GR  1265     8885    1264  8903.6    1264 8933.48    1264 8934.03    1264 8954.48
GR  1265 9081.36    1265 9085.08    1264 9091.53    1263 9097.85    1262 9104.45
GR  1261 9114.25    1260 9124.73    1260 9735.98    1261 9743.17    1261 9754.25
GR  1261 9822.18    1262 9828.63    1263 9871.84    1264 9882.72    1264 9883.36
GR  1264 9897.67    1264  9909.1    1263 9926.59    1262  9931.1    1261 9935.35
GR  1260 9940.49    1259  9962.3    1258 9966.33    1257 9968.92    1256 9971.41
GR  1255 9973.93    1254 9976.45    1254  9981.3    1255 9983.61    1256 9985.81
     257 9988.39    1258  9990.9    1259 9993.63    126010059.01    126110062.09
GR  126210065.09    126310068.59    126410072.12    126510075.58    126610079.33
GR  126710082.53    126710109.49
NC                              0.2     0.4
NH     4   0.035 9856.42    0.02 9943.53   0.02510066.24   0.03510192.55
ET                   7.1                          9156.5610051.73
X1 6.723       76 9121.8310092.69     500     500     500
X3     0    1259
GR  1265     8854    1265 8952.49    1265 8981.35    1266 9021.08    1266 9045.77
GR  1266 9087.43    1267 9090.69    1267 9121.83    1266 9133.96    1265 9146.04
GR  1264 9156.56    1263 9160.99    1262 9165.02    1261 9168.71    1260 9172.55
GR  1259 9176.64    1258 9180.69    1257 9184.31    1256 9187.42    1255 9190.81
GR  1254 9194.06    1253 9196.95    1253 9239.83    1254 9247.36    1255 9251.88
GR  1256 9255.24    1257 9258.72    1258  9264.1    1259 9271.07    1260  9277.1
GR  1261 9282.54    1262 9287.63    1262 9298.85    1261 9328.43    1261  9359.4
GR  1262 9367.47    1262 9409.87    1261 9415.38    1260 9423.55    1259 9430.93
GR  1259 9549.05    1259 9640.22    1259 9649.53    1260  9660.8    1261 9667.74
GR  1262 9672.76    1263 9692.91    1264 9698.31    1264 9705.29    1263  9712.7
GR  1262 9725.91    1261 9741.59    1261 9802.77    1262 9813.47    1263 9828.83
GR  1263 9839.75    1263 9856.42    1264 9889.45    1264 9940.07    1263 9943.53
GR  1262 9947.21    1261 9950.58    1260 9978.51    1260 9979.92    1260 9992.43
GR  126010000.44    126110051.73    126210061.21    126310066.24    126410071.14
GR  126510075.97    126610080.09    126710083.06    126810085.93    126910092.69
GR  126910192.55
NC                              0.2     0.4
     4   0.035 9778.26    0.02 9849.36   0.02510116.12   0.03510186.47
E.          5.1     7.1            9225   10100 9324.93 10050.6
* NON-EFFECTIVE FLOW AREA REMOVED
X1  6.82       53 8922.1710141.05     500     500     500
X3     0
```

```
GR  1265    8770    1266 8803.94    1267 8922.17    1267 8941.13    1266 8945.78
GR  1265 8950.59    1264 8955.43    1264 9006.98    1264 9017.23    1263 9100.48
GR  1263 9127.16    1264 9159.72    1264 9166.07    1264 9238.61    1265  9246.9
GR  1266  9257.4    1266 9276.13    1265 9299.02    1264 9339.74    1263 9555.37
    1263 9575.35    1263 9729.35    1262 9735.27    1261 9738.04    1261 9739.11
GR  1262  9747.4    1263 9751.91    1264 9756.03    1265 9759.54    1266 9763.28
GR  1266 9770.18    1265 9773.52    1264 9778.26    1264 9790.84    1264 9802.13
GR  1264 9814.66    1264 9845.29    1264 9849.36    1265 9884.07    1265 9896.91
GR  1264 9903.28    1263 9908.07    1262 9912.96    126210099.62    126310105.43
GR  126410110.95    126510116.12    126610121.31    126710126.11    126810131.11
GR  126910135.99    127010141.05    127010186.47
NC                          0.2     0.4
NH     4    0.05 9646.74    0.02 9827.13   0.02510115.31   0.03510196.56
ET                  7.1                         9345.7410059.26
X1 6.856      90 9278.6710135.98     200     200     200
X3    10    1261
GR  1269  8819.1    1269 8821.33    1269  8834.5    1270 8857.92    1270 8865.05
GR  1270 8878.34    1271 8911.11    1272 8944.13    1273 8984.43    1273 8986.91
GR  1272  8987.7    1271 8988.34    1270 8988.94    1269 8993.14    1269 8999.58
GR  1269  9029.8    1268 9037.69    1267 9045.15    1266 9054.09    1266 9079.66
GR  1267  9094.2    1268 9100.84    1269 9118.19    1270 9131.23    1271 9148.85
GR  1272  9156.8    1273 9164.45    1274 9172.47    1275  9183.7    1275 9195.88
GR  1275 9210.02    1275 9242.94    1275 9278.67    1275 9293.92    1274 9301.95
GR  1273  9308.7    1272 9312.43    1271 9316.26    1270 9320.61    1269  9325.9
GR  1268 9330.72    1267 9332.26    1266 9333.93    1265 9335.62    1264 9338.36
GR  1263 9341.83    1262 9451.92    1261 9459.89    1260 9466.94    1260 9539.85
GR  1260 9549.74    1260 9558.17    1261 9561.75    1262 9574.56    1263 9597.06
GR  1263 9615.43    1262 9624.59    1262 9630.53    1263 9636.09    1264 9641.47
GR  1265 9646.74    1265 9655.45    1264 9667.46    1263 9672.35    1263 9677.53
    1264 9687.08    1265 9695.31    1265 9708.76    1265 9728.43    1266 9781.72
    1266 9814.01    1265 9827.13    1264 9830.43    1263 9833.95    1262 9840.01
GR  1261 9914.97    1261 9989.58    1261 10036.1    126110062.96    126210094.52
GR  126310107.93    126410111.41    126510115.31    126610119.37    126710123.44
GR  126810127.69    126910131.76    127010135.98    127110144.57    127110196.56
NC                          0.3     0.5
NH     4    0.05 9621.88    0.02 9878.33   0.02510110.47   0.03510374.06
ET                  7.1                         9349.3710133.63
X1 6.879      74 8874.7910148.46     120     120     120
X3    10
GR  1270    8422    1269    8442    1268 8447.26    1267 8487.61    1267  8501.7
GR  1267 8509.33    1267 8620.52    1268 8788.92    1269 8804.63    1270 8852.25
GR  1270 8874.79    1269 8945.89    1268 9050.73    1268 9054.85    1268 9066.98
GR  1268 9080.13    1268 9087.39    1268 9131.09    1268 9145.83    1268 9176.01
GR  1268 9211.98    1267 9278.77    1266 9294.13    1265  9303.3    1264 9334.88
GR  1263 9383.15    1262 9573.64    1262 9580.18    1263 9586.94    1264 9604.49
GR  1265 9621.88    1265 9657.24    1264 9659.16    1263 9660.12    1262 9661.11
GR  1261  9662.1    1260 9663.05    1259    9664    1258 9664.93    1257 9665.97
GR  1256 9666.97    1255 9667.86    1255 9677.72    1256 9678.76    1257  9679.9
GR  1258 9680.93    1259 9682.15    1260 9683.21    1261 9684.28    1262 9685.34
GR  1263 9686.28    1264 9687.27    1265 9688.46    1266 9733.32    1267 9773.84
GR  1268 9814.32    1268 9878.33    1264 9899.62    1263  9902.1    1262 9975.84
GR  126210079.59    126210097.43    126210108.03    126310109.01    1264 10109.7
GR  126510110.47    126610111.15    126710111.94    1268 10115.6    126910120.49
GR  127010125.67    127110148.46    127110232.83    127010374.06
NC                          0.3     0.5
    1    0.0210669.63
ET                  7.1                         9382.8410155.72
* MCDONALD DRIVE
* DOWNSTREAM EDGE
* NON-EFFECTIVE FLOW AREA REMOVED
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* begin file 11ibw.dwg
X1  6.88      38 8773.6810199.22      32      32      32
X3    10
GR  1269    7956    1267 8217.42    1267 8394.87    1268 8685.22    1269 8773.68
    .69 8929.47    1268 8969.85    1267 9037.32    1266 9100.01    1265 9157.91
    .264 9200.77    1263 9340.38    1263 9664.69    1264 9706.68    1265 9749.87
GR  1266 9784.46    1267 9823.45    1268 9840.03    1269 9919.76    1262    9947
GR  126210144.34    126210153.23    126310154.15    126410154.92    126510155.72
GR  126610156.58    126710157.15    126810157.59    127010157.62    126910157.63
GR  127110157.89    127210158.36    127210199.22    127110267.35    127010318.66
GR  126910358.51    126810426.87    126910669.63
NC                          0.3     0.5
NH     4   0.035 9660.03    0.02 9898.39   0.02510167.69   0.03510167.69
ET                  7.1                         9310.4710095.38
SB  1.05     1.5     2.6       0     214     7.5 1722.21       0 1262.83 1261.83
* MCDONALD DRIVE
* UPSTREAM EDGE
X1 6.893      54 9843.4310167.69      78      78      78
X2                    1 1271.17 1272.84                     2
X3    10
BT   -16 8949.05    1269       0 9021.27    1267       0  9034.7    1266       0
BT       9181.92    1265       0 9210.64    1264       0 9300.06    1263       0
BT       9339.21    1263       0 9612.99    1264       0 9662.82    1264       0
BT       9690.35    1264       0 9702.43    1265       0 9714.69    1265       0
BT       9758.71    1266       0 9804.05    1268    1268 9843.43 1272.84 1271.17
BT      10167.69 1272.84 1271.17
GR  1271    8476    1271 8500.83    1271 8634.03    1269 8849.52    1268 8949.05
GR  1267 9021.27    1266  9034.7    1265 9181.92    1264 9210.64    1263 9300.06
GR  1263 9339.21    1264 9612.99    1264 9617.56    1264 9640.67    1264 9660.03
G   264 9661.66    1264 9662.82    1263 9664.41    1262 9665.83    1261 9667.29
    260  9668.9    1259 9670.64    1258 9672.24    1257  9673.3    1256 9673.92
GR  1255 9674.91    1255 9679.07    1256 9679.77    1257 9680.57    1258 9681.34
GR  1259 9682.12    1260 9682.96    1261 9683.86    1262 9685.21    1263 9687.63
GR  1264 9690.35    1265 9702.43    1265 9704.43    1265 9714.69    1266 9758.71
GR  1267 9783.67    1268 9804.05    1269 9843.43    1269 9896.32    1268 9896.62
GR  1267 9896.91    1266 9897.29    1265 9897.71    1264 9898.08    1263 9898.39
GR  1262 9916.71    126210053.08    1262 10098.7    127210167.69
NC                          0.2     0.4
NH     4   0.035 9667.81    0.02 9870.13   0.02510116.76   0.03510287.77
ET                  7.1                         9314.09 10106.5
X1  6.91      71 9190.7610137.11      45      45      45
GR  1272    9055    1272 9190.76    1271 9198.82    1270 9206.44    1269 9215.08
GR  1268  9224.3    1267 9233.51    1266  9241.9    1265 9249.65    1264 9257.32
GR  1263 9265.54    1263 9280.35    1264    9322    1265 9336.91    1265 9350.64
GR  1264 9374.25    1264 9381.15    1264 9423.71    1264 9436.24    1265 9447.01
GR  1266 9455.26    1266 9470.34    1265 9478.94    1264 9486.75    1263 9495.49
GR  1263 9581.33    1263 9615.44    1263 9641.17    1263 9667.81    1262 9669.53
GR  1261 9671.26    1260 9673.11    1259  9674.7    1258 9676.57    1258 9685.18
GR  1259 9686.98    1260 9688.74    1261 9690.47    1262 9692.37    1263 9694.02
GR  1264 9695.78    1265 9697.63    1265 9702.25    1265 9712.89    1265 9716.84
GR  1265 9723.11    1266 9767.76    1267 9792.99    1267 9864.48    1266 9870.13
GR  1265 9873.57    1264 9876.98    1263 9880.37    126210022.98    126210048.83
GR  126310111.67    126410112.36    1265 10113.1    1266 10113.9    126710114.62
GR  126810115.35    126910116.15    127010116.76    127010137.11    126910141.27
GR  126910146.33    127010155.41    127010175.09    127010215.43    127110272.56
    .7110287.77
                            0.2     0.4
NH     6   0.035 9472.15    0.02 9588.24   0.035 9699.14    0.02 9840.74   0.025
NH 10137   0.03510304.08
ET                  7.1                         9364.7110101.33
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X1  6.96      57 9344.8810151.44     250     250     250
X3     0    1262
GR  1274     9295    1274 9296.72    1273  9303.2    1273 9318.57    1273 9344.88
GR  1272 9349.66    1271 9354.47    1270 9359.05    1269  9363.8    1268 9368.59
      .67 9373.36    1266 9378.21    1265 9383.05    1264 9387.99    1263 9442.31
      1262 9453.62    1261 9464.71    1260 9472.15    1260 9588.24    1261 9596.07
GR  1262 9603.77    1263 9611.96    1264 9699.14    1265 9706.78    1266 9714.29
GR  1266 9718.27    1266     9735    1266 9736.48    1266 9746.88    1266 9786.05
GR  1266 9800.29    1267 9820.93    1267 9840.74    1266  9844.8    1265 9849.08
GR  1264 9852.94    1263 9857.07    1262 9888.26    1262 9888.67    126310101.33
GR  126410105.61    126510109.88    126610114.16    126710118.38    126810122.69
GR  126910126.77    127010130.67    127110134.39    127210135.95    1273   10137
GR  127310151.44    127210155.13    127110158.62    1271 10164.6    127210170.56
GR  127210222.63    127110304.08
NC                          0.2     0.4
NH     2    0.02 9828.23   0.02510366.81
ET             5.1     7.1          9521.5   10146 9666.5010116.59
X1 7.008      32 9510.4110163.36     315     237     250
GR  1272 9510.41    1271 9522.24    1270 9546.36    1269 9577.18    1268 9626.33
GR  1267 9681.84    1267 9815.51    1268 9828.23    1268 9837.23    1267 9845.48
GR  1266 9849.74    1265 9854.04    1264 9858.41    1263 9922.55    126310106.08
GR  126410119.34    126510123.37    1266 10127.4    126710131.49    126810135.61
GR  126910139.59    127010143.61    127110147.36    127210151.42    127310155.34
GR  127410159.35    127510163.36    127510181.17    1274 10182.1    127310185.37
GR  127210327.23    127110366.81
NC                          0.2     0.4
NH     2    0.02 9821.54   0.02510558.76
ET                    7.1                          9813.4210190.76
* GR DATA ADJUSTED FOR FLOODWALL
Y    102      32    972010235.76     505     478     500
      275    9719    1270    9720    1269 9727.59    1269 9821.54    1269 9831.81
GR  1268 9838.71    1267 9843.42    1266 9848.36    1265 9853.23    1264 9857.99
GR  1263 9870.05    1263 9877.19    1263 9968.09    126310051.06    126410192.57
GR  126510196.22    126610199.57    126710202.86    126810206.08    126910209.35
GR  127010212.31    127110215.18    127210218.04    127310221.02    127410223.87
GR  127510226.71    127610229.63    127710235.76    127410329.54    127310395.49
GR  127310418.91    127410558.76
NC                          0.2     0.4
NH     3   0.035 9782.35   0.02510241.03   0.03510439.74
ET                    7.1                          9725.0310241.03
X1 7.197      39 9689.3810344.54     570     470     500
X3    10
GR  1275 9584.56    1276  9585.7    1276 9674.22    1276 9689.38    1276 9697.85
GR  1275  9701.8    1274 9705.61    1273  9709.5    1272 9713.48    1271 9717.31
GR  1270  9721.1    1269 9725.03    1268 9728.86    1267  9732.7    1266 9736.55
GR  1265 9740.52    1264 9776.28    1264 9782.35    1264  9873.7    1264 9946.32
GR  126410002.11    126410241.03    126510244.74    1266 10248.4    126710252.07
GR  126810255.67    126910259.48    127010263.03    127110266.43    127210269.78
GR  127310273.12    127410276.45    127510279.71    127610283.11    127710286.77
GR  127810290.49    127810344.54    127710417.09    127710439.74
NC                          0.2     0.4
ET                    7.1                          9652.0210290.52
NH     3   0.035 9634.79   0.02510320.45   0.03510449.32
X1  7.29      42 9606.2810339.76     500     500     500
X3    10
      .79    9538    1280 9606.28    1280 9607.53    1279 9612.83    1278 9621.12
      1277 9626.03    1276 9630.42    1275 9634.79    1274 9639.11    1273  9643.5
GR  1272 9647.75    1271 9652.02    1270 9656.08    1269  9660.3    1268 9679.42
GR  1267  9774.6    1267 9808.74    1267 9865.74    1266 9939.93    1265 9977.31
GR  1265 9999.99    126510009.18    126410014.01    126310018.61    126310019.41
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GR  126410023.26    126510027.14    126610054.34    126710189.83    126810291.55
GR  126910296.83    127010302.31    127110306.52    127210309.94    1273 10313.4
GR  127410316.83    127510320.45    127610323.76    127710327.87    1278 10331.9
GR  127910339.76    127910449.32
                                0.2     0.4
     3   0.035 9675.72   0.02510277.12   0.03510460.74
ET                  7.1                         9693.810277.07
X1  7.39      39    962110325.14     500     500     500
GR  1280    9621    1280 9621.17    1280 9630.79    1279 9635.14    1278 9639.79
GR  1277 9644.28    1276 9648.78    1275 9653.28    1274 9657.69    1273 9662.18
GR  1272 9666.72    1271 9671.23    1270 9675.72    1269  9693.8    1268 9887.94
GR  1267 9975.08    1266 9983.58    1265 9986.66    1264 9989.66    1264 9990.05
GR  1265 9992.23    1266  9994.3    126710001.22    126810013.34    1268 10016.8
GR  126810170.93    126910277.12    127010284.93    1271 10291.3    127210295.52
GR  127310299.51    127410303.62    127510307.61    127610311.63    127710315.72
GR  127810320.38    127910325.14    127910444.88    127910460.74
NC                              0.2     0.4
NH     3   0.035 9679.21   0.025 10232.8   0.03510337.56
ET                  7.1                         9674.0210232.38
* begin file 12ibw.dwg
X1 7.481      52 9597.9610312.56     500     500     500
GR  1283    9534    1283 9595.09    1282 9597.96    1281 9617.32    1280 9629.53
GR  1279 9634.13    1278  9638.9    1277 9643.69    1276 9648.46    1275 9653.26
GR  1274 9658.06    1273 9662.96    1272 9667.62    1271 9672.57    1270 9679.21
GR  1269 9738.04    1268 9813.85    1268 9860.52    1268 9887.31    1267 9922.61
GR  1266 9926.52    1266 9929.65    1267 9936.73    1267 9965.14    1266 9967.33
GR  1265 9969.78    1265 9970.26    1266 9976.38    1267 9979.31    1268 9982.28
GR  1268  9994.5    1268 9996.25    126810052.48    126810074.85    1269 10158.5
GR  1270 10232.8    127110236.75    127210240.74    127310244.66    127410248.62
G   27510252.55    1276 10256.5    127710260.37    127810264.31    127910268.31
     28010272.26    128110298.47    128210301.14    128310303.66    128410306.21
GR  128510312.56    128610337.56
NC                              0.2     0.4
NH     3   0.035 9739.22   0.02510215.96   0.03510512.17
ET                  7.1                         9729.2310255.73
X1 7.576      46    966510299.71     500     500     500
GR  1282    9665    1282 9682.16    1282 9687.21    1281 9691.65    1280 9695.82
GR  1279 9700.13    1278 9704.36    1277 9708.53    1276 9712.76    1275 9716.89
GR  1274 9721.03    1273 9725.02    1272 9729.23    1271 9733.19    1270 9739.22
GR  1269 9899.27    1269  9908.8    1269 9929.88    1268 9970.97    1268 9974.49
GR  126810045.67    126710050.73    126710059.56    126810063.73    126910097.39
GR  126910115.27    126910135.55    127010215.96    127110255.74    127210260.28
GR  127310264.68    127410269.05    127510273.31    1276 10277.7    127710282.14
GR  127810286.48    127910290.89    1280 10295.3    128110299.71    128210317.89
GR  128310327.52    128410338.72    128510350.58    128610391.67    128610494.28
GR  128610512.17
NC                              0.2     0.4
NH     3   0.035 9674.09   0.02510196.98   0.03510346.55
ET                  7.1                         9726.7410196.98
* NON-EFFECTIVE FLOW AREA REMOVED
X1  7.67      49 9583.9710258.36     500     500     500
GR  1284    9582    1284 9583.97    1283 9617.69    1282 9625.43    1281 9625.99
GR  1280 9626.37    1279 9626.63    1278 9627.02    1277 9627.56    1276 9628.08
GR  1275 9629.08    1274 9630.75    1273 9632.46    1272 9634.32    1271 9636.43
GR  1270 9638.52    1270 9640.87    1271 9649.73    1271 9674.09    1270 9831.67
     70 9860.28    1270 9884.06    1269 9963.98    1268 9968.87    1268 9972.41
    1269  9976.8    1269 9982.04    1269 9987.89    127010103.82    127110196.98
GR  1272 10203.2    1273   10208    127410212.54    127410221.49    127410226.48
GR  127510229.35    127610232.12    127710234.89    1278 10237.8    127910240.56
GR  128010243.27    128110245.93    128210248.73    128310251.33    128310258.36
```

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GR  128310288.61    128310291.71    128210342.29    128210346.55
NC                              0.2     0.4
NH     3   0.035 9742.78   0.02510207.96   0.03510393.39
ET                      7.1                             9722.2810207.96
      65       40 9690.0210311.45      500     500     500
      284     9634     1284 9690.02    1283 9692.86    1282 9695.11    1281 9697.32
GR  1280 9699.49    1279 9701.64    1278 9703.75    1277 9715.27    1276  9718.8
GR  1275 9722.28    1274 9725.74    1273 9729.06    1272 9732.48    1271  9736.5
GR  1271 9742.78    1271  9774.4    1271 9814.45    1271 9825.03    1270 9871.68
GR  127010082.77    127110199.87    127110207.96    127110218.04    127210224.74
GR  127310230.48    127410235.62    1275 10240.6    127610244.86    127710248.92
GR  127810253.03    127910257.08    128010261.29    128110265.52    128210268.02
GR  128310270.22    128410272.58    128410311.45    128310349.84    128210393.39
NC                              0.2     0.4
NH     3   0.035 9773.23   0.02510200.77   0.03510317.37
ET                      7.1                             9756.1110249.73
X1 7.837       36 9698.6410304.67      380     380     380
GR  1287     9647     1286 9686.69    1285 9698.64    1284 9709.67    1283 9713.85
GR  1282 9717.79    1281 9721.87    1280 9725.94    1279 9730.02    1278 9734.21
GR  1277 9738.14    1276 9742.27    1275 9746.36    1274 9750.41    1273 9754.54
GR  1272 9759.02    1271 9773.23    1271 9840.07    1271 9856.43    1271 9973.97
GR  1271 9985.58    127110200.77    127210260.79    127310264.48    127410268.05
GR  127510271.59    127610275.35    127710279.01    127810282.67    127910286.34
GR  128010289.98    1281 10293.7    128210297.32    1283    10301   128410304.67
GR  128410317.37
NC                              0.2     0.4
NH     3   0.035 9842.02    0.0210110.98   0.03510413.91
ET                      7.1                             9837.4710240.44
X1 7.883       42 9683.9510317.03      240     240     240
G     288     9648     1287 9675.17    1286 9683.95    1285 9703.44    1284  9706.7
       83 9710.29    1282 9713.72    1281 9717.14    1280 9720.57    1279 9723.89
Gk  1278 9727.34    1277 9730.86    1276 9734.51    1275  9747.7    1274 9764.38
GR  1273 9781.09    1272 9799.49    1271 9815.07    1270 9823.52    1269 9827.91
GR  1268 9832.74    1267 9837.47    1266 9842.02    126610110.98    126710114.29
GR  1268 10117.5    127210133.16    127310163.66    127410262.52    127510267.01
GR  127610270.23    127710273.01    127810275.81    127910278.53    128010281.71
GR  128110284.97    128210290.15    128310294.34    128410305.53    128510317.03
GR  128610345.23    128710413.91
NC                              0.3     0.5
NH     3   0.035 9853.53    0.025 10189.4   0.03510430.14
ET                      7.1                             9891.6910177.56
X1 7.955       45 9790.0410247.68      227     500     400
GR  1294     9608     1293 9671.72    1292 9722.56    1291 9762.22    1291 9790.04
GR  1291 9796.84    1290  9802.9    1289 9805.47    1288 9808.06    1287 9810.76
GR  1286 9813.33    1285  9815.8    1284 9818.47    1283 9821.09    1282 9823.82
GR  1281 9826.49    1280 9829.27    1279 9831.88    1273 9848.13    1272 9850.71
GR  1271 9853.53    1271 10189.4    1272 10192.6    127310196.11    127410199.42
GR  127510202.55    127610205.58    127710208.53    127810211.41    1279 10214.4
GR  128010217.26    128110220.14    128210223.13    128310226.07    128410229.02
GR  1285 10232.1    128610235.15    128710238.18    128810241.31    128910244.62
GR  129010247.68    129110314.28    129110375.83    1291    10399   129110430.14
NC                              0.3     0.5
NH     1    0.0210485.63
ET                      7.1                             9726.2710222.92
* INDIAN BEND ROAD
      OF DROP STRUCTURE
X      979       33 9565.0410485.63      120     120     120
X5     1        0
GR  1285     9256     1284 9321.14    1283 9494.49    1282 9565.04    1281 9568.98
GR  1280 9572.99    1279 9577.01    1278 9580.95    1277 9584.86    1276  9588.9
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GR  1275 9593.15    1274 9603.75    1273 9642.22    1272  9689.8    1271 9840.21
GR  1271 9868.59    1271 9886.96    1271 9900.37    127110054.66    127110222.92
GR  127210340.61    127310391.33    127310439.38    127310441.24    1274 10460.2
GR  127510463.28    127610466.44    127710469.65    127810472.86    127910476.05
C     8010479.06    128110482.23    128210485.63
                                0.3     0.5
NH     1    0.02 11074.4
ET                     7.1                          9518.7610322.56
X1 7.988       19    913210958.29      50       50       50
GR  1290    9132    1289  9192.6    1288 9233.54    1287 9287.36    1286 9325.51
GR  1285 9364.75    1284 9417.53    1283 9492.61    1282  9842.8    128210582.52
GR  128310644.56    1284 10689.2    128510746.47    128610760.15    128710797.29
GR  128810841.21    128910886.28    129010958.29    1290 11074.4
NC                              0.3     0.5
NH     1    0.0211174.97
ET                     7.1                          9408.0310307.21
* begin file 13ibw.dwg
* INDIAN BEND ROAD
* UPSTREAM EDGE OF DROP STRUCTURE
X1 7.992       22    912511174.97      20       41       30
GR  1290    9125    1289 9181.43    1288 9235.45    1287 9278.64    1286 9315.09
GR  1285 9365.93 1282.11 9415.88    1284 9417.38    1283 9492.75    1282 10219.8
GR  128210245.85    128210257.45    128210360.42    1283 10587.1    128410642.48
GR  128510687.23    1286 10710.3    128710754.64    128810801.34    128910844.66
GR  129010935.16    129111174.97
NC                              0.2     0.4
QT     2   16000   16000
ET                     7.1                          9055.2910085.96
NH     1    0.0210795.63
X'    '44       69 8888.98 10695.8     787     252     582
      90    8805 1288.96 8872.78 1289.23  8872.9    1291 8888.98    1291 9012.86
GR  1290 9017.94    1289 9023.14    1288 9028.46    1287 9033.55    1286 9039.04
GR  1285 9044.43    1284 9049.95    1283 9055.39    1282 9060.76    1282 9421.55
GR  1283 9428.11    1284 9434.22    1284 9625.02    1284 9741.98    1284 9768.79
GR  1285 9853.69    1285 9905.79    1284 9915.43    1283 9925.26    1282 9932.13
GR  128210123.76    128310139.42    128410146.48    128510167.31    128610179.79
GR  128710193.97    128810208.43    128910219.81    129010231.18    129110292.72
GR  129210368.61    129310378.64    129310383.49    129210386.43    129210396.16
GR  129310402.66    129310402.66    129310431.41    129210438.76    129110447.63
GR  129010457.14    128910465.13    128810472.85    128710480.77    128610489.02
GR  128610542.71    128710551.01    128810558.87    128810595.56    128710601.59
GR  128610611.59    1285 10635.5    128510660.68    128610663.71    128710666.48
GR  128810669.39    128910672.14    129010674.81    129110677.42    129210683.71
GR  129310689.92    1294 10695.8    129410773.46    129410795.63
NC                              0.2     0.4
NH     6    0.04  9223.4    0.03 9425.04    0.02 9541.69    0.0410045.61    0.02
NH 10130    0.0410813.45
ET           5.1     7.1           9399   10110 9399.3510100.31
* NON-EFFECTIVE FLOW AREA REMOVED
X1 8.239       87 8341.39   10671     533     465     500
X3     0
GR  1291    8271    1291 8279.34    1292 8341.39    1292 8343.02    1291 8360.81
GR  1290 8366.36    1289 8372.65    1288 8391.63    1287 8411.56    1286 8437.41
GR  1285 8486.31    1284 8617.18    1283 8675.63    1282 8770.09    1282 8806.59
GR  1283 8863.16    1284  9102.3    1284  9223.4    1283 9300.15    1282 9359.65
      82 9393.55    1283 9404.37    1283 9409.82    1282 9425.04    1282 9541.69
      83 9556.18    1284  9571.3    1285 9584.31    1286  9587.8    1287 9592.22
GR  1287 9654.77    1286 9690.34    1285 9716.12    1285  9736.2    1286 9743.44
GR  1287 9774.66    1288 9780.75    1289 9787.61    1290 9797.45    1291 9806.16
GR  1291 9813.13    1290 9827.75    1289 9844.41    1288 9848.37    1287 9853.79
```

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GR  1287 9880.65    1287 9918.62    1286  9942.4    1285 9974.63    1284 10000.3
GR  128310036.29    128210045.61    1282   10130    128310140.34    128410152.39
GR  1285 10171.5    128610193.12    128710202.72    128810209.79    128910217.07
GR  128910251.17    128810258.64    128710268.29    128610285.78    128510308.16
      8510317.84    128610379.81    128610380.31    128610389.07    128610393.46
      28610434.76    128710508.22    128810521.16    128910534.92    129010553.21
GR  129010570.81    128910582.25    128810589.53    128710596.91    128610604.52
GR  128610648.75    128710654.97    128810660.64    128910665.79    1290   10671
GR  129110802.93    129110813.45
NC                              0.2     0.4
NH     3    0.04 9975.96    0.0210026.79    0.0410519.29
ET                    7.1                          9362.610101.77
X1 8.333       75 9038.5910488.36     500     485     500
GR  1292    8597    1292 8665.54    1292 8669.45    1292 9038.59    1291 9048.33
GR  1290 9058.31    1289 9067.81    1289  9083.2    1290 9101.86    1290 9108.13
GR  1289 9114.23    1289 9125.22    1290 9142.97    1290 9145.67    1289 9218.37
GR  1288 9275.18    1287 9281.88    1287 9285.75    1288 9289.47    1288 9309.84
GR  1287 9328.18    1286 9331.79    1285 9354.88    1284 9379.67    1283  9399.1
GR  1283 9414.08    1284 9462.39    1284 9517.01    1283 9528.65    1283 9550.03
GR  1284 9560.13    1285 9570.03    1286 9580.06    1287 9590.85    1288 9602.82
GR  1288 9627.83    1288 9683.54    1289 9695.99    1290 9703.69    1290 9736.58
GR  1289  9744.7    1288 9752.26    1287  9759.8    1287 9765.29    1287 9770.34
GR  1286 9796.27    1286  9798.3    1286 9844.28    1286  9852.5    1287 9868.22
GR  1288 9881.33    1289 9895.19    1289 9921.56    1288 9932.05    1287 9941.53
GR  1286  9951.2    1285  9972.6    1284 9975.96    128410026.79    128510101.77
GR  128510103.89    128510115.14    128610157.67    128710290.14    128810319.81
GR  128810371.48    128710415.13    128710450.96    128810456.61    128910459.27
GR  129010461.15    129110462.98    129210464.62    129210488.36    129110519.29
NC                              0.2     0.4
N      4    0.04 9980.82    0.0210036.93    0.04 10173.9    0.0310704.56
                      7.1                          9269.510287.14
X1 8.428       70 9148.1110606.78     620     438     500
GR  1293    9024    1293 9113.99    1293 9148.11    1293 9155.02    1292 9159.17
GR  1291 9163.52    1290 9168.26    1289 9180.32    1288 9195.75    1287 9210.75
GR  1287 9335.74    1287 9380.41    1286 9460.32    1286 9527.44    1287 9543.01
GR  1288 9558.29    1289 9564.33    1290 9574.05    1290 9619.16    1289 9631.38
GR  1288 9641.17    1288  9656.7    1288 9673.33    1287  9679.6    1287 9688.09
GR  1288 9702.43    1289 9713.26    1290 9723.15    1291 9738.08    1292 9753.15
GR  1293 9770.03    1293 9779.38    1293 9780.71    1293 9797.34    1292 9809.46
GR  1291 9819.58    1290 9828.35    1290 9888.96    1290 9907.18    1290 9921.44
GR  1290 9945.62    1289 9956.29    1288 9959.71    1287 9963.86    1286 9971.28
GR  1285 9977.71    1284 9980.82    128410036.93    128510042.68    128610049.07
GR  128710055.21    128810064.35    128910085.52    129010097.08    129110108.39
GR  129110132.75    129010141.96    128910153.69    128910156.03    1289 10173.9
GR  128810304.49    128810572.85    128910578.73    129010584.77    129110590.39
GR  129210596.03    129310601.34    129410606.78    129410680.56    129410704.56
NC                              0.2     0.4
NH     5    0.0410005.09    0.0210063.32    0.0410411.04    0.02 10457.3    0.03
NH 11140
ET                    7.1                          9506.56 10457.6
X1 8.523       84 9166.5110482.62     500     500     500
X3    10
GR  1294    9033    1294 9043.07    1295 9069.83    1295 9097.43    1295 9098.02
GR  1296 9166.51    1296 9186.54    1295  9194.5    1294 9202.49    1293  9209.2
GP  1292 9222.43    1292 9234.91    1293 9251.77    1293  9284.5    1292 9296.15
      91 9303.73    1290  9311.2    1290 9384.58    1290 9402.22    1289 9416.58
G.  1288 9442.34    1288 9717.54    1289 9747.25    1290 9788.22    1290 9865.79
GR  1290 9867.43    1290 9975.52    1289 9990.22    128810001.16    128710005.09
GR  128710063.32    128810069.06    128910074.09    129010078.94    129110088.26
GR  129210100.84    129310113.29    1293 10123.7    129310141.04    129310150.39
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GR  129210205.19    129310211.63    129410225.21    129510234.22    129610245.27
GR  129610256.08    129510263.26    1294 10268.4    129310273.29    129210278.21
GR  129110283.15    129110301.52    129210307.52    129210308.14    1291 10333.5
GR  129010373.02    128910398.46    128810407.06    128710411.04    1287 10457.3
G    8810461.91     128910464.49    129010466.82    129110469.61    129210472.62
G    29310477.07    129410482.62    129410501.94    129310505.51    129210509.19
GR  129110512.37    129010515.67    128910519.06    128910823.17    129010828.76
GR  129110834.28    129210839.86    129310844.48    129410848.96    129510853.54
GR  129510885.82    129410912.48    129410963.19    1294   11140
NC                              0.2     0.4
NH     4    0.04 9956.68    0.02 9996.62    0.0410443.08    0.0310454.18
ET                     7.1                          9286.76 10301.6
* begin file 14ibw.dwg
*  THE GR POINTS HAVE BEEN REDUCED TO MEET THE REQUIREMENTS OF GR POINT NO.
*
X1 8.656       82 9728.9110454.18     520     480     513
X3    10    1290
GR  1299 8699.37    1300 8706.38    1301 8713.44    1302 8721.11    1303 8728.46
GR  1304 8735.64    1305 8746.39    1306 8759.21    1307 8783.99    1307 8815.84
GR  1306 8828.63    1305 8838.51    1304  8848.4    1303    8859    1302 8869.98
GR  1301 8880.79    1300 8892.43    1299 8903.65    1298 8921.42    1297  8942.2
GR  1296 8962.89    1295 8982.63    1294 9050.73    1294 9086.84    1295 9114.16
GR  1296 9129.22    1297 9142.22    1298 9154.97    1299 9170.83    1299 9184.88
GR  1297 9205.73    1296 9216.75    1295 9225.58    1294 9248.93    1294 9478.93
GR  1295 9534.87    1295 9604.63    1294 9618.28    1293 9628.05    1293  9664.4
GR  1294 9673.31    1295 9681.75    1296 9690.17    1297  9703.6    1297 9728.91
GR  1296 9739.16    1295 9746.39    1295 9758.57    1295 9773.84    1294 9799.62
GR  1293 9929.64    1292 9936.16    1291 9943.57    1290 9945.03    1289 9946.02
GR  1288 9948.31    1287 9956.68    1287 9996.62    128810000.33    128910002.76
G    9010004.58     129110083.06    129210098.66    129210126.37    129110129.65
      9110130.41    129210133.73    129210137.52    129110331.33    1290 10355.4
GR  128910361.58    128910397.08    129010400.96    129110405.31    129210411.13
GR  129310416.24    129410421.58    129510426.81    129610431.98    129610443.08
GR  129610443.33    129710454.18
NC                              0.2     0.4
NH     5    0.04 9272.89    0.03 9482.75    0.0210230.94    0.03   10278    0.04
NH 10395
ET                     7.1                          9409.44 10050.6
X1 8.752       70 8325.4410325.92     480     480     480
X3    10    1291
GR  1305 8300.18    1305 8325.44    1306 8333.55    1306 8346.54    1305 8347.54
GR  1305 8347.57    1302  8396.8    1301 8399.92    1300 8403.45    1300 8404.44
GR  1300 8470.39    1299    8480    1298 8489.32    1298 8526.79    1299 8547.29
GR  1300 8559.83    1300 8584.07    1299 8629.44    1299 8634.96    1300 8640.09
GR  1300  8663.9    1300 8676.49    1301 8686.32    1301 8687.89    1301 8694.34
GR  1301 8724.02    1300 8759.23    1299 8853.83    1299 8881.77    1300  8990.4
GR  1301 8999.81    1301    9028    1300 9042.97    1300 9066.94    1301  9077.8
GR  1301 9093.49    1301 9094.85    1301 9114.43    1300 9123.03    1299 9130.34
GR  1298 9134.44    1297 9150.91    1297 9190.64    1298 9199.73    1299 9206.81
GR  1299 9231.22    1298 9241.13    1297    9250    1296 9260.62    1295 9272.89
GR  1294 9300.06    1293 9361.62    1292 9446.77    1291  9467.4    1290 9473.26
GR  1289 9482.75    128910230.94    1290 10241.7    129110246.87    129210253.38
GR  129310263.98    129410273.07    1295   10278    129610286.13    129710297.25
GR  129810307.06    129910325.92    1299   10366    129810390.14    1298   10395
NH     3    0.03 9246.38    0.02 10211.6    0.0310366.99
                       7.1                          9548.5510102.18
X1  .996       40 9033.7510366.99     1288    1288    1288
X3     0    1291
GR  1303    8434    1303 8565.58    1302 8579.31    1302 8586.46    1302 8790.14
GR  1301 8796.54    1300 8803.89    1299 8811.57    1298  8833.2    1298 8835.59
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GR 1298 8910.09 1298 8923.92 1299 8966.32 1300 8982.2 1301 8993.23
GR 1302 9022.76 1302 9033.75 1301 9126.67 1300 9148.26 1299 9160.3
GR 1298 9169.54 1297 9178.49 1296 9186.91 1295 9195.08 1294 9207.54
GR 1293 9225.99 1292 9232.88 1291 9234.8 1290 9237.04 1289 9246.38
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GR 1297 8957.91 1297 8999.5 1297 9024.6 1297 9067.54 1297 9088.17
GR 1296 9104.44 1294 9199.38 1293 9207.77 1292 9216.38 1291 9227.3
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X1 9.125 66 9249.4810820.74 417 440 529
X3 10 1291
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GR 1302 8159.2 1301 8161 1301 8219.36 1302 8221.73 1303 8224.4
GR 1303 8339.05 1302 8443.39 1301 8659.58 1300 8869.55 1299 8880.88
GR 1298 8885.18 1298 8932.58 1299 8942.31 1300 9198.08 1300 9249.48
299 9306.36 1298 9313.89 1297 9321.14 1296 9327.07 1296 9356.46
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GR 1301 8514.43 1301 8551.85 1302 8557.65 1302 8562.23 1301 8567.3
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GR 1303 8825.11 1303 8841.26 1303 8855.52 1303 8943.38 1302 8995.52
GR 1302 9009.83 1302 9021.45 1303 9079.06 1303 9170.11 1302 9177.77
GR 1301 9184.98 1300 9200.74 1299 9263.06 1298 9273.14 1297 9283.5
GR 1297 9562.82 1298 9567.08 1299 9580.28 1300 9617.46 1300 9617.47
GR 1300 9631.32 1299 9639.31 1298 9641.01 1297 9643.37 1297 9725.49
GR 1298 9736.97 1298 9768.93 1298 9783.41 1298 9794.42 1298 9799.83
99 9844.67 1299 9849.81 1299 9893.86 1299 9902.31 1299 9920.44
GR 1299 9939.53 1298 9943.41 1297 9947.24 1296 9950.81 1295 9953.24
GR 1294 9954.28 1293 9955.12 1292 9956 1292 9973.93 129710023.16
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GR  130010564.36     130010581.88     130010591.77     130210672.44
NC                              0.3      0.5
NH     2    0.04     9354     0.0210687.14
ET                      7.1                              9459.94    10300
*      TSDALE ROAD
       NSTREAM EDGE
X1 9.128       68 9292.7610482.96      126      103       23
X3    10
GR  1306     7632     1305 7689.25     1304 7788.64     1304 7794.29     1305 7798.87
GR  1305 7849.76     1304 7866.08     1304 7870.89     1304 7924.01     1303 7975.02
GR  1303 7982.72     1303  8081.1     1302 8086.91     1302 8093.38     1302 8181.98
GR  1301 8204.33     1301 8261.45     1301 8269.82     1301 8274.23     1301 8376.28
GR  1301 8388.18     1302 8429.02     1303 8547.26     1303 8579.78     1302 8592.76
GR  1302 8596.73     1303 8640.26     1303 8687.77     1303 8730.42     1303 9018.62
GR  1303 9028.96     1303 9060.87     1303 9155.14     1303 9292.76     1302     9300
GR  1301 9306.81     1300     9354     1299 9364.09     1298 9368.22     1297 9372.23
GR  1297 9717.85     1298   9725.6     1299 9733.64     1299 9774.57     1299 9794.61
GR  1299   9808.4     1299 9930.18     1299 9970.62     1299 9993.19     1299 9994.24
GR  129810003.77     1297    10004     1290 10004.1     1290    10040     129710040.51
GR  129710047.43     129810047.93     129910183.14     129910203.87     129810285.23
GR  129810291.08     129610431.91     1294 10450.5     129410455.83     129610464.86
GR  129810473.92     130010482.96     130210687.14
NC                              0.2      0.4
NH     3    0.04   9380.8     0.0210470.76     0.0410684.96
ET                      7.1                              9440    10285
SB  1.25      1.5      2.6        0       32        2       90        0     1290     1290
* SCOTTSDALE ROAD
* UPSTREAM EDGE
X1  9.15       78  9380.810482.44      242      188      100
X                       1     1293     1299                        2
       10
BT   -12 9380.80     1302        0 9406.69     1296        0 9495.08     1299        0
BT        9585.15     1298     129810085.37     1298     129310145.97     1298     1293
BT       10217.85     1298     129810290.16     1296       010345.75     1294        0
BT       10399.09     1298       010470.76     1300       010482.44     1302        0
GR  1308     7645     1307 7679.58     1308 7685.69     1308   7713.7     1307   7789.4
GR  1306 7844.38     1306 7850.83     1306 7904.35     1306 7905.91     1306 7913.26
GR  1305 7981.98     1305 7994.43     1306 8024.97     1306 8029.09     1305   8098.2
GR  1304 8114.24     1304 8213.13     1304 8231.67     1303 8305.91     1303 8341.25
GR  1303 8556.76     1302   8597.7     1302 8598.04     1303 8718.52     1303 8886.22
GR  1302 8917.78     1302 8935.07     1302   8939.4     1302 8958.93     1303 9059.65
GR  1304 9186.81     1304 9194.12     1304   9202.7     1304   9209.2     1303 9230.59
GR  1303 9255.37     1303 9263.16     1303 9265.48     1304 9284.53     1304 9297.82
GR  1303 9309.38     1302   9380.8     1301 9384.57     1300 9388.24     1299 9392.12
GR  1298 9396.01     1297 9400.35     1296 9405.94     1296 9406.69     1297 9456.68
GR  1298 9466.48     1299 9476.78     1299 9480.41     1299 9480.83     1299 9495.08
GR  1298 9585.15     129810085.37     129610087.15     129410090.03     1292 10096.3
GR  129010109.89     129010133.38     129210135.53     1294 10137.8     129610140.72
GR  129810145.97     129810217.85     129610290.16     129410302.52     129210314.74
GR  129210331.24     129410345.75     129610359.56     129810399.09     130010470.76
GR  130210482.44     130210664.16     130210684.96
NC                              0.2      0.4
NH     4    0.04 9559.06     0.02  9626.3   0.03510000.78     0.0310764.14
QT     2    9000     9000
ET                      7.1                              9704.84    10370
       .43       49 9559.0610412.65      499      499      499
G.    307     8200     1306 8273.76     1306 8319.07     1307 8341.51     1307 8353.83
GR  1306 8513.68     1305 8585.28     1304 8634.02     1304 8639.34     1304 8710.69
GR  1303 8725.25     1302 8742.24     1302 8746.48     1302 8778.78     1302 8779.83
GR  1303 8857.81     1303 8913.82     1302 8938.64     1302 8982.63     1302 8990.36
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GR  1302 9117.29    1302 9330.59    1301  9378.9    1301 9381.68    1302  9406.3
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GR  1301  9568.5    1300 9573.87    1299 9579.12    1298 9585.11    1297 9593.29
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ET                    7.1                             9380   10060
X1 9.283       34  8865.110121.37     325      314      316
X3    10
GR  1305    8345    1305 8369.71    1305 8373.72    1304 8532.89    1303 8582.14
GR  1302 8677.96    1301 8680.74    1300 8756.92    1300 8765.52    1301 8781.07
GR  1302 8816.57    1302  8865.1    1301 8910.26    1300 8921.59    1299 8932.24
GR  1298 8947.62    1298 8948.68    1299 8956.68    1300 8964.35    1301 8971.83
GR  1300 9387.21    1298 9949.27    1296 9964.28    129410043.26    129410058.05
GR  129610068.69    129810078.34    130010093.85    130210104.95    130410114.07
GR  130410121.37    1304   10182    130410319.77    130410516.13
NC                              0.2     0.4
NH     2    0.02 8998.38    0.03 11110.5
ET                    7.1                             9470   10180
X1 9.375       41 8732.4910560.61     298      400      400
X3    10
GR  1305    8565    1305 8597.22    1304 8732.49    1303 8780.76    1302 8786.34
GR  1300 8823.58    1301 8829.32    1302 8835.16    1303 8841.15    1302 8998.38
GR  1302 9061.63    1302 9164.08    1302 9198.81    1302 9216.04    1300 9410.45
GR  1300 9414.19    1300 9949.03    130010014.12    130210213.01    1302 10240.9
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GR  130610611.91    130610855.44    130410898.21    130410917.87    130410932.03
GR  130410957.43    130611183.01    130811414.86
NC                              0.2     0.4
NH     3    0.0410004.81   0.02510043.44    0.0411443.74
ET                    7.1                             9475   10280
X1 9.564       24 9447.1110529.67     494      472      484
X3    10
GR  1308 9346.53    1308 9447.11    1306 9508.75    1306 9553.65    1308 9569.88
GR  1308 9597.04    1306 9628.35    1304 9638.64    130210004.81    130210043.44
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GR  131010529.67    131010650.38    130810667.22    130610674.58    130610684.33
GR  130811115.96    130811165.45    130811248.74    131011443.74
NC                              0.2     0.4
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                      7.1                             9700   10540
 .578       32 9474.8110886.25     500      500      500
X3    10
GR  1312 9420.83    1314 9440.22    1314 9474.81    1312  9521.7    1310 9558.29
GR  1308 9666.24    1306 9777.09    130410005.23    1302 10023.8    130210029.09
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GR  1312 9498.26    1310 9541.78    1308 9688.09    1306 9936.63    1304 9956.69
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GR  130610329.01    130810461.73    131010525.12    131210550.48    1312 10640.8
GR  131010812.91    131010832.14    131010927.43    131010944.94    131211219.15
NC                          0.2     0.4
NH      3    0.04 9970.53   0.02510058.38    0.0411423.69
ET                   7.1                          9825   10450
X1 9.849       41 9577.8510583.29     463     403     427
X     10
      12    8866    1312 8931.18    1312 8971.77    1312 9070.09    1312 9148.12
GR  1310 9192.92    1310 9216.48    1312 9286.58    1314 9301.88    1316 9314.84
GR  1316 9327.55    1314 9430.41    1312 9446.54    1312 9450.07    1312 9458.15
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GR  131411423.69
NC                          0.2     0.4
NH      3    0.04 9908.67   0.02510092.39    0.0411147.78
ET                   7.1                          9750 10218.8
X1 9.943       23  9584.110852.41     499     482     489
X3    10
GR  1314    8890    1314 8934.84    1314 9345.84    1316 9379.14    1316 9410.18
GR  1316  9484.7    1316  9584.1    1314 9599.37    1312 9620.06    1310 9908.67
GR  1308 9973.98    130810021.45    131010092.39    131210267.02    131410297.01
GR  1314 10371.3    1314 10376.6    131410413.86    131410743.19    131610817.42
GR  131810847.12    131810852.41    131611147.78
NC                          0.2     0.4
NH      3    0.04  9953.4   0.02510092.89    0.0411227.56
ET                   7.1                          9610 10303.6
X1 10.04       15  9436.910962.81     431     446     435
X3    10
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(     14 9535.36    1312  9953.4    1310 9975.47    131010070.38    131210092.89
G.   31410363.38    131410388.23    131410595.69    131610962.81    131811227.56
NC                          0.2     0.4
NH      3    0.04 9886.16   0.02510146.89    0.0410910.25
ET           5.1     7.1            9800   10290    9850   10290
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X1 10.13       12 9549.4910335.77      500      500      500
X3     10
GR   1320 9549.49     1318 9575.62     1316 9598.53     1314 9626.52     1314 9790.15
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C      1810335.77     131810910.25
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NH      3    0.035 9845.63    0.02510235.46    0.035 11130.7
ET                      7.1                              9820    10180
X1 10.23       18 9642.8710274.69      500      500      500
X3     10
GR   1328     9361     1328 9369.05     1326 9577.44     1326 9586.24     1326 9633.23
GR   1324 9642.87     1322 9684.79     1320 9695.64     1318 9709.06     1316 9845.63
GR   1314 9942.23     1314 10089.5     131610199.49     131810235.46     132010274.69
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NH      3     0.04 9830.16    0.02510103.13     0.0410594.98
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X1 10.32       14 9643.8210351.19      500      500      500
X3     10
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GR   1318 9680.94     1316 9830.16     1314 9927.49     131410066.92     131610103.13
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NC                              0.2      0.4
NH      3     0.04 9789.07    0.02510353.21     0.0410679.88
ET                      7.1                           9727.28 10325.4
X1 10.38       23 9642.0210574.64      374      191      312
X3     10
GR   1326     8615     1324 8773.44     1322 8782.11     1322 8837.21     1324 8841.54
GR    326 8846.32     1326   8848.7     1324 9075.17     1324 9189.14     1324 9642.02
       22 9659.25     1320 9672.55     1318 9789.07     1316 9929.32     1314 9994.26
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GR   132210622.58     132210628.49     132210679.88
NC                              0.2      0.4
NH      1     0.0210440.51
ET                      7.1                           9701.97 10340.5
* INVERGORDON ROAD
* DOWNSTREAM EDGE
X1   10.4       18  9199.410440.51      200       10       90
X3     10
GR   1326     8912     1324 8964.12     1322 9096.03     1322 9148.79     1322  9199.4
GR   1320 9221.68     1318 9225.56     1318  9237.5     1318 9611.15     1316     9955
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GR   131810363.49     132010432.97     132210440.51
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ET                      7.1                           9723.47 10366.6
SB   1.25      1.5      2.6        0    48.42     3.75   126.86        0 1313.39 1313.08
* INVERGORDON ROAD
* UPSTREAM EDGE
X1 10.41       27 9553.6710449.52       58       58       58
X2                      1 1316.23  1317.7                        2               15
X3     10
BT     -8 9553.67     1322        0 9605.11     1320        0 9747.59     1318     1318
BT        9980.02  1317.7 1316.2310057.95  1317.7 1316.2310434.14     1318     1318
        10442.18     1320        010449.52     1322        0
      326     8905     1324 8960.06     1322 8968.57     1320 8976.38     1320 8992.98
GR   1322   9001.3     1324 9009.87     1324   9092.6     1324 9097.44     1322 9268.27
GR   1322 9520.74     1322 9553.67     1320 9605.11     1318 9747.59     1316 9980.02
GR   1314 9981.64     1312 9983.22     1310 9984.86     1308 9986.44     1308 9986.83
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GR  1310  9989.6    1312 9992.27    1314 9994.79    131610057.95    131810434.14
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NC                          0.2     0.4
NH     1   0.02510754.42
                        7.1                         9792.82 10263.9
X    .51       23 9633.5710293.94     341     706     542
X3    10
GR  1328     8259    1326 8973.96    1324 8980.79    1322 8987.23    1320 8993.96
GR  1320 9006.54     1322 9016.03    1324  9023.4    1324 9424.12    1324 9442.55
GR  1324 9458.76     1324 9471.17    1324 9633.57    1322 9656.06    1320 9667.29
GR  1318  9738.6    1316  9932.1    1316 10223.9    131810260.99    132010275.59
GR  132210293.94    132410745.53    132410754.42
NC                          0.2     0.4
NH     3    0.04 9864.39   0.02510160.08    0.0410266.73
ET                      7.1                         9724.6210154.77
X1 10.61       20 9505.2610190.08     455     455     455
X3    10
GR  1328     8457    1328 8733.22    1328 8871.72    1328 8876.17    1326  9331.6
GR  1326 9348.44     1326 9363.23    1326 9375.71    1326 9412.27    1326  9473.9
GR  1326 9505.26     1324 9517.71    1322  9584.4    1320 9864.39    1318 9909.66
GR  131810137.77    132010160.08    132210175.03    132410190.08    132410266.73
NC                          0.2     0.4
NH     3    0.04 9776.13   0.02510347.85    0.0410887.14
ET                      7.1                         9794.49 10335.4
X1  10.7       15 9703.3610409.29     460     478     470
GR  1330     8892    1328  9151.2    1326 9259.22    1326 9578.28    1326 9703.36
GR  1324 9720.46     1322 9776.13    132210292.52    132210304.54    132210347.85
GR  132410395.99    132610409.29    132810710.73    132810797.32    132810887.14
NC                          0.2     0.4
N      3    0.04 9924.74    0.0210094.08    0.0410666.98
                        7.1                         9826.8010370.86
X1  10.8       14 9787.4110492.06     480     480     480
X3    10
GR  1330 9071.01     1330 9165.31    1330 9212.99    1330 9232.41    1328 9787.41
GR  1326 9795.69     1324 9826.81    1322 9904.63    1320 9924.74    132010094.08
GR  132210335.31    132410469.02    132610492.06    132810666.98
NC                          0.2     0.4
NH     3   0.035 9818.74    0.0210109.41   0.035   10723
ET                      7.1                         9727.32 10201.6
X1 10.89       14 9680.52    10386     500     500     500
X3    10
GR  1330     9395    1330 9480.16    1328 9680.52    1326 9696.68    1324 9711.93
GR  1322 9791.56     1320 9818.74    132010109.41    132210290.51    132410332.97
GR  1326   10356    132810371.42    1330   10386    1332   10723
NC                          0.2     0.4
NH     3    0.04 9855.08   0.02510014.58    0.0410478.49
ET                      7.1                         9636.09 10230.6
* begin file 18ibw.dwg
X1 10.99       18 9587.3510272.96     476     485     480
X3    10
GR  1332     9018    1330 9224.48    1330 9237.57    1330 9517.84    1330 9541.07
GR  1330 9587.35     1328 9609.44    1326  9712.4    1324 9855.08    132410014.58
GR  132610038.54    132610107.27    132610162.09    132810257.01    133010272.96
GR  133210323.35    133210384.08    133210478.49
NC                          0.2     0.4
      3    0.04  9929.2   0.02510124.77    0.0410686.08
E.                      7.1                         9680.0710288.39
X1 11.08       18 9631.2210338.21     460     488     476
X3    10
GR  1334     9058    1334 9362.46    1332 9381.62    1332 9401.51    1332  9431.1
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GR  1332 9435.95    1334 9446.57    1332 9631.22    1330 9649.88    1328 9753.67
GR  1326  9929.2    1324 9957.65    132410074.31    132610124.77    132810305.97
GR  133010322.49    133210338.21    133410686.08
NC                          0.2     0.4
   3    0.04 9959.08    0.0210226.04    0.0411197.46
E                   7.1                         9694.37   10363
* DOUBLETREE ROAD
* DOWNSTREAM EDGE
X1 11.15      31 9649.22 10426.7     334     440     402
X3    10
GR  1336    8937    1334 9249.41    1332 9253.94    1332 9317.48    1334 9355.42
GR  1334 9425.02    1334  9521.5    1334 9649.22    1332 9663.81    1330 9679.16
GR  1328 9959.08    1326 9972.97    1324 9974.08    1322 9975.27    1320 9978.94
GR  1320 9993.92    1322 9996.01    1324 9998.13    132410056.39    1324 10069.9
GR  1326 10105.3    132810226.04    133010379.72    1332 10407.8    1334 10426.7
GR  133410555.38    133410567.92    133410580.83    133410597.89    1336 10831.1
GR  133811197.46
NC                          0.2     0.4
NH     3    0.04 9951.68    0.02 10112.9    0.0411137.34
ET                  7.1                         9691.49 10372.1
SB  1.25     1.5     2.6       0   48.42    3.75  133.12       0 1324.25 1324.07
* DOUBLETREE ROAD
* UPSTREAM EDGE
X1 11.17      27 9659.1410421.09      98      98      98
X2                    1 1327.23 1329.37                     2
X3    10
BT   -14 9659.14    1334        0 9671.04    1332        0 9691.49    1330        0
BT       9911.26    1328        0 9951.68    1328        0 9976.02    1330        0
BT       9985.09    1330     1330 9991.59 1329.37    1328 9994.71 1329.37 1327.23
r       10090.91 1329.37 1327.23 10112.9 1329.37    1328   10210  1329.4        0
L       10404.83    1332        010421.09    1334        0
GR  1336    8999    1334 9479.44    1334 9498.99    1334 9518.68    1334 9527.49
GR  1334 9659.14    1332 9671.04    1330 9691.49    1328 9911.26    1328 9951.68
GR  1330 9976.02    1330 9985.09    1328 9991.59    1326 9994.71    132610008.39
GR  132610012.26    132610082.14    132610085.45    132610090.91    1328 10112.9
GR1329.4   10210    133210404.83    133410421.09    1336 10666.3    133610723.71
GR  133610848.54    133811137.34
NC                          0.2     0.4
NH     3    0.04 9952.69   0.025   10142    0.0410643.65
ET                  7.1                         9740.12 10301.4
X1 11.27      16 9689.4310501.46      546     442     493
X3    10
GR  1336    9521    1336 9548.19    1336 9550.12    1336 9689.43    1334 9704.48
GR  1332 9773.68    1330 9952.69    1330   10142    133210302.46    133410342.21
GR  133410390.64    133410406.01    133410429.78    133410442.06    133610501.46
GR  133810643.65
NC                          0.2     0.4
NH     3    0.04 9879.37   0.02510129.73    0.0410625.02
ET                  7.1                         9762.8310344.04
X1 11.36      15  9689.710406.72      490     490     490
X3    10
GR  1338    9459    1338 9558.05    1338  9689.7    1336 9704.09    1334 9734.45
GR  1332 9879.37    1330 9983.63    133010018.87    133210129.73    133410179.21
GR  133410203.11    1334   10220    133610391.07    133810406.72    134010625.02
N                           0.2     0.4
   3   0.035 9815.74   0.025 10190.3   0.03510903.35
E                   7.1                         9767.4 10346.5
X1 11.46      15 9689.5310386.29      460     460     460
GR  1340    9433    1340  9509.2    1340 9689.53    1338 9705.73    1336 9722.63
GR  1334 9815.74    1334 10190.3    133610360.58    133810386.29    134010546.72
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GR  134010550.18    134010570.35    1342 10655.5    134210744.35    134210903.35
NC                          0.2     0.4
NH     3    0.04 9946.58   0.02510137.12    0.0410820.13
ET                    7.1                         9777.4310345.45
      n file 19ibw.dwg
      .55       15 9660.1110416.47     422  631.36     499
X3    10
GR  1342     9368    1342 9483.84    1344 9502.43    1344 9660.11    1342 9675.54
GR  1340 9712.48    1338 9722.39    1336 9846.33    1334 9946.58    133410137.12
GR  133610286.83    133810351.48    134010404.69    134210416.47    134410820.13
NC                          0.2     0.4
NH     3    0.04 9744.07   0.025 9939.54    0.0410473.33
ET                    7.1                         9688.4410184.07
X1 11.65       22 9602.5810342.28     425     562     480
X3    10
GR  1344     9130    1346 9160.16    1346 9274.57    1346 9334.44    1346 9361.08
GR  1344 9469.18    1344 9547.92    1346 9589.84    1346 9602.58    1344  9623.3
GR  1342  9650.4    1340 9673.55    1338 9688.44    1336 9744.07    1336 9939.54
GR  133810146.29    133810201.96    133810267.74    134010301.87    134210322.02
GR  134410342.28    134610473.33
NC                          0.2     0.4
NH     3   0.035 9855.06   0.025 10116.9   0.03510564.26
ET                    7.1                         9741.33 10116.9
X1 11.74       18 9640.1710345.18     468     530     502
X3    10
GR  1346     9089    1346 9570.52    1346 9606.25    1346  9620.3    1346 9640.17
GR  1344  9655.3    1342 9670.59    1340 9679.65    1340  9771.6    1340 9855.06
GR  1338 9922.24    133810054.62    1340 10116.9    134210291.67    134410322.74
GR  134610345.18    134610393.59    134610564.26
N                           0.2     0.4
      3   0.035 9909.27   0.02510180.29   0.03510937.66
ET                    7.1                         9909.04 10182.3
X1 11.84       17 9623.7410379.09     477     439     463
X3    10
GR  1348     9448    1348  9460.6    1350  9476.6    1350 9623.74    1348 9691.13
GR  1346  9703.9    1344 9716.89    1344 9732.19    1344 9830.34    1342 9909.27
GR  1340     9950    134010076.46    134210180.29    134410344.44    134610361.63
GR  134810379.09    135010937.66
NC                          0.2     0.4
NH     3   0.035 9862.46   0.02510130.25   0.03510602.28
ET                    7.1                         9890.9610223.74
X1 11.93       19 9626.11 10302.9     460     468     464
X3    10
GR  1350     9376    1350 9492.48    1350  9619.9    1350 9626.11    1348 9695.64
GR  1346  9756.5    1344 9862.46    1342 9976.05    1340 9990.39    1340 10044.1
GR  134210066.98    134410130.25    134410223.94    134410241.55    1346   10280
GR  134810296.27    1348 10302.9    134810334.56    135010602.28
NC                          0.2     0.4
NH     4   0.035 9969.07   0.02510129.93    0.0210418.84   0.03510781.13
ET                    7.1                         9947.14 10408.1
X1 12.03       20  9850.910639.52     468     417     441
X3    10    1342
GR  1352     9438    1350  9850.9    1348  9900.6    1346  9909.4    1344 9969.07
GR  1342 9981.79    134210029.17    134410063.14    134410105.01    134210129.93
GR  134010136.61    134010411.01    134210418.84    134410535.28    134610575.35
      4810619.15    135010639.52    1352 10689.6    135210703.34    135210781.13
N                           0.2     0.4
NH     3   0.035 9957.26   0.02510289.93   0.03510757.43
ET                    7.1                         9957.26   10334
X1 12.12       22  9893.710542.73     452     321     434
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X3    10
GR  1354    9486    1352 9662.52    1352 9728.55    1352  9893.7    1350 9901.18
GR  1348 9908.54    1346 9916.22    1344 9957.26    1342 9978.63    1342 9993.38
GR  134410018.05    134410210.35    134410289.93    134610405.28    134610476.83
G   4610510.57    134810521.29    135010532.01    135210542.73    135410628.93
G.  35410632.55    135410757.43
NC                          0.2     0.4
NH     3   0.035 9815.82   0.025   10050   0.035   10485
ET                  7.1                         9863.5510223.06
X1 12.22       18 9767.7910389.28     505     544     532
X3    10
GR  1354    9533    1354 9604.75    1354 9720.78    1354 9744.98    1354 9748.49
GR  1352 9767.79    1350 9782.55    1348 9797.51    1346 9815.82    1344 9984.08
GR  134410020.75    1346   10050    1348 10145.7    134810154.12    134810322.14
GR  135210353.29    135410389.28    1356   10485
NC                          0.2     0.4
NH     1   0.02510309.22
ET                  7.1                         9880.810124.62
X1 12.31       16 9821.4710216.42     491     487     497
X3    10
GR  1356    9453    1354 9821.47    1352 9834.28    1350 9844.39    1348 9853.59
GR  1346 9864.65    1344 9875.26    1344 9884.82    1344    9934    134410068.71
GR  134610106.11    134810143.75    135010181.04    135210200.13    135410216.42
GR  135610309.22
NC                          0.2     0.4
NH     1   0.025 9829.13
ET                  7.1                     9509.31 9753.66
X1 12.41       13    9457 9829.13     458     545     509
X3    10
G   354    9457    1352 9467.46    1350 9477.11    1348 9486.84    1346 9499.76
    346 9754.27    1348 9764.72    1350 9775.18    1352 9785.35    1354 9795.82
GR  1356 9806.71    1358 9817.79    1358 9829.13
NC                          0.2     0.4
NH     1   0.025 10335.5
ET                  7.1                     9941.51   10177
X1  12.5       24 9879.2210203.88     484     497     493
X3    10
GR  1360    9513    1358 9655.54    1358 9693.02    1358 9735.52    1358 9766.65
GR  1358 9879.22    1356 9914.29    1354  9922.4    1352 9929.75    1350 9936.85
GR  1348 9943.94    1346 9951.03    1346 9972.14    134610021.96    134610036.85
GR  134610075.31    134610147.21    134810156.63    135010165.92    135210175.29
GR  135410184.76    135610194.28    135810203.88    1360 10335.5
NC                          0.3     0.5
NH     1    0.02 10581.8
ET                  7.1                     9946.1510142.47
* begin file 20ibw.dwg
* SHEA BOULEVARD
* DOWNSTREAM EDGE
X1 12.54       15 9920.5110172.71     187     271     222
X3    10
GR  1360    9073    1358 9560.88    1358 9607.14    1360 9839.25    1358 9920.51
GR  1356 9925.66    1354 9930.92    1352 9936.36    1348 9946.15    134810153.66
GR  135210161.25    135410165.14    1356 10168.7    135810172.71    1360 10581.8
NC                          0.3     0.5
NH     1    0.0210786.05
                    7.1                     9941.1710156.72
Sb   0.9     1.5     2.6       0     179       8    2092       5    1348    1348
* SHEA BOULEVARD
* UPSTREAM EDGE
X1 12.56       18 9925.6210182.48      74      74      74
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X2                    1  1359.2 1361.33                    1.05
X3    10
GR  1358    9372    1358 9658.84    1358 9925.62    1356 9930.24    1354 9934.42
GR  1352 9938.48    1350 9942.52    1348 9946.54    134810158.81    135010162.55
    52 10167.1    135410172.09    135610177.17    135810182.48    136010198.08
    36010281.51    136010306.86    136210786.05
NC                            0.2     0.4
NH     1   0.02510569.39
ET                    7.1                          9897.0710078.89
X1  12.6       18 9827.2210216.73     228      63     201
X3    10
GR  1362    9656    1364 9816.57    1364 9827.22    1362  9833.1    1360 9838.94
GR  1358 9844.62    1356 9850.21    1354 9855.81    1352 9930.83    135210078.89
GR  135410128.05    135610135.48    135810143.52    136010151.66    136010171.83
GR  136210216.73    136210343.09    136210569.39
NC                            0.2     0.4
NH     1   0.02510363.83
ET                    7.1                          9925.2410220.41
X1 12.69       20 9813.1410254.89     500      420     500
X3    10
GR  1360    9658    1362  9693.8    1362  9710.6    1362 9724.56    1364 9796.88
GR  1364 9807.78    1362 9813.14    1360 9818.57    1358 9824.01    1356 9829.36
GR  135410007.13    135410028.47    135410132.95    135410151.06    135610217.22
GR  135810233.41    136010244.05    136210254.89    136410282.24    136410363.83
NC                            0.2     0.4
NH     3   0.035 9794.34    0.0210007.38   0.03510288.28
ET           5.1     7.1            980010105.31 9834.8210105.31
X1 12.78       15 9572.0010150.24     490      518     505
X3    10    1356
G   364    9572    1362  9604.5    1360  9617.4    1358 9631.36    1356 9794.34
    354 9801.65    135410000.86    135610007.38    135610083.05    135610100.36
GR  135810111.46    1360 10122.2    136210140.38    136410150.24    136410288.28
NC                            0.2     0.4
NH     3   0.035 9909.17    0.0210014.73   0.03510462.09
ET                    7.1                          9860.8510209.39
X1 12.88       22 9651.3510272.67     412      412     412
X3    10    1356
GR  1366    9412    1364 9432.08    1364 9472.98    1366 9496.28    1366 9626.97
GR  1364 9651.35    1362 9676.94    1360 9703.16    1358  9755.6    1356 9909.17
GR  1354  9938.8    135410005.09    135610014.73    135810070.35    135810168.13
GR  135610210.41    135610215.45    135810226.46    136010245.41    136210252.84
GR  136410272.67    136610462.09
NC                            0.2     0.4
NH     3   0.035  9989.7   0.02510117.26   0.03510543.13
ET                    7.1                          9809.2710168.97
X1 12.97       32 9716.4310240.65     509      463     489
X3    10  1359.5
GR  1366    9290    1366 9300.49    1366 9464.63    1366 9511.95    1368 9541.08
GR  1368  9621.5    1366 9716.43    1364 9728.46    1362 9740.27    1360 9761.66
GR  1360 9839.27    1362 9850.22    1362 9872.91    1360 9896.27    1360 9918.88
GR  1362 9957.34    1362 9968.14    1360 9979.08    1358  9989.7    135810051.71
GR  135810098.97    135810117.26    136010171.18    1362 10183.8    136210196.82
GR  136210213.61    136410231.23    136610240.65    136810293.19    136810320.88
GR  136810531.04    137010543.13
NC                            0.2     0.4
    3   0.035 9974.99   0.02510050.39   0.035 10444.3
                  7.1                          9795.3810164.32
X1 13.07       22 9617.6110264.93     435      435     435
X3    10
GR  1368    9359    1366 9379.02    1366 9414.02    1368 9447.58    1368 9571.37
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GR  1366 9617.61    1364 9650.67    1362 9881.45    1360 9974.99    1358 9991.36
GR  135810018.19    136010027.87    136210037.97    136210050.39    136210088.79
GR  136210103.74    136210227.74    136410236.13    136610264.93    136810276.38
GR  137010385.44    1370 10444.3
     3   0.035 9586.12   0.02510142.67   0.03510227.67
                  7.1                          9656.1910068.48
X1 13.16      15  9498.710227.67     353     511     448
GR  1368  9397.7    1370 9464.19    1370  9498.7    1368 9560.77    1366 9586.12
GR  1364  9623.6    1364 9864.56    1364 9963.62    1362 9978.53    1360 9986.07
GR  136010019.22    136210025.85    136410071.04    136610142.67    136810227.67
NC                          0.3     0.5
NH     5   0.035 9624.13   0.025 9723.41   0.035 9917.48   0.02510141.97   0.035
NH 10638
ET                  7.1                          9610.0910030.22
* begin file 21ibw.dwg
X1 13.25      31 9487.1910186.86     601     375     450
X3    10
GR  1372    8896    1372 8947.37    1372  9222.4    1372 9347.29    1372 9364.48
GR  1370 9487.19    1368 9519.23    1366 9532.12    1364 9624.13    1362 9648.06
GR  1360 9686.74    1360  9691.8    1362 9709.31    1364 9723.41    1366 9796.89
GR  1366 9826.47    1364 9917.48    1362  9927.8    136210064.32    136410141.97
GR  136610155.19    136810166.23    137010172.43    137010180.88    137010186.86
GR  137210204.21    137410257.96    137410434.57    1372 10498.1    137010565.23
GR  1370   10638
NC                          0.3     0.5
NH     1    0.0210888.07
ET                  7.1                          9936.2410066.41
* TATUM BOULEVARD (48TH STREET)
* DOWNSTREAM EDGE
X1  .38      29 9748.6810149.74     853     349     598
     10
GR  1374    9299    1372 9402.64    1372 9420.53    1372 9425.31    1372  9441.4
GR  1372 9696.91    1372 9720.24    1374 9726.87    1374 9748.68    1372 9760.05
GR  1370 9836.89    1368 9852.39    1366 9867.86    1364 9881.82    1362 9912.59
GR  136210115.77    136410118.49    136610120.58    136810122.33    1370 10124.3
GR  137210127.57    137410149.74    1374 10296.2    137410336.35    1374 10399.8
GR  137210445.04    137010541.94    137010827.77    137010888.07
NC                          0.3     0.5
NH     1    0.02 10271.1
ET                  7.1                          9971.07 10089.3
SB   0.9     1.5     2.6       0     155       5    1200       0    1362    1362
* TATUM BOULEVARD
* UPSTREAM EDGE
X1  13.4      13 9926.9610103.28     113     113     113
X2                    1    1370    1372                       2
X3    10
GR  1374    9679    1374 9926.96    1372  9928.4    1368 9930.81    1366 9932.12
GR  1364 9933.22    1362 9934.48    136210099.07    136410100.33    136610101.39
GR  136810102.14    137210103.28    1372 10271.1
NC                          0.3     0.5
NH     3   0.035 9926.36   0.02510048.07   0.03510206.73
ET                  7.1                          9923.2310087.53
X1 13.45      24 9818.3810164.64     223     282     252
X3    10
GR  1374    9755    1376 9766.15    1378 9777.18    1380 9793.33    1380 9818.38
     .78 9833.04    1376 9844.86    1374 9859.42    1372 9878.44    1370 9888.69
     368 9896.44    1366 9907.02    1366 9913.23    1366 9926.36    1364 9964.82
GR  136410035.91    136610048.07    136810100.67    137010141.42    137210151.57
GR  137410164.64    137410175.33    137410194.55    137410206.73
NC                          0.2     0.4
```

```
NH     4   0.035 9834.87     0.0310030.43    0.02510186.38    0.03510355.94
ET                    7.1                              9843.110180.59
X1 13.54       21 9755.6710221.45      470      486      477
X3     10
G      76     9465     1376 9475.38     1374   9579.4     1374 9637.97     1374 9655.15
       374 9674.62     1374 9755.67     1372 9772.92     1370 9834.87     1368 9989.73
GR  136610000.11     136410007.26     136410014.18     136610021.97     136810030.43
GR  137010186.38     1372 10201.7     137410221.45     137610283.55     137610312.66
GR  137410355.94
NC                              0.2      0.4
NH     3   0.035  9925.1     0.0310115.04    0.03510607.53
ET                    7.1                              9980 10327.6
X1 13.64       21 9872.4510393.56      440      440      440
X3     10
GR  1378     9391     1378 9840.89     1378 9872.45     1376 9882.26     1374 9897.68
GR  1372   9925.1     1370 9975.17     1368 9988.36     136810057.13     137010085.05
GR  137210115.04     137210198.62     137010223.64     137010269.63     137210338.23
GR  137410384.86     137610393.56     137610430.19     137610443.35     1376 10510.5
GR  137610607.53
NC                              0.2      0.4
NH     3   0.035 9912.33     0.0310108.04    0.03510647.94
ET                    7.1                              9780.9210150.07
X1 13.73       29 9756.1210220.51      384      429      408
X3     10
GR  1378     9076     1376 9149.82     1376 9150.23     1378 9170.21     1378 9175.65
GR  1378 9448.32     1378 9526.62     1376 9695.57     1376 9732.55     1376 9756.12
GR  1374 9764.98     1372 9784.45     1370 9912.33     1368 9948.82     136810019.97
GR  137010108.04     137210156.73     1374 10208.1     137610220.51     137810226.01
GR  137810243.13     137810260.64     137810273.66     137810291.52     137810385.43
G    37610401.61     137610437.14     137810457.34     137810647.94
                                0.2      0.4
NH     4   0.035 9972.94     0.0310038.73    0.02510207.04    0.03510700.64
ET                    7.1                              9943.33 10182.3
X1 13.83       31 9637.6110280.92      488      451      459
X3     10
GR  1378     9204     1378 9554.23     1378 9637.61     1376 9701.21     1374 9752.26
GR  1374 9761.18     1374 9853.72     1374 9858.33     1376  9872.3     1376 9884.97
GR  1376 9888.52     1376 9904.93     1374 9922.51     1372 9972.94     1370 9981.42
GR  1368 9987.28     136810007.76     1370    10017     137210038.73     137410207.04
GR  137610223.94     137610238.31     137610258.68     137810271.85     138010280.92
GR  138010309.24     138010376.58     1380 10408.7     137810472.42     1378 10569.1
GR  138010700.64
NH     1    0.03   10250
ET                    7.1                          9871.42 10152.2
X1 13.88       18 9891.1110249.01  289.24   128.56   237.05
X3     10
GR  1382     9712     1380 9727.55     1378 9786.59     1376 9796.48     1376 9806.83
GR  1376 9835.89     1376 9871.42     1378 9891.11     1378 9898.64     1376 9917.11
GR  1374 9967.98     1372 9975.31     1370 9982.45     137010025.21     137210044.52
GR  1374 10070.9     137410249.01     1379    10250
NC                              0.2      0.4
NH     3   0.035 9948.04     0.0310110.62    0.025 10843.9
ET                    7.1                          9859.69 10330.2
X1 13.92       44 9608.1910723.78   190.2   345.66   233.68
X3     10
       380     9300     1380 9308.07     1382   9324.8     1384 9350.25     1384 9375.52
       382 9434.66     1380 9436.92     1378 9439.44     1376   9441.6     1376 9456.79
GR  1380 9461.99     1382   9466.8     1382 9547.28     1382 9579.68     1384 9589.79
GR  1384 9608.19     1382 9620.67     1380 9637.36     1380 9657.49     1380 9670.55
GR  1380 9683.97     1380 9718.84     1378   9786.7     1378 9794.54     1378 9805.65
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GR  1376 9826.04    1376  9875.3    1376 9892.89    1374 9948.04    1372 9977.76
GR  1370 9995.02    137010009.71    137210037.88    137410063.06    137610106.69
GR  137610110.62    137610246.21    137610399.97    137610677.25    137810723.78
GR  138010806.75    138210818.62    1384 10832.7    1384 10843.9
                                0.2     0.4
     4   0.035 9821.28    0.03 9988.37   0.02510483.64   0.03510685.78
ET                   7.1                          9836.88 10341.9
* begin file 22ibw.dwg
X1 14.02       21    9602 10534.1     478      465      475
X3    10                 9836.83    1385 10341.9    1385
GR  1382     9571    1380    9602    1378 9627.28    1378 9668.55    1378 9821.28
GR  1376 9836.88    1374 9871.93    1372 9941.24    1372 9944.87    1374 9958.62
GR  1376  9978.8    1378 9988.37    137810011.67    137810483.64    1380 10534.1
GR  138210569.81    138410608.88    138610617.72    138610620.86    138410629.81
GR  138210685.78
NH     3    0.03 9961.26   0.02510474.87   0.03510567.13
ET                   7.1                          9976.21 10309.8
X1 14.06       20 9961.2610474.87  289.96  241.52  276.92
X3    10
GR  1382     9640    1382 9651.49    1382 9719.25    1380  9727.8    1378 9733.25
GR  1376 9737.75    1378 9879.02    1378 9915.96    1378 9929.99    1378 9961.26
GR  1374 9983.59    137410014.23    137610156.47    137810174.36    138010392.64
GR  138210474.87    138410488.01    138610500.56    1386 10512.8    138410567.13
NC                              0.2     0.4
NH     4   0.035 9836.63    0.0310060.27   0.02510255.66   0.03511010.55
ET                   7.1                          9788.38 10220.6
X1 14.11       32 9716.2110292.93     500      500      500
X3    10
GR  1382     9479    1382 9598.22    1382 9646.44    1384 9649.67    1386 9656.71
G   388 9663.87    1388 9668.52    1386 9679.22    1384  9688.3    1382 9716.21
    380 9736.19    1378 9743.61    1376  9789.2    1376 9811.67    1378 9816.99
GR  1378 9836.63    1374 9974.89    137410024.16    137610040.18    137810060.27
GR  138010078.53    138010116.62    138010255.66    138210292.93    1384 10606.9
GR  138410633.26    138410702.87    138410743.09    138410747.99    1386 10989.8
GR  138611007.54    138611010.55
NC                              0.2     0.4
NH     3   0.035 9933.34    0.0310042.35   0.03511054.68
ET                   7.1                          9926.42 10205.6
X1 14.21       22 9706.0710292.61     472      475      473
GR  1386     9447    1384 9560.19    1384 9584.86    1384 9666.78    1384 9706.07
GR  1384 9740.37    1382 9759.78    1380 9779.25    1378 9933.34    1376 9958.37
GR  137610035.91    137810042.35    1380 10248.3    138210292.61    138210486.43
GR  1382 10490.4    138410565.37    138410719.95    138410738.32    138611032.88
GR  138611042.53    138611054.68
NC                              0.3     0.5
NH     3   0.035 9954.29    0.0310093.27   0.03510886.85
ET                   7.1                          9903.17 10201.9
X1  14.3       48 9786.3810527.72     460      473      465
X3    10
GR  1386     9380    1386  9555.2    1386 9629.33    1386 9677.28    1386 9684.53
GR  1386 9743.85    1386 9747.71    1384 9781.94    1384 9786.38    1382 9797.48
GR  1382 9803.94    1382 9813.05    1382 9832.47    1382 9900.02    1384 9911.73
GR  1386 9923.33    1386  9933.8    1384     9941    1382 9947.44    1380 9954.29
GR  1378 9960.85    1376  9974.7    137610024.76    137810057.12    138010093.27
GP  138010158.53    138010203.46    138210254.88    138210301.56    1382 10326.8
    38210343.21    138210447.65    138410458.51    138610470.18    138810491.73
G.  139010502.91    139010505.36    138810517.09    138610527.72    138610626.24
GR  138610639.24    138610655.92    138810771.62    138810793.58    138610840.36
GR  138610850.42    138610853.61    138610886.85
NH     2    0.03 10160.4   0.03210519.13
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ET                    7.1                          9759.62 10028.5
X1 14.34       37 9751.0510053.35  164.89  179.78  125.92
GR  1386     9693     1388 9695.84     1390 9699.74     1390 9711.61     1388 9720.11
GR  1386 9738.42     1384 9751.05     1382 9759.62     1380 9780.34     1380 9797.18
    80 9946.09     1378 9983.18     1376  9996.4     137610008.04     137810028.52
    38010036.67     138210053.35     138210094.42     1382 10136.4     138410151.37
GR  1386 10160.4     138610168.67     138610232.95     138810255.73     139010269.45
GR  139010271.69     138810281.96     138610290.21     138410295.79     138210375.12
GR  138210451.86     138410463.93     1386 10476.1     138810484.93     139010490.15
GR  139010513.67     138810519.13
NC                            0.3     0.5
NH     3   0.035 9921.34     0.0310285.01    0.03511027.99
ET           5.1      7.1          9876.0710250.13 9926.73 10213.3
X1 14.39       46 9795.6910413.71      205      370      283
X3    10
GR  1386     9135     1386  9212.5     1386 9446.17     1386 9573.31     1388 9620.56
GR  1388 9676.31     1386 9687.88     1384 9730.03     1384  9753.3     1386 9771.76
GR  1386 9795.69     1384 9809.91     1384 9849.73     1384 9856.56     1382 9870.11
GR  1380 9921.34     138010098.85     138010114.05     137810213.66     137810241.31
GR  138010259.07     138210285.01     138410326.73     138410352.41     138410391.93
GR  138610413.71     138810454.24     138810486.96     138610502.84     138610511.36
GR  138610545.04     138610554.91     138610567.64     138410590.58     138210622.22
GR  138010657.01     138010740.85     138210790.62     138410829.92     1386 10852.5
GR  138610914.87     138610918.63     138810929.37     138810993.76     138611007.86
GR  138611027.99
NC                            0.3     0.5
NH     1    0.0210396.65
ET                    7.1                          9827.2710013.32
* CACTUS ROAD
*    NSTREAM EDGE
      .44       22 9812.3810021.82      136      223      184
X3    10
GR  1386     9463     1386  9527.4     1388  9580.2     1390 9716.11     1390 9812.38
GR  1388 9814.94     1386 9817.19     1384 9822.64     1382 9828.82     1380 9839.54
GR  1378 9955.61     138410020.45     138610021.29     138810021.82     139010022.26
GR  139210085.18     139410286.47     139410288.94     139410308.57     139410314.06
GR  139410332.59     139410396.65
NC                            0.3     0.5
NH     1    0.0210240.27
QT     2    6000    6000
ET                    7.1                          9843.03 10015.6
SB  1.05      1.5      2.6        0  159.71        5 1814.75        0 1377.53 1377.33
* CACTUS ROAD
* UPSTREAM EDGE
X1 14.47       19 9813.5410046.91       92       92       92
X2                       1 1389.26  1391.3                        2
X3    10
GR  1386     9435     1388 9649.86     1390 9813.54     1390 9824.18     1388 9826.73
GR  1386 9828.26     1384  9831.9     1382 9834.75     1380 9837.77     1378 9841.16
GR  1378 9878.21     137810002.67     137810038.39     138010040.42     1382 10041.6
GR  138410042.59     138610044.08     138810046.91     138810240.27
NC                            0.3     0.5
NH     1   0.02510089.52
ET                    7.1                          9826.0410030.92
X1 14.49       13 9805.2710049.11      237       83      148
    10
GR  1388     9670     1388 9676.21     1388 9805.27     1386 9817.21     1384 9828.53
GR  1382 9839.43     1380  9850.2     138010014.67     138210033.11     138410038.26
GR  138610043.68     138810049.11     138810089.52
NC                            0.3     0.5
```

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NH     1   0.02510478.69
ET                  7.1                          9876.5810184.42
X1 14.58       15 9832.6310224.78     460      498      483
X3    10
r     90     9224     1388 9648.13     1388 9832.63     1386 9844.33     1384 9856.56
      382 9868.85     1382 9914.76     1382 9936.21     1380 9998.51     138010046.77
GR  1382 10111.3     138410198.39     138610211.49     138810224.78     138810478.69
NC                                0.3      0.5
NH     3    0.16 9568.32    0.025 10417.6     0.1610682.73
ET                  7.1                          9771.64 10182.8
X1 14.66       22 9568.3210459.19     447      231      369
X3    10
GR  1390     9105     1390 9108.77     1390 9229.84     1390 9295.09     1390 9308.38
GR  1390 9362.54     1390 9486.47     1390 9568.32     1388 9702.58     1386 9771.66
GR  1384 9838.18     1382 9934.18     138210048.67     138410199.37     138610239.51
GR  138810312.62     1390 10417.6     139010459.19     139010532.25     139010658.02
GR  138810671.77     138810682.73
EJ
T1       IBW #5
T2
T3
J1   -10        3                                                20000  1167.3
J2    15                -1                                -1       -6
ER
```

```
1*****************************************
*  HEC-2 WATER SURFACE PROFILES           *
*                                         *
    rsion   4.6.2;  May 1991             *
                                         *
*  RUN DATE    03NOV97    TIME   09:20:02 *
*****************************************
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**************************************
*  U.S. ARMY CORPS OF ENGINEERS      *
*  HYDROLOGIC ENGINEERING CENTER     *
*  609 SECOND STREET, SUITE D        *
*  DAVIS, CALIFORNIA 95616-4687      *
*          (916) 756-1104            *
**************************************
```

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

1

THIS RUN EXECUTED 03NOV97 09:20:02

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

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

THIS IS AN ARCHIVAL RUN ALL DATA AND RESULTS ARE SAVED ON UNIT 96

```
AC
T1      IBW #5
T2
T3

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

     -10        2                                                          20000     1167.3

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

      1                  -1                                     -1        -6

J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     10                   150                  200
  OE OF GRADE CONTROL STRUCTURE
  6 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
  begin file 01ibw.dwg
  TOE OF GRADE CONTROL STRUCTURE
```

6 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
TOP OF GRADE CONTROL
2 PIERS IN LEFT BANK AREA
CURRY ROAD
NSTREAM EDGE
RRY ROAD
UPSTREAM EDGE
begin file 02ibw.dwg
MCKELLIPS ROAD
DOWNSTREAM EDGE
The cidubg i fier width provide accuracy of the modeling
MCKELLIPS ROAD
UPSTREAM EDGE
begin file 03ibw.dwg
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVE
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NEAR ROOSEVELT STREET
begin file 04ibw.dwg
MCDOWELL ROAD
DOWNSTREAM EDGE

MCDOWELL ROAD
UPSTREAM EDGE
WNSTREAM TOE OF SILL
WNSTREAM TOP OF SILL
UPSTREAM TOP OF SILL
UPSTREAM TOE OF SILL
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
begin file 05ibw.dwg
MURRAY LANE
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
NON-EFFECTIVE FLOW AREAS REMOVED
NON-EFFECTIVE FLOW AREA REMOVED
THOMAS ROAD
DOWNSTREAM EDGE
THOMAS ROAD
UPSTREAM EDGE
egin file 06ibw.dwg
BORN ROAD
egin file 07ibw.dwg
INDIAN SCHOOL ROAD
DOWNSTREAM EDGE
INDIAN SHCOOL ROAD

UPSTREAM EDGE
GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
AREA BETWEEN STA. 9685 AND STA. 9909
NON-EFFECTIVE FLOW AREA REMOVED
CAMELBACK ROAD
DOWNSTREAM EDGE
begin file 08ibw.dwg
CAMELBACK ROAD
UPSTREAM EDGE
CHAPARRAL ROAD
DOWNSTREAM EDGE
CHAPARREL ROAD
begin file 09ibw.dwg
JACKRABBIT ROAD
DOWNSTREAM EDGE
begin file 10ibw.dwg
NON-EFFECTIVE FLOW AREA REMOVED
MCDONALD DRIVE
DOWNSTREAM EDGE
NON-EFFECTIVE FLOW AREA REMOVED
begin file 11ibw.dwg

MCDONALD DRIVE
UPSTREAM EDGE
GR DATA ADJUSTED FOR FLOODWALL
begin file 12ibw.dwg
NON-EFFECTIVE FLOW AREA REMOVED
INDIAN BEND ROAD
BASE OF DROP STRUCTURE
begin file 13ibw.dwg
INDIAN BEND ROAD
UPSTREAM EDGE OF DROP STRUCTURE
NON-EFFECTIVE FLOW AREA REMOVED
begin file 14ibw.dwg
THE GR POINTS HAVE BEEN REDUCED TO MEET THE REQUIREMENTS OF GR POINT NO.

SCOTTSDALE ROAD
DOWNSTREAM EDGE
SCOTTSDALE ROAD
UPSTREAM EDGE
begin file 16ibw.dwg
begin file 17ibw.dwg
INVERGORDON ROAD
DOWNSTREAM EDGE
INVERGORDON ROAD
UPSTREAM EDGE
begin file 18ibw.dwg
DOUBLETREE ROAD
DOWNSTREAM EDGE
DOUBLETREE ROAD
UPSTREAM EDGE
begin file 19ibw.dwg
begin file 20ibw.dwg
SHEA BOULEVARD
DOWNSTREAM EDGE
SHEA BOULEVARD
UPSTREAM EDGE

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

*PROF 1

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .437

DIVIDED FLOW

TOE OF GRADE CONTROL STRUCTURE
SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
begin file 01ibw.dwg

.437	23.30	1167.30	1148.28	1167.30	1167.34	.04	.00	.00	1184.00
20000.0	.0	20000.0	.0	.0	12300.7	.0	.0	.0	1172.00
.00	.00	1.63	.00	.000	.045	.000	.000	1144.00	9699.67
.000072	0.	0.	0.	0	20	0	.00	599.27	10331.94

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .475

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .29

TOE OF GRADE CONTROL STRUCTURE
6 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW

.475	9.23	1167.23	1161.38	.00	1167.44	.21	.03	.07	1184.00
20000.0	.0	20000.0	.0	.0	5389.5	.0	40.6	2.8	1172.00
.01	.00	3.71	.00	.000	.045	.000	.000	1158.00	9699.80
000855	200.	200.	200.	2	17	0	.00	599.05	10331.85

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .491

3265 DIVIDED FLOW

1

TOP OF GRADE CONTROL
2 PIERS IN LEFT BANK AREA

.491	7.32	1167.32	1164.63	.00	1167.80	.49	.25	.11	1184.00
20000.0	.0	20000.0	.0	.0	3567.5	.0	69.4	6.6	1172.00
.03	.00	5.61	.00	.000	.025	.000	.000	1160.00	9197.69
.000925	280.	280.	280.	2	8	0	.00	611.37	9820.08

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .568

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .53

.568	7.38	1167.38	1166.95	.00	1168.85	1.47	.65	.39	1172.00
20000.0	.0	20000.0	.0	.0	2055.8	.0	95.9	12.0	1172.00
.04	.00	9.73	.00	.000	.022	.000	.000	1160.00	9736.62
.003352	425.	410.	390.	2	11	0	.00	533.75	10270.37

= .200 CEHV= .400
1490 NH CARD USED
*SECNO .663

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1174.00 ELREA= 1174.00

.663	9.53	1169.53	1169.53	.00	1171.53	2.00	1.78	.21	1174.00
20000.0	.0	20000.0	.0	.0	1764.1	.0	117.8	17.8	1174.00
.05	.00	11.34	.00	.000	.020	.000	.000	1160.00	9809.04
.003800	544.	500.	415.	0	15	0	.00	467.47	10276.50

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO .758

3470 ENCROACHMENT STATIONS= 9860.0 10295.0 TYPE= 1 TARGET= 435.000

.758	10.44	1172.44	1171.74	.00	1173.97	1.53	2.30	.14	100000.00
20000.0	.0	20000.0	.0	.0	2014.5	.0	139.5	23.0	100000.00
.07	.00	9.93	.00	.000	.031	.000	.000	1162.00	9860.00
005683	611.	500.	349.	3	8	0	.00	435.00	10295.00

1

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO .776
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1180.00 ELREA= 1180.00

CURRY ROAD
DOWNSTREAM EDGE

.776	7.50	1173.50	1173.50	.00	1175.27	1.77	.47	.12	1180.00
20000.0	.0	20000.0	.0	.0	1874.5	.0	143.9	24.1	1180.00
.07	.00	10.67	.00	.000	.020	.000	.000	1166.00	9777.91
.003979	99.	99.	99.	0	19	0	.00	543.37	10321.28

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

DOWNSTREAM ELEV IS 1172.37 , NOT 1173.50 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.05	1.50	2.60	.00	133.00	4.00	482.46	.00	1165.02	1164.60

*SECNO .791

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.62

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1213.52	1177.58	.00	14184.	5828.	482.	482.	1168.76	1171.44	745.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1180.00 ELREA= 1180.00

CURRY ROAD

1

UPSTREAM EDGE

.791	10.48	1176.48	.00	.00	1176.90	.41	1.63	.00	1180.00
20000.0	.0	20000.0	.0	.0	3877.1	.0	149.0	25.3	1180.00

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      .07       .00      5.16       .00      .000      .020      .000      .000   1166.00   9600.08
   .000581      78.       78.       78.         2         0         6       .00    790.44  10390.52


      .200 CEHV=      .400
    NH CARD USED
*SECNO  .852

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .45


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1180.00 ELREA=      1180.00

      .852     10.49   1176.49   1175.53       .00   1177.48       .99       .36       .23   1180.00
   20000.0        .0  20000.0         .0        .0    2509.4        .0     172.5      30.3   1180.00
      .08       .00      7.97       .00      .000      .027      .000      .000   1166.00   9737.47
   .002910      320.      320.      320.         3        10         0       .00    582.66  10320.13


1490 NH CARD USED
*SECNO  .947

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .64

      .947     8.29   1178.29   1178.27       .00   1179.90      1.61      2.17       .25   1184.00
   20000.0        .0  20000.0         .0        .0    1966.4        .0     198.2      36.8   1184.00
      .10       .00     10.17       .00      .000      .029      .000      .000   1170.00   9688.49
   .007130      500.      500.      500.         2        14         0       .00    552.66  10241.14


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 1.040
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1186.00 ELREA=      1186.00

        begin file 02ibw.dwg
    1.040     7.99   1181.99   1181.67       .00   1183.46      1.46      3.92     -1.15   1186.00
   20000.0        .0  20000.0         .0        .0    2059.8        .0     221.3      43.3   1186.00
      .11       .00      9.71       .00      .000      .033      .000      .000   1174.00   9658.57
   .008659      500.      500.      500.        20        11         0       .00    578.35  10236.93


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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST
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CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.136

 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.76


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1188.00 ELREA=      1188.00

     1.136      8.89   1184.89   1183.73       .00   1185.83       .95      2.27       .10   1188.00
   20000.0        .0   20000.0        .0        .0    2561.3        .0     247.8      50.0   1188.00
       .13       .00      7.81       .00      .000      .027      .000      .000   1176.00   9567.53
   .002793      435.      500.      544.         3         8         0       .00    590.91  10158.44


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.231

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1190.00 ELREA=      1190.00

     1.231      10.26   1186.26   1184.22       .00   1186.89       .63       .99       .06   1190.00
   20000.0        .0   20000.0        .0        .0    3136.0        .0     280.5      56.8   1190.00
       .15       .00      6.38       .00      .000      .027      .000      .000   1176.00   9719.46
   .001487      470.      500.      527.         3        10         0       .00    586.18  10305.65


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.326

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1190.00 ELREA=      1192.00

     1.326      10.90   1186.90   1185.18       .00   1187.93      1.03       .88       .16   1190.00
   20000.0        .0   20000.0        .0        .0    2453.0        .0     312.6      63.5   1192.00
       .17       .00      8.15       .00      .000      .022      .000      .000   1176.00   9723.97
   .002130      470.      500.      548.         2        12         0       .00    582.48  10306.45


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


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 1.420

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1192.00 ELREA=      1194.00

     1.420      12.01   1188.01   1184.52       .00   1188.92       .90       .94       .04   1192.00
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20000.0	.0	20000.0	.0	.0	2625.1	.0	341.7	70.0	1194.00
.19	.00	7.62	.00	.000	.023	.000	.000	1176.00	9720.26
.001682	500.	500.	500.	2	15	0	.00	550.22	10270.48

...V= .300 CEHV= .500
1490 NH CARD USED
*SECNO 1.515

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1194.00 ELREA= 1194.00

1.515	11.75	1189.75	1189.75	.00	1191.59	1.84	1.16	.47	1194.00
20000.0	.0	20000.0	.0	.0	1837.0	.0	367.2	76.2	1194.00
.20	.00	10.89	.00	.000	.018	.000	.000	1178.00	9749.99
.003425	606.	497.	348.	0	5	0	.00	542.98	10292.97

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 1.554

3301 HV CHANGED MORE THAN HVINS

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.94

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1196.00 ELREA= 1196.00

MCKELLIPS ROAD
DOWNSTREAM EDGE

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
1.554	14.72	1191.72	1189.81	.00	1192.28	.56	.30	.38	1196.00
20000.0	.0	20000.0	.0	.0	3335.5	.0	378.5	79.1	1196.00
.21	.00	6.00	.00	.000	.020	.000	.000	1177.00	9603.75
.000914	190.	190.	190.	4	8	0	.00	755.55	10359.30

CCHV= .300 CEHV= .500
1490 NH CARD USED

...AL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.95	1.50	2.60	.00	42.00	.01	374.64	.00	1177.07	1176.69

*SECNO 1.570
PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

S	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1258.10	1192.28	.00	17365.	2722.	375.	375.	1185.99	1187.80	861.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1195.00 ELREA= 1195.00

MCKELLIPS ROAD
UPSTREAM EDGE

1.570	15.33	1192.33	.00	.00	1192.95	.62	.67	.00	1195.00
20000.0	.0	20000.0	.0	.0	3170.4	.0	385.3	80.6	1195.00
.21	.00	6.31	.00	.000	.020	.000	.000	1177.00	9487.34
.001090	91.	91.	91.	3	0	6	.00	754.27	10241.61

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 1.582

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1195.00 ELREA= 1195.00

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1.582	12.57	1192.57	1189.82	.00	1193.05	.48	.06	.04	1195.00
20000.0	.0	20000.0	.0	.0	3582.0	.0	389.0	81.4	1195.00
.22	.00	5.58	.00	.000	.030	.000	.000	1180.00	9616.94
01262	226.	49.	138.	2	14	0	.00	629.19	10246.13

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.610

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.64

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1196.00 ELREA= 1197.00

1.610	7.80	1192.80	1189.39	.00	1193.22	.42	.15	.01	1196.00
20000.0	.0	20000.0	.0	.0	3866.5	.0	407.0	84.4	1197.00
.23	.00	5.17	.00	.000	.021	.000	.000	1185.00	9638.74
00470	210.	210.	210.	1	22	0	.00	618.17	10256.91

CCHV= .200 CEHV= .400
1490 NH CARD USED

*SECNO 1.705

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1198.00 ELREA= 1199.00

1.705	8.06	1193.06	1190.13	.00	1193.55	.49	.31	.03	1198.00
20000.0	.0	20000.0	.0	.0	3578.1	.0	449.7	91.5	1199.00
.25	.00	5.59	.00	.000	.025	.000	.000	1185.00	9670.92
.000832	500.	500.	500.	2	14	0	.00	612.29	10283.22

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.770

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1201.00 ELREA= 1202.00

NON-EFFECTIVE FLOW AREA REMOVED

1.770	8.27	1193.27	1189.97	.00	1193.80	.53	.23	.02	1201.00
20000.0	.0	20000.0	.0	.0	3426.9	.0	477.9	96.2	1202.00
.27	.00	5.84	.00	.000	.020	.000	.000	1185.00	9651.60
.000547	439.	350.	281.	2	14	0	.00	573.08	10224.68

CCHV= .200 CEHV= .400
1490 NH CARD USED
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 1.787

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1201.00 ELREA= 1202.00

NON-EFFECTIVE FLOW AREA REMOVED

1.787	8.19	1193.19	1189.86	.00	1193.91	.72	.04	.08	1201.00
20000.0	.0	20000.0	.0	.0	2938.9	.0	482.4	96.9	1202.00
.27	.00	6.81	.00	.000	.020	.000	.000	1185.00	9761.49
.000590	74.	62.	55.	2	11	0	.00	399.06	10160.55

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.794

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1200.00 ELREA= 1202.00

NON-EFFECTIVE FLOW AREA REMOVE

1.794	7.90	1195.90	1195.90	.00	1197.54	1.64	.08	.37	1200.00
20000.0	.0	20000.0	.0	.0	1945.2	.0	485.5	97.5	1202.00

.27	.00	10.28	.00	.000	.032	.000	.000	1188.00	9914.75
.009525	68.	55.	46.	0	10	0	.00	564.52	10479.27

.200 CEHV= .400
NH CARD USED
*SECNO 1.799
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1200.00 ELREA= 1202.00

NON-EFFECTIVE FLOW AREA REMOVED

1.799	8.14	1196.14	1196.14	.00	1197.92	1.78	.25	.05	1200.00
20000.0	.0	20000.0	.0	.0	1868.8	.0	486.6	97.9	1202.00
.27	.00	10.70	.00	.000	.032	.000	.000	1188.00	9665.70
.010930	25.	25.	25.	0	8	0	.00	562.08	10227.78

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

.200 CEHV= .400
NH CARD USED
*SECNO 1.827

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.64

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1200.00 ELREA= 1204.00

NON-EFFECTIVE FLOW AREA REMOVED

1.827	6.05	1198.05	1196.76	.00	1198.99	.94	.91	.17	1200.00
20000.0	.0	20000.0	.0	.0	2567.7	.0	493.9	99.7	1204.00
.28	.00	7.79	.00	.000	.034	.000	.000	1192.00	9664.53
.004077	112.	144.	175.	2	11	0	.00	539.58	10204.12

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.894

3301 HV CHANGED MORE THAN HVINS

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.04

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1200.00 ELREA= 1200.00

1.894	8.06	1199.06	1195.43	.00	1199.45	.40	.35	.11	1200.00
20000.0	.0	20000.0	.0	.0	3962.1	.0	520.1	104.4	1200.00
.30	.00	5.05	.00	.000	.021	.000	.000	1191.00	9738.13
000441	290.	350.	396.	2	15	0	.00	622.86	10360.99

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.990

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .45

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1200.00 ELREA= 1204.00

1.990	8.40	1199.40	1197.43	.00	1199.93	.53	.42	.05	1200.00
20000.0	.0	20000.0	.0	.0	3416.8	.0	562.5	112.0	1204.00
.32	.00	5.85	.00	.000	.034	.000	.000	1191.00	9816.10
.002223	500.	500.	500.	2	16	0	.00	715.10	10531.21

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 2.047

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .61

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1204.00 ELREA= 1206.00

2.047	9.13	1200.13	1199.67	.00	1201.20	1.07	1.06	.21	1204.00
20000.0	.0	20000.0	.0	.0	2413.9	.0	583.1	117.4	1206.00
.33	.00	8.29	.00	.000	.029	.000	.000	1191.00	9781.81
.005979	280.	308.	350.	3	8	0	.00	799.73	10581.53

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 2.080

3470 ENCROACHMENT STATIONS= 9780.0 10317.0 TYPE= 1 TARGET= 537.000

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.080	10.21	1201.21	1200.30	.00	1202.39	1.18	1.14	.05	100000.00
20000.0	.0	20000.0	.0	.0	2295.2	.0	593.5	120.3	100000.00
.34	.00	8.71	.00	.000	.035	.000	.000	1191.00	9785.03

.005916	145.	192.	308.	2	8	0	.00	531.97	10317.00

CCHV= .200 CEHV= .400

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

1490 NH CARD USED
*SECNO 2.178

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.71

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1210.00 ELREA= 1207.00

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2.178	9.52	1203.52	1201.16	.00	1204.11	.59	1.61	.12	1210.00
20000.0	.0	20000.0	.0	.0	3234.9	.0	625.2	126.8	1207.00
.36	.00	6.18	.00	.000	.033	.000	.000	1194.00	9819.03
002023	500.	500.	500.	2	19	0	.00	601.08	10420.11

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 2.273

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1212.00 ELREA= 1208.00

2.273	10.43	1204.43	1201.32	.00	1204.94	.51	.81	.02	1212.00
20000.0	.0	20000.0	.0	.0	3476.6	.0	663.7	133.4	1208.00
.38	.00	5.75	.00	.000	.032	.000	.000	1194.00	9780.92
.001326	500.	500.	500.	2	19	0	.00	546.32	10327.25

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 2.367

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1209.00 ELREA= 1208.00

2.367	8.93	1204.93	1201.89	.00	1205.57	.64	.58	.05	1209.00
20000.0	.0	20000.0	.0	.0	3112.0	.0	701.6	139.2	1208.00
.41	.00	6.43	.00	.000	.026	.000	.000	1196.00	9823.75
.001025	500.	500.	500.	2	11	0	.00	463.92	10287.67

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 2.462

2.462	11.58	1205.58	1202.44	.00	1206.20	.62	.63	.00	1212.00
20000.0	.0	20000.0	.0	.0	3152.8	.0	737.5	144.5	1210.00
.43	.00	6.34	.00	.000	.033	.000	.000	1194.00	9729.30
.001571	500.	500.	500.	2	12	0	.00	461.17	10190.47

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.557

3470 ENCROACHMENT STATIONS= 9890.2 10260.6 TYPE= 1 TARGET= 370.369

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.557	10.18	1206.18	1201.74	.00	1206.77	.58	.55	.01	100000.00
20000.0	.0	20000.0	.0	.0	3268.8	.0	774.4	149.3	100000.00
.45	.00	6.12	.00	.000	.029	.000	.000	1196.00	9890.23
.000813	500.	500.	500.	2	8	0	.00	370.37	10260.60

= .300 CEHV= .500
NH CARD USED
*SECNO 2.610

3470 ENCROACHMENT STATIONS= 9789.7 10077.2 TYPE= 1 TARGET= 287.550

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.610	12.32	1206.32	1201.08	.00	1206.99	.68	.18	.05	100000.00
20000.0	.0	20000.0	.0	.0	3024.1	.0	794.8	151.4	100000.00
.46	.00	6.61	.00	.000	.024	.000	.000	1194.00	9789.69
.000511	283.	283.	283.	2	19	0	.00	287.55	10077.24

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.620

3470 ENCROACHMENT STATIONS= 9800.0 10053.2 TYPE= 1 TARGET= 253.240

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.620	10.16	1206.16	1202.30	.00	1207.22	1.06	.03	.19	100000.00
20000.0	.0	20000.0	.0	.0	2426.2	.0	797.9	151.7	100000.00
.46	.00	8.24	.00	.000	.024	.000	.000	1196.00	9800.00
00945	50.	50.	50.	2	11	0	.00	253.24	10053.24

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.629

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1210.00 ELREA= 1211.00

MCDOWELL ROAD
DOWNSTREAM EDGE

2.629	9.89	1205.89	1203.43	.00	1207.60	1.71	.05	.33	1210.00
20000.0	.0	20000.0	.0	.0	1907.8	.0	800.4	152.0	1211.00
.47	.00	10.48	.00	.000	.020	.000	.000	1196.00	9820.88
.001202	50.	50.	50.	2	15	0	.00	213.69	10034.57

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.05	1.50	2.60	.00	214.00	7.50	2244.65	.00	1198.33	1197.83

*SECNO 2.652
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1205.74 BRIDGE VELOCITY= 12.65 CALCULATED CHANNEL AREA= 1530.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1207.81	.32	0.	20000.	2245.	2245.	1209.20	1210.87	0.

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1210.00 ELREA= 1210.00

MCDOWELL ROAD
UPSTREAM EDGE

2.652	10.21	1206.21	.00	.00	1207.81	1.60	.21	.00	1210.00
20000.0	.0	20000.0	.0	.0	1972.7	.0	805.8	152.6	1210.00
.47	.00	10.14	.00	.000	.020	.000	.000	1196.00	9818.63

.001061	120.	120.	120.	0	0	0	.00	214.03	10032.65

CCHV= .300 CEHV= .500
NH CARD USED
SECNO 2.653

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1210.00 ELREA= 1210.00

DOWNSTREAM TOE OF SILL

2.653	10.22	1206.22	1203.44	.00	1207.82	1.59	.01	.00	1210.00
20000.0	.0	20000.0	.0	.0	1974.4	.0	806.1	152.6	1210.00
.47	.00	10.13	.00	.000	.020	.000	.000	1196.00	9818.63
.001058	7.	7.	7.	0	15	0	.00	214.03	10032.66

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.658

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1214.00 ELREA= 1215.00

DOWNSTREAM TOP OF SILL

2.658	10.09	1206.09	1206.09	.00	1209.31	3.21	.02	.81	1214.00
20000.0	.0	20000.0	.0	.0	1390.0	.0	806.4	152.7	1215.00
.47	.00	14.39	.00	.000	.020	.000	.000	1196.00	9789.14
.003487	9.	9.	9.	0	5	0	.00	224.00	10013.14

1

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.662

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.41

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1214.00 ELREA= 1215.00

UPSTREAM TOP OF SILL

2.662	11.57	1207.57	1206.14	.00	1209.66	2.10	.02	.33	1214.00
20000.0	.0	20000.0	.0	.0	1720.3	.0	806.8	152.7	1215.00
.47	.00	11.63	.00	.000	.020	.000	.000	1196.00	9786.66

.001756	9.	9.	9.	12	5	0	.00	226.77	10013.43

CCHV= .300 CEHV= .500
NH CARD USED
SECNO 2.663

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.09

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1214.00 ELREA= 1215.00

UPSTREAM TOE OF SILL

2.663	13.23	1209.23	1203.64	.00	1210.05	.82	.01	.38	1214.00
20000.0	.0	20000.0	.0	.0	2744.0	.0	807.2	152.8	1215.00
.47	.00	7.29	.00	.000	.020	.000	.000	1196.00	9783.69
.000401	9.	9.	9.	3	14	0	.00	239.53	10023.25

CCHV= .300 CEHV= .500
1

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

1490 NH CARD USED
*SECNO 2.700

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1215.00 ELREA= 1215.00

2.700	11.00	1210.00	1204.76	.00	1210.31	.31	.10	.15	1215.00
20000.0	.0	20000.0	.0	.0	4459.9	.0	823.8	154.5	1215.00
.48	.00	4.48	.00	.000	.035	.000	.000	1199.00	9777.16
.000662	200.	200.	200.	2	18	0	.00	531.83	10309.00

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.746

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1219.00 ELREA= 1215.00

2.746	11.10	1210.10	1206.46	.00	1210.51	.41	.16	.04	1219.00
20000.0	.0	20000.0	.0	.0	3879.2	.0	841.9	157.0	1215.00
.49	.00	5.16	.00	.000	.034	.000	.000	1199.00	9828.75
.001145	190.	190.	190.	0	16	0	.00	578.82	10407.57

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.770
NON-EFFECTIVE FLOW AREA REMOVED

2.770	8.28	1210.28	1207.27	.00	1210.72	.44	.20	.01	1220.00
20000.0	.0	20000.0	.0	.0	3760.9	.0	855.1	159.1	1215.00
.50	.00	5.32	.00	.000	.036	.000	.000	1202.00	9787.88
.001594	150.	150.	150.	2	14	0	.00	637.00	10424.88

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.775
NON-EFFECTIVE FLOW AREA REMOVED

2.775	7.23	1210.23	1208.34	.00	1210.85	.62	.06	.07	1219.00
20000.0	.0	20000.0	.0	.0	3167.4	.0	857.1	159.4	1215.00
.50	.00	6.31	.00	.000	.037	.000	.000	1203.00	9728.72
.003239	25.	25.	25.	2	14	0	.00	697.70	10426.42

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.780

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .60

2.780	5.91	1209.91	1209.68	.00	1211.28	1.37	.13	.30	1220.00
20000.0	.0	20000.0	.0	.0	2128.1	.0	858.6	159.8	1216.00
.50	.00	9.40	.00	.000	.033	.000	.000	1204.00	9754.17
.009020	25.	25.	25.	3	15	0	.00	658.54	10412.71

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.790
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

2.790	5.68	1210.68	1210.68	.00	1212.19	1.51	.50	.06	1220.00
20000.0	.0	20000.0	.0	.0	2028.7	.0	861.0	160.6	1216.00
.50	.00	9.86	.00	.000	.033	.000	.000	1205.00	9703.46
.011218	50.	50.	50.	0	8	0	.00	675.37	10378.84

CCHV= .300 CEHV= .400
1490 NH CARD USED

*SECNO 2.810

NON-EFFECTIVE FLOW AREA REMOVED

2.810	5.94	1211.94	1211.45	.00	1212.99	1.05	.66	.14	1221.00
20000.0	.0	20000.0	.0	.0	2433.1	.0	865.2	162.0	1213.00
.51	.00	8.22	.00	.000	.030	.000	.000	1206.00	9791.76
.006006	83.	83.	83.	3	11	0	.00	756.62	10548.38

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.820
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1218.00 ELREA= 1218.00

2.820	3.25	1212.25	1212.25	.00	1213.70	1.45	.54	.16	1218.00
20000.0	.0	20000.0	.0	.0	2070.9	.0	868.7	163.1	1218.00
.51	.00	9.66	.00	.000	.033	.000	.000	1209.00	9775.65
.011618	67.	67.	67.	0	11	0	.00	722.41	10498.05

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.827

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.48

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1218.00 ELREA= 1218.00

2.827	4.51	1213.51	1212.14	.00	1214.09	.59	.13	.26	1218.00
20000.0	.0	20000.0	.0	.0	3257.4	.0	870.8	163.7	1218.00
.51	.00	6.14	.00	.000	.026	.000	.000	1209.00	9786.77
.001892	35.	35.	35.	4	8	0	.00	817.77	10604.54

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.841

7105 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1218.00 ELREA= 1218.00

2.841	4.73	1213.73	1212.04	.00	1214.23	.50	.12	.02	1218.00
20000.0	.0	20000.0	.0	.0	3516.8	.0	875.9	164.9	1218.00
.51	.00	5.69	.00	.000	.028	.000	.000	1209.00	9790.30
.001664	65.	65.	65.	2	14	0	.00	819.46	10609.76

CCHV= .300 CEHV= .400
1490 NH CARD USED
O 2.936

1

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

3470 ENCROACHMENT STATIONS= 9780.0 10510.0 TYPE= 1 TARGET= 730.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

2.936	7.62	1214.62	1212.36	.00	1215.06	.45	.81	.02	100000.00
20000.0	.0	20000.0	.0	.0	3732.3	.0	917.5	173.8	100000.00
.54	.00	5.36	.00	.000	.033	.000	.000	1207.00	9780.00
.001583	500.	500.	500.	0	11	0	.00	730.00	10510.00

CCHV= .300 CEHV= .400
1490 NH CARD USED
NO 3.030

3470 ENCROACHMENT STATIONS= 9580.0 10350.0 TYPE= 1 TARGET= 770.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

3.030	8.44	1215.44	1213.60	.00	1215.97	.54	.88	.04	100000.00
20000.0	.0	20000.0	.0	.0	3396.1	.0	958.4	182.4	100000.00
.56	.00	5.89	.00	.000	.030	.000	.000	1207.00	9580.00
.001949	500.	500.	500.	0	12	0	.00	770.00	10350.00

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.125

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.47

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1219.00 ELREA= 1221.00

3.125	10.38	1216.38	1213.97	.00	1216.68	.31	.64	.07	1219.00
20000.0	.0	20000.0	.0	.0	4508.6	.0	1003.8	192.3	1221.00
.59	.00	4.44	.00	.000	.028	.000	.000	1206.00	9567.68
000899	500.	500.	500.	2	10	0	.00	949.54	10517.22

1

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.220

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1219.00 ELREA= 1221.00

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3.220	5.67	1216.67	1215.25	.00	1217.40	.73	.55	.17	1219.00
20000.0	.0	20000.0	.0	.0	2909.3	.0	1046.4	201.6	1221.00
.61	.00	6.87	.00	.000	.021	.000	.000	1211.00	9555.55
.001366	500.	500.	500.	2	18	0	.00	676.92	10232.47

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.270

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .64

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1220.00 ELREA= 1220.00

3.270	6.19	1217.19	1216.23	.00	1217.95	.76	.54	.01	1220.00
20000.0	.0	20000.0	.0	.0	2863.0	.0	1063.9	206.1	1220.00
.62	.00	6.99	.00	.000	.029	.000	.000	1211.00	9490.42
.003381	265.	265.	265.	2	15	0	.00	795.12	10285.53

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.280

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1221.00 ELREA= 1221.00

MURRAY LANE

3.280	4.56	1217.56	1216.23	.00	1218.18	.63	.19	.04	1221.00
20000.0	.0	20000.0	.0	.0	3147.8	.0	1067.7	207.1	1221.00
.63	.00	6.35	.00	.000	.035	.000	.000	1213.00	9651.20
.003608	55.	55.	55.	2	11	0	.00	800.10	10451.30

CCHV= .300 CEHV= .400
1

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

1490 NH CARD USED

*SECNO 3.409

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1221.00 ELREA= 1221.00

NON-EFFECTIVE FLOW AREA REMOVED

3.409	4.13	1219.13	1217.79	.00	1219.66	.53	1.45	.03	1221.00
20000.0	.0	20000.0	.0	.0	3421.8	.0	1104.6	216.7	1221.00
.65	.00	5.84	.00	.000	.031	.000	.000	1215.00	9806.04
.002471	329.	490.	522.	1	14	0	.00	900.82	10706.86

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.488

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .67

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1222.00 ELREA= 1225.00

NON-EFFECTIVE FLOW AREA REMOVED

3.488	5.50	1220.50	1219.81	.00	1221.22	.72	1.49	.08	1222.00
20000.0	.0	20000.0	.0	.0	2937.8	.0	1135.3	225.9	1225.00
.67	.00	6.81	.00	.000	.033	.000	.000	1215.00	9829.50
.005483	420.	420.	420.	2	8	0	.00	1003.78	10853.38

.300 CEHV= .400
1490 NH CARD USED
*SECNO 3.490

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.55

NON-EFFECTIVE FLOW AREA REMOVED

3.490	6.04	1221.04	1219.67	.00	1221.43	.39	.10	.10	1222.00
20000.0	4872.6	15127.4	.0	882.2	3149.2	.0	1137.7	226.7	1225.00
.67	5.52	4.80	.00	.035	.030	.000	.000	1215.00	9614.59
.002272	30.	30.	30.	3	15	0	.00	1298.00	10973.13

1

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.504

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .58

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1223.00 ELREA= 1225.00

NON-EFFECTIVE FLOW AREA REMOVED

3.504	4.95	1220.95	1220.50	.00	1221.79	.84	.18	.18	1223.00
20000.0	.0	20000.0	.0	.0	2719.0	.0	1141.6	228.0	1225.00
.67	.00	7.36	.00	.000	.032	.000	.000	1216.00	9923.96
.006759	50.	50.	50.	2	19	0	.00	1026.21	10950.17

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.510

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1223.00 ELREA= 1225.00

NON-EFFECTIVE FLOW AREA REMOVED

3.510	5.47	1221.47	1220.58	.00	1222.05	.58	.18	.08	1223.00
20000.0	.0	20000.0	.0	.0	3267.0	.0	1144.0	228.9	1225.00
.67	.00	6.12	.00	.000	.031	.000	.000	1216.00	9873.94
.004071	35.	35.	35.	3	11	0	.00	1129.04	11002.98

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.548

ENCROACHMENT STATIONS= 9668.0 10778.0 TYPE= 1 TARGET= 1110.000

NON-EFFECTIVE FLOW AREA REMOVED

3.548	8.29	1222.29	1220.86	.00	1222.76	.47	.68	.03	1224.00
20000.0	.0	20000.0	.0	.0	3628.5	.0	1159.8	233.8	100000.00
.68	.00	5.51	.00	.000	.034	.000	.000	1214.00	9776.53
.002898	200.	200.	200.	2	11	0	.00	1001.47	10778.00

CCHV= .300 CEHV= .400
1

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

1490 NH CARD USED
*SECNO 3.590

3470 ENCROACHMENT STATIONS= 9719.0 10676.0 TYPE= 1 TARGET= 957.000

NON-EFFECTIVE FLOW AREA REMOVED

3.590	7.61	1222.61	1220.48	.00	1223.02	.41	.23	.02	1224.00
20000.0	.0	20000.0	.0	.0	3901.8	.0	1168.3	235.9	100000.00
.69	.00	5.13	.00	.000	.034	.000	.000	1215.00	9759.63
.002017	83.	98.	105.	1	14	0	.00	916.37	10676.00

CCHV= .300 CEHV= .400

1490 NH CARD USED
*SECNO 3.600

3470 ENCROACHMENT STATIONS= 9725.5 10548.0 TYPE= 1 TARGET= 822.500
NON-EFFECTIVE FLOW AREA REMOVED

3.600	7.87	1222.87	1220.61	.00	1223.32	.46	.29	.02	100000.00
20000.0	.0	20000.0	.0	.0	3688.1	.0	1180.7	238.7	100000.00
.69	.00	5.42	.00	.000	.034	.000	.000	1215.00	9725.50
.002051	142.	142.	141.	2	15	0	.00	822.50	10548.00

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.660

3470 ENCROACHMENT STATIONS= 9618.5 10303.4 TYPE= 1 TARGET= 684.900
NON-EFFECTIVE FLOW AREAS REMOVED

3.660	9.43	1223.43	1220.69	.00	1223.97	.54	.61	.03	100000.00
20000.0	.0	19990.2	9.8	.0	3402.5	9.2	1205.5	244.0	1223.00
.71	.00	5.88	1.07	.000	.033	.035	.000	1214.00	9618.50
.001975	340.	305.	255.	2	14	0	.00	684.90	10303.40

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.710

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1227.00 ELREA= 1228.00

3.710	7.79	1223.79	1221.89	.00	1224.81	1.02	.65	.19	1227.00
000.0	.0	20000.0	.0	.0	2465.2	.0	1225.9	247.8	1228.00
.72	.00	8.11	.00	.000	.029	.000	.000	1216.00	9666.65
.002302	360.	303.	280.	2	14	0	.00	417.56	10084.21

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 3.730

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1226.00 ELREA= 1228.00

3.730	6.88	1223.88	1222.45	.00	1225.16	1.28	.22	.13	1226.00
20000.0	.0	20000.0	.0	.0	2204.3	.0	1230.3	248.6	1228.00
.72	.00	9.07	.00	.000	.030	.000	.000	1217.00	9680.21
003288	103.	82.	74.	2	19	0	.00	385.10	10065.31

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 3.760

3301 HV CHANGED MORE THAN HVINS

ENCROACHMENT STATIONS= 9770.0 10002.0 TYPE= 1 TARGET= 232.010
ELENCL= 1232.00 ELENCR= 1232.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1232.00 ELREA= 1232.00

NON-EFFECTIVE FLOW AREA REMOVED
THOMAS ROAD
DOWNSTREAM EDGE

3.760	8.79	1223.79	1223.01	.00	1226.20	2.41	.47	.56	1232.00
20000.0	.0	20000.0	.0	.0	1606.6	.0	1238.0	249.8	1232.00
.73	.00	12.45	.00	.000	.020	.000	.000	1215.00	9770.00
.002292	174.	174.	174.	2	8	0	.00	232.01	10002.01

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1222.38 , NOT 1223.79 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

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

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.50	2.60	.00	258.00	6.00	3654.00	.00	1217.83	1217.33

*SECNO 3.780
CLASS B LOW FLOW

3420 BRIDGE W.S.= 1223.38 BRIDGE VELOCITY= 13.67 CALCULATED CHANNEL AREA= 1400.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1226.64	.00	0.	20000.	3654.	3654.	1232.33	1234.00	0.

3470 ENCROACHMENT STATIONS= 9770.0 10002.0 TYPE= 1 TARGET= 232.010
ELENCL= 1233.00 ELENCR= 1233.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1233.00 ELREA= 1233.00

THOMAS ROAD
UPSTREAM EDGE

3.780	8.64	1224.64	.00	.00	1226.64	2.00	.44	.00	1233.00
20000.0	.0	20000.0	.0	.0	1761.0	.0	1241.3	250.3	1233.00
.73	.00	11.36	.00	.000	.020	.000	.000	1216.00	9770.00
.001680	86.	86.	86.	0	0	0	.00	232.01	10002.01

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CCHV=     .300 CEHV=     .500
1490 NH CARD USED
     O 3.811

3301 HV CHANGED MORE THAN HVINS


3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1235.00 ELREA=      1232.00

     3.811      9.78   1226.78   1223.18       .00   1227.32       .54       .25       .44   1235.00
   20000.0        .0   20000.0        .0        .0    3377.8        .0    1250.7     251.6   1232.00
       .74       .00      5.92       .00      .000      .035      .000      .000   1217.00   9681.98
   .001416       152.      160.      172.         3        19         0       .00    472.14  10154.12


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


    NO 3.883

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1232.00 ELREA=      1233.00

     3.883     10.44   1227.44   1223.01       .00   1227.74       .30       .35       .07   1232.00
   20000.0        .0   20000.0        .0        .0    4542.4        .0    1281.5     255.9   1233.00
       .76       .00      4.40       .00      .000      .035      .000      .000   1217.00   9729.01
   .000773       357.      339.      327.         2        14         0       .00    629.54  10358.55


CCHV=     .300 CEHV=     .400
1490 NH CARD USED
*SECNO 3.977

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1233.00 ELREA=      1233.00

        begin file 06ibw.dwg
     3.977      9.79   1227.79   1224.08       .00   1228.16       .37       .39       .03   1233.00
   20000.0        .0   20000.0        .0        .0    4098.9        .0    1331.1     263.0   1233.00
       .79       .00      4.88       .00      .000      .030      .000      .000   1218.00   9569.44
   .000784       500.      500.      500.         2        14         0       .00    606.63  10176.06


CCHV=     .300 CEHV=     .400
1490 NH CARD USED
    NO 4.072

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1232.00 ELREA=      1233.00

     4.072     10.18   1228.18   1225.26       .00   1228.72       .54       .49       .07   1232.00
   20000.0        .0   20000.0        .0        .0    3394.3        .0    1374.1     269.9   1233.00
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      .81       .00      5.89       .00      .000      .028      .000      .000   1218.00   9594.78
   .001259      500.      500.      500.         0        15         0       .00    609.51  10204.29


      .300 CEHV=     .400
 . .0 NH CARD USED
 *SECNO 4.167

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.06

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



 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1233.00 ELREA=      1232.00

     4.167      8.85   1228.85   1223.70       .00   1229.08       .23       .27       .09   1233.00
   20000.0        .0  20000.0        .0        .0    5178.4         .0    1423.3     277.2   1232.00
       .84       .00      3.86       .00      .000      .026      .000      .000   1220.00   9567.23
   .000297      500.      500.      500.         2        18         0       .00    652.77  10220.00


    =     .300 CEHV=     .400
     NH CARD USED
 *SECNO 4.220

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .58


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1235.00 ELREA=      1233.00

     4.220      8.87   1228.87   1225.30       .00   1229.26       .39       .12       .06   1235.00
   20000.0        .0  20000.0        .0        .0    4012.4         .0    1449.7     280.8   1233.00
       .86       .00      4.98       .00      .000      .031      .000      .000   1220.00   9471.21
   .000892      250.      250.      250.         2        14         0       .00    612.84  10084.04


 CCHV=     .300 CEHV=     .400
 1490 NH CARD USED
 *SECNO 4.250

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1233.00 ELREA=      1234.00

         OSBORN ROAD
     4.250      9.00   1229.00   1225.73       .00   1229.41       .41       .14       .01   1233.00
   20000.0        .0  20000.0        .0        .0    3888.1         .0    1467.8     283.7   1234.00
       .87       .00      5.14       .00      .000      .023      .000      .000   1220.00   9449.84
    000591      200.      200.      200.         0        14         0       .00    637.87  10087.71


 CCHV=     .300 CEHV=     .400
 1490 NH CARD USED
 *SECNO 4.290
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3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .55

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1234.00 ELREA= 1234.00

4.290	8.06	1229.06	1226.93	.00	1229.73	.66	.21	.10	1234.00
20000.0	.0	20000.0	.0	.0	3060.7	.0	1485.0	286.9	1234.00
.88	.00	6.53	.00	.000	.028	.000	.000	1221.00	9384.44
.001946	215.	215.	215.	2	14	0	.00	664.02	10048.46

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.356

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1234.00 ELREA= 1235.00

4.356	7.76	1229.76	1227.32	.00	1230.26	.50	.49	.05	1234.00
0000.0	.0	20000.0	.0	.0	3521.1	.0	1506.5	291.2	1235.00
.89	.00	5.68	.00	.000	.032	.000	.000	1222.00	9489.26
.001520	285.	285.	285.	2	14	0	.00	643.98	10133.24

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.451

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1235.00 ELREA= 1236.00

4.451	7.51	1230.51	1228.20	.00	1231.04	.54	.77	.01	1235.00
20000.0	.0	20000.0	.0	.0	3402.2	.0	1546.2	298.5	1236.00
.92	.00	5.88	.00	.000	.030	.000	.000	1223.00	9524.41
.001542	500.	500.	500.	2	19	0	.00	638.32	10162.73

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.546

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .63

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1236.00 ELREA= 1237.00

4.546	7.15	1231.15	1229.94	.00	1232.09	.93	.89	.16	1236.00
20000.0	.0	20000.0	.0	.0	2580.2	.0	1572.5	303.9	1237.00
.93	.00	7.75	.00	.000	.032	.000	.000	1224.00	9918.85
.003856	200.	383.	504.	2	15	0	.00	576.39	10495.24

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.640

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1236.00 ELREA= 1239.00

4.640	7.92	1232.92	1230.83	.00	1233.54	.62	1.35	.10	1236.00
20000.0	.0	20000.0	.0	.0	3174.7	.0	1601.1	310.0	1239.00
.95	.00	6.30	.00	.000	.035	.000	.000	1225.00	9768.22
.002586	433.	433.	433.	2	15	0	.00	645.90	10414.12

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.735

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.89

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1237.00 ELREA= 1238.00

4.735	7.96	1233.96	1230.26	.00	1234.24	.28	.61	.10	1237.00
20000.0	.0	20000.0	.0	.0	4692.3	.0	1645.4	317.7	1238.00
.98	.00	4.26	.00	.000	.032	.000	.000	1226.00	9714.55
.000722	490.	490.	490.	2	11	0	.00	735.58	10450.13

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 4.830

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1239.00 ELREA= 1239.00

begin file 07ibw.dwg

4.830	6.19	1234.19	1231.19	.00	1234.57	.39	.28	.05	1239.00
20000.0	.0	20000.0	.0	.0	4010.2	.0	1695.3	325.9	1239.00
1.01	.00	4.99	.00	.000	.020	.000	.000	1228.00	9451.22
.000446	500.	500.	500.	2	18	0	.00	696.87	10148.09

CCHV= .300 CEHV= .500
1490 NH CARD USED

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA

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    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 4.850

3255 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1238.00 ELREA=      1238.00

     4.850       7.54    1235.54    1235.54        .00    1237.50       1.97        .12        .79    1238.00
   20000.0         .0    20000.0         .0         .0     1777.1         .0     1702.0      327.3    1238.00
      1.01        .00      11.25        .00       .000       .034       .000       .000    1228.00    9453.65
   .011465       100.       100.       100.          0         11          0        .00     470.84   10170.39


CCHV=      .300 CEHV=      .500
1490 NH CARD USED
*SECNO 4.855

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

    ENCROACHMENT STATIONS=     9419.0    10187.0  TYPE=       1  TARGET=       768.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        INDIAN SCHOOL ROAD
        DOWNSTREAM EDGE
     4.855      10.09    1238.09    1238.09        .00    1239.54       1.45        .17        .15  100000.00
   20000.0         .0    20000.0         .0         .0     2068.9         .0     1703.1      327.6  100000.00
      1.01        .00       9.67        .00       .000       .020       .000       .000    1228.00    9419.00
   .004641       25.        25.        25.          0         12          0        .00     768.00   10187.00


CCHV=      .300 CEHV=      .500
1490 NH CARD USED
1
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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


   .AL BRIDGE

5227 DOWNSTREAM ELEV IS    1236.65 , NOT    1238.09 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
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1.05	1.50	2.60	.00	98.25	2.50	666.42	.00	1228.00	1227.08

*SECNO 4.870
PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1259.07	1242.50	.00	13578.	6502.	666.	674.	1235.04	1240.07	1708.

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
3693 PROBABLE MINIMUM SPECIFIC ENERGY

3470 ENCROACHMENT STATIONS= 9329.0 10182.0 TYPE= 1 TARGET= 853.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

INDIAN SHCOOL ROAD
UPSTREAM EDGE

4.870	11.02	1239.02	1238.93	.00	1240.33	1.31	.38	.38	100000.00
20000.0	.0	20000.0	.0	.0	2181.1	.0	1707.2	329.2	100000.00
1.01	.00	9.17	.00	.000	.020	.000	.000	1228.00	9329.00
.004497	84.	84.	84.	20	8	5	.00	853.00	10182.00

CCHV= .300 CEHV= .500
1490 NH CARD USED
NO 4.873

3501 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.74

3470 ENCROACHMENT STATIONS= 9358.0 10321.0 TYPE= 1 TARGET= 963.000
1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.873	11.48	1240.48	1236.48	.00	1240.68	.20	.02	.33	100000.00
17000.0	.0	17000.0	.0	.0	4733.7	.0	1708.4	329.5	100000.00
1.02	.00	3.59	.00	.000	.025	.000	.000	1229.00	9358.00
000434	15.	15.	15.	3	19	0	.00	963.00	10321.00

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 4.892

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.42

ENCROACHMENT STATIONS= 9270.0 10085.0 TYPE= 1 TARGET= 815.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.892	12.64	1240.64	1231.79	.00	1240.73	.09	.01	.03	100000.00
17000.0	.0	17000.0	.0	.0	7099.1	.0	1722.0	331.6	100000.00
1.03	.00	2.39	.00	.000	.022	.000	.000	1228.00	9270.00
.000074	100.	100.	100.	2	17	0	.00	815.00	10085.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 4.924

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1241.00 ELREA= 1241.00

4.924	12.67	1240.67	1231.96	.00	1240.74	.07	.01	.00	1241.00
17000.0	.0	17000.0	.0	.0	7831.3	.0	1751.6	335.5	1241.00
1.05	.00	2.17	.00	.000	.017	.000	.000	1228.00	8994.91
.000052	173.	173.	173.	1	17	0	.00	1177.61	10172.52

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 4.952

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1242.00 ELREA= 1242.00

4.952	12.70	1240.70	1232.67	.00	1240.75	.05	.01	.00	1242.00
17000.0	.0	17000.0	.0	.0	9080.9	.0	1780.7	339.4	1242.00
1.07	.00	1.87	.00	.000	.025	.000	.000	1228.00	8916.78
.000058	290.	150.	150.	1	18	0	.00	1107.72	10024.50

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 4.990

3265 DIVIDED FLOW

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .40

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1241.00 ELREA= 1242.00

GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
AREA BETWEEN STA. 9685 AND STA. 9909

4.990	11.71	1240.71	1235.51	.00	1240.84	.14	.06	.03	1241.00
17000.0	.0	17000.0	.0	.0	5707.5	.0	1865.4	350.7	1242.00
1.12	.00	2.98	.00	.000	.033	.000	.000	1229.00	8980.64
000356	348.	499.	595.	1	11	0	.00	855.84	10089.60

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.110

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1244.00 ELREA= 1242.00

5.110	10.87	1240.87	1235.99	.00	1241.07	.19	.20	.02	1244.00
13655.0	.0	13655.0	.0	.0	3901.5	.0	1919.7	359.0	1242.00
1.16	.00	3.50	.00	.000	.032	.000	.000	1230.00	9279.91
.000490	193.	492.	604.	2	11	0	.00	610.16	9890.07

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.205

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1244.00 ELREA= 1243.00

5.205	10.10	1241.10	1236.84	.00	1241.28	.18	.21	.00	1244.00
13655.0	.0	13655.0	.0	.0	3974.5	.0	1958.5	365.1	1243.00
1.19	.00	3.44	.00	.000	.034	.000	.000	1231.00	9289.47
.000511	306.	429.	501.	2	11	0	.00	625.33	9914.79

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.300

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .58

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1247.00 ELREA= 1243.00

NON-EFFECTIVE FLOW AREA REMOVED

5.300	7.48	1241.48	1238.72	.00	1241.82	.34	.47	.06	1247.00
3655.0	.0	13655.0	.0	.0	2919.4	.0	2003.9	373.9	1243.00
1.23	.00	4.68	.00	.000	.032	.000	.000	1234.00	9175.85
.001532	715.	574.	474.	2	14	0	.00	712.75	9888.60

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CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 5.357

     OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1250.00 ELREA=      1244.00

    5.357      6.91   1241.91   1239.60       .00   1242.40       .49       .52       .06   1250.00
 13655.0         .0  13655.0         .0        .0    2443.1         .0    2023.0     378.5   1244.00
     1.24       .00      5.59       .00      .000      .030      .000      .000   1235.00   9207.67
 .001877     310.      310.      310.         2        14         0       .00    580.73   9788.40


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
1
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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 5.360

3301 HV CHANGED MORE THAN HVINS

     MINIMUM SPECIFIC ENERGY
     CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1251.00 ELREA=      1245.00

        CAMELBACK ROAD
        DOWNSTREAM EDGE
        begin file 08ibw.dwg
    5.360      4.02   1243.02   1243.02       .00   1244.29      1.27       .27       .39   1251.00
 13655.0         .0  13655.0         .0        .0    1509.0         .0    2027.6     379.8   1245.00
     1.24       .00      9.05       .00      .000      .020      .000      .000   1239.00   9155.75
 .004270     100.      100.      100.         0        11         0       .00    593.02   9748.77


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 5.372
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1251.00 ELREA=      1245.00

        CAMELBACK ROAD
        UPSTREAM EDGE
    5.372      4.63   1243.63   1243.63       .00   1244.96      1.33       .34       .03   1251.00
 13655.0         .0  13655.0         .0        .0    1473.1         .0    2030.3     380.9   1245.00
     1.25       .00      9.27       .00      .000      .020      .000      .000   1239.00   9129.20
 .004224      80.       80.       80.         0         8         0       .00    553.82   9683.02


CCHV=     .300 CEHV=     .500
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1490 NH CARD USED
*SECNO 5.385

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.01

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1249.00 ELREA= 1245.00

5.385	8.99	1244.99	1242.61	.00	1245.38	.39	.13	.28	1249.00
13655.0	.0	13655.0	.0	.0	2727.8	.0	2033.7	381.8	1245.00
1.25	.00	5.01	.00	.000	.027	.000	.000	1236.00	9229.04
.001047	70.	70.	70.	3	14	0	.00	565.95	9794.99

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.492

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1251.00 ELREA= 1246.00

5.492	9.41	1245.41	1242.42	.00	1245.77	.37	.39	.00	1251.00
13655.0	.0	13655.0	.0	.0	2800.0	.0	2061.6	387.2	1246.00
1.28	.00	4.88	.00	.000	.026	.000	.000	1236.00	9262.75
.000767	440.	440.	440.	2	19	0	.00	505.38	9768.13

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.587

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1253.00 ELREA= 1248.00

5.587	9.82	1245.82	1241.43	.00	1246.09	.28	.30	.02	1253.00
12972.0	.0	12972.0	.0	.0	3058.0	.0	2095.2	392.5	1248.00
1.31	.00	4.24	.00	.000	.029	.000	.000	1236.00	9353.78
.000484	500.	500.	500.	2	14	0	.00	427.06	9780.83

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.682

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1254.00 ELREA= 1252.00

5.682	10.06	1246.06	1241.66	.00	1246.33	.26	.23	.00	1254.00
12928.0	.0	12928.0	.0	.0	3135.1	.0	2130.8	397.5	1252.00
1.34	.00	4.12	.00	.000	.028	.000	.000	1236.00	9360.06

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    .000428      500.      500.      500.         2        14         0       .00    429.97   9790.03


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


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 5.777

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1257.00 ELREA=      1251.00

      5.777      10.32    1246.32    1241.56       .00    1246.60       .28        .27        .01    1257.00
    12836.0         .0    12836.0         .0        .0     3039.8         .0     2166.2      402.3    1251.00
       1.38        .00       4.22        .00      .000       .035       .000       .000    1236.00    9362.64
    .000685      500.      500.      500.         2        11         0       .00    406.32   9768.96


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 5.867

     OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1256.00 ELREA=      1251.00

      5.867       8.60    1246.60    1244.16       .00    1247.07       .47        .39        .08    1256.00
    11769.0         .0    11769.0         .0        .0     2147.6         .0     2193.9      407.1    1251.00
       1.40        .00       5.48        .00      .000       .024       .000       .000    1238.00    9284.41
    .001090      465.      465.      465.         2        14         0       .00    491.02   9775.43


 CCHV=      .300 CEHV=      .500
 1490 NH CARD USED
 *SECNO 5.871

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1256.00 ELREA=      1251.00

      5.871       6.08    1247.08    1247.08       .00    1248.41      1.33        .05        .43    1256.00
    11706.0         .0    11706.0         .0        .0     1264.7         .0     2194.7      407.3    1251.00
       1.40        .00       9.26        .00      .000       .035       .000       .000    1241.00    9283.22
    .013326       20.       20.       20.         0        19         0       .00    489.73   9772.96


 CCHV=      .300 CEHV=      .500

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

NH CARD USED
*SECNO 5.886

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1255.00 ELREA= 1251.00

5.886	1.85	1251.85	1251.85	.00	1252.60	.75	.36	.17	1255.00
11500.0	.0	5822.2	5677.8	.0	1359.8	639.9	2197.6	408.8	1251.00
1.40	.00	4.28	8.87	.000	.020	.020	.000	1250.00	8928.16
.002278	78.	78.	78.	0	17	0	.00	1231.21	10159.37

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1251.55 , NOT 1251.85 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	105.50	3.00	402.83	.00	1246.93	1246.53

*SECNO 5.900

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.62

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1293.33	1252.99	.00	13951.	3056.	403.	403.	1250.86	1252.36	1574.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1254.00 ELREA= 1257.00

CHAPARREL ROAD
begin file 09ibw.dwg

5.900	5.73	1252.73	.00	.00	1253.19	.46	.59	.00	1254.00
17000.0	.0	17000.0	.0	.0	3113.3	.0	2202.3	411.2	1257.00
1.41	.00	5.46	.00	.000	.020	.000	.000	1247.00	8786.19
.001898	80.	80.	80.	3	0	7	.00	1416.64	10202.83

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

.300 CEHV= .500
NH CARD USED
*SECNO 5.925

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .60

5.925	3.05	1253.05	1252.50	.00	1253.65	.60	.39	.07	1255.00
17000.0	.0	17000.0	.0	.0	2731.0	.0	2211.0	415.1	1255.00
1.41	.00	6.22	.00	.000	.031	.000	.000	1250.00	8939.59
.005286	130.	130.	130.	2	18	0	.00	1146.78	10086.37

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.966

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.94

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1256.00 ELREA= 1256.00

5.966	4.26	1254.26	1252.40	.00	1254.58	.33	.88	.06	1256.00
17000.0	.0	17000.0	.0	.0	3712.2	.0	2237.6	424.2	1256.00
1.43	.00	4.58	.00	.000	.028	.000	.000	1250.00	9083.39
.001401	360.	360.	360.	2	15	0	.00	1054.90	10138.29

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.060

3265 DIVIDED FLOW

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1258.00 ELREA= 1256.00

6.060	4.82	1254.82	1253.07	.00	1255.28	.46	.64	.05	1258.00
17000.0	.0	17000.0	.0	.0	3122.4	.0	2276.9	434.6	1256.00
1.46	.00	5.44	.00	.000	.024	.000	.000	1250.00	9219.66
.001186	500.	500.	500.	3	15	0	.00	761.48	10068.33

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

...V= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.155

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1260.00 ELREA= 1257.00

6.155	5.47	1255.47	1252.33	.00	1255.64	.18	.31	.06	1260.00
11920.0	.0	11920.0	.0	.0	3514.5	.0	2314.9	443.0	1257.00
1.50	.00	3.39	.00	.000	.023	.000	.000	1250.00	9156.00
.000314	500.	500.	500.	0	11	0	.00	700.63	9856.63

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.250

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1263.00 ELREA= 1259.00

6.250	5.62	1255.62	1253.39	.00	1256.01	.39	.28	.09	1263.00
11920.0	.0	11920.0	.0	.0	2374.7	.0	2348.7	449.9	1259.00
1.53	.00	5.02	.00	.000	.029	.000	.000	1250.00	9351.34
.001239	500.	500.	500.	2	14	0	.00	512.07	9863.41

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.345

3301 HV CHANGED MORE THAN HVINS

MINIMUM SPECIFIC ENERGY
CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1262.00 ELREA= 1261.00

6.345	4.60	1257.60	1257.60	.00	1258.96	1.37	1.35	.39	1262.00
11920.0	.0	11920.0	.0	.0	1270.6	.0	2369.7	455.7	1261.00
1.54	.00	9.38	.00	.000	.030	.000	.000	1253.00	9329.52
.009945	500.	500.	500.	0	15	0	.00	483.25	9812.76

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.390
7185 MINIMUM SPECIFIC ENERGY
7??? CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1262.00 ELREA= 1261.00

6.390	3.24	1260.24	1260.24	.00	1261.51	1.26	1.45	.02	1262.00
11920.0	.0	11920.0	.0	.0	1320.7	.0	2376.5	458.3	1261.00

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      1.55       .00      9.03       .00      .000      .020      .000      .000   1257.00   9276.75
    .004363      230.      230.      230.         0        19         0       .00    529.50   9806.25


          .200 CEHV=      .400
 1 . 0 NH CARD USED
 *SECNO 6.400

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77

         begin file 10ibw.dwg
     6.400      4.25   1261.25   1260.33       .00   1261.78       .53       .13       .15   1262.00
   17000.0         .0  17000.0         .0        .0    2905.3         .0    2378.3     459.0   1261.00
      1.55       .00      5.85       .02      .000      .026      .035      .000   1257.00   9203.01
    .002837      38.       38.       38.         5         8         0       .00   1072.44  10275.45


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 6.440

 3265 DIVIDED FLOW

     6.440      4.99   1261.99   1260.40       .00   1262.37       .39       .56       .03   1262.00
   17000.0         .0  17000.0         .0        .0    3412.6         .0    2395.0     464.3   1264.00
      1.57       .00      4.98       .00      .000      .033      .000      .000   1257.00   9096.72
    .002110      230.      230.      230.         2        15         0       .00    925.22  10076.08


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


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 6.530

 3265 DIVIDED FLOW

     6.530      7.98   1262.98   1261.17       .00   1263.32       .34       .94       .01   1263.00
   17000.0         .0  17000.0         .0        .0    3643.4         .0    2435.5     475.0   1267.00
      1.59       .00      4.67       .00      .000      .032      .000      .000   1255.00   9107.18
    .001678      500.      500.      500.         2        11         0       .00    937.69  10087.32


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 6.630

 3265 DIVIDED FLOW
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6.630	5.88	1263.88	1262.32	.00	1264.27	.39	.93	.02	1265.00
17000.0	.0	17000.0	.0	.0	3403.1	.0	2476.0	485.8	1267.00
1.62	.00	5.00	.00	.000	.032	.000	.000	1258.00	9092.27
.002086	500.	500.	500.	2	11	0	.00	949.75	10071.71

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.723

6.723	5.86	1264.86	1262.71	.00	1265.19	.33	.90	.01	1267.00
17000.0	.0	17000.0	.0	.0	3712.2	.0	2516.8	496.6	1269.00
1.65	.00	4.58	.00	.000	.032	.000	.000	1259.00	9147.49
.001584	500.	500.	500.	2	14	0	.00	927.81	10075.30

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.820

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

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

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .49

3470 ENCROACHMENT STATIONS= 9225.0 10100.0 TYPE= 1 TARGET= 875.000
NON-EFFECTIVE FLOW AREA REMOVED

6.820	4.97	1265.97	1265.56	.00	1266.84	.88	1.43	.22	100000.00
17000.0	.0	17000.0	.0	.0	2264.2	.0	2551.1	506.8	100000.00
1.67	.00	7.51	.00	.000	.031	.000	.000	1261.00	9225.00
.006713	500.	500.	500.	2	15	0	.00	848.13	10100.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.856

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.05

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1275.00 ELREA= 1270.00

6.856	6.19	1267.19	1264.65	.00	1267.53	.34	.58	.11	1275.00
17000.0	.0	17000.0	.0	.0	3644.8	.0	2564.7	510.6	1270.00

1.68	.00	4.66	.00	.000	.035	.000	.000	1261.00	9331.97
.001602	200.	200.	200.	2	15	0	.00	792.27	10124.24

.300 CEHV= .500
1490 NH CARD USED
*SECNO 6.879

3265 DIVIDED FLOW

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1270.00 ELREA= 1271.00

6.879	12.33	1267.33	1265.56	.00	1267.83	.50	.22	.08	1270.00
17000.0	.0	17000.0	.0	.0	3002.0	.0	2573.8	512.7	1271.00
1.69	.00	5.66	.00	.000	.031	.000	.000	1255.00	9256.30
.002217	120.	120.	120.	2	18	0	.00	762.47	10113.17

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

.300 CEHV= .500
NH CARD USED
*SECNO 6.880

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.08

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1269.00 ELREA= 1272.00

MCDONALD DRIVE
DOWNSTREAM EDGE
NON-EFFECTIVE FLOW AREA REMOVED
begin file 11ibw.dwg

6.880	5.67	1267.67	1265.43	.00	1267.93	.26	.03	.07	1269.00
17000.0	.0	17000.0	.0	.0	4131.5	.0	2576.4	513.4	1272.00
1.69	.00	4.11	.00	.000	.020	.000	.000	1262.00	8991.91
.000512	32.	32.	32.	2	14	0	.00	1075.23	10157.45

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1266.84 , NOT 1267.67 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.50	2.60	.00	214.00	7.50	1722.21	.00	1262.83	1261.83

*SECNO 6.893

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

.SS B LOW FLOW

3420 BRIDGE W.S.= 1268.28 BRIDGE VELOCITY= 13.84 CALCULATED CHANNEL AREA= 1125.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1270.11	.00	0.	17000.	1722.	1722.	1271.17	1272.84	0.

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1269.00 ELREA= 1272.00

MCDONALD DRIVE
UPSTREAM EDGE

6.893	15.01	1270.01	.00	.00	1270.11	.10	2.18	.00	1269.00
17000.0	11072.9	5927.1	.0	5004.6	1877.8	.0	2586.3	515.6	1272.00
1.70	2.21	3.16	.00	.031	.023	.000	.000	1255.00	8740.95
.000216	78.	78.	78.	0	0	0	.00	1413.00	10153.95

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.910

3265 DIVIDED FLOW

6.910	11.99	1269.99	1265.74	.00	1270.14	.15	.01	.02	1272.00
17000.0	.0	16993.3	6.7	.0	5487.0	11.5	2592.7	516.8	1270.00
1.70	.00	3.10	.58	.000	.027	.035	.000	1258.00	9206.51
.000303	45.	45.	45.	2	11	0	.00	928.43	10155.33

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.960

6.960	8.04	1270.04	1265.63	.00	1270.23	.18	.07	.01	1273.00
17000.0	.0	17000.0	.0	.0	4962.6	.0	2622.7	521.7	1273.00
1.72	.00	3.43	.00	.000	.025	.000	.000	1262.00	9358.82
.000270	250.	250.	250.	1	17	0	.00	772.04	10130.86

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.008

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .42

3470 ENCROACHMENT STATIONS= 9521.5 10146.0 TYPE= 1 TARGET= 624.500

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
7.008	6.87	1269.87	1268.32	.00	1270.56	.69	.13	.20	100000.00
17000.0	.0	17000.0	.0	.0	2541.8	.0	2644.3	525.6	100000.00
1.73	.00	6.69	.00	.000	.023	.000	.000	1263.00	9550.33
.001506	315.	250.	237.	2	14	0	.00	592.77	10143.09

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.102
GR DATA ADJUSTED FOR FLOODWALL

7.102	7.58	1270.58	1267.49	.00	1271.15	.57	.56	.03	1270.00
17000.0	.0	17000.0	.0	.0	2809.1	.0	2675.0	531.9	1277.00
1.76	.02	6.05	.00	.020	.023	.000	.000	1263.00	9719.88
000866	505.	500.	478.	2	14	0	.00	494.10	10213.98

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.197

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1276.00 ELREA= 1278.00

7.197	7.19	1271.19	1267.31	.00	1271.51	.32	.31	.05	1276.00
17000.0	.0	17000.0	.0	.0	3749.7	.0	2712.6	537.8	1278.00
1.79	.00	4.53	.00	.000	.025	.000	.000	1264.00	9716.58
.000468	570.	500.	470.	0	14	0	.00	550.48	10267.06

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.290

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .64

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1280.00 ELREA= 1279.00

7.290	8.44	1271.44	1269.61	.00	1271.93	.49	.35	.07	1280.00
000.0	.0	17000.0	.0	.0	3038.6	.0	2751.6	544.8	1279.00
1.81	.00	5.59	.00	.000	.025	.000	.000	1263.00	9650.14
.001154	500.	500.	500.	2	10	0	.00	657.88	10308.03

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.390

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .69

7.390	8.08	1272.08	1271.09	.00	1272.84	.76	.81	.11	1280.00
17000.0	.0	17000.0	.0	.0	2424.6	.0	2782.9	552.2	1279.00
1.83	.00	7.01	.00	.000	.025	.000	.000	1264.00	9666.35
.002404	500.	500.	500.	2	10	0	.00	629.49	10295.84

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.481
begin file 12ibw.dwg

7.481	8.16	1273.16	1271.36	.00	1273.77	.60	.89	.03	1282.00
17000.0	.0	17000.0	.0	.0	2729.4	.0	2812.5	559.1	1285.00
1.86	.00	6.23	.00	.000	.025	.000	.000	1265.00	9662.15
.001376	500.	500.	500.	2	19	0	.00	583.16	10245.31

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.576

7.576	6.86	1273.86	1272.28	.00	1274.56	.70	.75	.04	1282.00
17000.0	.0	17000.0	.0	.0	2528.6	.0	2842.7	565.6	1281.00
1.88	.00	6.72	.00	.000	.025	.000	.000	1267.00	9721.59
.001661	500.	500.	500.	2	14	0	.00	546.84	10268.43

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.670
NON-EFFECTIVE FLOW AREA REMOVED

7.670	6.75	1274.75	1273.07	.00	1275.37	.61	.79	.02	1284.00
17000.0	.0	17000.0	.0	.0	2701.7	.0	2872.7	572.2	1283.00
1.90	.00	6.29	.00	.000	.025	.000	.000	1268.00	9629.49
.001508	500.	500.	500.	2	19	0	.00	599.16	10228.65

CCHV= .200 CEHV= .400

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

1490 NH CARD USED
*SECNO 7.765

7.765	5.50	1275.50	1273.74	.00	1276.19	.69	.79	.03	1284.00
17000.0	.0	17000.0	.0	.0	2557.0	.0	2902.9	578.6	1284.00
1.92	.00	6.65	.00	.000	.026	.000	.000	1270.00	9720.54
.001657	500.	500.	500.	2	11	0	.00	522.20	10242.73

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.837

7.837	5.14	1276.14	1274.35	.00	1276.80	.66	.61	.01	1285.00
17000.0	.0	17000.0	.0	.0	2610.7	.0	2925.4	583.2	1284.00
1.94	.00	6.51	.00	.000	.026	.000	.000	1271.00	9741.68
.001546	380.	380.	380.	2	14	0	.00	534.19	10275.87

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.883

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.68

7.883	10.70	1276.70	1270.88	.00	1276.99	.28	.11	.08	1286.00
17000.0	.0	17000.0	.0	.0	3985.2	.0	2943.6	586.2	1285.00
1.95	.00	4.27	.00	.000	.019	.000	.000	1266.00	9731.95
.000215	240.	240.	240.	2	8	0	.00	540.24	10272.18

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 7.955

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .28

7.955	5.45	1276.45	1275.23	.00	1277.66	1.22	.21	.47	1291.00
17000.0	.0	17000.0	.0	.0	1921.4	.0	2970.7	590.4	1290.00
1.96	.00	8.85	.00	.000	.026	.000	.000	1271.00	9838.77
.002664	227.	400.	500.	2	18	0	.00	368.15	10206.92

1

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 7.979

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 4.10

INDIAN BEND ROAD
BASE OF DROP STRUCTURE

7.979	6.88	1277.88	1273.90	.00	1278.03	.15	.05	.32	1282.00
17000.0	.0	17000.0	.0	.0	5441.8	.0	2980.8	592.1	1282.00
1.97	.00	3.12	.00	.000	.020	.000	.000	1271.00	9581.43
.000159	120.	120.	120.	3	11	0	.00	891.04	10472.47

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 7.988

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

7.988	2.07	1284.07	1284.07	.00	1284.96	.89	.02	.37	1290.00
17000.0	.0	17000.0	.0	.0	2245.6	.0	2985.3	593.3	1290.00
1.98	.00	7.57	.00	.000	.020	.000	.000	1282.00	9413.89
.004902	50.	50.	50.	0	17	0	.00	1279.26	10693.15

CCHV= .300 CEHV= .500
1490 NH CARD USED
IO 7.992
MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
begin file 13ibw.dwg
INDIAN BEND ROAD
UPSTREAM EDGE OF DROP STRUCTURE

7.992	2.35	1284.35	1284.35	.00	1285.23	.88	.15	.00	1290.00
17000.0	.0	17000.0	.0	.0	2253.2	.0	2986.8	594.2	1291.00
1.98	.00	7.54	.00	.000	.020	.000	.000	1282.00	9377.17
.004861	20.	30.	41.	0	8	0	.00	1280.94	10658.11

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 8.144

DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.12

8.144	4.12	1286.12	1284.82	.00	1286.44	.32	1.10	.11	1291.00
000.0	.0	16000.0	.0	.0	3501.9	.0	3025.3	611.2	1294.00
2.01	.00	4.57	.00	.000	.020	.000	.000	1282.00	9038.38
.000961	787.	582.	252.	3	11	0	.00	1252.46	10664.04

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 8.239

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9399.0 10110.0 TYPE= 1 TARGET= 711.000
NON-EFFECTIVE FLOW AREA REMOVED

8.239	5.16	1287.16	1287.16	.00	1288.55	1.39	1.19	.43	100000.00
16000.0	.0	16000.0	.0	.0	1691.0	.0	3055.1	622.0	100000.00
2.03	.00	9.46	.00	.000	.034	.000	.000	1282.00	9399.00
.013223	533.	500.	465.	0	11	0	.00	633.67	10110.00

.200 CEHV= .400
NH CARD USED
*SECNO 8.333

1

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

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.20

8.333	7.11	1290.11	1287.55	.00	1290.29	.17	1.50	.24	1292.00
16000.0	.0	16000.0	.0	.0	4777.7	.0	3092.2	633.7	1292.00
2.07	.00	3.35	.00	.000	.036	.000	.000	1283.00	9057.21
.001288	500.	500.	485.	4	11	0	.00	1404.14	10461.35

CCHV= .200 CEHV= .400
NH CARD USED
*SECNO 8.428

3265 DIVIDED FLOW

8.428	6.81	1290.81	1289.33	.00	1291.08	.27	.76	.04	1293.00
16000.0	.0	16000.0	.0	.0	3808.3	.0	3141.5	649.3	1294.00
2.10	.00	4.20	.00	.000	.031	.000	.000	1284.00	9164.39
.001807	620.	500.	438.	3	18	0	.00	1311.00	10589.36

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 8.523

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .64

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1296.00 ELREA= 1294.00

8.523	5.05	1292.05	1290.95	.00	1292.50	.44	1.35	.07	1296.00
16000.0	.0	16000.0	.0	.0	3000.1	.0	3180.5	662.6	1294.00
2.13	.00	5.33	.00	.000	.038	.000	.000	1287.00	9221.71
.004430	500.	500.	500.	3	22	0	.00	1018.41	10472.86

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 8.656

3301 HV CHANGED MORE THAN HVINS

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1297.00 ELREA= 1297.00

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8.656	4.67	1294.67	1294.28	.00	1295.72	1.05	2.98	.24	1297.00
16000.0	.0	16000.0	.0	.0	1944.6	.0	3209.7	672.4	1297.00
2.14	.00	8.23	.00	.000	.034	.000	.000	1290.00	9782.44
.007935	520.	513.	480.	2	15	0	.00	642.62	10425.06

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 8.752

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 5.23

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1305.00 ELREA= 1299.00

8.752	5.11	1296.11	1293.31	.00	1296.29	.18	.39	.17	1305.00
16000.0	.0	16000.0	.0	.0	4698.6	.0	3246.3	681.6	1299.00
2.18	.00	3.41	.00	.000	.020	.000	.000	1291.00	9259.49
.000291	480.	480.	480.	3	8	0	.00	1027.82	10287.31

1490 NH CARD USED
*SECNO 8.996

8.996	5.45	1296.45	1293.00	.00	1296.57	.13	.28	.01	1302.00
16000.0	.0	16000.0	.0	.0	5597.0	.0	3398.5	712.6	1300.00
2.31	.00	2.86	.00	.000	.020	.000	.000	1291.00	9183.16
.000165	1288.	1288.	1288.	3	18	0	.00	1071.24	10254.40

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.022

3265 DIVIDED FLOW

9.022	5.52	1296.52	1292.93	.00	1296.61	.09	.03	.01	1299.00
16000.0	.0	16000.0	.0	.0	6567.2	.0	3422.8	717.7	1302.00
2.33	.00	2.44	.00	.000	.023	.000	.000	1291.00	9095.99
.000204	174.	174.	174.	2	18	0	.00	1483.74	10652.77

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 9.125

3265 DIVIDED FLOW

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1300.00 ELREA= 1302.00

9.125	7.59	1298.59	1298.59	.00	1299.45	.87	.30	.39	1300.00
16000.0	.0	16000.0	.0	.0	2142.7	.0	3475.6	734.6	1302.00
2.35	.00	7.47	.00	.000	.020	.000	.000	1291.00	9309.47
J05167	417.	529.	440.	0	12	0	.00	1292.79	10696.94

CCHV= .300 CEHV= .500
1490 NH CARD USED

*SECNO 9.126

3265 DIVIDED FLOW

MINIMUM SPECIFIC ENERGY
CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1303.00 ELREA= 1302.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
9.126	6.92	1298.92	1298.92	.00	1299.88	.96	.05	.05	1303.00
16000.0	.0	16000.0	.0	.0	2035.3	.0	3476.1	734.9	1302.00
2.35	.00	7.86	.00	.000	.020	.000	.000	1292.00	9263.85
.005187	463.	10.	10.	0	9	0	.00	1137.57	10560.26

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 9.128
7185 MINIMUM SPECIFIC ENERGY
CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1303.00 ELREA= 1300.00

SCOTTSDALE ROAD
DOWNSTREAM EDGE

9.128	9.37	1299.37	1299.37	.00	1300.34	.97	.12	.00	1303.00
16000.0	.0	16000.0	.0	.0	2026.5	.0	3477.2	735.5	1300.00
2.35	.00	7.90	.00	.000	.020	.000	.000	1290.00	9360.37
.005217	126.	23.	103.	0	15	0	.00	1119.74	10480.11

CCHV= .200 CEHV= .400
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	32.00	2.00	90.00	.00	1290.00	1290.00

*SECNO 9.150

3301 HV CHANGED MORE THAN HVINS

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.41

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID	ELLC	ELTRD	WEIRLN

						AREA			
2035.51	1300.34	.26	15315.	702.	90.	90.	1293.00	1299.00	1089.

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1302.00 ELREA= 1302.00

SCOTTSDALE ROAD
UPSTREAM EDGE

9.150	10.44	1300.44	.00	.00	1300.78	.35	.45	.00	1302.00
16000.0	.0	16000.0	.0	.0	3377.2	.0	3483.4	738.0	1302.00
2.36	.00	4.74	.00	.000	.020	.000	.000	1290.00	9386.62
.000901	242.	100.	188.	2	0	8	.00	1086.73	10473.34

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.243

DIVIDED FLOW

9.243	7.01	1301.01	1296.68	.00	1301.10	.09	.26	.05	1304.00
9000.0	.0	9000.0	.0	.0	3772.4	.0	3524.4	749.0	1302.00
2.41	.01	2.39	.00	.040	.027	.000	.000	1294.00	9378.56
.000255	499.	499.	499.	2	14	0	.00	825.80	10390.97

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.283

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .36

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1302.00 ELREA= 1304.00

9.283	7.09	1301.09	1299.94	.00	1301.33	.23	.17	.06	1302.00
9000.0	.0	9000.0	.0	.0	2317.0	.0	3546.4	756.3	1304.00
2.44	.00	3.88	.00	.000	.026	.000	.000	1294.00	8905.98
.001967	325.	316.	314.	2	9	0	.00	1193.95	10099.93

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.375

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV

Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .67

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1304.00 ELREA= 1306.00

9.375	4.20	1302.20	1301.47	.00	1302.46	.26	1.12	.01	1304.00
9000.0	.0	9000.0	.0	.0	2205.8	.0	3567.2	769.2	1306.00
2.46	.00	4.08	.00	.000	.030	.000	.000	1298.00	8785.22
.004332	298.	400.	400.	5	8	0	.00	1612.37	10527.95

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.470

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1308.00 ELREA= 1306.00

9.470	4.40	1304.40	1304.14	.00	1304.80	.40	2.28	.06	1308.00
9000.0	.0	9000.0	.0	.0	1777.4	.0	3587.6	783.5	1306.00
2.49	.00	5.06	.00	.000	.030	.000	.000	1300.00	9388.30
006175	465.	445.	387.	3	6	0	.00	1197.81	10586.11

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.564

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.59

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1308.00 ELREA= 1310.00

9.564	4.40	1306.40	1304.94	.00	1306.62	.23	1.79	.03	1308.00
9000.0	.0	9000.0	.0	.0	2362.6	.0	3610.6	795.1	1310.00
2.52	.00	3.81	.00	.000	.037	.000	.000	1302.00	9496.80
.002452	494.	484.	472.	2	19	0	.00	886.17	10448.45

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.578

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1314.00 ELREA= 1314.00

9.578	5.47	1307.47	1305.77	.00	1307.63	.16	.99	.01	1314.00
9000.0	.0	9000.0	.0	.0	2783.6	.0	3640.1	806.0	1314.00
2.57	.00	3.23	.00	.000	.037	.000	.000	1302.00	9695.76
.001645	500.	500.	500.	3	15	0	.00	1009.28	10705.04

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.659

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1310.00 ELREA= 1310.00

9.659	6.15	1308.15	1306.60	.00	1308.33	.17	.69	.00	1310.00
9000.0	.0	9000.0	.0	.0	2701.2	.0	3663.8	815.6	1310.00
2.60	.00	3.33	.00	.000	.035	.000	.000	1302.00	9341.74
.002073	428.	377.	354.	2	10	0	.00	1218.75	10560.50

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.754

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1312.00 ELREA= 1312.00

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9.754	5.13	1309.13	1307.90	.00	1309.38	.25	1.02	.03	1312.00
9000.0	.0	9000.0	.0	.0	2244.2	.0	3690.8	827.2	1312.00
2.63	.00	4.01	.00	.000	.032	.000	.000	1304.00	9605.54
.002218	591.	476.	383.	2	14	0	.00	891.95	10497.50

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.849

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1312.00 ELREA= 1314.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
9.849	5.99	1309.99	1308.57	.00	1310.24	.25	.86	.00	1312.00
9000.0	.0	9000.0	.0	.0	2246.0	.0	3712.8	835.3	1314.00
2.66	.00	4.01	.00	.000	.033	.000	.000	1304.00	9774.50
.001842	463.	427.	403.	2	10	0	.00	760.21	10534.71

CCHV= .200 CEHV= .400

1490 NH CARD USED
*SECNO 9.943

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1316.00 ELREA= 1318.00

9.943	4.24	1312.24	1312.24	.00	1313.09	.85	1.52	.24	1316.00
9000.0	.0	9000.0	.0	.0	1219.1	.0	3732.3	843.2	1318.00
2.68	.00	7.38	.00	.000	.024	.000	.000	1308.00	9617.56
.006385	499.	489.	482.	0	14	0	.00	653.09	10270.65

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.040

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.47

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1316.00 ELREA= 1316.00

10.040	4.74	1314.74	1314.21	.00	1315.03	.29	1.83	.11	1316.00
9000.0	.0	9000.0	.0	.0	2092.5	.0	3748.8	852.8	1316.00
2.71	.00	4.30	.00	.000	.026	.000	.000	1310.00	9454.34
.002972	431.	435.	446.	1	6	0	.00	1277.11	10731.46

CCHV= .200 CEHV= .400
1

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

1490 NH CARD USED
*SECNO 10.130

3470 ENCROACHMENT STATIONS= 9800.0 10290.0 TYPE= 1 TARGET= 490.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

10.130	4.37	1316.37	1315.58	.00	1316.98	.62	1.82	.13	100000.00
9000.0	.0	9000.0	.0	.0	1429.4	.0	3769.0	863.0	100000.00
2.73	.00	6.30	.00	.000	.032	.000	.000	1312.00	9800.00
.004584	500.	500.	500.	3	15	0	.00	490.00	10290.00

CCHV= .200 CEHV= .400
1490 NH CARD USED

*SECNO 10.230

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1324.00 ELREA= 1320.00

0.230	4.09	1318.09	1317.34	.00	1318.70	.62	1.72	.00	1324.00
9000.0	.0	9000.0	.0	.0	1424.5	.0	3785.4	868.8	1320.00
2.75	.00	6.32	.00	.000	.024	.000	.000	1314.00	9708.51
.002678	500.	500.	500.	2	15	0	.00	528.55	10237.06

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.320

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.56

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1324.00 ELREA= 1322.00

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10.320	5.31	1319.31	1317.69	.00	1319.59	.28	.82	.07	1324.00
9000.0	.0	9000.0	.0	.0	2104.0	.0	3805.7	875.6	1322.00
2.78	.00	4.28	.00	.000	.025	.000	.000	1314.00	9673.49
.001103	500.	500.	500.	2	11	0	.00	645.38	10318.87

CCHV= .200 CEHV= .400
1

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

1490 NH CARD USED
*SECNO 10.380

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1324.00 ELREA= 1322.00

10.380	5.66	1319.66	1318.29	.00	1319.96	.30	.36	.01	1324.00
9000.0	.0	9000.0	.0	.0	2058.4	.0	3820.6	880.6	1322.00
2.80	.00	4.37	.00	.000	.023	.000	.000	1314.00	9692.73
.001217	374.	312.	191.	2	15	0	.00	761.53	10454.26

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.400

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.64

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1322.00 ELREA= 1322.00

INVERGORDON ROAD
DOWNSTREAM EDGE

10.400	3.92	1319.92	1318.52	.00	1320.05	.13	.06	.03	1322.00

9000.0	.0	9000.0	.0	.0	3059.8	.0	3825.9	882.6	1322.00
2.81	.00	2.94	.00	.000	.020	.000	.000	1316.00	9221.84
.000454	200.	90.	10.	2	18	0	.00	1208.30	10430.14

.V= .200 CEHV= .400
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	48.42	3.75	126.86	.00	1313.39	1313.08

*SECNO 10.410
PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1437.15	1320.07	.02	8362.	624.	127.	127.	1316.23	1317.70	851.

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1322.00 ELREA= 1322.00

INVERGORDON ROAD
UPSTREAM EDGE

10.410	12.31	1320.31	.00	.00	1320.48	.18	.43	.00	1322.00
9000.0	.0	9000.0	.0	.0	2677.9	.0	3829.7	884.0	1322.00
2.82	.00	3.36	.00	.000	.020	.000	.000	1308.00	9597.24
.000445	58.	58.	58.	2	0	8	.00	846.07	10443.30

FLOW DISTRIBUTION FOR SECNO= 10.41 CWSEL= 1320.31

STA= 9597. 10450.
PER Q= 100.0
AREA= 2677.9
VEL= 3.4
DEPTH= 3.2

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.510

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1324.00 ELREA= 1322.00

10.510	4.58	1320.58	1318.55	.00	1320.81	.24	.31	.03	1324.00
9000.0	.0	9000.0	.0	.0	2297.6	.0	3860.6	893.1	1322.00
2.85	.00	3.92	.00	.000	.025	.000	.000	1316.00	9664.06

.000753 341. 542. 706. 2 21 0 .00 616.82 10280.87

CCHV= .200 CEHV= .400
NH CARD USED
*SECNO 10.610

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1326.00 ELREA= 1324.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
10.610	3.38	1321.38	1321.38	.00	1322.47	1.09	.72	.34	1326.00
9000.0	.0	9000.0	.0	.0	1074.7	.0	3878.3	898.9	1324.00
2.87	.00	8.37	.00	.000	.022	.000	.000	1318.00	9670.53
.005316	455.	455.	455.	0	15	0	.00	499.90	10170.43

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.700

10.700	2.22	1324.22	1323.91	.00	1324.86	.64	2.30	.09	1326.00
9000.0	.0	9000.0	.0	.0	1397.0	.0	3891.6	905.3	1326.00
2.89	.00	6.44	.00	.000	.025	.000	.000	1322.00	9718.57
.004526	460.	470.	478.	2	11	0	.00	678.89	10397.46

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.800

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.64

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1328.00 ELREA= 1326.00

10.800	5.43	1325.43	1323.04	.00	1325.61	.18	.66	.09	1328.00
9000.0	.0	9000.0	.0	.0	2618.7	.0	3913.7	912.8	1326.00
2.93	.00	3.44	.00	.000	.027	.000	.000	1320.00	9804.57
.000649	480.	480.	480.	3	11	0	.00	680.92	10485.49

CCHV= .200 CEHV= .400
NH CARD USED
*SECNO 10.890

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.49

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 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1328.00 ELREA=      1330.00

    10.890      5.69   1325.69   1322.61       .00   1325.83       .14       .21       .01   1328.00
    000.0        .0    9000.0        .0        .0    2986.2        .0    3945.9     920.4   1330.00
     2.98       .00      3.01       .00      .000      .023      .000      .000   1320.00   9699.05
   .000291     500.      500.      500.         2        11         0       .00    653.38  10352.43


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


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 10.990

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1330.00 ELREA=      1330.00

     begin file 18ibw.dwg
    10.990      3.26   1327.26   1327.26       .00   1328.24       .99       .40       .34   1330.00
    9000.0        .0    9000.0        .0        .0    1129.3        .0    3968.6     927.2   1330.00
      2.99       .00      7.97       .00      .000      .027      .000      .000   1324.00   9647.67
   .008480     476.      480.      485.         0        11         0       .00    574.09  10221.76


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 11.080

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.37


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1332.00 ELREA=      1332.00

    11.080      5.46   1329.46   1328.08       .00   1329.79       .34      1.42       .13   1332.00
    9000.0        .0    9000.0        .0        .0    1934.7        .0    3985.3     933.8   1332.00
      3.02       .00      4.65       .00      .000      .026      .000      .000   1324.00   9677.57
   .001508     460.      476.      488.         3        11         0       .00    640.51  10318.08


     =      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 11.150

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1334.00 ELREA=      1334.00
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DOWNSTREAM EDGE

11.150	9.91	1329.91	1328.92	.00	1330.39	.49	.54	.06	1334.00
9000.0	.0	9000.0	.0	.0	1609.2	.0	4001.7	939.9	1334.00
3.04	.00	5.59	.00	.000	.016	.000	.000	1320.00	9692.61
.001202	334.	402.	440.	2	14	0	.00	679.73	10372.34

CCHV= .200 CEHV= .400
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	48.42	3.75	133.12	.00	1324.25	1324.07

*SECNO 11.170
PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1436.37	1330.53	.14	7758.	1280.	133.	133.	1327.23	1329.37	735.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1334.00 ELREA= 1334.00

DOUBLETREE ROAD
UPSTREAM EDGE

11.170	5.77	1331.77	.00	.00	1332.06	.30	1.67	.00	1334.00
9000.0	.0	9000.0	.0	.0	2062.8	.0	4005.8	941.5	1334.00
3.05	.00	4.36	.00	.000	.025	.000	.000	1326.00	9673.38
.001300	98.	98.	98.	2	0	7	.00	714.30	10387.68

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.270

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1336.00 ELREA= 1336.00

11.270	2.73	1332.73	1332.73	.00	1333.74	1.00	1.38	.28	1336.00
9000.0	.0	9000.0	.0	.0	1120.1	.0	4023.8	948.8	1336.00
3.06	.00	8.03	.00	.000	.029	.000	.000	1330.00	9748.33
.09868	546.	493.	442.	0	14	0	.00	568.69	10317.02

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.360

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.24

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1338.00 ELREA= 1338.00

11.360	5.23	1335.23	1334.18	.00	1335.69	.46	1.84	.11	1338.00
9000.0	.0	9000.0	.0	.0	1652.3	.0	4039.4	955.4	1338.00
3.09	.00	5.45	.00	.000	.024	.000	.000	1330.00	9715.82
.001969	490.	490.	490.	4	14	0	.00	609.13	10324.96

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.460

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .60

11.460	2.48	1336.48	1336.24	.00	1337.20	.72	1.41	.10	1340.00
9000.0	.0	9000.0	.0	.0	1321.2	.0	4055.1	962.0	1338.00
3.11	.00	6.81	.00	.000	.026	.000	.000	1334.00	9718.57
.005412	460.	460.	460.	3	18	0	.00	648.18	10366.75

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.550

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.72

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1344.00 ELREA= 1342.00

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11.550	4.41	1338.41	1336.96	.00	1338.74	.33	1.46	.08	1344.00
9000.0	.0	9000.0	.0	.0	1958.2	.0	4073.9	969.4	1342.00
3.14	.00	4.60	.00	.000	.029	.000	.000	1334.00	9720.38
.001829	422.	499.	631.	1	11	0	.00	641.88	10362.26

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

.200 CEHV= .400
NH CARD USED
*SECNO 11.650

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .70

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1346.00 ELREA= 1344.00

11.650	3.52	1339.52	1338.83	.00	1340.04	.52	1.22	.08	1346.00
9000.0	.0	9000.0	.0	.0	1556.0	.0	4093.2	976.3	1344.00
3.16	.00	5.78	.00	.000	.029	.000	.000	1336.00	9677.20
.003766	425.	480.	562.	2	14	0	.00	616.31	10293.51

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.740

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1346.00 ELREA= 1346.00

11.740	3.57	1341.57	1341.45	.00	1342.45	.88	2.27	.15	1346.00
9000.0	.0	9000.0	.0	.0	1193.6	.0	4109.1	983.2	1346.00
3.18	.00	7.54	.00	.000	.024	.000	.000	1338.00	9672.54
.005536	468.	502.	530.	2	8	0	.00	581.50	10254.04

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.840

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1350.00 ELREA= 1348.00

11.840	3.89	1343.89	1343.71	.00	1344.88	.99	2.38	.04	1350.00
9000.0	.0	9000.0	.0	.0	1125.4	.0	4121.4	989.0	1348.00
3.20	.00	8.00	.00	.000	.022	.000	.000	1340.00	9834.79
.004802	477.	463.	439.	2	9	0	.00	500.39	10335.18

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.930

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1350.00 ELREA= 1348.00

11.930	5.97	1345.97	1345.26	.00	1346.62	.65	1.67	.07	1350.00

9000.0	.0	9000.0	.0	.0	1388.6	.0	4134.8	994.4	1348.00
3.21	.00	6.48	.00	.000	.023	.000	.000	1340.00	9758.26
.002799	460.	464.	468.	2	11	0	.00	521.10	10279.36

V= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.030

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.67

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1350.00 ELREA= 1350.00

12.030	4.91	1346.91	1344.47	.00	1347.08	.17	.37	.10	1350.00
9000.0	.0	9000.0	.0	.0	2706.1	.0	4155.5	1000.6	1350.00
3.25	.00	3.33	.00	.000	.022	.000	.000	1342.00	9905.42
.000394	468.	441.	417.	2	18	0	.00	689.75	10595.17

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.120

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .37

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1352.00 ELREA= 1352.00

12.120	5.05	1347.05	1346.47	.00	1347.59	.54	.36	.15	1352.00
9000.0	.0	9000.0	.0	.0	1529.4	.0	4176.6	1007.0	1352.00
3.27	.00	5.88	.00	.000	.025	.000	.000	1342.00	9912.17
.002839	452.	434.	321.	3	10	0	.00	604.06	10516.22

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.220

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1352.00 ELREA= 1354.00

12.220	4.64	1348.64	1348.43	.00	1349.52	.89	1.79	.14	1352.00
9000.0	.0	9000.0	.0	.0	1190.3	.0	4193.2	1014.0	1354.00
3.29	.00	7.56	.00	.000	.021	.000	.000	1344.00	9792.75
004055	505.	532.	544.	2	15	0	.00	534.35	10327.10

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.310

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.93

)VERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1354.00 ELREA= 1354.00

12.310	6.06	1350.06	1347.73	.00	1350.55	.48	.94	.08	1354.00
9000.0	.0	9000.0	.0	.0	1614.7	.0	4209.2	1018.9	1354.00
3.32	.00	5.57	.00	.000	.025	.000	.000	1344.00	9844.07
.001094	491.	497.	487.	2	15	0	.00	337.58	10181.64

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.410

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1354.00 ELREA= 1358.00

12.410	4.64	1350.64	1349.29	.00	1351.38	.74	.73	.10	1354.00
9000.0	.0	9000.0	.0	.0	1301.7	.0	4226.3	1022.7	1358.00
3.34	.00	6.91	.00	.000	.025	.000	.000	1346.00	9474.01
.001957	458.	509.	545.	2	11	0	.00	304.43	9778.44

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.500

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1358.00 ELREA= 1358.00

:.500	5.50	1351.50	1349.91	.00	1352.37	.87	.94	.05	1358.00
9000.0	.0	9000.0	.0	.0	1204.6	.0	4240.4	1025.8	1358.00
3.36	.00	7.47	.00	.000	.025	.000	.000	1346.00	9931.51
.001867	484.	493.	497.	2	11	0	.00	241.46	10172.97

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 12.540

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

)VERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1358.00 ELREA= 1358.00

begin file 20ibw.dwg
SHEA BOULEVARD
DOWNSTREAM EDGE

12.540	3.81	1351.81	1351.81	.00	1353.67	1.86	.58	.50	1358.00
9000.0	.0	9000.0	.0	.0	822.7	.0	4245.6	1027.0	1358.00
3.36	.00	10.94	.00	.000	.020	.000	.000	1348.00	9936.82
.003865	187.	222.	271.	0	19	0	.00	224.08	10160.89

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1351.56 , NOT 1351.81 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.50	2.60	.00	179.00	8.00	2092.00	5.00	1348.00	1348.00

*SECNO 12.560

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.65

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1352.23 BRIDGE VELOCITY= 11.08 CALCULATED CHANNEL AREA= 812.

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

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1354.06	.00	0.	9000.	2092.	2542.	1359.20	1361.33	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1358.00 ELREA= 1358.00

SHEA BOULEVARD
UPSTREAM EDGE

12.560	5.07	1353.07	.00	.00	1354.06	.99	.39	.00	1358.00
9000.0	.0	9000.0	.0	.0	1129.0	.0	4247.3	1027.4	1358.00
3.36	.00	7.97	.00	.000	.020	.000	.000	1348.00	9936.30
.001426	74.	74.	74.	0	0	0	.00	233.48	10169.78

CCHV= .200 CEHV= .400
[illegible] NH CARD USED
[illegible]O 12.600

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1364.00 ELREA= 1362.00

2.600	3.70	1355.70	1355.70	.00	1357.28	1.58	.53	.24	1364.00
9000.0	.0	9000.0	.0	.0	892.3	.0	4251.9	1028.5	1362.00
3.37	.00	10.09	.00	.000	.025	.000	.000	1352.00	9851.05
.006254	228.	201.	63.	0	15	0	.00	283.31	10134.36

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.690

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.88

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

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1362.00 ELREA= 1362.00

12.690	4.45	1358.45	1357.18	.00	1359.00	.55	1.51	.21	1362.00
9000.0	.0	9000.0	.0	.0	1512.6	.0	4265.7	1032.5	1362.00
3.39	.00	5.95	.00	.000	.025	.000	.000	1354.00	9822.80
.001778	500.	500.	420.	2	15	0	.00	412.99	10235.79

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.780

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .64

3470 ENCROACHMENT STATIONS= 9800.0 10105.3 TYPE= 1 TARGET= 305.310

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.780	3.42	1359.42	1359.00	.00	1360.58	1.16	1.34	.24	100000.00
9000.0	.0	9000.0	.0	.0	1041.1	.0	4280.5	1036.7	100000.00
3.41	.00	8.64	.00	.000	.025	.000	.000	1356.00	9800.00
004339	490.	505.	518.	3	14	0	.00	305.31	10105.31

CCHV= .200 CEHV= .400
1490 NH CARD USED

*SECNO 12.880

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.08

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1364.00 ELREA= 1364.00

12.880	5.24	1361.24	1359.21	.00	1361.51	.26	.75	.18	1364.00
9000.0	.0	9000.0	.0	.0	2180.0	.0	4295.8	1040.8	1364.00
3.44	.00	4.13	.00	.000	.028	.000	.000	1356.00	9686.95
.000999	412.	412.	412.	2	11	0	.00	563.05	10250.00

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.970

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1366.00 ELREA= 1366.00

12.970	3.06	1362.56	1362.56	.00	1363.68	1.12	1.12	.34	1366.00
9000.0	.0	9000.0	.0	.0	1059.5	.0	4314.0	1046.7	1366.00
3.45	.00	8.49	.00	.000	.029	.000	.000	1359.50	9736.99
.009523	509.	489.	463.	0	14	0	.00	481.51	10218.50

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.070

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.19

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1366.00 ELREA= 1366.00

13.070	7.11	1365.11	1363.80	.00	1365.46	.35	1.63	.15	1366.00
9000.0	.0	9000.0	.0	.0	1894.8	.0	4328.7	1052.2	1366.00
3.48	.00	4.75	.00	.000	.029	.000	.000	1358.00	9632.19
.001990	435.	435.	435.	3	11	0	.00	620.04	10252.23

1490 NH CARD USED
*SECNO 13.160

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .69

13.160	6.14	1366.14	1365.80	.00	1366.86	.73	1.25	.15	1370.00
9000.0	.0	9000.0	.0	.0	1316.6	.0	4345.2	1058.3	1368.00
3.50	.00	6.84	.00	.000	.025	.000	.000	1360.00	9584.37
.004210	353.	448.	511.	3	14	0	.00	564.17	10148.54

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 13.250

3301 HV CHANGED MORE THAN HVINS

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.54

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1370.00 ELREA= 1370.00

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13.250	7.40	1367.40	1365.16	.00	1367.62	.22	.60	.15	1370.00
9000.0	.0	9000.0	.0	.0	2387.5	.0	4364.4	1064.5	1370.00
3.53	.00	3.77	.00	.000	.024	.000	.000	1360.00	9523.11
.000652	601.	450.	375.	2	15	0	.00	639.79	10162.90

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 13.380

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1374.00 ELREA= 1374.00

TATUM BOULEVARD (48TH STREET)
DOWNSTREAM EDGE

13.380	5.63	1367.63	1365.70	.00	1368.31	.69	.46	.23	1374.00
9000.0	.0	9000.0	.0	.0	1353.8	.0	4390.0	1070.7	1374.00
3.55	.00	6.65	.00	.000	.020	.000	.000	1362.00	9855.22
.000929	853.	598.	349.	2	8	0	.00	266.79	10122.01

.300 CEHV= .500
[illegible] NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.50	2.60	.00	155.00	5.00	1200.00	.00	1362.00	1362.00

*SECNO 13.400

HV CHANGED MORE THAN HVINS

1

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

CLASS A LOW FLOW

3420 BRIDGE W.S.= 1367.26 BRIDGE VELOCITY= 11.40 CALCULATED CHANNEL AREA= 790.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1369.07	.06	0.	9000.	1200.	1200.	1370.00	1372.00	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1374.00 ELREA= 1372.00

TATUM BOULEVARD
UPSTREAM EDGE

13.400	5.69	1367.69	.00	.00	1369.07	1.38	.75	.00	1374.00
9000.0	.0	9000.0	.0	.0	955.3	.0	4393.0	1071.3	1372.00
3.56	.00	9.42	.00	.000	.020	.000	.000	1362.00	9931.01
.001707	113.	113.	113.	0	0	0	.00	171.01	10102.02

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 13.450
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1380.00 ELREA= 1374.00

13.450	5.35	1369.35	1369.35	.00	1371.15	1.80	.72	.21	1380.00
9000.0	.0	9000.0	.0	.0	836.4	.0	4398.2	1072.5	1374.00
3.56	.00	10.76	.00	.000	.024	.000	.000	1364.00	9891.20
.005642	223.	252.	282.	0	11	0	.00	237.02	10128.22

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.540

HV CHANGED MORE THAN HVINS

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

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1374.00 ELREA= 1374.00

13.540	8.49	1372.49	1371.31	.00	1373.07	.58	1.67	.24	1374.00
9000.0	.0	9000.0	.0	.0	1473.2	.0	4410.9	1076.1	1374.00
3.59	.00	6.11	.00	.000	.027	.000	.000	1364.00	9768.75
.002390	470.	477.	486.	2	14	0	.00	437.72	10206.47

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.640

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1378.00 ELREA= 1376.00

13.640	5.74	1373.74	1372.88	.00	1374.35	.61	1.27	.01	1378.00
9000.0	.0	9000.0	.0	.0	1435.8	.0	4425.6	1080.8	1376.00
3.61	.00	6.27	.00	.000	.029	.000	.000	1368.00	9901.33
.003568	440.	440.	440.	2	11	0	.00	477.31	10378.64

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.730

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.84

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1376.00 ELREA= 1376.00

13.730	6.83	1374.83	1372.39	.00	1375.14	.31	.72	.06	1376.00
9000.0	.0	9000.0	.0	.0	2020.4	.0	4441.7	1085.1	1376.00
3.63	.00	4.45	.00	.000	.029	.000	.000	1368.00	9761.32
.001057	384.	408.	429.	2	19	0	.00	451.92	10213.23

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.830

3265 DIVIDED FLOW

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

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .42

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1378.00 ELREA= 1380.00

13.830	7.32	1375.32	1375.18	.00	1376.42	1.11	.97	.32	1378.00
9000.0	.0	9000.0	.0	.0	1066.0	.0	4458.0	1089.9	1380.00
3.65	.00	8.44	.00	.000	.024	.000	.000	1368.00	9718.61
.006097	488.	459.	451.	3	8	0	.00	456.20	10218.18

1490 NH CARD USED
*SECNO 13.880

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1378.00 ELREA= 1374.00

13.880	6.80	1376.80	1376.17	.00	1377.72	.93	1.26	.04	1378.00
9000.0	.0	8998.9	1.1	.0	1165.1	.8	4464.1	1092.1	1374.00
3.65	.00	7.72	1.43	.000	.030	.030	.000	1370.00	9909.73
.004707	289.	237.	129.	3	10	0	.00	339.83	10249.56

CCHV= .200 CEHV= .400
NH CARD USED
O 13.920

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.09

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1384.00 ELREA= 1378.00

13.920	8.12	1378.12	1376.77	.00	1378.33	.21	.46	.14	1384.00
9000.0	.0	8999.9	.1	.0	2460.1	.3	4473.8	1095.5	1378.00
3.67	.00	3.66	.30	.000	.025	.025	.000	1370.00	9782.65
.001076	190.	234.	346.	2	5	0	.00	946.07	10728.73

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 14.020

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .42

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1378.00 ELREA= 1380.00

13.830	7.32	1375.32	1375.18	.00	1376.42	1.11	.97	.32	1378.00
9000.0	.0	9000.0	.0	.0	1066.0	.0	4458.0	1089.9	1380.00
3.65	.00	8.44	.00	.000	.024	.000	.000	1368.00	9718.61
.006097	488.	459.	451.	3	8	0	.00	456.20	10218.18

1490 NH CARD USED
*SECNO 13.880

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1378.00 ELREA= 1374.00

13.880	6.80	1376.80	1376.17	.00	1377.72	.93	1.26	.04	1378.00
9000.0	.0	8998.9	1.1	.0	1165.1	.8	4464.1	1092.1	1374.00
3.65	.00	7.72	1.43	.000	.030	.030	.000	1370.00	9909.73
.004707	289.	237.	129.	3	10	0	.00	339.83	10249.56

CCHV= .200 CEHV= .400
NH CARD USED
*SECNO 13.920

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.09

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1384.00 ELREA= 1378.00

13.920	8.12	1378.12	1376.77	.00	1378.33	.21	.46	.14	1384.00
9000.0	.0	8999.9	.1	.0	2460.1	.3	4473.8	1095.5	1378.00
3.67	.00	3.66	.30	.000	.025	.025	.000	1370.00	9782.65
.001076	190.	234.	346.	2	5	0	.00	946.07	10728.73

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

= .200 CEHV= .400
1490 NH CARD USED
*SECNO 14.020

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3... ENCROACHMENT STATIONS= 9836.8 10341.9 TYPE= 1 TARGET= 505.070
ELENCL= 1385.00 ELENCR= 1385.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1385.00 ELREA= 1385.00

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14.020	6.88	1378.88	1378.88	.00	1380.01	1.13	1.12	.37	1385.00
9000.0	.0	9000.0	.0	.0	1054.6	.0	4493.0	1103.4	1385.00
3.69	.00	8.53	.00	.000	.027	.000	.000	1372.00	9836.83
.008822	478.	475.	465.	0	9	0	.00	505.07	10341.90

1490 NH CARD USED
*SECNO 14.060

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.92

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1378.00 ELREA= 1382.00

14.060	6.57	1380.57	1378.89	.00	1380.82	.25	.64	.18	1378.00
9000.0	2584.2	6415.8	.0	740.7	1508.2	.0	4503.6	1107.3	1382.00
3.71	3.49	4.25	.00	.030	.025	.000	.000	1374.00	9725.37
.001037	290.	277.	242.	3	16	0	.00	690.65	10416.02

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 14.110
1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1382.00 ELREA= 1382.00

14.110	7.09	1381.09	1378.90	.00	1381.45	.36	.58	.04	1382.00
9000.0	.0	9000.0	.0	.0	1881.6	.0	4527.3	1114.4	1382.00
3.74	.00	4.78	.00	.000	.026	.000	.000	1374.00	9725.27
.001329	500.	500.	500.	3	16	0	.00	550.76	10276.03

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 14.210

14.210	5.88	1381.88	1380.61	.00	1382.31	.43	.83	.03	1384.00

9000.0	.0	9000.0	.0	.0	1701.2	.0	4546.7	1120.3	1382.00
3.76	.00	5.29	.00	.000	.030	.000	.000	1376.00	9760.98
.002432	472.	473.	475.	2	23	0	.00	528.91	10289.88

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 14.300

3265 DIVIDED FLOW

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1384.00 ELREA= 1386.00

14.300	7.03	1383.03	1382.35	.00	1383.54	.51	1.19	.04	1384.00
9000.0	.0	9000.0	.0	.0	1570.4	.0	4564.2	1126.4	1386.00
3.78	.00	5.73	.00	.000	.025	.000	.000	1376.00	9791.76
.002704	460.	465.	473.	2	9	0	.00	623.43	10453.25

1490 NH CARD USED
*SECNO 14.340

3265 DIVIDED FLOW

14.340	7.31	1383.31	1382.87	.00	1384.06	.75	.40	.12	1384.00
9000.0	.0	8177.2	822.8	.0	1131.5	255.1	4568.6	1128.2	1382.00
3.79	.00	7.23	3.23	.000	.030	.031	.000	1376.00	9754.00
.003629	165.	126.	180.	2	6	0	.00	528.83	10459.77

1

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 14.390

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.59

3470 ENCROACHMENT STATIONS= 9876.1 10250.1 TYPE= 1 TARGET= 374.060

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

14.390	6.38	1384.38	1382.25	.00	1384.79	.40	.62	.10	100000.00
9000.0	.0	9000.0	.0	.0	1767.8	.0	4579.1	1131.4	100000.00
3.80	.00	5.09	.00	.000	.031	.000	.000	1378.00	9876.07
.001430	205.	283.	370.	2	14	0	.00	374.06	10250.13

CCHV= .300 CEHV= .500
1490 NH CARD USED

*SECNO 14.440

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .66

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1390.00 ELREA= 1388.00

CACTUS ROAD
DOWNSTREAM EDGE

14.440	6.03	1384.03	1383.86	.00	1385.90	1.87	.38	.73	1390.00
9000.0	.0	9000.0	.0	.0	820.0	.0	4584.6	1132.6	1388.00
3.81	.00	10.97	.00	.000	.020	.000	.000	1378.00	9822.55
.003297	136.	184.	223.	3	11	0	.00	197.92	10020.46

CCHV= .300 CEHV= .500
1490 NH CARD USED
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.50	2.60	.00	159.71	5.00	1814.75	.00	1377.53	1377.33

*SECNO 14.470

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.08

CLASS A LOW FLOW

3420 BRIDGE W.S.= 1384.09 BRIDGE VELOCITY= 5.82 CALCULATED CHANNEL AREA= 1015.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1385.90	.40	0.	6000.	1815.	1815.	1389.26	1391.30	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1390.00 ELREA= 1388.00

CACTUS ROAD
UPSTREAM EDGE

14.470	6.03	1384.03	.00	.00	1385.90	.32	.00	.00	1390.00
6000.0	.0	6000.0	.0	.0	1317.9	.0	4586.9	1133.0	1388.00
3.81	.00	4.55	.00	.000	.020	.000	.000	1378.00	9831.12

.000339	92.	92.	92.	0	0	0	.00	211.79	10042.91

CCHV= .300 CEHV= .500
NH CARD USED
*SECNO 14.490

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .58

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1388.00 ELREA= 1388.00

14.490	5.59	1385.59	1383.26	.00	1386.05	.46	.08	.07	1388.00
6000.0	.0	6000.0	.0	.0	1106.0	.0	4591.0	1133.8	1388.00
3.82	.00	5.42	.00	.000	.025	.000	.000	1380.00	9819.52
.000993	237.	148.	83.	3	11	0	.00	223.05	10042.57

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

CCHV= .300 CEHV= .500
NH CARD USED
NO 14.580

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1388.00 ELREA= 1388.00

14.580	6.26	1386.26	1383.72	.00	1386.47	.22	.35	.07	1388.00
6000.0	.0	6000.0	.0	.0	1611.8	.0	4606.0	1137.0	1388.00
3.86	.00	3.72	.00	.000	.025	.000	.000	1380.00	9842.82
.000553	460.	483.	498.	2	14	0	.00	370.39	10213.21

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 14.660

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1390.00 ELREA= 1390.00

14.660	4.51	1386.51	1384.75	.00	1386.74	.23	.26	.01	1390.00
6000.0	.0	6000.0	.0	.0	1557.0	.0	4619.5	1140.8	1390.00
3.88	.00	3.85	.00	.000	.025	.000	.000	1382.00	9753.74
.000936	447.	369.	231.	1	14	0	.00	504.73	10258.47

T1 IBW #5
T2

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10	3						20000	1167.3	

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15		-1				-1	-6		

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

*PROF 2

CRITICAL DEPTH TO BE CALCULATED AT ALL CROSS SECTIONS
0

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .437

3265 DIVIDED FLOW

TOE OF GRADE CONTROL STRUCTURE
SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW
begin file 01ibw.dwg

.437	23.30	1167.30	1148.28	1167.30	1167.34	.04	.00	.00	1184.00
0000.0	.0	20000.0	.0	.0	12300.7	.0	.0	.0	1172.00
.00	.00	1.63	.00	.000	.045	.000	.000	1144.00	9699.67
.000072	0.	0.	0.	0	20	0	.00	599.27	10331.94

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .475

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .29

3470 ENCROACHMENT STATIONS= 9700.0 10331.0 TYPE= 1 TARGET= 631.000
TOE OF GRADE CONTROL STRUCTURE
6 SETS OF 5.5' PIERS, AREA ADJUSTED FOR SKEW

.475	9.23	1167.23	1161.38	1167.23	1167.44	.21	.03	.07	100000.00
20000.0	.0	20000.0	.0	.0	5389.2	.0	40.6	2.7	100000.00
.01	.00	3.71	.00	.000	.045	.000	.000	1158.00	9700.00
.000854	200.	200.	200.	2	17	0	.00	598.00	10331.00

CCHV= .200 CEHV= .400
0 NH CARD USED
)0 .491
1

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

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9215.0 9830.0 TYPE= 1 TARGET= 615.000
TOP OF GRADE CONTROL
2 PIERS IN LEFT BANK AREA

.491	7.31	1167.31	1164.65	1167.32	1167.81	.51	.25	.12	100000.00
20000.0	.0	20000.0	.0	.0	3502.7	.0	69.2	6.6	100000.00
.03	.00	5.71	.00	.000	.025	.000	.000	1160.00	9215.00
.000950	280.	280.	280.	2	8	0	.00	594.04	9820.05

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .568

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .45

ENCROACHMENT STATIONS= 9770.0 10210.0 TYPE= 1 TARGET= 440.000

.568	7.41	1167.41	1166.84	1167.38	1168.98	1.57	.74	.42	100000.00
20000.0	.0	20000.0	.0	.0	1991.2	.0	95.0	11.4	100000.00
.04	.00	10.04	.00	.000	.027	.000	.000	1160.00	9770.00
.004621	425.	410.	390.	2	11	0	.00	440.00	10210.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO .663

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9875.0 10230.0 TYPE= 1 TARGET= 355.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

.663	9.66	1169.66	1169.45	1169.53	1171.84	2.18	2.62	.24	100000.00
20000.0	.0	20000.0	.0	.0	1689.1	.0	116.2	16.0	100000.00
.05	.00	11.84	.00	.000	.027	.000	.000	1160.00	9875.00
.005977	544.	500.	415.	2	18	0	.00	355.00	10230.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA

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    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


CCHV=      .300 CEHV=      .500
     NH CARD USED
 *SECNO  .758

3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     9900.0    10255.0  TYPE=       1  TARGET=      355.000
      .758      10.95    1172.95    1171.63    1172.44    1174.37       1.43       2.31        .23 100000.00
   20000.0         .0   20000.0         .0         .0     2087.5         .0      137.8       20.1 100000.00
       .07        .00       9.58       .00       .000       .030       .000       .000    1162.00    9900.00
   .003679       611.       500.       349.          3          5          0        .00     355.00   10255.00


CCHV=      .300 CEHV=      .500
1490 NH CARD USED
*SECNO  .776

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9845.0    10250.0  TYPE=       1  TARGET=      405.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     CURRY ROAD
     DOWNSTREAM EDGE
      .776       7.30    1173.30    1173.30    1173.50    1175.46       2.16        .37        .37 100000.00
   20000.0         .0   20000.0         .0         .0     1694.2         .0      142.1       20.9 100000.00
       .07        .00      11.81       .00       .000       .020       .000       .000    1166.00    9845.00
   .003804       99.        99.        99.          0         19          0        .00     405.00   10250.00


CCHV=      .300 CEHV=      .500
1490 NH CARD USED

SPECIAL BRIDGE

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


5227 DOWNSTREAM ELEV IS    1172.37 , NOT    1173.30 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

    XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05       1.50       2.60        .00     133.00       4.00     482.46        .00    1165.02    1164.60

*SECNO  .791
BTCARD, BRIDGE STENCL=    9790.00   STENCR=   10235.00
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3301 HV CHANGED MORE THAN HVINS

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.61

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1213.33	1177.98	.00	13684.	6326.	482.	482.	1168.76	1171.44	445.

3470 ENCROACHMENT STATIONS= 9790.0 10235.0 TYPE= 1 TARGET= 445.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CURRY ROAD
UPSTREAM EDGE

.791	10.68	1176.68	.00	1176.48	1177.30	.63	1.84	.00	100000.00
20000.0	.0	20000.0	.0	.0	3145.9	.0	146.5	21.7	100000.00
.07	.00	6.36	.00	.000	.020	.000	.000	1166.00	9790.00
.000557	78.	78.	78.	2	0	5	.00	445.00	10235.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
NO .852

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .39

3470 ENCROACHMENT STATIONS= 9770.0 10270.0 TYPE= 1 TARGET= 500.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
.852	10.84	1176.84	1175.53	1176.49	1177.81	.97	.37	.14	100000.00
20000.0	.0	20000.0	.0	.0	2531.7	.0	167.3	25.2	100000.00
.08	.00	7.90	.00	.000	.033	.000	.000	1166.00	9770.00
.003706	320.	320.	320.	2	10	0	.00	500.00	10270.00

NH CARD USED
IO .947

3470 ENCROACHMENT STATIONS= 9716.2 10218.7 TYPE= 1 TARGET= 502.550

.947	8.83	1178.83	1178.24	1178.29	1180.12	1.29	2.18	.13	100000.00
20000.0	.0	20000.0	.0	.0	2193.1	.0	194.4	30.9	100000.00

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      .10       .00      9.12       .00      .000      .031      .000      .000   1170.00   9716.19
  .005190      500.      500.      500.         2        14         0       .00    502.55  10218.74


      .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.040

3470 ENCROACHMENT STATIONS=     9664.5   10178.8  TYPE=      1  TARGET=      514.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

       begin file 02ibw.dwg
    1.040      8.00   1182.00   1181.84   1181.99   1183.70      1.69      3.42       .16 100000.00
  20000.0        .0  20000.0        .0        .0    1914.7        .0     218.0      36.8 100000.00
      .11       .00     10.45       .00      .000      .033      .000      .000   1174.00   9664.50
  .009416      500.      500.      500.         2        15         0       .00    514.30  10178.80


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.136

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77


    ENCROACHMENT STATIONS=     9628.4   10127.1  TYPE=      1  TARGET=      498.699

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



3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    1.136      9.44   1185.44   1183.71   1184.89   1186.32       .88      2.46       .16 100000.00
  20000.0        .0  20000.0        .0        .0    2659.0        .0     244.3      42.6 100000.00
      .13       .00      7.52       .00      .000      .033      .000      .000   1176.00   9628.40
  .003007      435.      500.      544.         2         8         0       .00    498.70  10127.10


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.231

3470 ENCROACHMENT STATIONS=     9780.6   10210.9  TYPE=      1  TARGET=      430.301

    OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    1.231     10.76   1186.76   1183.87   1186.26   1187.47       .71      1.12       .03 100000.00
  20000.0        .0  20000.0        .0        .0    2963.6        .0     276.5      47.9 100000.00
      .15       .00      6.75       .00      .000      .033      .000      .000   1176.00   9780.60
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    .001722      470.      500.      527.         2        15         0       .00    430.30  10210.90

CCHV=     .200 CEHV=     .400
     NH CARD USED
  SECNO 1.326

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS=     9881.0   10107.0  TYPE=      1  TARGET=      226.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     1.326     11.25   1187.25   1184.44   1186.90   1188.90      1.64      1.06       .38 100000.00
   20000.0        .0  20000.0        .0        .0    1943.2         .0     304.7      51.7 100000.00
       .16       .00     10.29       .00       .000      .031      .000      .000   1176.00   9881.00
   .002648      470.      500.      548.         2        13         0       .00    226.00  10107.00


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
1
   03NOV97      09:20:02                                                                          PAGE   92

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

*SECNO 1.420

3470 ENCROACHMENT STATIONS=     9895.5   10100.6  TYPE=      1  TARGET=      205.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     1.420     12.71   1188.71   1184.40   1188.01   1189.99      1.28       .98       .11 100000.00
   20000.0        .0  20000.0        .0        .0    2204.7         .0     328.5      54.2 100000.00
       .18       .00      9.07       .00       .000      .030      .000      .000   1176.00   9895.50
   .001512      500.      500.      500.         2        15         0       .00    205.10  10100.60


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 1.515

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .45

3470 ENCROACHMENT STATIONS=     9857.1   10198.9  TYPE=      1  TARGET=      341.750

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     1.515     11.75   1189.75   1189.51   1189.75   1191.79      2.04      1.42       .38 100000.00
   20000.0        .0  20000.0        .0        .0    1744.4         .0     351.0      57.3 100000.00
```

```
      .19       .00     11.47       .00      .000      .033      .000      .000   1178.00   9857.11
   .007380      606.      497.      348.         2        10         0       .00    341.75  10198.86


      .300 CEHV=      .500
 0 NH CARD USED
*SECNO 1.554

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.68


3470 ENCROACHMENT STATIONS=     9779.6   10230.7  TYPE=       1  TARGET=      451.141
1
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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST



3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

       MCKELLIPS ROAD
       DOWNSTREAM EDGE
    1.554      14.67   1191.67   1189.62   1191.72   1192.55       .89       .41       .35 100000.00
  20000.0         .0  20000.0         .0        .0    2642.8         .0     360.6      59.0 100000.00
      .20        .00      7.57       .00      .000      .020      .000      .000   1177.00   9779.60
  .001029      190.      190.      190.         3         8         0       .00    451.14  10230.74


CCHV=      .300 CEHV=      .500
1490 NH CARD USED

SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
      .95       1.50       2.60        .00      42.00        .01     374.64        .00    1177.07    1176.69

*SECNO 1.570
PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape


 EGPRS       EGLWC       H3        QWEIR      QPR        BAREA    TRAPEZOID      ELLC       ELTRD      WEIRLN
                                                                    AREA
   1258.05    1192.56        .00     17314.     2775.      375.      375.      1185.99    1187.80       861.



 ENCROACHMENT STATIONS=     9690.0   10189.5  TYPE=       1  TARGET=      499.450

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

       MCKELLIPS ROAD
       UPSTREAM EDGE
```

```
    1.570     14.78   1191.78       .00   1192.33   1192.94      1.16       .39       .00 100000.00
  20000.0        .0   20000.0        .0        .0    2310.6        .0     365.8      60.0 100000.00
     .20        .00      8.66       .00      .000      .020      .000      .000   1177.00   9690.00
  .001857      91.       91.       91.         4         0         6       .00    499.45  10189.45


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 1.582
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3301 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     9693.7   10228.5  TYPE=      1  TARGET=      534.820

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

       begin file 03ibw.dwg
    1.582     12.67   1192.67   1189.86   1192.57   1193.21       .53       .07       .19 100000.00
  0000.0        .0   20000.0        .0        .0    3417.0        .0     369.0      60.6 100000.00
     .20        .00      5.85       .00      .000      .030      .000      .000   1180.00   9693.67
  .001209     226.       49.      138.         3        18         0       .00    534.82  10228.49


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.610

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.46


3470 ENCROACHMENT STATIONS=     9693.6   10220.5  TYPE=      1  TARGET=      526.990

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    1.610      7.94   1192.94   1189.37   1192.80   1193.39       .45       .17       .02 100000.00
  20000.0        .0   20000.0        .0        .0    3730.0        .0     386.2      63.1 100000.00
     .21        .00      5.36       .00      .000      .024      .000      .000   1185.00   9693.56
  .000569     210.      210.      210.         2        17         0       .00    526.99  10220.55


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.705

    ENCROACHMENT STATIONS=     9705.0   10206.1  TYPE=      1  TARGET=      501.101

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    1.705      8.25   1193.25   1190.08   1193.06   1193.78       .53       .36       .03 100000.00
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   20000.0        .0   20000.0        .0        .0    3418.2        .0     427.2      69.0 100000.00
      .24        .00       5.85       .00       .000      .028       .000       .000   1185.00    9704.97
   .000938      500.       500.       500.         2        14         0        .00    501.10   10206.07


1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.770

3470 ENCROACHMENT STATIONS=     9762.5   10158.3  TYPE=      1  TARGET=      395.779

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        NON-EFFECTIVE FLOW AREA REMOVED
     1.770      8.46   1193.46   1189.88   1193.27   1194.10       .64       .27       .04 100000.00
   20000.0        .0   20000.0        .0        .0    3106.9        .0     453.4      72.6 100000.00
      .25        .00       6.44       .00       .000      .023       .000       .000   1185.00    9762.53
   .000653      439.       350.       281.         2        14         0        .00    395.78   10158.31


   =     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.787

3470 ENCROACHMENT STATIONS=     9771.3   10148.7  TYPE=      1  TARGET=      377.440

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        NON-EFFECTIVE FLOW AREA REMOVED
     1.787      8.47   1193.47   1189.85   1193.19   1194.16       .68       .04       .02 100000.00
   20000.0        .0   20000.0        .0        .0    3018.1        .0     457.8      73.2 100000.00
      .26        .00       6.63       .00       .000      .022       .000       .000   1185.00    9771.27
   .000615       74.        62.        55.         2        11         0        .00    377.44   10148.71


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 1.794

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

   ENCROACHMENT STATIONS=    10007.4   10408.1  TYPE=      1  TARGET=      400.690

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

1
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NON-EFFECTIVE FLOW AREA REMOVE

1.794	7.99	1195.99	1195.99	1195.90	1198.19	2.19	.09	.60	100000.00
000.0	.0	20000.0	.0	.0	1682.6	.0	460.8	73.7	100000.00
.26	.00	11.89	.00	.000	.034	.000	.000	1188.00	10007.38
.011408	68.	55.	46.	0	11	0	.00	400.69	10408.07

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.799
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9752.5 10172.8 TYPE= 1 TARGET= 420.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

1.799	8.43	1196.43	1196.43	1196.14	1198.57	2.13	.29	.01	100000.00
20000.0	.0	20000.0	.0	.0	1705.9	.0	461.7	73.9	100000.00
.26	.00	11.72	.00	.000	.034	.000	.000	1188.00	9752.53
.011688	25.	25.	25.	0	8	0	.00	420.30	10172.83

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.827

HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.07

3470 ENCROACHMENT STATIONS= 9694.1 10193.6 TYPE= 1 TARGET= 499.520

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

1.827	6.79	1198.79	1196.77	1198.05	1199.55	.77	.71	.27	100000.00
20000.0	.0	20000.0	.0	.0	2844.8	.0	469.3	75.4	100000.00
.26	.00	7.03	.00	.000	.035	.000	.000	1192.00	9694.07
.002716	112.	144.	175.	2	11	0	.00	499.52	10193.59

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.894

1

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

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.41

ENCROACHMENT STATIONS= 9773.4 10275.1 TYPE= 1 TARGET= 501.619

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

1.894	8.54	1199.54	1195.41	1199.06	1199.95	.41	.33	.07	100000.00
20000.0	.0	20000.0	.0	.0	3882.5	.0	496.3	79.5	100000.00
.28	.00	5.15	.00	.000	.024	.000	.000	1191.00	9773.44
.000468	290.	350.	396.	2	14	0	.00	501.62	10275.06

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 1.990

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .52

3470 ENCROACHMENT STATIONS= 9830.2 10468.8 TYPE= 1 TARGET= 638.620

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

1.990	8.90	1199.90	1197.34	1199.40	1200.38	.48	.40	.03	100000.00
20000.0	.0	20000.0	.0	.0	3599.4	.0	539.2	86.0	100000.00
.31	.00	5.56	.00	.000	.035	.000	.000	1191.00	9830.16
.001711	500.	500.	500.	2	19	0	.00	638.62	10468.78

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 2.047

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .50

3470 ENCROACHMENT STATIONS= 9817.5 10443.1 TYPE= 1 TARGET= 625.641

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.047	9.51	1200.51	1199.80	1200.13	1201.54	1.03	.94	.22	100000.00
20000.0	.0	20000.0	.0	.0	2450.9	.0	560.6	90.5	100000.00
.32	.00	8.16	.00	.000	.037	.000	.000	1191.00	9817.47
.006842	280.	308.	350.	2	6	0	.00	625.64	10443.11

```
 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 2.080

      ENCROACHMENT STATIONS=     9850.0   10267.1  TYPE=      1  TARGET=      417.140

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     2.080     10.49   1201.49   1200.50   1201.21   1202.87      1.38      1.19       .14 100000.00
   20000.0        .0   20000.0        .0        .0    2121.3        .0     570.7      92.8 100000.00
       .32       .00      9.43       .00      .000      .034      .000      .000   1191.00   9850.00
   .005640      145.      192.      308.         2         5         0       .00    417.14  10267.14


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 2.178

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.80


 3470 ENCROACHMENT STATIONS=     9855.4   10381.8  TYPE=      1  TARGET=      526.359

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

       begin file 04ibw.dwg
     2.178      9.90   1203.90   1201.17   1203.52   1204.47       .57      1.44       .16 100000.00
   20000.0        .0   20000.0        .0        .0    3302.4        .0     601.8      98.2 100000.00
       .35       .00      6.06       .00      .000      .034      .000      .000   1194.00   9855.40
   .001736      500.      500.      500.         2        20         0       .00    526.36  10381.76


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


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 2.273

 3470 ENCROACHMENT STATIONS=     9841.7   10294.5  TYPE=      1  TARGET=      452.869

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     2.273     10.67   1204.67   1201.33   1204.43   1205.25       .58       .78       .01 100000.00
    000.0        .0   20000.0        .0        .0    3266.0        .0     639.5     103.8 100000.00
       .37       .00      6.12       .00      .000      .033      .000      .000   1194.00   9841.65
   .001410      500.      500.      500.         2        19         0       .00    452.87  10294.52
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CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 2.367

 ENCROACHMENT STATIONS=     9848.5   10266.0  TYPE=      1  TARGET=      417.460

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     2.367      9.30   1205.30   1201.85   1204.93   1205.92       .62       .65       .02 100000.00
   20000.0        .0   20000.0        .0        .0    3164.5        .0     676.4     108.8 100000.00
       .39       .00      6.32       .00       .000      .031      .000      .000   1196.00   9848.54
   .001219     500.      500.      500.         2        11         0        .00    417.46  10266.00


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 2.462

3470 ENCROACHMENT STATIONS=     9742.1   10159.3  TYPE=      1  TARGET=      417.149
     2.462     11.98   1205.98   1202.36   1205.58   1206.58       .60       .66       .00 100000.00
   20000.0        .0   20000.0        .0        .0    3204.8        .0     713.0     113.6 100000.00
       .41       .00      6.24       .00       .000      .034      .000      .000   1194.00   9742.11
   .001418     500.      500.      500.         1        15         0        .00    417.15  10159.26


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 2.557
1
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 SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
 Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
 TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
 SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.41


3470 ENCROACHMENT STATIONS=     9890.2   10260.6  TYPE=      1  TARGET=      370.369

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     2.557     10.56   1206.56   1201.77   1206.18   1207.09       .54       .49       .02 100000.00
   20000.0        .0   20000.0        .0        .0    3406.4        .0     750.9     118.1 100000.00
       .44       .00      5.87       .00       .000      .029      .000      .000   1196.00   9890.23
   .000711     500.      500.      500.         2        11         0        .00    370.37  10260.60


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 2.610

3470 ENCROACHMENT STATIONS=     9789.7   10077.2  TYPE=      1  TARGET=      287.550

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00
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2.610	12.67	1206.67	1201.09	1206.32	1207.30	.64	.16	.05	100000.00
20000.0	.0	20000.0	.0	.0	3124.7	.0	772.1	120.2	100000.00
.45	.00	6.40	.00	.000	.024	.000	.000	1194.00	9789.69
.000460	283.	283.	283.	2	14	0	.00	287.55	10077.24

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.620

3470 ENCROACHMENT STATIONS= 9800.0 10053.2 TYPE= 1 TARGET= 253.240

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.620	10.52	1206.52	1202.30	1206.16	1207.50	.98	.03	.17	100000.00
20000.0	.0	20000.0	.0	.0	2518.1	.0	775.4	120.6	100000.00
.45	.00	7.94	.00	.000	.024	.000	.000	1196.00	9800.00
.000840	50.	50.	50.	2	8	0	.00	253.24	10053.24

1

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

= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.629

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9826.3 10040.0 TYPE= 1 TARGET= 213.710

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 1211.00

MCDOWELL ROAD
DOWNSTREAM EDGE

2.629	10.23	1206.23	1203.50	1205.89	1207.89	1.66	.05	.34	100000.00
20000.0	.0	20000.0	.0	.0	1935.8	.0	777.9	120.8	1211.00
.45	.00	10.33	.00	.000	.020	.000	.000	1196.00	9826.29
.001106	50.	50.	50.	2	19	0	.00	208.28	10034.57

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.05	1.50	2.60	.00	214.00	7.50	2244.65	.00	1198.33	1197.83

*SECNO 2.652
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1206.19 BRIDGE VELOCITY= 11.94 CALCULATED CHANNEL AREA= 1624.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1208.02	.30	0.	20000.	2245.	2245.	1209.20	1210.87	0.

3470 ENCROACHMENT STATIONS= 9818.6 10032.6 TYPE= 1 TARGET= 213.940

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

MCDOWELL ROAD
UPSTREAM EDGE

2.652	10.53	1206.53	.00	1206.21	1208.02	1.49	.13	.00	100000.00
20000.0	.0	20000.0	.0	.0	2040.6	.0	783.4	121.4	100000.00
.46	.00	9.80	.00	.000	.020	.000	.000	1196.00	9818.63
.000951	120.	120.	120.	0	0	0	.00	213.94	10032.57

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

= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.653

3470 ENCROACHMENT STATIONS= 9818.6 10032.6 TYPE= 1 TARGET= 213.940

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

DOWNSTREAM TOE OF SILL

2.653	10.54	1206.54	1203.42	1206.22	1208.03	1.49	.01	.00	100000.00
20000.0	.0	20000.0	.0	.0	2042.1	.0	783.7	121.4	100000.00
.46	.00	9.79	.00	.000	.020	.000	.000	1196.00	9818.63
.000949	7.	7.	7.	0	19	0	.00	213.94	10032.57

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 2.658

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

ENCROACHMENT STATIONS= 9789.0 10013.0 TYPE= 1 TARGET= 224.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

DOWNSTREAM TOP OF SILL

2.658	10.17	1206.17	1206.17	1206.09	1209.31	3.13	.01	.82	100000.00

```
   20000.0        .0   20000.0        .0        .0    1407.8        .0     784.1     121.5 100000.00
      .46        .00     14.21        .00      .000      .020      .000      .000   1196.00   9789.00
   .003346        9.        9.        9.         0         8         0       .00    224.00  10013.00


  .V=     .300 CEHV=     .500
 1490 NH CARD USED
 *SECNO 2.662

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=     9789.8   10013.9  TYPE=      1  TARGET=      224.101
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

       UPSTREAM TOP OF SILL
     2.662     11.43   1207.43   1206.10   1207.57   1209.61      2.18       .02       .28 100000.00
   20000.0        .0   20000.0        .0        .0    1686.3        .0     784.4     121.5 100000.00
      .46        .00     11.86        .00      .000      .020      .000      .000   1196.00   9789.81
   001854        9.        9.        9.        13         5         0       .00    223.58  10013.39


 CCHV=     .300 CEHV=     .500
 1490 NH CARD USED
 *SECNO 2.663

 3265 DIVIDED FLOW


 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.08


 3470 ENCROACHMENT STATIONS=     9794.0   10190.5  TYPE=      1  TARGET=      396.550

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=      1215.00

       UPSTREAM TOE OF SILL
     2.663     13.14   1209.14   1203.64   1209.23   1210.01       .87       .01       .39 100000.00
   20000.0        .0   20000.0        .0        .0    2670.9        .0     784.9     121.6   1215.00
      .46        .00      7.49        .00      .000      .020      .000      .000   1196.00   9793.96
   000427        9.        9.        9.         3        14         0       .00    229.25  10023.24


 CCHV=     .300 CEHV=     .500
 1490 NH CARD USED
 *SECNO 2.700
```

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .59

ENCROACHMENT STATIONS= 9849.5 10205.4 TYPE= 1 TARGET= 355.960

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.700	10.70	1209.70	1204.84	1210.00	1210.25	.55	.13	.10	100000.00
20000.0	.0	20000.0	.0	.0	3362.7	.0	798.7	122.9	100000.00
.47	.00	5.95	.00	.000	.038	.000	.000	1199.00	9849.45
.001223	200.	200.	200.	2	14	0	.00	355.96	10205.41

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.746

3470 ENCROACHMENT STATIONS= 9858.0 10309.5 TYPE= 1 TARGET= 451.520

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.746	10.94	1209.94	1206.73	1210.10	1210.55	.61	.28	.03	100000.00
20000.0	.0	20000.0	.0	.0	3179.2	.0	813.0	124.7	100000.00
.47	.00	6.29	.00	.000	.036	.000	.000	1199.00	9857.99
.001828	190.	190.	190.	2	16	0	.00	451.52	10309.51

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.770

3470 ENCROACHMENT STATIONS= 9808.4 10343.7 TYPE= 1 TARGET= 535.290
NON-EFFECTIVE FLOW AREA REMOVED

2.770	8.32	1210.32	1207.37	1210.28	1210.86	.54	.29	.02	100000.00
20000.0	.0	20000.0	.0	.0	3380.5	.0	824.3	126.4	100000.00
.48	.00	5.92	.00	.000	.038	.000	.000	1202.00	9808.44
.002023	150.	150.	150.	2	8	0	.00	535.29	10343.73

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.775

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .69

3470 ENCROACHMENT STATIONS= 9799.0 10344.8 TYPE= 1 TARGET= 545.830

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        NON-EFFECTIVE FLOW AREA REMOVED
     2.775       7.23   1210.23   1208.58   1210.23   1211.04       .81       .07       .11 100000.00
     000.0         .0   20000.0        .0        .0    2775.5        .0     826.1     126.7 100000.00
       .48        .00      7.21       .00      .000      .039      .000      .000   1203.00   9798.99
    .004292       25.       25.       25.         2        19         0       .00    545.83  10344.82


 CCHV=     .300 CEHV=     .400
 1490 NH CARD USED
 *SECNO 2.780

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=     9788.8   10358.9  TYPE=      1  TARGET=      570.100
      2.780      5.85   1209.85   1209.85   1209.91   1211.57      1.72       .17       .37 100000.00
    20000.0        .0   20000.0        .0        .0    1897.8        .0     827.4     127.0 100000.00
       .48        .00     10.54       .00      .000      .034      .000      .000   1204.00   9788.82
    .011760       25.       25.       25.         0        15         0       .00    570.10  10358.92


 CCHV=     .300 CEHV=     .400
 1490 NH CARD USED
 *SECNO 2.790
 7185 MINIMUM SPECIFIC ENERGY
      CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=     9792.5   10364.3  TYPE=      1  TARGET=      571.730
      2.790      5.75   1210.75   1210.75   1210.68   1212.48      1.74       .61       .00 100000.00
    20000.0        .0   20000.0        .0        .0    1891.1        .0     829.6     127.7 100000.00
       .48        .00     10.58       .00      .000      .035      .000      .000   1205.00   9792.52
    .012678       50.       50.       50.         0         5         0       .00    571.73  10364.25


 CCHV=     .300 CEHV=     .400
 1490 NH CARD USED
 *SECNO 2.810

 3470 ENCROACHMENT STATIONS=     9883.5   10446.8  TYPE=      1  TARGET=      563.320
        NON-EFFECTIVE FLOW AREA REMOVED
      2.810      6.01   1212.01   1211.64   1211.94   1213.40      1.39       .81       .10 100000.00
    20000.0        .0   20000.0        .0        .0    2115.8        .0     833.4     128.7 100000.00
       .49        .00      9.45       .00      .000      .033      .000      .000   1206.00   9883.52
    .007719       83.       83.       83.         3         8         0       .00    563.32  10446.84


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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.820
7195 MINIMUM SPECIFIC ENERGY
CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9869.2 10426.8 TYPE= 1 TARGET= 557.619

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.820	3.61	1212.61	1212.61	1212.25	1214.34	1.72	.65	.13	100000.00
20000.0	.0	20000.0	.0	.0	1898.4	.0	836.5	129.6	100000.00
.49	.00	10.53	.00	.000	.035	.000	.000	1209.00	9869.23
.012521	67.	67.	67.	0	14	0	.00	557.62	10426.85

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.827

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.21

3470 ENCROACHMENT STATIONS= 9880.6 10439.1 TYPE= 1 TARGET= 558.520

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.827	4.96	1213.96	1212.44	1213.51	1214.78	.82	.17	.27	100000.00
20000.0	.0	20000.0	.0	.0	2752.4	.0	838.3	130.1	100000.00
.49	.00	7.27	.00	.000	.030	.000	.000	1209.00	9880.61
.002570	35.	35.	35.	4	8	0	.00	558.52	10439.13

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.841

3470 ENCROACHMENT STATIONS= 9877.8 10451.8 TYPE= 1 TARGET= 573.950

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

2.841	5.27	1214.27	1212.40	1213.73	1214.97	.69	.15	.04	100000.00
20000.0	.0	20000.0	.0	.0	2993.3	.0	842.6	130.9	100000.00
.49	.00	6.68	.00	.000	.030	.000	.000	1209.00	9877.84
.002090	65.	65.	65.	2	14	0	.00	573.95	10451.79

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 2.936

ENCROACHMENT STATIONS= 9811.5 10382.9 TYPE= 1 TARGET= 571.360

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

2.936	8.37	1215.37	1212.61	1214.62	1215.89	.51	.87	.05	100000.00
20000.0	.0	20000.0	.0	.0	3481.4	.0	879.8	137.5	100000.00
.52	.00	5.74	.00	.000	.033	.000	.000	1207.00	9811.50
.001456	500.	500.	500.	2	8	0	.00	571.36	10382.86

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.030

3470 ENCROACHMENT STATIONS= 9615.5 10198.2 TYPE= 1 TARGET= 582.630

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

3.030	9.13	1216.13	1214.13	1215.44	1216.79	.66	.84	.06	100000.00
20000.0	.0	20000.0	.0	.0	3064.7	.0	917.4	144.1	100000.00
.54	.00	6.53	.00	.000	.030	.000	.000	1207.00	9615.53
.001975	500.	500.	500.	2	15	0	.00	582.63	10198.16

V= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.125

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

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.40

3470 ENCROACHMENT STATIONS= 9662.3 10244.6 TYPE= 1 TARGET= 582.370

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

3.125	11.08	1217.08	1214.12	1216.38	1217.54	.45	.69	.06	100000.00
20000.0	.0	20000.0	.0	.0	3703.6	.0	956.2	150.8	100000.00
.56	.00	5.40	.00	.000	.030	.000	.000	1206.00	9662.25
001007	500.	500.	500.	2	10	0	.00	582.37	10244.62

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.220

3470 ENCROACHMENT STATIONS= 9559.9 10204.1 TYPE= 1 TARGET= 644.181

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

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3.220	6.57	1217.57	1215.26	1216.67	1218.09	.52	.52	.02	100000.00
20000.0	.0	20000.0	.0	.0	3472.3	.0	997.4	157.8	100000.00
.59	.00	5.76	.00	.000	.026	.000	.000	1211.00	9559.93
.001089	500.	500.	500.	2	18	0	.00	644.18	10204.11

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.270

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .60

3470 ENCROACHMENT STATIONS= 9586.6 10194.8 TYPE= 1 TARGET= 608.250

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

3.270	6.85	1217.85	1216.45	1217.19	1218.65	.80	.45	.11	100000.00
20000.0	.0	20000.0	.0	.0	2792.3	.0	1016.4	161.6	100000.00
.60	.00	7.16	.00	.000	.031	.000	.000	1211.00	9586.56
.002982	265.	265.	265.	0	15	0	.00	608.25	10194.81

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.280

3470 ENCROACHMENT STATIONS= 9705.5 10310.0 TYPE= 1 TARGET= 604.580

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

MURRAY LANE

3.280	5.13	1218.13	1216.48	1217.56	1218.84	.71	.17	.03	100000.00
20000.0	.0	20000.0	.0	.0	2959.1	.0	1020.1	162.4	100000.00
.60	.00	6.76	.00	.000	.035	.000	.000	1213.00	9705.46
.003110	55.	55.	55.	2	8	0	.00	604.58	10310.04

'= .300 CEHV= .400
NH CARD USED
SECNO 3.409

3470 ENCROACHMENT STATIONS= 9960.9 10612.6 TYPE= 1 TARGET= 651.700

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

3.409	4.70	1219.70	1218.41	1219.13	1220.47	.77	1.60	.02	100000.00
000.0	.0	20000.0	.0	.0	2837.7	.0	1052.7	169.5	100000.00
.62	.00	7.05	.00	.000	.033	.000	.000	1215.00	9960.87
.003453	329.	490.	522.	2	14	0	.00	651.70	10612.57

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.488

3470 ENCROACHMENT STATIONS= 9910.4 10546.6 TYPE= 1 TARGET= 636.220

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

3.488	6.22	1221.22	1220.11	1220.50	1222.09	.86	1.58	.04	100000.00
20000.0	.0	20000.0	.0	.0	2683.7	.0	1079.3	175.7	100000.00
.64	.00	7.45	.00	.000	.033	.000	.000	1215.00	9910.41
.004115	420.	420.	420.	2	8	0	.00	636.22	10546.63

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.490

3470 ENCROACHMENT STATIONS= 9969.8 10604.5 TYPE= 1 TARGET= 634.760

NON-EFFECTIVE FLOW AREA REMOVED

3.490	6.30	1221.30	1220.39	1221.04	1222.26	.96	.13	.04	100000.00
20000.0	.0	20000.0	.0	.0	2543.6	.0	1081.1	176.1	100000.00
.64	.00	7.86	.00	.000	.032	.000	.000	1215.00	9969.75
.004691	30.	30.	30.	2	15	0	.00	634.76	10604.51

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.504

3470 ENCROACHMENT STATIONS= 9936.2 10578.6 TYPE= 1 TARGET= 642.410

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

3.504	5.52	1221.52	1220.73	1220.95	1222.52	1.01	.25	.02	100000.00
20000.0	.0	20000.0	.0	.0	2484.9	.0	1084.0	176.8	100000.00
.64	.00	8.05	.00	.000	.033	.000	.000	1216.00	9936.22
.005337	50.	50.	50.	0	19	0	.00	642.41	10578.63

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CCHV=     .300 CEHV=     .400
1490 NH CARD USED
*SECNO 3.510

 ENCROACHMENT STATIONS=     9909.3   10556.7  TYPE=      1  TARGET=      647.440

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        NON-EFFECTIVE FLOW AREA REMOVED
    3.510      5.85   1221.85   1220.81   1221.47   1222.73       .88       .16       .04 100000.00
  20000.0        .0   20000.0        .0        .0    2662.2        .0    1086.0     177.4 100000.00
      .64       .00      7.51       .00      .000      .032      .000      .000   1216.00   9909.27
  .004120       35.       35.       35.         2        15         0       .00    647.44  10556.71


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


CCHV=     .300 CEHV=     .400
1490 NH CARD USED
*SECNO 3.548

 ENCROACHMENT STATIONS=     9778.4   10438.1  TYPE=      1  TARGET=      659.630
        NON-EFFECTIVE FLOW AREA REMOVED
    3.548      8.83   1222.83   1220.87   1222.29   1223.43       .60       .62       .08 100000.00
  20000.0        .0   20000.0        .0        .0    3210.5        .0    1099.5     180.4 100000.00
      .65       .00      6.23       .00      .000      .034      .000      .000   1214.00   9778.44
  .002448      200.      200.      200.         2        11         0       .00    659.63  10438.07


CCHV=     .300 CEHV=     .400
1490 NH CARD USED
*SECNO 3.590

3470 ENCROACHMENT STATIONS=     9779.7   10376.8  TYPE=      1  TARGET=      597.109
        NON-EFFECTIVE FLOW AREA REMOVED
    3.590      8.14   1223.14   1220.55   1222.61   1223.66       .51       .20       .03 100000.00
  20000.0        .0   20000.0        .0        .0    3475.6        .0    1107.0     181.8 100000.00
      .65       .00      5.75       .00      .000      .034      .000      .000   1215.00   9779.66
  .001661       83.       98.      105.         0        14         0       .00    597.11  10376.77


CCHV=     .300 CEHV=     .400
1490 NH CARD USED
*SECNO 3.600

 ENCROACHMENT STATIONS=     9725.5   10277.3  TYPE=      1  TARGET=      551.859
        NON-EFFECTIVE FLOW AREA REMOVED
    3.600      8.36   1223.36   1220.52   1222.87   1223.88       .53       .22       .01 100000.00
  20000.0        .0   20000.0        .0        .0    3433.9        .0    1118.3     183.6 100000.00
      .66       .00      5.82       .00      .000      .033      .000      .000   1215.00   9725.48
  .001481      142.      142.      141.         2        14         0       .00    551.86  10277.34
```

CCHV= .300 CEHV= .400
1490 NH CARD USED
O 3.660

3470 ENCROACHMENT STATIONS= 9628.5 10073.4 TYPE= 1 TARGET= 444.920
NON-EFFECTIVE FLOW AREAS REMOVED

3.660	9.75	1223.75	1220.56	1223.43	1224.37	.62	.45	.04	100000.00
20000.0	.0	20000.0	.0	.0	3161.5	.0	1141.4	187.1	100000.00
.67	.00	6.33	.00	.000	.033	.000	.000	1214.00	9628.47
.001447	340.	305.	255.	2	15	0	.00	444.92	10073.39

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.710

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9683.7 10020.8 TYPE= 1 TARGET= 337.100

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

3.710	7.99	1223.99	1221.83	1223.79	1225.13	1.14	.56	.21	100000.00
20000.0	.0	20000.0	.0	.0	2333.5	.0	1160.5	189.9	100000.00
.68	.00	8.57	.00	.000	.031	.000	.000	1216.00	9683.66
.002435	360.	303.	280.	2	14	0	.00	337.10	10020.76

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 3.730

3470 ENCROACHMENT STATIONS= 9683.4 9988.3 TYPE= 1 TARGET= 304.850

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

3.730	6.99	1223.99	1222.67	1223.88	1225.62	1.63	.24	.24	100000.00
20000.0	.0	20000.0	.0	.0	1952.3	.0	1164.5	190.5	100000.00
.69	.00	10.24	.00	.000	.030	.000	.000	1217.00	9683.44
.003700	103.	82.	74.	2	19	0	.00	304.85	9988.29

: .300 CEHV= .500
1490 NH CARD USED
*SECNO 3.760

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9770.0 10002.0 TYPE= 1 TARGET= 232.010
ELENCL= 1232.00 ELENCR= 1232.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1232.00 ELREA= 1232.00

1

NON-EFFECTIVE FLOW AREA REMOVED
THOMAS ROAD
DOWNSTREAM EDGE

3.760	9.18	1224.18	1223.00	1223.79	1226.34	2.16	.45	.27	1232.00
20000.0	.0	20000.0	.0	.0	1694.6	.0	1171.8	191.5	1232.00
.69	.00	11.80	.00	.000	.020	.000	.000	1215.00	9770.00
.001927	174.	174.	174.	2	8	0	.00	232.01	10002.01

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.50	2.60	.00	258.00	6.00	3654.00	.00	1217.83	1217.33

*SECNO 3.780
S A LOW FLOW

3420 BRIDGE W.S.= 1224.15 BRIDGE VELOCITY= 12.07 CALCULATED CHANNEL AREA= 1594.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1226.60	.38	0.	20000.	3654.	3654.	1232.33	1234.00	0.

3470 ENCROACHMENT STATIONS= 9770.0 10002.0 TYPE= 1 TARGET= 232.010
ELENCL= 1233.00 ELENCR= 1233.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1233.00 ELREA= 1233.00

THOMAS ROAD
UPSTREAM EDGE

3.780	8.56	1224.56	.00	1224.64	1226.60	2.04	.26	.00	1233.00
20000.0	.0	20000.0	.0	.0	1743.0	.0	1175.2	192.0	1233.00
.69	.00	11.47	.00	.000	.020	.000	.000	1216.00	9770.00
.001737	86.	86.	86.	0	0	0	.00	231.97	10001.97

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 3.811

3301 HV CHANGED MORE THAN HVINS

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

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

3470 ENCROACHMENT STATIONS= 9776.9 10063.0 TYPE= 1 TARGET= 286.060

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

3.811	8.77	1225.77	1223.75	1226.78	1227.19	1.41	.39	.19	100000.00
20000.0	.0	20000.0	.0	.0	2096.4	.0	1182.2	192.9	100000.00
.70	.00	9.54	.00	.000	.035	.000	.000	1217.00	9776.94
.003765	152.	160.	172.	4	15	0	.00	286.06	10063.00

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 3.883

3301 HV CHANGED MORE THAN HVINS

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.21

3470 ENCROACHMENT STATIONS= 9800.0 10320.0 TYPE= 1 TARGET= 520.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

3.883	10.66	1227.66	1223.04	1227.44	1228.00	.35	.50	.32	100000.00
20000.0	.0	20000.0	.0	.0	4238.9	.0	1206.9	196.1	100000.00
.72	.00	4.72	.00	.000	.035	.000	.000	1217.00	9800.00
.000774	357.	339.	327.	2	19	0	.00	520.00	10320.00

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 3.977

3470 ENCROACHMENT STATIONS= 9581.8 10156.1 TYPE= 1 TARGET= 574.260

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

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3.977	10.05	1228.05	1224.11	1227.79	1228.40	.36	.39	.00	100000.00
20000.0	.0	20000.0	.0	.0	4178.7	.0	1255.2	202.4	100000.00
.75	.00	4.79	.00	.000	.033	.000	.000	1218.00	9581.83
000798	500.	500.	500.	2	11	0	.00	574.26	10156.09

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.072

3470 ENCROACHMENT STATIONS= 9637.6 10176.3 TYPE= 1 TARGET= 538.649

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.072	10.46	1228.46	1225.28	1228.18	1229.00	.54	.53	.07	100000.00
20000.0	.0	20000.0	.0	.0	3396.4	.0	1298.7	208.7	100000.00
.77	.00	5.89	.00	.000	.032	.000	.000	1218.00	9637.61
.001451	500.	500.	500.	2	19	0	.00	538.65	10176.26

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.167

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.07

3470 ENCROACHMENT STATIONS= 9577.8 10199.7 TYPE= 1 TARGET= 621.870

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.167	9.19	1229.19	1223.69	1228.85	1229.40	.22	.31	.10	100000.00
20000.0	.0	20000.0	.0	.0	5332.3	.0	1348.8	215.4	100000.00
.81	.00	3.75	.00	.000	.030	.000	.000	1220.00	9577.84
.000338	500.	500.	500.	2	22	0	.00	621.87	10199.71

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.220

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .63

3470 ENCROACHMENT STATIONS= 9489.8 10055.5 TYPE= 1 TARGET= 565.610

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.220	9.22	1229.22	1225.32	1228.87	1229.59	.37	.13	.06	100000.00
20000.0	.0	20000.0	.0	.0	4119.4	.0	1375.9	218.8	100000.00
.82	.00	4.86	.00	.000	.033	.000	.000	1220.00	9489.85
.000850	250.	250.	250.	2	11	0	.00	565.61	10055.46

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV

Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

..V= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.250

3470 ENCROACHMENT STATIONS= 9548.8 10034.7 TYPE= 1 TARGET= 485.910

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

OSBORN ROAD

4.250	9.29	1229.29	1225.85	1229.00	1229.81	.51	.16	.06	100000.00
20000.0	.0	20000.0	.0	.0	3478.1	.0	1393.4	221.2	100000.00
.83	.00	5.75	.00	.000	.025	.000	.000	1220.00	9548.81
.000712	200.	200.	200.	2	14	0	.00	485.91	10034.72

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.290

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .59

3470 ENCROACHMENT STATIONS= 9606.2 10028.5 TYPE= 1 TARGET= 422.380

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.290	8.33	1229.33	1227.06	1229.06	1230.19	.86	.24	.14	100000.00
20000.0	.0	20000.0	.0	.0	2685.0	.0	1408.6	223.5	100000.00
.84	.00	7.45	.00	.000	.031	.000	.000	1221.00	9606.16
.002053	215.	215.	215.	2	14	0	.00	422.38	10028.54

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.356

3470 ENCROACHMENT STATIONS= 9663.1 10113.3 TYPE= 1 TARGET= 450.189

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.356	8.02	1230.02	1227.42	1229.76	1230.74	.72	.51	.04	100000.00
20000.0	.0	20000.0	.0	.0	2938.4	.0	1427.0	226.3	100000.00
.85	.00	6.81	.00	.000	.030	.000	.000	1222.00	9663.12
.001591	285.	285.	285.	2	14	0	.00	450.19	10113.31

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.451

3470 ENCROACHMENT STATIONS= 9534.2 10125.3 TYPE= 1 TARGET= 591.130

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.451	8.03	1231.03	1228.26	1230.51	1231.52	.49	.71	.07	100000.00
20000.0	.0	20000.0	.0	.0	3571.4	.0	1464.3	232.3	100000.00
.87	.00	5.60	.00	.000	.031	.000	.000	1223.00	9534.15
.001269	500.	500.	500.	2	14	0	.00	591.13	10125.28

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.546

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .63

3470 ENCROACHMENT STATIONS= 9943.2 10474.8 TYPE= 1 TARGET= 531.610

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.546	7.55	1231.55	1229.95	1231.15	1232.40	.85	.74	.14	100000.00
20000.0	.0	20000.0	.0	.0	2706.4	.0	1491.9	237.2	100000.00
.89	.00	7.39	.00	.000	.034	.000	.000	1224.00	9943.18
.003239	200.	383.	504.	0	19	0	.00	531.61	10474.79

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.640

3470 ENCROACHMENT STATIONS= 9898.9 10396.0 TYPE= 1 TARGET= 497.110

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.640	7.94	1232.94	1231.03	1232.92	1233.75	.81	1.34	.01	100000.00
20000.0	.0	20000.0	.0	.0	2764.2	.0	1519.1	242.3	100000.00
.91	.00	7.24	.00	.000	.035	.000	.000	1225.00	9898.92
.002976	433.	433.	433.	3	15	0	.00	497.11	10396.03

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

CCHV= .300 CEHV= .400
1490 NH CARD USED
*SECNO 4.735

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3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50


3470 ENCROACHMENT STATIONS=     9898.1   10352.1  TYPE=      1  TARGET=      453.989

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     4.735      8.16   1234.16   1230.92   1233.96   1234.75       .59       .93       .07 100000.00
   20000.0        .0   20000.0        .0        .0    3240.2        .0    1552.9     247.7 100000.00
       .93       .00      6.17       .00      .000      .032      .000      .000   1226.00   9898.11
   .001315      490.      490.      490.         2        14         0       .00    453.99  10352.10


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 4.830

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.81


3470 ENCROACHMENT STATIONS=     9468.8   10072.4  TYPE=      1  TARGET=      603.620

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

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     4.830      6.77   1234.77   1231.30   1234.19   1235.15       .38       .33       .06 100000.00
   20000.0        .0   20000.0        .0        .0    4040.5        .0    1594.7     253.8 100000.00
       .96       .00      4.95       .00      .000      .021      .000      .000   1228.00   9468.76
   .000400      500.      500.      500.         2        18         0       .00    603.62  10072.38


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 4.850

3265 DIVIDED FLOW

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



3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9474.6   10108.2  TYPE=      1  TARGET=      633.630

     OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     4.850      7.49   1235.49   1235.49   1235.54   1237.70      2.21       .11       .91 100000.00
   20000.0        .0   20000.0        .0        .0    1676.4        .0    1601.2     254.9 100000.00
       .96       .00     11.93       .00      .000      .034      .000      .000   1228.00   9474.59
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   .010658      100.      100.      100.         0         8         0       .00    386.04   10108.22


CCHV=     .300 CEHV=     .500
     NH CARD USED
    SECNO 4.855

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9469.5    10087.1  TYPE=       1  TARGET=      617.580

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        INDIAN SCHOOL ROAD
        DOWNSTREAM EDGE
     4.855      10.18    1238.18    1238.18    1238.09    1239.75       1.57        .15        .19 100000.00
   20000.0         .0    20000.0         .0         .0     1991.5         .0     1602.3      255.2 100000.00
       .96        .00      10.04        .00       .000       .020       .000       .000    1228.00    9469.50
   .003985       25.        25.        25.          0         13          0        .00     617.58   10087.08


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS    1236.65 , NOT    1238.18 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB  XK        XKOR      COFQ      RDLEN     BWC       BWP       BAREA     SS        ELCHU     ELCHD
     1.05      1.50      2.60       .00     98.25      2.50    666.42       .00    1228.00   1227.08

*SECNO 4.870
PRESSURE AND WEIR FLOW,  Weir Submergence Based on TRAPEZOIDAL Shape


 EGPRS      EGLWC      H3       QWEIR      QPR       BAREA    TRAPEZOID      ELLC      ELTRD     WEIRLN
                                                              AREA
   1259.16   1242.62       .00    13694.     6384.      666.      674.     1235.04   1240.07     1708.


3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF
     PROBABLE MINIMUM SPECIFIC ENERGY

3470 ENCROACHMENT STATIONS=     9379.4     9992.3  TYPE=       1  TARGET=      612.840

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00
```

INDIAN SHCOOL ROAD
UPSTREAM EDGE

4.870	11.07	1239.07	1238.98	1239.02	1240.69	1.62	.34	.23	100000.00
000.0	.0	20000.0	.0	.0	1957.1	.0	1606.1	256.4	100000.00
.96	.00	10.22	.00	.000	.020	.000	.000	1228.00	9379.43
.004217	84.	84.	84.	20	8	5	.00	612.84	9992.27

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 4.873

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.79

3470 ENCROACHMENT STATIONS= 9458.1 10071.2 TYPE= 1 TARGET= 613.070

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.873	11.89	1240.89	1236.47	1240.48	1241.12	.24	.02	.41	100000.00
17000.0	.0	17000.0	.0	.0	4331.7	.0	1607.2	256.6	100000.00
.96	.00	3.92	.00	.000	.027	.000	.000	1229.00	9458.12
.000392	15.	15.	15.	3	19	0	.00	613.07	10071.19

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 4.892

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.55

3470 ENCROACHMENT STATIONS= 9440.1 10066.0 TYPE= 1 TARGET= 625.850

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.892	13.08	1241.08	1231.79	1240.64	1241.18	.10	.01	.04	100000.00
17000.0	.0	17000.0	.0	.0	6769.0	.0	1619.9	258.0	100000.00
.97	.00	2.51	.00	.000	.022	.000	.000	1228.00	9440.12
.000061	100.	100.	100.	2	17	0	.00	625.85	10065.97

C .V= .200 CEHV= .400
1490 NH CARD USED
*SECNO 4.924

3470 ENCROACHMENT STATIONS= 9355.9 10092.0 TYPE= 1 TARGET= 736.130

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.924	13.10	1241.10	1231.96	1240.67	1241.19	.09	.01	.00	100000.00
7000.0	.0	17000.0	.0	.0	7092.2	.0	1647.4	260.7	100000.00
.99	.00	2.40	.00	.000	.023	.000	.000	1228.00	9355.88
.000070	173.	173.	173.	1	17	0	.00	736.13	10092.01

CCHV= .200 CEHV= .400
1490 NH CARD USED
1
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 4.952

3470 ENCROACHMENT STATIONS= 9020.7 9992.9 TYPE= 1 TARGET= 972.250

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

4.952	13.16	1241.16	1232.69	1240.70	1241.21	.05	.01	.01	100000.00
7000.0	.0	17000.0	.0	.0	9257.2	.0	1675.6	263.7	100000.00
1.02	.00	1.84	.00	.000	.028	.000	.000	1228.00	9020.65
.000061	290.	150.	150.	2	19	0	.00	972.25	9992.90

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 4.990

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .33

3470 ENCROACHMENT STATIONS= 9051.3 9985.8 TYPE= 1 TARGET= 934.500

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
AREA BETWEEN STA. 9685 AND STA. 9909

4.990	12.16	1241.16	1235.82	1240.71	1241.32	.16	.07	.04	100000.00
17000.0	.0	17000.0	.0	.0	5300.8	.0	1759.0	274.6	100000.00
1.06	.00	3.21	.00	.000	.034	.000	.000	1229.00	9051.29
.000562	348.	499.	595.	2	11	0	.00	934.50	9985.79

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.110

3470 ENCROACHMENT STATIONS= 9294.1 9869.3 TYPE= 1 TARGET= 575.170

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.110	11.39	1241.39	1235.97	1240.87	1241.56	.17	.23	.00	100000.00
13655.0	.0	13655.0	.0	.0	4161.9	.0	1812.4	283.1	100000.00
1.10	.00	3.28	.00	.000	.033	.000	.000	1230.00	9294.08
00385	193.	492.	604.	2	8	0	.00	575.17	9869.25

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.205

3470 ENCROACHMENT STATIONS= 9351.6 9773.4 TYPE= 1 TARGET= 421.820

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.205	10.54	1241.54	1236.89	1241.10	1241.81	.27	.21	.04	100000.00
13655.0	.0	13655.0	.0	.0	3289.5	.0	1849.1	288.0	100000.00
1.13	.00	4.15	.00	.000	.035	.000	.000	1231.00	9351.59
.000643	306.	429.	501.	2	11	0	.00	421.82	9773.41

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.300

3470 ENCROACHMENT STATIONS= 9265.4 9733.2 TYPE= 1 TARGET= 467.761

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

NON-EFFECTIVE FLOW AREA REMOVED

5.300	7.97	1241.97	1238.73	1241.48	1242.32	.35	.48	.03	100000.00
13655.0	.0	13655.0	.0	.0	2865.8	.0	1889.7	293.9	100000.00
1.16	.00	4.76	.00	.000	.035	.000	.000	1234.00	9265.39
.001151	715.	574.	474.	2	14	0	.00	467.76	9733.15

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.357

3470 ENCROACHMENT STATIONS= 9300.0 9728.9 TYPE= 1 TARGET= 428.910

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.357	7.27	1242.27	1239.71	1241.91	1242.79	.52	.40	.07	100000.00
655.0	.0	13655.0	.0	.0	2352.5	.0	1908.3	297.1	100000.00
1.18	.00	5.80	.00	.000	.030	.000	.000	1235.00	9300.00
.001454	310.	310.	310.	1	14	0	.00	428.91	9728.91

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.360

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9265.6 9706.7 TYPE= 1 TARGET= 441.090

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CAMELBACK ROAD
DOWNSTREAM EDGE
begin file 08ibw.dwg

5.360	3.91	1242.91	1242.91	1243.02	1244.47	1.57	.23	.52	100000.00
13655.0	.0	13655.0	.0	.0	1359.6	.0	1912.5	298.1	100000.00
1.18	.00	10.04	.00	.000	.020	.000	.000	1239.00	9265.58
004102	100.	100.	100.	0	11	0	.00	441.09	9706.67

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.372
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9264.2 9697.9 TYPE= 1 TARGET= 433.750

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CAMELBACK ROAD
UPSTREAM EDGE

5.372	4.58	1243.58	1243.58	1243.63	1245.21	1.63	.33	.03	100000.00
13655.0	.0	13655.0	.0	.0	1334.0	.0	1915.0	298.9	100000.00
1.18	.00	10.24	.00	.000	.020	.000	.000	1239.00	9264.15
.004049	80.	80.	80.	0	11	0	.00	416.81	9680.96

CCHV= .300 CEHV= .500
1490 NH CARD USED

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

*SECNO 5.385

HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.41

3470 ENCROACHMENT STATIONS= 9262.5 9682.1 TYPE= 1 TARGET= 419.590

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.385	9.14	1245.14	1242.94	1244.99	1245.72	.57	.19	.32	100000.00
13655.0	.0	13655.0	.0	.0	2246.2	.0	1917.9	299.5	100000.00
1.19	.00	6.08	.00	.000	.033	.000	.000	1236.00	9262.49
.002023	70.	70.	70.	4	14	0	.00	419.59	9682.08

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.492

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.55

3470 ENCROACHMENT STATIONS= 9278.1 9711.2 TYPE= 1 TARGET= 433.131

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.492	9.95	1245.95	1242.50	1245.41	1246.31	.35	.55	.04	100000.00
13655.0	.0	13655.0	.0	.0	2857.4	.0	1943.6	303.8	100000.00
1.21	.00	4.78	.00	.000	.031	.000	.000	1236.00	9278.10
.000840	440.	440.	440.	2	16	0	.00	433.13	9711.23

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.587

3470 ENCROACHMENT STATIONS= 9364.8 9743.7 TYPE= 1 TARGET= 378.910

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
5.587	10.38	1246.38	1241.44	1245.82	1246.65	.27	.33	.02	100000.00
12972.0	.0	12972.0	.0	.0	3117.2	.0	1977.9	308.5	100000.00
1.24	.00	4.16	.00	.000	.033	.000	.000	1236.00	9364.78
.000523	500.	500.	500.	2	11	0	.00	378.91	9743.69

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 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 5.682

      ENCROACHMENT STATIONS=     9417.7    9737.0  TYPE=       1  TARGET=      319.290

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      5.682     10.62   1246.62   1242.12   1246.06   1247.00       .38       .31       .04 100000.00
    12928.0        .0   12928.0        .0        .0    2609.5        .0    2010.8     312.5 100000.00
       1.27       .00      4.95       .00      .000      .032      .000      .000   1236.00   9417.67
    .000729      500.      500.      500.         2        14         0       .00    319.29   9736.96


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 5.777

 3470 ENCROACHMENT STATIONS=     9417.1    9736.3  TYPE=       1  TARGET=      319.160

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      5.777     11.04   1247.04   1242.18   1246.32   1247.39       .35       .37       .01 100000.00
    12836.0        .0   12836.0        .0        .0    2715.8        .0    2041.4     316.2 100000.00
       1.30       .00      4.73       .00      .000      .035      .000      .000   1236.00   9417.14
    .000771      500.      500.      500.         2        14         0       .00    319.16   9736.30


    '=      .200 CEHV=      .400
      NH CARD USED
 *SECNO 5.867

 3470 ENCROACHMENT STATIONS=     9307.9    9737.1  TYPE=       1  TARGET=      429.270

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      5.867      9.46   1247.46   1244.06   1246.60   1247.82       .36       .43       .01 100000.00
    11769.0        .0   11769.0        .0        .0    2429.1        .0    2068.8     320.2 100000.00
       1.33       .00      4.84       .00      .000      .033      .000      .000   1238.00   9307.86
    .001138      465.      465.      465.         2        11         0       .00    429.27   9737.13


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


 CCHV=      .300 CEHV=      .500
 1400 NH CARD USED
      O 5.871

 3301 HV CHANGED MORE THAN HVINS

 7185 MINIMUM SPECIFIC ENERGY
```

3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9293.1 9744.1 TYPE= 1 TARGET= 451.080

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.871	6.07	1247.07	1247.07	1247.08	1248.47	1.40	.05	.52	100000.00
11706.0	.0	11706.0	.0	.0	1232.3	.0	2069.7	320.4	100000.00
1.33	.00	9.50	.00	.000	.035	.000	.000	1241.00	9293.06
.013166	20.	20.	20.	0	11	0	.00	451.08	9744.14

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.886
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9270.0 9790.0 TYPE= 1 TARGET= 520.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.886	2.49	1252.49	1252.49	1251.85	1253.74	1.25	.56	.05	100000.00
11500.0	.0	11500.0	.0	.0	1282.7	.0	2071.9	321.2	100000.00
1.33	.00	8.97	.00	.000	.020	.000	.000	1250.00	9270.00
.004418	78.	78.	78.	0	18	0	.00	520.00	9790.00

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

1

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

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	105.50	3.00	402.83	.00	1246.93	1246.53

*SECNO 5.900
6870 D.S. ENERGY OF 1253.74 IS HIGHER THAN COMPUTED ENERGY OF 1253.28

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.92

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1293.97	1253.74	.24	14665.	2338.	403.	403.	1250.86	1252.36	1594.

3470 ENCROACHMENT STATIONS= 9139.6 10019.5 TYPE= 1 TARGET= 879.910

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CHAPARREL ROAD
begin file 09ibw.dwg

5.900	6.25	1253.25	.00	1252.73	1253.74	.49	.00	.00	100000.00
17000.0	.0	17000.0	.0	.0	3017.8	.0	2075.9	322.5	100000.00
1.34	.00	5.63	.00	.000	.020	.000	.000	1247.00	9139.60
.001129	80.	80.	80.	2	0	7	.00	879.91	10019.51

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.925

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .45

3470 ENCROACHMENT STATIONS= 9184.4 10057.1 TYPE= 1 TARGET= 872.729

5.925	3.39	1253.39	1252.82	1253.05	1254.15	.75	.28	.13	100000.00
17000.0	.0	17000.0	.0	.0	2438.1	.0	2084.0	325.1	100000.00
1.34	.00	6.97	.00	.000	.031	.000	.000	1250.00	9184.40
.005469	130.	130.	130.	2	14	0	.00	872.73	10057.13

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.966

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.01

3470 ENCROACHMENT STATIONS= 9163.2 10067.7 TYPE= 1 TARGET= 904.550

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.966	4.77	1254.77	1252.58	1254.26	1255.10	.33	.87	.08	100000.00
17000.0	.0	17000.0	.0	.0	3680.3	.0	2109.3	332.5	100000.00
1.36	.00	4.62	.00	.000	.030	.000	.000	1250.00	9163.15
.001354	360.	360.	360.	2	15	0	.00	904.55	10067.70

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.060

3470 ENCROACHMENT STATIONS= 9218.7 10060.3 TYPE= 1 TARGET= 841.560

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

6.060	5.36	1255.36	1253.06	1254.82	1255.72	.35	.61	.01	100000.00
7000.0	.0	17000.0	.0	.0	3558.4	.0	2150.8	342.5	100000.00
1.39	.00	4.78	.00	.000	.027	.000	.000	1250.00	9218.73
.001097	500.	500.	500.	3	14	0	.00	841.56	10060.29

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.155

3470 ENCROACHMENT STATIONS= 9251.1 9788.3 TYPE= 1 TARGET= 537.210

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

6.155	5.84	1255.84	1252.50	1255.47	1256.07	.23	.32	.03	100000.00
11920.0	.0	11920.0	.0	.0	3124.4	.0	2189.2	350.4	100000.00
1.43	.00	3.82	.00	.000	.024	.000	.000	1250.00	9251.11
.000362	500.	500.	500.	2	14	0	.00	537.21	9788.32

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.250

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .57

3470 ENCROACHMENT STATIONS= 9367.9 9840.7 TYPE= 1 TARGET= 472.800

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

6.250	6.07	1256.07	1253.40	1255.62	1256.41	.34	.29	.05	100000.00
11920.0	.0	11920.0	.0	.0	2535.3	.0	2221.7	356.2	100000.00
1.46	.00	4.70	.00	.000	.032	.000	.000	1250.00	9367.86
.001122	500.	500.	500.	2	11	0	.00	472.80	9840.66

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.345

HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9356.2 9790.7 TYPE= 1 TARGET= 434.479

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

6.345	4.69	1257.69	1257.69	1257.60	1259.15	1.46	1.26	.45	100000.00
1920.0	.0	11920.0	.0	.0	1229.5	.0	2243.3	361.4	100000.00
1.47	.00	9.69	.00	.000	.030	.000	.000	1253.00	9356.23
.010091	500.	500.	500.	0	19	0	.00	434.48	9790.71

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.390
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9307.0 9762.2 TYPE= 1 TARGET= 455.210

1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

6.390	3.20	1260.20	1260.20	1260.24	1261.60	1.39	1.43	.01	100000.00
11920.0	.0	11920.0	.0	.0	1258.2	.0	2249.8	363.8	100000.00
1.48	.00	9.47	.00	.000	.020	.000	.000	1257.00	9307.00
.004221	230.	230.	230.	0	14	0	.00	455.21	9762.21

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.400

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9232.1 10071.9 TYPE= 1 TARGET= 839.760
begin file 10ibw.dwg

6.400	3.88	1260.88	1260.53	1261.25	1261.87	.99	.20	.08	100000.00
17000.0	.0	17000.0	.0	.0	2124.5	.0	2251.3	364.3	100000.00
1.48	.00	8.00	.00	.000	.029	.000	.000	1257.00	9232.13
.005978	38.	38.	38.	7	8	0	.00	755.72	10071.89

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.440

HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.88

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3470 ENCROACHMENT STATIONS=     9120.2   10061.1  TYPE=      1  TARGET=      940.950
     6.440      5.34   1262.34   1260.40   1261.99   1262.67       .33       .66       .13 100000.00
   17000.0        .0  17000.0        .0        .0    3676.2        .0    2266.6     368.8 100000.00
      1.49       .00      4.62       .00      .000      .033      .000      .000   1257.00   9120.16
   .001698      230.      230.      230.         2        15         0       .00    940.95  10061.11


CCHV=      .200 CEHV=      .400
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


1490 NH CARD USED
*SECNO 6.530

3470 ENCROACHMENT STATIONS=     9130.7   10070.9  TYPE=      1  TARGET=      940.180
     6.530      8.18   1263.18   1261.13   1262.98   1263.50       .32       .83       .00 100000.00
   17000.0        .0  17000.0        .0        .0    3743.5        .0    2309.2     379.6 100000.00
      1.52       .00      4.54       .00      .000      .033      .000      .000   1255.00   9130.69
   .001624      500.      500.      500.         2        11         0       .00    940.18  10070.87


   '=      .200 CEHV=      .400
    NH CARD USED
*SECNO 6.630

3470 ENCROACHMENT STATIONS=     9114.3   10040.1  TYPE=      1  TARGET=      925.850
     6.630      6.07   1264.07   1262.36   1263.88   1264.45       .38       .92       .02 100000.00
   17000.0        .0  17000.0        .0        .0    3437.7        .0    2350.4     390.3 100000.00
      1.55       .00      4.95       .00      .000      .033      .000      .000   1258.00   9114.25
   .002125      500.      500.      500.         2        11         0       .00    925.85  10040.10


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 6.723

3470 ENCROACHMENT STATIONS=     9156.6   10051.7  TYPE=      1  TARGET=      895.171
     6.723      6.01   1265.01   1262.71   1264.86   1265.33       .31       .86       .01 100000.00
   17000.0        .0  17000.0        .0        .0    3786.3        .0    2391.9     400.7 100000.00
      1.58       .00      4.49       .00      .000      .033      .000      .000   1259.00   9156.56
   .001427      500.      500.      500.         0        14         0       .00    895.17  10051.73


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 6.820

    DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .41

3470 ENCROACHMENT STATIONS= 9324.9 10050.6 TYPE= 1 TARGET= 725.670

NON-EFFECTIVE FLOW AREA REMOVED

6.820	4.94	1265.94	1265.77	1265.97	1267.11	1.17	1.44	.34	100000.00
17000.0	.0	17000.0	.0	.0	1961.6	.0	2424.9	410.0	100000.00
1.60	.00	8.67	.00	.000	.031	.000	.000	1261.00	9324.93
.008652	500.	500.	500.	2	15	0	.00	718.37	10050.60

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.856

3301 HV CHANGED MORE THAN HVINS

? WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.34

3470 ENCROACHMENT STATIONS= 9345.7 10059.3 TYPE= 1 TARGET= 713.520

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

6.856	6.54	1267.54	1264.81	1267.19	1267.89	.36	.62	.16	100000.00
17000.0	.0	17000.0	.0	.0	3551.1	.0	2437.5	413.3	100000.00
1.61	.00	4.79	.00	.000	.036	.000	.000	1261.00	9345.74
.001584	200.	200.	200.	2	15	0	.00	713.52	10059.26

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 6.879

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9349.4 10133.6 TYPE= 1 TARGET= 784.260

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA

SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
6.879	12.71	1267.71	1265.49	1267.33	1268.18	.47	.23	.06	100000.00
7000.0	.0	17000.0	.0	.0	3078.3	.0	2446.7	415.2	100000.00
1.62	.00	5.52	.00	.000	.035	.000	.000	1255.00	9349.37
.002345	120.	120.	120.	2	11	0	.00	687.61	10114.52

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 6.880

3265 DIVIDED FLOW

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.73

3470 ENCROACHMENT STATIONS= 9382.8 10155.7 TYPE= 1 TARGET= 772.880

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

MCDONALD DRIVE
DOWNSTREAM EDGE
NON-EFFECTIVE FLOW AREA REMOVED
begin file 11ibw.dwg

6.880	5.74	1267.74	1265.78	1267.67	1268.23	.48	.04	.01	100000.00
17000.0	.0	17000.0	.0	.0	3044.8	.0	2448.9	415.7	100000.00
1.62	.00	5.58	.00	.000	.020	.000	.000	1262.00	9382.84
000786	32.	32.	32.	2	17	0	.00	683.99	10155.72

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1266.84 , NOT 1267.74 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.05	1.50	2.60	.00	214.00	7.50	1722.21	.00	1262.83	1261.83

*SECNO 6.893

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.43

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

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1268.28 BRIDGE VELOCITY= 13.84 CALCULATED CHANNEL AREA= 1125.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1270.22	.00	0.	17000.	1722.	1722.	1271.17	1272.84	0.

3470 ENCROACHMENT STATIONS= 9310.5 10095.4 TYPE= 1 TARGET= 784.910

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1269.00 ELREA= 100000.00

MCDONALD DRIVE
UPSTREAM EDGE

6.893	15.01	1270.01	.00	1270.01	1270.22	.21	1.99	.00	1269.00
17000.0	10310.9	6689.1	.0	3095.0	1630.0	.0	2455.9	417.0	100000.00
1.62	3.33	4.10	.00	.029	.024	.000	.000	1255.00	9310.47
.000386	78.	78.	78.	0	0	0	.00	784.91	10095.38

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.910

3470 ENCROACHMENT STATIONS= 9314.1 10106.5 TYPE= 1 TARGET= 792.410

6.910	12.05	1270.05	1265.93	1269.99	1270.24	.18	.02	.00	100000.00
17000.0	.0	17000.0	.0	.0	4956.1	.0	2460.9	417.8	100000.00
1.63	.00	3.43	.00	.000	.029	.000	.000	1258.00	9314.09
.000388	45.	45.	45.	2	11	0	.00	792.41	10106.50

= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.960

3470 ENCROACHMENT STATIONS= 9364.7 10101.3 TYPE= 1 TARGET= 736.620

6.960	8.14	1270.14	1265.63	1270.04	1270.32	.19	.09	.00	100000.00
17000.0	.0	17000.0	.0	.0	4923.5	.0	2489.2	422.2	100000.00
1.65	.00	3.45	.00	.000	.027	.000	.000	1262.00	9364.71
.000308	250.	250.	250.	1	17	0	.00	736.62	10101.33

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 7.008

HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .44

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3470 ENCROACHMENT STATIONS=     9666.5   10116.6  TYPE=      1  TARGET=      450.090
     7.008      6.89   1269.89   1268.30   1269.87   1270.74       .85       .15       .27 100000.00
   17000.0        .0   17000.0        .0        .0    2295.4        .0    2509.9     425.6 100000.00
      1.66       .00      7.41       .00      .000      .023      .000      .000   1263.00   9666.50
    001574      315.      250.      237.         2        14         0       .00    450.09  10116.59


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 7.102

3470 ENCROACHMENT STATIONS=     9813.4   10190.8  TYPE=      1  TARGET=      377.340
        GR DATA ADJUSTED FOR FLOODWALL
     7.102      7.72   1270.72   1267.52   1270.58   1271.37       .65       .59       .04 100000.00
   17000.0        .0   17000.0        .0        .0    2631.8        .0    2538.2     430.4 100000.00
      1.68       .00      6.46       .00      .000      .025      .000      .000   1263.00   9813.42
   .000905      505.      500.      478.         2        14         0       .00    377.34  10190.76


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 7.197

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.40


3470 ENCROACHMENT STATIONS=     9725.0   10241.0  TYPE=      1  TARGET=      516.000

    OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     7.197      7.43   1271.43   1267.32   1271.19   1271.75       .32       .31       .07 100000.00
   17000.0        .0   17000.0        .0        .0    3769.4        .0    2575.0     435.5 100000.00
      1.71       .00      4.51       .00      .000      .026      .000      .000   1264.00   9725.03
   .000459      570.      500.      470.         2        14         0       .00    516.00  10241.03


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


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 7.290

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


3[illegible] ENCROACHMENT STATIONS=     9652.0   10290.5  TYPE=      1  TARGET=      638.500

    OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     7.290      8.67   1271.67   1269.60   1271.44   1272.12       .45       .32       .05 100000.00
   17000.0        .0   17000.0        .0        .0    3153.0        .0    2614.7     442.1 100000.00
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      1.74       .00      5.39       .00      .000      .025      .000      .000   1263.00   9652.02
   .000989      500.      500.      500.         2        10         0       .00    638.50  10290.52


        .200 CEHV=      .400
    NH CARD USED
*SECNO 7.390

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .67


3470 ENCROACHMENT STATIONS=     9693.8   10277.1  TYPE=      1  TARGET=      583.271
     7.390      8.18   1272.18   1271.10   1272.08   1272.97       .78       .71       .13 100000.00
   17000.0        .0  17000.0        .0        .0    2395.9        .0    2646.5     449.1 100000.00
      1.76       .00      7.10       .00      .000      .025      .000      .000   1264.00   9693.80
   .002202      500.      500.      500.         2        14         0       .00    583.27  10277.07


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 7.481

3470 ENCROACHMENT STATIONS=     9674.0   10232.4  TYPE=      1  TARGET=      558.360
        begin file 12ibw.dwg
     7.481      8.25   1273.25   1271.35   1273.16   1273.85       .60       .85       .04 100000.00
   17000.0        .0  17000.0        .0        .0    2742.7        .0    2676.0     455.7 100000.00
      1.78       .00      6.20       .00      .000      .025      .000      .000   1265.00   9674.02
   .001339      500.      500.      500.         2        19         0       .00    558.36  10232.38


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


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 7.576

3470 ENCROACHMENT STATIONS=     9729.2   10255.7  TYPE=      1  TARGET=      526.500
     7.576      6.95   1273.95   1272.27   1273.86   1274.64       .69       .75       .04 100000.00
   17000.0        .0  17000.0        .0        .0    2549.4        .0    2706.4     461.9 100000.00
      1.80       .00      6.67       .00      .000      .026      .000      .000   1267.00   9729.23
   .001699      500.      500.      500.         2        14         0       .00    526.50  10255.73


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 7.670

    ENCROACHMENT STATIONS=     9726.7   10197.0  TYPE=      1  TARGET=      470.240
       NON-EFFECTIVE FLOW AREA REMOVED
     7.670      6.75   1274.75   1273.30   1274.75   1275.61       .86       .91       .07 100000.00
   17000.0        .0  17000.0        .0        .0    2284.1        .0    2734.1     467.6 100000.00
      1.82       .00      7.44       .00      .000      .025      .000      .000   1268.00   9726.74
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   .001950      500.      500.      500.         2        19         0       .00    470.24  10196.98


CCHV=     .200 CEHV=     .400
     NH CARD USED
    NO 7.765

3470 ENCROACHMENT STATIONS=     9722.3   10208.0  TYPE=      1  TARGET=      485.680
     7.765      5.80   1275.80   1273.80   1275.50   1276.46       .67       .81       .04 100000.00
   17000.0        .0  17000.0        .0        .0    2596.2        .0    2762.1     473.1 100000.00
      1.84       .00      6.55       .00      .000      .025      .000      .000   1270.00   9722.28
   .001372      500.      500.      500.         2        11         0       .00    485.68  10207.96


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 7.837

3470 ENCROACHMENT STATIONS=     9756.1   10249.7  TYPE=      1  TARGET=      493.620
     7.837      5.35   1276.35   1274.39   1276.14   1277.01       .66       .55       .00 100000.00
   17000.0        .0  17000.0        .0        .0    2612.0        .0    2784.9     477.4 100000.00
      1.85       .00      6.51       .00      .000      .027      .000      .000   1271.00   9756.11
   .001505      380.      380.      380.         2        11         0       .00    493.62  10249.73


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


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 7.883

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.94

3470 ENCROACHMENT STATIONS=     9837.5   10240.4  TYPE=      1  TARGET=      402.971
     7.883     10.88   1276.88   1270.87   1276.70   1277.24       .36       .17       .06 100000.00
   17000.0        .0  17000.0        .0        .0    3548.4        .0    2801.8     479.9 100000.00
      1.87       .00      4.79       .00      .000      .026      .000      .000   1266.00   9837.47
   .000399      240.      240.      240.         2        11         0       .00    402.97  10240.44


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*SECNO 7.955

3301 HV CHANGED MORE THAN HVINS

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .34

3470 ENCROACHMENT STATIONS=     9891.7   10177.6  TYPE=      1  TARGET=      285.869
```

7.955	5.52	1276.52	1275.77	1276.45	1278.32	1.80	.36	.72	100000.00
17000.0	.0	17000.0	.0	.0	1577.2	.0	2825.4	483.0	100000.00
1.88	.00	10.78	.00	.000	.025	.000	.000	1271.00	9891.69
.003548	227.	400.	500.	3	14	0	.00	285.87	10177.56

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 7.979

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.59

3470 ENCROACHMENT STATIONS= 9726.3 10222.9 TYPE= 1 TARGET= 496.650
INDIAN BEND ROAD
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BASE OF DROP STRUCTURE

7.979	7.51	1278.51	1274.39	1277.88	1278.84	.33	.08	.44	100000.00
17000.0	.0	17000.0	.0	.0	3687.7	.0	2832.6	484.1	100000.00
1.89	.00	4.61	.00	.000	.020	.000	.000	1271.00	9726.27
.000276	120.	120.	120.	3	14	0	.00	496.65	10222.92

= .300 CEHV= .500
NH CARD USED
*SECNO 7.988

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9518.8 10322.6 TYPE= 1 TARGET= 803.800

7.988	2.58	1284.58	1284.58	1284.07	1285.79	1.21	.04	.44	100000.00
17000.0	.0	17000.0	.0	.0	1923.8	.0	2835.8	484.9	100000.00
1.89	.00	8.84	.00	.000	.020	.000	.000	1282.00	9518.76
.004449	50.	50.	50.	0	22	0	.00	803.80	10322.56

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 7.992

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.43

3470 ENCROACHMENT STATIONS= 9408.0 10307.2 TYPE= 1 TARGET= 899.180
begin file 13ibw.dwg
INDIAN BEND ROAD
UPSTREAM EDGE OF DROP STRUCTURE

7.992	3.31	1285.31	1284.75	1284.35	1286.03	.72	.09	.15	100000.00
17000.0	.0	17000.0	.0	.0	2492.0	.0	2837.4	485.4	100000.00
1.89	.00	6.82	.00	.000	.020	.000	.000	1282.00	9408.03
.002188	20.	30.	41.	11	8	0	.00	899.18	10307.21

```
CCHV=     .200 CEHV=     .400
1490 NH CARD USED
 O 8.144

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.62


3470 ENCROACHMENT STATIONS=     9055.3   10086.0  TYPE=      1  TARGET=     1030.670
     8.144      4.49   1286.49   1285.01   1286.12   1286.81       .32       .70       .08 100000.00
   16000.0        .0   16000.0        .0        .0    3521.2        .0    2877.5     498.3 100000.00
      1.92       .00      4.54       .00       .000      .020      .000      .000   1282.00   9055.29
   .000735     787.      582.      252.         2        11         0       .00   1030.67  10085.96


1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 8.239

 DIVIDED FLOW


3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9399.3   10100.3  TYPE=      1  TARGET=      700.960
        NON-EFFECTIVE FLOW AREA REMOVED
     8.239      5.22   1287.22   1287.22   1287.16   1288.63      1.41       .96       .43 100000.00
   16000.0        .0   16000.0        .0        .0    1681.0        .0    2907.4     507.8 100000.00
      1.94       .00      9.52       .00       .000      .035      .000      .000   1282.00   9399.35
   .013386     533.      500.      465.         0        11         0       .00    624.40  10100.31


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 8.333

3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.62


 O ENCROACHMENT STATIONS=     9362.6   10101.8  TYPE=      1  TARGET=      739.170
     8.333      7.55   1290.55   1287.90   1290.11   1290.88       .34      2.04       .21 100000.00
   16000.0        .0   16000.0        .0        .0    3440.1        .0    2936.8     515.7 100000.00
      1.97       .00      4.65       .00       .000      .039      .000      .000   1283.00   9362.60
```

```
    .001943      500.      500.      485.        4         8         0       .00    739.17  10101.77


CCHV=     .200 CEHV=     .400
     NH CARD USED
    NO 8.428

 3265 DIVIDED FLOW

1
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST



 3470 ENCROACHMENT STATIONS=     9269.5   10287.1  TYPE=      1  TARGET=     1017.640
     8.428      7.66   1291.66   1289.67   1290.81   1291.99       .34      1.11       .00 100000.00
   16000.0        .0  16000.0        .0        .0    3441.8        .0    2976.3     525.4 100000.00
      2.00       .00      4.65       .00      .000      .038      .000      .000   1284.00   9269.50
   .002562      620.      500.      438.        4        15         0       .00    952.71  10287.14


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
    NO 8.523

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     9506.6   10457.6  TYPE=      1  TARGET=      951.040

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     8.523      6.03   1293.03   1291.30   1292.05   1293.43       .40      1.41       .02 100000.00
   16000.0        .0  16000.0        .0        .0    3165.0        .0    3014.2     536.0 100000.00
      2.03       .00      5.06       .00      .000      .038      .000      .000   1287.00   9506.56
   .003120      500.      500.      500.        4        11         0       .00    889.94  10457.60


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 8.656

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .53


 3  ENCROACHMENT STATIONS=     9286.8   10301.6  TYPE=      1  TARGET=     1014.840

    5 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1297.00 ELREA=    100000.00

       begin file 14ibw.dwg
    8.656      5.29   1295.29   1294.96   1294.67   1296.51      1.22      2.75       .33   1297.00
```

16000.0	.0	16000.0	.0	.0	1805.1	.0	3043.5	544.5	100000.00
2.04	.00	8.86	.00	.000	.039	.000	.000	1290.00	9744.30
.011287	520.	513.	480.	2	15	0	.00	557.30	10301.60

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 8.752

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 5.55

3470 ENCROACHMENT STATIONS= 9409.4 10050.6 TYPE= 1 TARGET= 641.159

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

8.752	5.92	1296.92	1293.76	1296.11	1297.20	.28	.51	.19	100000.00
6000.0	.0	16000.0	.0	.0	3737.5	.0	3074.0	551.1	100000.00
2.07	.00	4.28	.00	.000	.021	.000	.000	1291.00	9409.44
.000367	480.	480.	480.	3	11	0	.00	641.16	10050.60

1490 NH CARD USED
*SECNO 8.996

3470 ENCROACHMENT STATIONS= 9548.5 10102.2 TYPE= 1 TARGET= 553.630

8.996	6.34	1297.34	1293.95	1296.45	1297.66	.32	.45	.02	100000.00
16000.0	.0	16000.0	.0	.0	3511.1	.0	3181.2	568.7	100000.00
2.15	.00	4.56	.00	.000	.020	.000	.000	1291.00	9548.55
.000330	1288.	1288.	1288.	3	8	0	.00	553.63	10102.18

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.022

3470 ENCROACHMENT STATIONS= 9548.6 10162.2 TYPE= 1 TARGET= 613.550

9.022	6.48	1297.48	1293.76	1296.52	1297.73	.25	.05	.01	100000.00
16000.0	.0	16000.0	.0	.0	3972.8	.0	3196.1	571.1	100000.00
2.16	.00	4.03	.00	.000	.020	.000	.000	1291.00	9548.63
.000250	174.	174.	174.	2	14	0	.00	613.55	10162.18

CCHV= .300 CEHV= .500
1

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

1490 NH CARD USED
*SECNO 9.125

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9381.5 10320.0 TYPE= 1 TARGET= 938.550

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.125	8.35	1299.35	1299.35	1298.59	1300.41	1.06	.35	.40	100000.00
16000.0	.0	16000.0	.0	.0	1938.8	.0	3232.0	580.5	100000.00
2.18	.00	8.25	.00	.000	.020	.000	.000	1291.00	9381.45
.004733	417.	529.	440.	0	8	0	.00	938.55	10320.00

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 9.126

DIVIDED FLOW

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9440.1 10290.0 TYPE= 1 TARGET= 849.930

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.126	7.78	1299.78	1299.78	1298.92	1300.89	1.11	.05	.03	100000.00
16000.0	.0	16000.0	.0	.0	1893.7	.0	3232.4	580.7	100000.00
2.18	.00	8.45	.00	.000	.020	.000	.000	1292.00	9440.07
.004336	463.	10.	10.	0	10	0	.00	826.19	10290.00

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 9.128
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1

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

3470 ENCROACHMENT STATIONS= 9459.9 10300.0 TYPE= 1 TARGET= 840.060

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

SCOTTSDALE ROAD
DOWNSTREAM EDGE

9.128	10.01	1300.01	1300.01	1299.37	1301.17	1.16	.11	.03	100000.00
16000.0	.0	16000.0	.0	.0	1851.6	.0	3233.4	581.1	100000.00
2.18	.00	8.64	.00	.000	.020	.000	.000	1290.00	9459.94
.004867	126.	23.	103.	0	15	0	.00	840.06	10300.00

CCHV= .200 CEHV= .400
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	32.00	2.00	90.00	.00	1290.00	1290.00

*SECNO 9.150
6870 D.S. ENERGY OF 1301.17 IS HIGHER THAN COMPUTED ENERGY OF 1300.82

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.71

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
2036.15	1301.17	.33	15476.	530.	90.	90.	1293.00	1299.00	1090.

3470 ENCROACHMENT STATIONS= 9440.0 10285.0 TYPE= 1 TARGET= 845.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

SCOTTSDALE ROAD
UPSTREAM EDGE

9.150	10.56	1300.56	.00	1300.44	1301.17	.61	.00	.00	100000.00
16000.0	.0	16000.0	.0	.0	2555.1	.0	3238.5	583.1	100000.00
2.19	.00	6.26	.00	.000	.020	.000	.000	1290.00	9440.00
.001658	242.	100.	188.	2	0	8	.00	845.00	10285.00

1

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

CCHV= .200 CEHV= .400

1490 NH CARD USED
*SECNO 9.243

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9704.8 10370.0 TYPE= 1 TARGET= 665.160

9.243	7.54	1301.54	1296.69	1301.01	1301.63	.09	.36	.10	100000.00
9000.0	.0	9000.0	.0	.0	3745.4	.0	3274.6	591.7	100000.00
2.25	.00	2.40	.00	.000	.032	.000	.000	1294.00	9704.84
.000276	499.	499.	499.	2	11	0	.00	665.16	10370.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.283

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .38

3470 ENCROACHMENT STATIONS= 9380.0 10060.0 TYPE= 1 TARGET= 680.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.283	7.62	1301.62	1300.14	1301.09	1301.88	.26	.18	.07	100000.00
9000.0	.0	9000.0	.0	.0	2207.0	.0	3296.2	596.6	100000.00
2.27	.00	4.08	.00	.000	.034	.000	.000	1294.00	9380.00
.001874	325.	316.	314.	2	14	0	.00	680.00	10060.00

= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.375

3470 ENCROACHMENT STATIONS= 9470.0 10180.0 TYPE= 1 TARGET= 710.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.375	2.54	1302.54	1301.90	1302.20	1302.99	.45	1.04	.08	100000.00
9000.0	.0	9000.0	.0	.0	1670.1	.0	3314.0	603.0	100000.00
2.29	.00	5.39	.00	.000	.030	.000	.000	1300.00	9470.00
.003808	298.	400.	400.	2	11	0	.00	710.00	10180.00

1

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

= .200 CEHV= .400
NH CARD USED
NO 9.470

3470 ENCROACHMENT STATIONS= 9550.0 10300.0 TYPE= 1 TARGET= 750.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.470	4.45	1304.45	1303.99	1304.40	1304.97	.51	1.95	.03	100000.00
9000.0	.0	9000.0	.0	.0	1564.7	.0	3330.5	610.4	100000.00
2.31	.00	5.75	.00	.000	.030	.000	.000	1300.00	9550.00
.005078	465.	445.	387.	2	17	0	.00	750.00	10300.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.564

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9475.0 10280.0 TYPE= 1 TARGET= 805.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.564	4.49	1306.49	1304.94	1306.40	1306.75	.26	1.73	.05	100000.00
9000.0	.0	9000.0	.0	.0	2204.6	.0	3351.4	618.6	100000.00
2.34	.00	4.08	.00	.000	.039	.000	.000	1302.00	9493.75
.002647	494.	484.	472.	2	14	0	.00	723.12	10280.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.578

ENCROACHMENT STATIONS= 9700.0 10540.0 TYPE= 1 TARGET= 840.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.578	5.64	1307.64	1305.85	1307.47	1307.81	.18	1.05	.02	100000.00
9000.0	.0	9000.0	.0	.0	2670.8	.0	3379.4	627.6	100000.00
2.38	.00	3.37	.00	.000	.039	.000	.000	1302.00	9700.00
.001704	500.	500.	500.	3	12	0	.00	840.00	10540.00

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 9.659

3470 ENCROACHMENT STATIONS= 9600.0 10460.0 TYPE= 1 TARGET= 860.000

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

9.659	6.30	1308.30	1306.60	1308.15	1308.47	.18	.66	.00	100000.00
9000.0	.0	9000.0	.0	.0	2651.8	.0	3402.4	635.0	100000.00
2.41	.00	3.39	.00	.000	.039	.000	.000	1302.00	9600.00

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   .001812      428.      377.      354.         2        14         0       .00    860.00  10460.00


CCHV=     .200 CEHV=     .400
     NH CARD USED
     NO 9.754

3470 ENCROACHMENT STATIONS=     9720.0   10430.0  TYPE=      1  TARGET=      710.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        begin file 16ibw.dwg
    9.754      5.25   1309.25   1307.85   1309.13   1309.52       .26      1.01       .03 100000.00
   9000.0        .0    9000.0        .0        .0    2181.6        .0    3428.9     643.5 100000.00
     2.45       .00      4.13       .00      .000       .038      .000      .000   1304.00   9720.00
   .002505      591.      476.      383.         2        14         0       .00    710.00  10430.00


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 9.849

3470 ENCROACHMENT STATIONS=     9825.0   10450.0  TYPE=      1  TARGET=      625.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    9.849      6.22   1310.22   1308.55   1309.99   1310.47       .25       .95       .00 100000.00
   9000.0        .0    9000.0        .0        .0    2224.1        .0    3450.5     650.1 100000.00
     2.48       .00      4.05       .00      .000       .038      .000      .000   1304.00   9825.00
   001999      463.      427.      403.         2        10         0       .00    625.00  10450.00


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


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 9.943

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9750.0   10218.8  TYPE=      1  TARGET=      468.800

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    9.943      4.11   1312.11   1312.11   1312.24   1313.27      1.16      2.06       .36 100000.00
   9000.0        .0    9000.0        .0        .0    1043.0        .0    3468.8     656.2 100000.00
     2.49       .00      8.63       .00      .000       .035      .000      .000   1308.00   9750.00
  .013916      499.      489.      482.         0        23         0       .00    468.80  10218.80
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CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 10.040

 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.32


3470 ENCROACHMENT STATIONS=     9610.0   10303.6  TYPE=      1  TARGET=      693.600

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    10.040      5.36   1315.36   1314.07   1314.74   1315.64       .28      2.19       .18 100000.00
    9000.0        .0    9000.0       .0        .0    2117.3        .0    3484.6     662.0 100000.00
      2.52       .00      4.25       .00      .000      .037      .000      .000   1310.00   9610.00
   .002582      431.      435.      446.         5         6         0       .00    693.60  10303.60


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 10.130
1
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3470 ENCROACHMENT STATIONS=     9850.0   10290.0  TYPE=      1  TARGET=      440.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    10.130      4.68   1316.68   1315.69   1316.37   1317.28       .60      1.51       .13 100000.00
    9000.0        .0    9000.0       .0        .0    1449.2        .0    3505.0     668.5 100000.00
      2.54       .00      6.21       .00      .000      .032      .000      .000   1312.00   9850.00
   .003599      500.      500.      500.         4        19         0       .00    440.00  10290.00


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 10.230

3470 ENCROACHMENT STATIONS=     9820.0   10180.0  TYPE=      1  TARGET=      360.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    10.230      4.17   1318.17   1317.30   1318.09   1318.94       .78      1.59       .07 100000.00
    9000.0        .0    9000.0       .0        .0    1273.5        .0    3520.7     673.1 100000.00
      2.56       .00      7.07       .00      .000      .026      .000      .000   1314.00   9820.00
   .002842      500.      500.      500.         2        19         0       .00    360.00  10180.00


CCHV=     .200 CEHV=     .400
```

1490 NH CARD USED
*SECNO 10.320

3470 ENCROACHMENT STATIONS= 9699.5 10129.0 TYPE= 1 TARGET= 429.460

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

begin file 17ibw.dwg

10.320	5.65	1319.65	1317.69	1319.31	1320.02	.36	.99	.08	100000.00
9000.0	.0	9000.0	.0	.0	1863.7	.0	3538.7	677.6	100000.00
2.59	.00	4.83	.00	.000	.031	.000	.000	1314.00	9699.54
.001458	500.	500.	500.	2	15	0	.00	429.46	10129.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 10.380

3470 ENCROACHMENT STATIONS= 9727.3 10325.4 TYPE= 1 TARGET= 598.120

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

10.380	6.14	1320.14	1318.26	1319.66	1320.40	.26	.36	.02	100000.00
9000.0	.0	9000.0	.0	.0	2208.0	.0	3553.3	681.3	100000.00
2.61	.00	4.08	.00	.000	.027	.000	.000	1314.00	9727.28
.000951	374.	312.	191.	2	19	0	.00	598.12	10325.40

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.400

3470 ENCROACHMENT STATIONS= 9702.0 10340.5 TYPE= 1 TARGET= 638.530

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

INVERGORDON ROAD
DOWNSTREAM EDGE

10.400	4.21	1320.21	1318.59	1319.92	1320.47	.26	.07	.00	100000.00
9000.0	.0	9000.0	.0	.0	2191.6	.0	3557.8	682.6	100000.00
2.62	.00	4.11	.00	.000	.020	.000	.000	1316.00	9701.97
.000596	200.	90.	10.	2	18	0	.00	638.53	10340.50

CCHV= .200 CEHV= .400
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD

1.25	1.50	2.60	.00	48.42	3.75	126.86	.00	1313.39	1313.08

*SECNO 10.410
PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1437.44	1320.52	.05	8478.	488.	127.	127.	1316.23	1317.70	853.

1

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

3470 ENCROACHMENT STATIONS= 9723.5 10366.6 TYPE= 1 TARGET= 643.130

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

INVERGORDON ROAD
UPSTREAM EDGE

10.410	12.33	1320.33	.00	1320.31	1320.55	.22	.08	.00	100000.00
9000.0	.0	9000.0	.0	.0	2379.6	.0	3560.8	683.5	100000.00
2.62	.00	3.78	.00	.000	.020	.000	.000	1308.00	9723.47
.000463	58.	58.	58.	2	0	8	.00	643.13	10366.60

FLOW DISTRIBUTION FOR SECNO= 10.41 CWSEL= 1320.33

STA= 9723. 10367.
PER Q= 100.0
AREA= 2379.6
VEL= 3.8
DEPTH= 3.7

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.510

3470 ENCROACHMENT STATIONS= 9792.8 10263.9 TYPE= 1 TARGET= 471.080

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

10.510	4.60	1320.60	1318.54	1320.58	1320.91	.31	.33	.03	100000.00
9000.0	.0	9000.0	.0	.0	2028.0	.0	3588.3	690.4	100000.00
2.66	.00	4.44	.00	.000	.025	.000	.000	1316.00	9792.82
.000808	341.	542.	706.	0	21	0	.00	471.08	10263.90

V= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.610

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
10.610	3.32	1321.32	1321.32	1321.38	1322.53	1.21	.90	.36	100000.00
9000.0	.0	9000.0	.0	.0	1019.1	.0	3604.2	695.1	100000.00
2.67	.00	8.83	.00	.000	.030	.000	.000	1318.00	9724.62
.010310	455.	455.	455.	0	19	0	.00	430.15	10154.77

3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9724.6 10154.8 TYPE= 1 TARGET= 430.149

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.700

HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.74

3470 ENCROACHMENT STATIONS= 9794.5 10335.4 TYPE= 1 TARGET= 540.910

10.700	2.57	1324.57	1324.04	1324.22	1325.22	.65	2.58	.11	100000.00
9000.0	.0	9000.0	.0	.0	1392.3	.0	3617.2	700.3	100000.00
2.69	.00	6.46	.00	.000	.025	.000	.000	1322.00	9794.49
.003395	460.	470.	478.	3	14	0	.00	540.91	10335.40

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.800

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.04

3470 ENCROACHMENT STATIONS= 9826.8 10370.9 TYPE= 1 TARGET= 544.061

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

10.800	5.83	1325.83	1323.00	1325.43	1326.01	.19	.71	.09	100000.00
9000.0	.0	9000.0	.0	.0	2597.0	.0	3639.2	706.3	100000.00
2.73	.00	3.47	.00	.000	.034	.000	.000	1320.00	9826.80
.000815	480.	480.	480.	3	11	0	.00	544.06	10370.86

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.890

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.46

3470 ENCROACHMENT STATIONS= 9727.3 10201.6 TYPE= 1 TARGET= 474.279

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

10.890	6.10	1326.10	1322.67	1325.69	1326.28	.18	.27	.00	100000.00
9000.0	.0	9000.0	.0	.0	2640.6	.0	3669.2	712.2	100000.00
2.77	.00	3.41	.00	.000	.026	.000	.000	1320.00	9727.32
.000381	500.	500.	500.	2	14	0	.00	474.28	10201.60

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 10.990

HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9636.1 10230.6 TYPE= 1 TARGET= 594.510

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

begin file 18ibw.dwg

10.990	3.25	1327.25	1327.25	1327.26	1328.24	1.00	.55	.33	100000.00
9000.0	.0	9000.0	.0	.0	1122.6	.0	3690.0	717.9	100000.00
2.79	.00	8.02	.00	.000	.036	.000	.000	1324.00	9648.27
.015518	476.	480.	485.	0	11	0	.00	572.94	10221.21

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.080

3301 HV CHANGED MORE THAN HVINS

1

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

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 3.00

3470 ENCROACHMENT STATIONS= 9680.1 10288.4 TYPE= 1 TARGET= 608.319

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

11.080	5.98	1329.98	1328.06	1329.46	1330.23	.26	1.84	.15	100000.00
9000.0	.0	9000.0	.0	.0	2206.6	.0	3708.1	724.4	100000.00
2.82	.00	4.08	.00	.000	.036	.000	.000	1324.00	9680.07
.001719	460.	476.	488.	5	11	0	.00	608.32	10288.39

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.150

3470 ENCROACHMENT STATIONS= 9694.4 10363.0 TYPE= 1 TARGET= 668.630

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

DOUBLETREE ROAD
DOWNSTREAM EDGE

11.150	10.68	1330.68	1328.89	1329.91	1330.96	.28	.72	.01	100000.00
9000.0	.0	9000.0	.0	.0	2135.9	.0	3728.2	730.3	100000.00
2.84	.00	4.21	.00	.000	.033	.000	.000	1320.00	9694.37
001853	334.	402.	440.	3	14	0	.00	668.63	10363.00

CCHV= .200 CEHV= .400
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	48.42	3.75	133.12	.00	1324.25	1324.07

*SECNO 11.170
PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

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

FRPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.37.15	1331.02	.06	7991.	1044.	133.	133.	1327.23	1329.37	735.

3470 ENCROACHMENT STATIONS= 9691.5 10372.1 TYPE= 1 TARGET= 680.609

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

DOUBLETREE ROAD
UPSTREAM EDGE

11.170	5.83	1331.83	.00	1331.77	1332.11	.29	1.16	.00	100000.00
9000.0	.0	9000.0	.0	.0	2084.6	.0	3732.9	731.8	100000.00
2.85	.00	4.32	.00	.000	.036	.000	.000	1326.00	9691.49
.002447	98.	98.	98.	2	0	7	.00	680.61	10372.10

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 11.270

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .66

3470 ENCROACHMENT STATIONS= 9740.1 10301.4 TYPE= 1 TARGET= 561.280

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

11.270	3.41	1333.41	1332.72	1332.73	1333.97	.56	1.75	.11	100000.00
9000.0	.0	9000.0	.0	.0	1492.7	.0	3753.2	738.8	100000.00
2.87	.00	6.03	.00	.000	.035	.000	.000	1330.00	9740.12
.005600	546.	493.	442.	2	14	0	.00	561.28	10301.40

= .200 CEHV= .400
NH CARD USED
*SECNO 11.360

3470 ENCROACHMENT STATIONS= 9762.8 10344.0 TYPE= 1 TARGET= 581.210

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

11.360	5.56	1335.56	1334.16	1335.23	1335.95	.39	1.94	.03	100000.00
9000.0	.0	9000.0	.0	.0	1791.9	.0	3771.7	745.2	100000.00
2.90	.00	5.02	.00	.000	.034	.000	.000	1330.00	9762.83
.002953	490.	490.	490.	2	11	0	.00	581.21	10344.04

CCHV= .200 CEHV= .400
1[illegible] NH CARD USED
[illegible]O 11.460

3470 ENCROACHMENT STATIONS= 9767.4 10346.5 TYPE= 1 TARGET= 579.100

11.460	2.95	1336.95	1336.24	1336.48	1337.48	.53	1.47	.06	100000.00
9000.0	.0	9000.0	.0	.0	1540.5	.0	3789.2	751.4	100000.00

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      2.92       .00      5.84       .00      .000      .029      .000      .000   1334.00   9767.40
    .003493      460.      460.      460.         3        18         0       .00    579.10  10346.50


         .200 CEHV=      .400
     NH CARD USED
 *SECNO 11.550

 3470 ENCROACHMENT STATIONS=     9777.4   10345.5  TYPE=       1  TARGET=      568.021

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        begin file 19ibw.dwg
    11.550      4.56   1338.56   1336.96   1338.41   1338.88       .32      1.35       .04 100000.00
    9000.0        .0    9000.0        .0        .0    1994.8        .0    3809.5     757.9 100000.00
      2.95       .00      4.51       .00      .000      .035      .000      .000   1334.00   9777.43
    .002170      422.      499.      631.         2         5         0       .00    568.02  10345.45


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 11.650

 3470 ENCROACHMENT STATIONS=     9688.4   10184.1  TYPE=       1  TARGET=      495.630

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

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


    11.650      3.82   1339.82   1338.84   1339.52   1340.34       .52      1.38       .08 100000.00
    9000.0        .0    9000.0        .0        .0    1554.3        .0    3829.1     763.8 100000.00
      2.98       .00      5.79       .00      .000      .035      .000      .000   1336.00   9688.44
    .003982      425.      480.      562.         2        14         0       .00    495.63  10184.07


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 11.740

 3301 HV CHANGED MORE THAN HVINS


 3470 ENCROACHMENT STATIONS=     9741.3   10116.9  TYPE=       1  TARGET=      375.570

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    11.740      3.89   1341.89   1341.54   1341.57   1342.92      1.03      2.38       .20 100000.00
    '000.0        .0    9000.0        .0        .0    1105.4        .0    3844.4     768.8 100000.00
      2.99       .00      8.14       .00      .000      .028      .000      .000   1338.00   9741.33
    .005749      468.      502.      530.         2        11         0       .00    375.57  10116.90
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 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 11.840

     ENCROACHMENT STATIONS=     9909.0   10182.3  TYPE=      1  TARGET=      273.260

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    11.840      4.10   1344.10   1343.77   1343.89   1345.43      1.33      2.38       .12 100000.00
    9000.0       .0    9000.0       .0        .0     973.0        .0    3855.4     772.3 100000.00
      3.01      .00       9.25      .00      .000      .025      .000      .000   1340.00   9909.04
    .004638    477.      463.      439.         1         8         0       .00    273.26  10182.30


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 11.930

 3301 HV CHANGED MORE THAN HVINS

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


     ENCROACHMENT STATIONS=     9891.0   10223.7  TYPE=      1  TARGET=      332.780

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    11.930      6.45   1346.45   1345.33   1345.97   1347.18       .73      1.63       .12 100000.00
    9000.0       .0    9000.0       .0        .0    1310.1        .0    3867.6     775.5 100000.00
      3.03      .00       6.87      .00      .000      .028      .000      .000   1340.00   9890.96
    .002759    460.      464.      468.         2        11         0       .00    332.78  10223.74


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 12.030

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.53


 3470 ENCROACHMENT STATIONS=     9947.1   10408.1  TYPE=      1  TARGET=      460.960

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    12.030      5.43   1347.43   1344.72   1346.91   1347.67       .24       .39       .10 100000.00
    9000.0       .0    9000.0       .0        .0    2293.8        .0    3885.8     779.5 100000.00
      3.06      .00       3.92      .00      .000      .023      .000      .000   1342.00   9947.14
     00431    468.      441.      417.         2        18         0       .00    460.96  10408.10


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
```

*SECNO 12.120

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .43

J ENCROACHMENT STATIONS= 9957.3 10334.0 TYPE= 1 TARGET= 376.740

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.120	5.55	1347.55	1346.42	1347.05	1348.19	.64	.36	.16	100000.00
9000.0	.0	9000.0	.0	.0	1399.9	.0	3904.2	783.7	100000.00
3.08	.00	6.43	.00	.000	.026	.000	.000	1342.00	9957.26
.002305	452.	434.	321.	2	15	0	.00	376.74	10334.00

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.220

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

3470 ENCROACHMENT STATIONS= 9863.5 10223.1 TYPE= 1 TARGET= 359.510

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.220	5.16	1349.16	1348.64	1348.64	1350.12	.96	1.80	.13	100000.00
9000.0	.0	9000.0	.0	.0	1146.3	.0	3919.8	788.2	100000.00
3.10	.00	7.85	.00	.000	.030	.000	.000	1344.00	9863.55
.005449	505.	532.	544.	2	15	0	.00	359.51	10223.06

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.310

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.44

3470 ENCROACHMENT STATIONS= 9880.8 10124.6 TYPE= 1 TARGET= 243.820

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.310	6.57	1350.57	1347.82	1350.06	1351.12	.55	.92	.08	100000.00
9000.0	.0	9000.0	.0	.0	1518.7	.0	3935.0	791.6	100000.00
3.12	.00	5.93	.00	.000	.025	.000	.000	1344.00	9880.80
.000916	491.	497.	487.	2	15	0	.00	243.82	10124.62

CCHV= .200 CEHV= .400

1490 NH CARD USED
*SECNO 12.410

3[illegible] ENCROACHMENT STATIONS= 9509.3 9753.7 TYPE= 1 TARGET= 244.351

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.410	5.05	1351.05	1349.47	1350.64	1351.87	.83	.64	.11	100000.00
9000.0	.0	9000.0	.0	.0	1233.0	.0	3951.1	794.5	100000.00
3.14	.00	7.30	.00	.000	.025	.000	.000	1346.00	9509.31
.001839	458.	509.	545.	3	11	0	.00	244.35	9753.66

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.500

3470 ENCROACHMENT STATIONS= 9941.5 10177.0 TYPE= 1 TARGET= 235.490

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.500	5.93	1351.93	1349.89	1351.50	1352.69	.76	.80	.01	100000.00
9000.0	.0	9000.0	.0	.0	1290.3	.0	3965.3	797.2	100000.00
3.16	.00	6.98	.00	.000	.025	.000	.000	1346.00	9941.51
.001444	484.	493.	497.	2	15	0	.00	233.47	10174.98

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 12.540

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9946.2 10142.5 TYPE= 1 TARGET= 196.319

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

begin file 20ibw.dwg
SHEA BOULEVARD
DOWNSTREAM EDGE

12.540	4.01	1352.01	1352.01	1351.81	1354.04	2.03	.50	.63	100000.00
9000.0	.0	9000.0	.0	.0	788.1	.0	3970.6	798.3	100000.00
3.16	.00	11.42	.00	.000	.020	.000	.000	1348.00	9946.15
.003906	187.	222.	271.	0	14	0	.00	196.32	10142.47

CCHV= .300 CEHV= .500

1490 NH CARD USED

1

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

SPECIAL BRIDGE

5227 DOWNSTREAM ELEV IS 1351.56 , NOT 1352.01 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.50	2.60	.00	179.00	8.00	2092.00	5.00	1348.00	1348.00

*SECNO 12.560

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.61

CLASS B LOW FLOW

3420 BRIDGE W.S.= 1352.23 BRIDGE VELOCITY= 11.08 CALCULATED CHANNEL AREA= 812.

RS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1354.14	.00	0.	9000.	2092.	2542.	1359.20	1361.33	0.

3470 ENCROACHMENT STATIONS= 9941.2 10156.7 TYPE= 1 TARGET= 215.550

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

SHEA BOULEVARD
UPSTREAM EDGE

12.560	5.07	1353.07	.00	1353.07	1354.14	1.07	.10	.00	100000.00
9000.0	.0	9000.0	.0	.0	1086.5	.0	3972.2	798.6	100000.00
3.17	.00	8.28	.00	.000	.020	.000	.000	1348.00	9941.17
.001511	74.	74.	74.	0	0	0	.00	215.55	10156.72

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.600

3301 HV CHANGED MORE THAN HVINS

MINIMUM SPECIFIC ENERGY
CRITICAL DEPTH ASSUMED

1

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

3470 ENCROACHMENT STATIONS= 9897.1 10078.9 TYPE= 1 TARGET= 181.819

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.600	4.32	1356.32	1356.32	1355.70	1358.44	2.12	.54	.42	100000.00
9000.0	.0	9000.0	.0	.0	769.7	.0	3976.5	799.5	100000.00
3.17	.00	11.69	.00	.000	.025	.000	.000	1352.00	9897.07
.005974	228.	201.	63.	0	11	0	.00	181.82	10078.89

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.690

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.16

3470 ENCROACHMENT STATIONS= 9925.2 10220.4 TYPE= 1 TARGET= 295.170

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.690	5.37	1359.37	1357.43	1358.45	1359.95	.58	1.20	.31	100000.00
9000.0	.0	9000.0	.0	.0	1472.7	.0	3989.4	802.3	100000.00
3.19	.00	6.11	.00	.000	.025	.000	.000	1354.00	9925.24
.001282	500.	500.	420.	2	15	0	.00	295.17	10220.41

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 12.780

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .63

3470 ENCROACHMENT STATIONS= 9834.8 10105.3 TYPE= 1 TARGET= 270.489

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

12.780	4.07	1360.07	1359.25	1359.42	1361.11	1.04	.98	.19	100000.00
9000.0	.0	9000.0	.0	.0	1098.4	.0	4004.3	805.6	100000.00
3.21	.00	8.19	.00	.000	.026	.000	.000	1356.00	9834.82
.003278	490.	505.	518.	3	14	0	.00	270.49	10105.31

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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV

```
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


     .200 CEHV=     .400
   0 NH CARD USED
 *SECNO 12.880

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.43


 3470 ENCROACHMENT STATIONS=     9860.8   10209.4  TYPE=      1  TARGET=      348.540

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    12.880      5.70   1361.70   1359.62   1361.24   1362.15       .45       .92       .12 100000.00
    9000.0        .0    9000.0        .0        .0    1677.0        .0    4017.4     808.5 100000.00
      3.23       .00      5.37       .00      .000      .031      .000      .000   1356.00   9860.85
   .001606      412.      412.      412.         2        11         0       .00    348.54  10209.39


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 12.970

 3301 HV CHANGED MORE THAN HVINS

   MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=     9809.3   10169.0  TYPE=      1  TARGET=      359.700

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    12.970      3.34   1362.84   1362.84   1362.56   1364.20      1.36      1.64       .36 100000.00
    9000.0        .0    9000.0        .0        .0     961.8        .0    4032.2     812.5 100000.00
      3.25       .00      9.36       .00      .000      .032      .000      .000   1359.50   9809.27
   .010986      509.      489.      463.         0        14         0       .00    359.70  10168.97


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 13.070
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 3301 HV CHANGED MORE THAN HVINS
```

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.25

3' ENCROACHMENT STATIONS= 9795.4 10164.3 TYPE= 1 TARGET= 368.940

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

13.070	7.71	1365.71	1363.90	1365.11	1366.18	.48	1.81	.18	100000.00
9000.0	.0	9000.0	.0	.0	1624.1	.0	4045.1	816.1	100000.00
3.27	.00	5.54	.00	.000	.033	.000	.000	1358.00	9795.38
.002168	435.	435.	435.	4	17	0	.00	368.94	10164.32

1490 NH CARD USED
*SECNO 13.160

3470 ENCROACHMENT STATIONS= 9656.2 10068.5 TYPE= 1 TARGET= 412.290

13.160	6.66	1366.66	1365.95	1366.14	1367.37	.71	1.09	.09	100000.00
9000.0	.0	9000.0	.0	.0	1332.6	.0	4060.3	820.1	100000.00
3.29	.00	6.75	.00	.000	.025	.000	.000	1360.00	9656.19
.002755	353.	448.	511.	3	14	0	.00	412.29	10068.48

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 13.250

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.44

ENCROACHMENT STATIONS= 9610.1 10030.2 TYPE= 1 TARGET= 420.130

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

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13.250	7.95	1367.95	1365.79	1367.40	1368.31	.36	.83	.11	100000.00
9000.0	.0	9000.0	.0	.0	1874.4	.0	4076.9	824.4	100000.00
3.31	.00	4.80	.00	.000	.030	.000	.000	1360.00	9610.09
.001332	601.	450.	375.	2	12	0	.00	420.13	10030.22

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 13.380

HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9936.2 10066.4 TYPE= 1 TARGET= 130.170

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

TATUM BOULEVARD (48TH STREET)
DOWNSTREAM EDGE

3.380	6.17	1368.17	1367.28	1367.63	1370.12	1.95	1.02	.79	100000.00
9000.0	.0	9000.0	.0	.0	803.5	.0	4095.3	828.2	100000.00
3.33	.00	11.20	.00	.000	.020	.000	.000	1362.00	9936.24
.002264	853.	598.	349.	3	14	0	.00	130.17	10066.41

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	.90	1.50	2.60	.00	155.00	5.00	1200.00	.00	1362.00	1362.00

*SECNO 13.400
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1367.98 BRIDGE VELOCITY= 10.04 CALCULATED CHANNEL AREA= 897.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1369.48	1370.65	.39	0.	9000.	1200.	1200.	1370.00	1372.00	0.

ENCROACHMENT STATIONS= 9971.1 10089.3 TYPE= 1 TARGET= 118.229

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

TATUM BOULEVARD
UPSTREAM EDGE

13.400	6.56	1368.56	.00	1367.69	1370.65	2.09	.53	.00	100000.00
9000.0	.0	9000.0	.0	.0	776.0	.0	4097.3	828.5	100000.00
3.33	.00	11.60	.00	.000	.020	.000	.000	1362.00	9971.07
.002281	113.	113.	113.	0	0	0	.00	118.23	10089.30

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

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 13.450
7[illegible] MINIMUM SPECIFIC ENERGY
CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9923.2 10087.5 TYPE= 1 TARGET= 164.300

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

13.450	5.51	1369.51	1369.51	1369.35	1371.81	2.29	.95	.10	100000.00
9000.0	.0	9000.0	.0	.0	740.6	.0	4101.7	829.3	100000.00
3.34	.00	12.15	.00	.000	.028	.000	.000	1364.00	9923.23
)07376	223.	252.	282.	0	15	0	.00	164.30	10087.53

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.540

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.09

3470 ENCROACHMENT STATIONS= 9843.1 10180.6 TYPE= 1 TARGET= 337.490

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

13.540	9.09	1373.09	1371.29	1372.49	1373.63	.54	1.47	.35	100000.00
9000.0	.0	9000.0	.0	.0	1525.0	.0	4114.1	832.1	100000.00
3.36	.00	5.90	.00	.000	.028	.000	.000	1364.00	9843.10
.001683	470.	477.	486.	2	14	0	.00	337.49	10180.59

CCHV= .200 CEHV= .400
1490 NH CARD USED
)O 13.640

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

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

3470 ENCROACHMENT STATIONS= 9980.0 10327.6 TYPE= 1 TARGET= 347.600

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

13.640	6.07	1374.07	1373.00	1373.74	1374.79	.72	1.09	.07	100000.00
9000.0	.0	9000.0	.0	.0	1319.9	.0	4128.5	835.5	100000.00
3.38	.00	6.82	.00	.000	.033	.000	.000	1368.00	9980.00
.004000	440.	440.	440.	3	11	0	.00	347.60	10327.60

CCHV= .200 CEHV= .400
NH CARD USED
*SECNO 13.730

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.04

3470 ENCROACHMENT STATIONS= 9780.9 10150.1 TYPE= 1 TARGET= 369.150

3[illegible] OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

13.730	7.28	1375.28	1372.36	1374.83	1375.58	.30	.71	.08	100000.00
9000.0	.0	9000.0	.0	.0	2044.9	.0	4144.2	838.9	100000.00
3.40	.00	4.40	.00	.000	.032	.000	.000	1368.00	9780.92
.000964	384.	408.	429.	2	19	0	.00	369.15	10150.07

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.830

3301 HV CHANGED MORE THAN HVINS

7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9943.3 10182.3 TYPE= 1 TARGET= 238.970

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

13.830	7.46	1375.46	1375.46	1375.32	1377.22	1.76	.96	.58	100000.00
9000.0	.0	9000.0	.0	.0	845.4	.0	4159.5	842.1	100000.00
3.41	.00	10.65	.00	.000	.028	.000	.000	1368.00	9943.33
.007555	488.	459.	451.	0	5	0	.00	238.97	10182.30

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

1490 NH CARD USED
*SECNO 13.880

3301 HV CHANGED MORE THAN HVINS

3470 ENCROACHMENT STATIONS= 9871.4 10152.2 TYPE= 1 TARGET= 280.780

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1378.00 ELREA= 100000.00

13.880	7.57	1377.57	1376.55	1376.80	1378.64	1.07	1.28	.14	1378.00
9000.0	.0	9000.0	.0	.0	1084.6	.0	4164.7	843.4	100000.00
3.42	.00	8.30	.00	.000	.030	.000	.000	1370.00	9902.58
.004052	289.	237.	129.	3	12	0	.00	249.61	10152.20

[illegible]CHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 13.920

3301 HV CHANGED MORE THAN HVINS

3~ WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.84

3470 ENCROACHMENT STATIONS= 9859.7 10330.2 TYPE= 1 TARGET= 470.510

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

13.920	8.93	1378.93	1377.04	1378.12	1379.26	.33	.47	.15	100000.00
9000.0	.0	9000.0	.0	.0	1958.9	.0	4172.9	845.4	100000.00
3.44	.00	4.59	.00	.000	.029	.000	.000	1370.00	9859.69
.001201	190.	234.	346.	2	10	0	.00	470.51	10330.20

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 14.020

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .62

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

3470 ENCROACHMENT STATIONS= 9836.8 10341.9 TYPE= 1 TARGET= 505.070
ELENCL= 1385.00 ELENCR= 1385.00

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1385.00 ELREA= 1385.00

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14.020	7.64	1379.64	1378.94	1378.88	1380.24	.61	.87	.11	1385.00
9000.0	.0	9000.0	.0	.0	1440.3	.0	4191.4	850.7	1385.00
3.46	.00	6.25	.00	.000	.027	.000	.000	1372.00	9836.83
.003135	478.	475.	465.	2	14	0	.00	505.07	10341.90

1490 NH CARD USED
*SECNO 14.060

3470 ENCROACHMENT STATIONS= 9976.2 10309.8 TYPE= 1 TARGET= 333.590

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

14.060	6.30	1380.30	1379.27	1380.57	1381.07	.78	.76	.07	100000.00
9000.0	.0	9000.0	.0	.0	1273.7	.0	4200.0	853.3	100000.00
3.47	.00	7.07	.00	.000	.025	.000	.000	1374.00	9976.21
.02428	290.	277.	242.	2	14	0	.00	333.59	10309.80

CCHV= .200 CEHV= .400
1490 NH CARD USED

*SECNO 14.110

3470 ENCROACHMENT STATIONS= 9788.4 10220.6 TYPE= 1 TARGET= 432.220

OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

14.110	7.65	1381.65	1379.05	1381.09	1382.01	.36	.86	.08	100000.00
9000.0	.0	9000.0	.0	.0	1869.1	.0	4218.1	857.7	100000.00
3.50	.00	4.82	.00	.000	.029	.000	.000	1374.00	9788.38
.001273	500.	500.	500.	2	11	0	.00	432.22	10220.60

CCHV= .200 CEHV= .400
1490 NH CARD USED
1
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*SECNO 14.210

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .61

ENCROACHMENT STATIONS= 9926.4 10205.6 TYPE= 1 TARGET= 279.180

14.210	6.33	1382.33	1380.96	1381.88	1383.11	.79	.93	.17	100000.00
9000.0	.0	9000.0	.0	.0	1265.7	.0	4235.1	861.6	100000.00
3.51	.00	7.11	.00	.000	.033	.000	.000	1376.00	9926.42
.003469	472.	473.	475.	2	14	0	.00	279.18	10205.60

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 14.300

3265 DIVIDED FLOW

3470 ENCROACHMENT STATIONS= 9903.2 10201.9 TYPE= 1 TARGET= 298.730

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

14.300	7.82	1383.82	1381.87	1383.03	1384.51	.68	1.36	.03	100000.00
9000.0	.0	9000.0	.0	.0	1355.4	.0	4249.1	864.5	100000.00
3.53	.00	6.64	.00	.000	.033	.000	.000	1376.00	9903.17
.002504	460.	465.	473.	2	11	0	.00	267.77	10201.90

1490 NH CARD USED
*SECNO 14.340

ENCROACHMENT STATIONS= 9759.6 10028.5 TYPE= 1 TARGET= 268.880

14.340	8.10	1384.10	1382.60	1383.31	1384.88	.78	.33	.05	100000.00
9000.0	.0	9000.0	.0	.0	1266.5	.0	4252.9	865.3	100000.00
3.54	.00	7.11	.00	.000	.030	.000	.000	1376.00	9759.62

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    .002718      165.      126.      180.         2        15         0       .00    268.88  10028.50


CC   =     .300 CEHV=     .500
      NH CARD USED
      NO 14.390
1
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3470 ENCROACHMENT STATIONS=     9926.7   10213.3  TYPE=       1  TARGET=      286.569

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

    14.390      6.99   1385.00   1382.76   1384.38   1385.54       .54       .58       .07 100000.00
    9000.0        .0    9000.0        .0        .0    1531.9        .0    4262.0     867.1 100000.00
      3.55       .00      5.88       .00      .000      .030      .000      .000   1378.01   9926.73
   .001590      205.      283.      370.         2        14         0       .00    286.57  10213.30


CCHV=     .300 CEHV=     .500
1490 NH CARD USED
*    NO 14.440

3501 HV CHANGED MORE THAN HVINS


3470 ENCROACHMENT STATIONS=     9827.3   10013.3  TYPE=       1  TARGET=      186.051

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        CACTUS ROAD
        DOWNSTREAM EDGE
    14.440      6.92   1384.92   1383.80   1384.03   1386.23      1.31       .30       .39 100000.00
    9000.0        .0    9000.0        .0        .0     979.0        .0    4267.3     868.1 100000.00
      3.56       .00      9.19       .00      .000      .020      .000      .000   1378.00   9827.27
   .001727      136.      184.      223.         2        15         0       .00    186.05  10013.32


CCHV=     .300 CEHV=     .500
1490 NH CARD USED

SPECIAL BRIDGE

SB  XK         XKOR       COFQ       RDLEN      BWC        BWP        BAREA      SS         ELCHU      ELCHD
     1.05       1.50       2.60        .00     159.71       5.00    1814.75        .00    1377.53    1377.33

*SECNO 14.470

3501 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.47
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SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

CLASS A LOW FLOW

3420 BRIDGE W.S.= 1384.98 BRIDGE VELOCITY= 5.13 CALCULATED CHANNEL AREA= 1153.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1386.23	.19	0.	6000.	1815.	1815.	1389.26	1391.30	0.

3470 ENCROACHMENT STATIONS= 9843.0 10015.6 TYPE= 1 TARGET= 172.569

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CACTUS ROAD
UPSTREAM EDGE

14.470	6.92	1384.92	.00	1384.03	1386.23	.37	.00	.00	100000.00
6000.0	.0	6000.0	.0	.0	1226.1	.0	4269.6	868.5	100000.00
3.56	.00	4.89	.00	.000	.020	.000	.000	1378.00	9843.03
.00353	92.	92.	92.	0	0	0	.00	172.57	10015.60

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 14.490

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

3470 ENCROACHMENT STATIONS= 9826.0 10030.9 TYPE= 1 TARGET= 204.880

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

14.490	5.91	1385.91	1383.27	1385.59	1386.33	.43	.08	.03	100000.00
6000.0	.0	6000.0	.0	.0	1141.5	.0	4273.6	869.1	100000.00
3.57	.00	5.26	.00	.000	.025	.000	.000	1380.00	9826.04
.000823	237.	148.	83.	3	11	0	.00	204.88	10030.92

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 14.580

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA

SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

ENCROACHMENT STATIONS= 9876.6 10184.4 TYPE= 1 TARGET= 307.840

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

14.580	6.47	1386.47	1383.73	1386.26	1386.70	.24	.31	.06	100000.00
6000.0	.0	6000.0	.0	.0	1537.4	.0	4288.5	872.0	100000.00
3.61	.00	3.90	.00	.000	.025	.000	.000	1380.00	9876.58
.000521	460.	483.	498.	2	14	0	.00	307.84	10184.42

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 14.660

3470 ENCROACHMENT STATIONS= 9771.6 10182.8 TYPE= 1 TARGET= 411.160

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

14.660	4.70	1386.70	1384.74	1386.51	1386.94	.24	.23	.00	100000.00
6000.0	.0	6000.0	.0	.0	1518.3	.0	4301.4	875.0	100000.00
3.63	.00	3.95	.00	.000	.025	.000	.000	1382.00	9771.64
.000784	447.	369.	231.	0	18	0	.00	411.16	10182.80

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THIS RUN EXECUTED 03NOV97 09:20:32

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HEC-2 WATER SURFACE PROFILES

Version 4.6.2; May 1991
****

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

SUMMARY PRINTOUT TABLE 110

SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
.437	1167.30	.00	1167.34	599.27	.00	20000.00	.00	.00	.00	9163.85	10337.92	.00
.437	1167.30	.00	1167.34	599.27	.00	20000.00	.00	.00	.00	9163.85	10337.92	.00
.475	1167.23	.00	1167.44	599.05	.00	20000.00	.00	.00	.00	9163.85	10337.92	.00
.475	1167.23	.00	1167.44	598.00	.00	20000.00	.00	631.00	9700.00	9163.85	10337.92	10331.00
.491	1167.32	.00	1167.80	611.37	.00	20000.00	.00	.00	.00	9170.12	9837.16	.00
.491	1167.31	-.01	1167.81	594.04	.00	20000.00	.00	615.00	9215.00	9170.12	9837.16	9830.00

*	.568	1167.38	.00	1168.85	533.75	.00	20000.00	.00	.00	.00	9701.21	10341.42	.00
*	.568	1167.41	.03	1168.98	440.00	.00	20000.00	.00	440.00	9770.00	9701.21	10341.42	10210.00
	.663	1169.53	.00	1171.53	467.47	.00	20000.00	.00	.00	.00	9771.72	10397.52	.00
	.663	1169.66	.13	1171.84	355.00	.00	20000.00	.00	355.00	9875.00	9771.72	10397.52	10230.00
	.758	1172.44	.00	1173.97	435.00	.00	20000.00	.00	435.00	9860.00	9752.04	10403.66	10295.00
	.758	1172.95	.51	1174.37	355.00	.00	20000.00	.00	355.00	9900.00	9752.04	10403.66	10255.00
*	.776	1173.50	.00	1175.27	543.37	.00	20000.00	.00	.00	.00	9412.90	10577.52	.00
*	.776	1173.30	-.20	1175.46	405.00	.00	20000.00	.00	405.00	9845.00	9412.90	10577.52	10250.00
*	.791	1176.48	.00	1176.90	790.44	.00	20000.00	.00	.00	.00	9425.92	10521.03	.00
*	.791	1176.68	.19	1177.30	445.00	.00	20000.00	.00	445.00	9790.00	9425.92	10521.03	10235.00
*	.852	1176.49	.00	1177.48	582.66	.00	20000.00	.00	.00	.00	9715.40	10339.78	.00
*	.852	1176.84	.35	1177.81	500.00	.00	20000.00	.00	500.00	9770.00	9715.40	10339.78	10270.00
*	.947	1178.29	.00	1179.90	552.66	.00	20000.00	.00	.00	.00	9650.16	10301.87	.00
	.947	1178.83	.54	1180.12	502.55	.00	20000.00	.00	502.55	9716.19	9650.16	10301.87	10218.74
*	1.040	1181.99	.00	1183.46	578.35	.00	20000.00	.00	.00	.00	9623.58	10275.30	.00
	1.040	1182.00	.01	1183.70	514.30	.00	20000.00	.00	514.30	9664.50	9623.58	10275.30	10178.80

1

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	1.136	1184.89	.00	1185.83	590.91	.00	20000.00	.00	.00	.00	9550.06	10217.40	.00
*	1.136	1185.44	.55	1186.32	498.70	.00	20000.00	.00	498.70	9628.40	9550.06	10217.40	10127.10
	1.231	1186.26	.00	1186.89	586.18	.00	20000.00	.00	.00	.00	9703.11	10334.06	.00
	1.231	1186.76	.50	1187.47	430.30	.00	20000.00	.00	430.30	9780.60	9703.11	10334.06	10210.90
	1.326	1186.90	.00	1187.93	582.48	.00	20000.00	.00	.00	.00	9706.24	10338.43	.00
	1.326	1187.25	.35	1188.90	226.00	.00	20000.00	.00	226.00	9881.00	9706.24	10338.43	10107.00
	1.420	1188.01	.00	1188.92	550.22	.00	20000.00	.00	.00	.00	9681.92	10335.16	.00
	1.420	1188.71	.70	1189.99	205.10	.00	20000.00	.00	205.10	9895.50	9681.92	10335.16	10100.60
*	1.515	1189.75	.00	1191.59	542.98	.00	20000.00	.00	.00	.00	9678.38	10370.31	.00
*	1.515	1189.75	.00	1191.79	341.75	.00	20000.00	.00	341.75	9857.11	9678.38	10370.31	10198.86
*	1.554	1191.72	.00	1192.28	755.55	.00	20000.00	.00	.00	.00	9409.98	10640.64	.00
*	1.554	1191.67	-.06	1192.55	451.14	.00	20000.00	.00	451.14	9779.60	9409.98	10640.64	10230.74
	1.570	1192.33	.00	1192.95	754.27	.00	20000.00	.00	.00	.00	9331.39	10344.36	.00
	1.570	1191.78	-.55	1192.94	499.45	.00	20000.00	.00	499.45	9690.00	9331.39	10344.36	10189.45
	1.582	1192.57	.00	1193.05	629.19	.00	20000.00	.00	.00	.00	9600.00	10262.87	.00
	1.582	1192.67	.11	1193.21	534.82	.00	20000.00	.00	534.82	9693.67	9600.00	10262.87	10228.49
	1.610	1192.80	.00	1193.22	618.17	.00	20000.00	.00	.00	.00	9619.73	10289.62	.00
	1.610	1192.94	.14	1193.39	526.99	.00	20000.00	.00	526.99	9693.56	9619.73	10289.62	10220.55
	1.705	1193.06	.00	1193.55	612.29	.00	20000.00	.00	.00	.00	9646.44	10322.93	.00
	1.705	1193.25	.19	1193.78	501.10	.00	20000.00	.00	501.10	9704.97	9646.44	10322.93	10206.07

	1.770	1193.27	.00	1193.80	573.08	.00	20000.00	.00	.00	.00	9615.27	10292.96	.00
	1.770	1193.46	.19	1194.10	395.78	.00	20000.00	.00	395.78	9762.53	9615.27	10292.96	10158.31
	1.787	1193.19	.00	1193.91	399.06	.00	20000.00	.00	.00	.00	9655.23	10229.00	.00
	1.787	1193.47	.28	1194.16	377.44	.00	20000.00	.00	377.44	9771.27	9655.23	10229.00	10148.71
*	1.794	1195.90	.00	1197.54	564.52	.00	20000.00	.00	.00	.00	9792.16	10506.20	.00
*	1.794	1195.99	.09	1198.19	400.69	.00	20000.00	.00	400.69	10007.38	9792.16	10506.20	10408.07
*	1.799	1196.14	.00	1197.92	562.08	.00	20000.00	.00	.00	.00	9546.05	10253.73	.00
*	1.799	1196.43	.29	1198.57	420.30	.00	20000.00	.00	420.30	9752.53	9546.05	10253.73	10172.83
*	1.827	1198.05	.00	1198.99	539.58	.00	20000.00	.00	.00	.00	9566.05	10230.02	.00
*	1.827	1198.79	.74	1199.55	499.52	.00	20000.00	.00	499.52	9694.07	9566.05	10230.02	10193.59
*	1.894	1199.06	.00	1199.45	622.86	.00	20000.00	.00	.00	.00	9717.86	10367.81	.00
*	1.894	1199.54	.48	1199.95	501.62	.00	20000.00	.00	501.62	9773.44	9717.86	10367.81	10275.06
*	1.990	1199.40	.00	1199.93	715.10	.00	20000.00	.00	.00	.00	9812.98	10585.58	.00
*	1.990	1199.90	.51	1200.38	638.62	.00	20000.00	.00	638.62	9830.16	9812.98	10585.58	10468.78

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	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	2.047	1200.13	.00	1201.20	799.73	.00	20000.00	.00	.00	.00	9757.54	10645.14	.00
	2.047	1200.51	.37	1201.54	625.64	.00	20000.00	.00	625.64	9817.47	9757.54	10645.14	10443.11
	2.080	1201.21	.00	1202.39	531.97	.00	20000.00	.00	537.00	9780.00	9774.32	10695.02	10317.00
	2.080	1201.49	.28	1202.87	417.14	.00	20000.00	.00	417.14	9850.00	9774.32	10695.02	10267.14
*	2.178	1203.52	.00	1204.11	601.08	.00	20000.00	.00	.00	.00	9795.47	10469.41	.00
*	2.178	1203.90	.38	1204.47	526.36	.00	20000.00	.00	526.36	9855.40	9795.47	10469.41	10381.76
	2.273	1204.43	.00	1204.94	546.32	.00	20000.00	.00	.00	.00	9749.81	10350.71	.00
	2.273	1204.67	.24	1205.25	452.87	.00	20000.00	.00	452.87	9841.65	9749.81	10350.71	10294.52
	2.367	1204.93	.00	1205.57	463.92	.00	20000.00	.00	.00	.00	9797.50	10299.01	.00
	2.367	1205.30	.37	1205.92	417.46	.00	20000.00	.00	417.46	9848.54	9797.50	10299.01	10266.00
	2.462	1205.58	.00	1206.20	461.17	.00	20000.00	.00	.00	.00	9689.85	10263.74	.00
	2.462	1205.98	.40	1206.58	417.15	.00	20000.00	.00	417.15	9742.11	9689.85	10263.74	10159.26
	2.557	1206.18	.00	1206.77	370.37	.00	20000.00	.00	370.37	9890.23	9791.91	10374.06	10260.60
*	2.557	1206.56	.37	1207.09	370.37	.00	20000.00	.00	370.37	9890.23	9791.91	10374.06	10260.60
	2.610	1206.32	.00	1206.99	287.55	.00	20000.00	.00	287.55	9789.69	9640.20	10164.92	10077.24
	2.610	1206.67	.35	1207.30	287.55	.00	20000.00	.00	287.55	9789.69	9640.20	10164.92	10077.24
	2.620	1206.16	.00	1207.22	253.24	.00	20000.00	.00	253.24	9800.00	9655.60	10127.36	10053.24
	2.620	1206.52	.36	1207.50	253.24	.00	20000.00	.00	253.24	9800.00	9655.60	10127.36	10053.24
	2.629	1205.89	.00	1207.60	213.69	.00	20000.00	.00	.00	.00	9819.64	10035.00	.00
	2.629	1206.23	.34	1207.89	208.28	.00	20000.00	.00	213.71	9826.29	9819.64	10035.00	10040.00
	2.652	1206.21	.00	1207.81	214.03	.00	20000.00	.00	.00	.00	9813.94	10034.15	.00
	2.652	1206.53	.32	1208.02	213.94	.00	20000.00	.00	213.94	9818.63	9813.94	10034.15	10032.57

	2.653	1206.22	.00	1207.82	214.03	.00	20000.00	.00	.00	.00	9813.94	10034.15	.00
	2.653	1206.54	.32	1208.03	213.94	.00	20000.00	.00	213.94	9818.63	9813.94	10034.15	10032.57
	2.658	1206.09	.00	1209.31	224.00	.00	20000.00	.00	.00	.00	9782.39	10015.26	.00
	2.658	1206.17	.08	1209.31	224.00	.00	20000.00	.00	224.00	9789.00	9782.39	10015.26	10013.00
*	2.662	1207.57	.00	1209.66	226.77	.00	20000.00	.00	.00	.00	9782.39	10015.26	.00
	2.662	1207.43	-.14	1209.61	223.58	.00	20000.00	.00	224.10	9789.81	9782.39	10015.26	10013.91
*	2.663	1209.23	.00	1210.05	239.53	.00	20000.00	.00	.00	.00	9775.91	10025.49	.00
*	2.663	1209.14	-.08	1210.01	229.25	.00	20000.00	.00	396.55	9793.96	9775.91	10025.49	10190.51
	2.700	1210.00	.00	1210.31	531.83	.00	20000.00	.00	.00	.00	9735.80	10327.30	.00
*	2.700	1209.70	-.30	1210.25	355.96	.00	20000.00	.00	355.96	9849.45	9735.80	10327.30	10205.41
	2.746	1210.10	.00	1210.51	578.82	.00	20000.00	.00	.00	.00	9715.02	10422.25	.00
	2.746	1209.94	-.16	1210.55	451.52	.00	20000.00	.00	451.52	9857.99	9715.02	10422.25	10309.51

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	2.770	1210.28	.00	1210.72	637.00	.00	20000.00	.00	.00	.00	9624.50	10439.14	.00
	2.770	1210.32	.04	1210.86	535.29	.00	20000.00	.00	535.29	9808.44	9624.50	10439.14	10343.73
	2.775	1210.23	.00	1210.85	697.70	.00	20000.00	.00	.00	.00	9637.51	10442.69	.00
	2.775	1210.23	.00	1211.04	545.83	.00	20000.00	.00	545.83	9798.99	9637.51	10442.69	10344.82
*	2.780	1209.91	.00	1211.28	658.54	.00	20000.00	.00	.00	.00	9630.26	10463.99	.00
*	2.780	1209.85	-.06	1211.57	570.10	.00	20000.00	.00	570.10	9788.82	9630.26	10463.99	10358.92
*	2.790	1210.68	.00	1212.19	675.37	.00	20000.00	.00	.00	.00	9633.91	10470.22	.00
*	2.790	1210.75	.07	1212.48	571.73	.00	20000.00	.00	571.73	9792.52	9633.91	10470.22	10364.25
	2.810	1211.94	.00	1212.99	756.62	.00	20000.00	.00	.00	.00	9671.32	10555.73	.00
	2.810	1212.01	.07	1213.40	563.32	.00	20000.00	.00	563.32	9883.52	9671.32	10555.73	10446.84
*	2.820	1212.25	.00	1213.70	722.41	.00	20000.00	.00	.00	.00	9723.25	10662.58	.00
*	2.820	1212.61	.36	1214.34	557.62	.00	20000.00	.00	557.62	9869.23	9723.25	10662.58	10426.85
*	2.827	1213.51	.00	1214.09	817.77	.00	20000.00	.00	.00	.00	9733.25	10655.90	.00
*	2.827	1213.96	.45	1214.78	558.52	.00	20000.00	.00	558.52	9880.61	9733.25	10655.90	10439.13
	2.841	1213.73	.00	1214.23	819.46	.00	20000.00	.00	.00	.00	9768.43	10633.14	.00
	2.841	1214.27	.54	1214.97	573.95	.00	20000.00	.00	573.95	9877.84	9768.43	10633.14	10451.79
	2.936	1214.62	.00	1215.06	730.00	.00	20000.00	.00	730.00	9780.00	9732.77	10732.03	10510.00
	2.936	1215.37	.76	1215.89	571.36	.00	20000.00	.00	571.36	9811.50	9732.77	10732.03	10382.86
	3.030	1215.44	.00	1215.97	770.00	.00	20000.00	.00	770.00	9580.00	9539.47	10520.72	10350.00
	3.030	1216.13	.69	1216.79	582.63	.00	20000.00	.00	582.63	9615.53	9539.47	10520.72	10198.16
	3.125	1216.38	.00	1216.68	949.54	.00	20000.00	.00	.00	.00	9536.01	10550.72	.00
	3.125	1217.08	.71	1217.54	582.37	.00	20000.00	.00	582.37	9662.25	9536.01	10550.72	10244.62
	3.220	1216.67	.00	1217.40	676.92	.00	20000.00	.00	.00	.00	9493.40	10276.72	.00
	3.220	1217.57	.90	1218.09	644.18	.00	20000.00	.00	644.18	9559.93	9493.40	10276.72	10204.11

*	3.270	1217.19	.00	1217.95	795.12	.00	20000.00	.00	.00	.00	9463.93	10397.22	.00
*	3.270	1217.85	.65	1218.65	608.25	.00	20000.00	.00	608.25	9586.56	9463.93	10397.22	10194.81
	3.280	1217.56	.00	1218.18	800.10	.00	20000.00	.00	.00	.00	9585.13	10525.03	.00
	3.280	1218.13	.57	1218.84	604.58	.00	20000.00	.00	604.58	9705.46	9585.13	10525.03	10310.04
	3.409	1219.13	.00	1219.66	900.82	.00	20000.00	.00	.00	.00	9769.83	10722.73	.00
	3.409	1219.70	.57	1220.47	651.70	.00	20000.00	.00	651.70	9960.87	9769.83	10722.73	10612.57
*	3.488	1220.50	.00	1221.22	1003.78	.00	20000.00	.00	.00	.00	9827.12	11168.98	.00
	3.488	1221.22	.72	1222.09	636.22	.00	20000.00	.00	636.22	9910.41	9827.12	11168.98	10546.63
*	3.490	1221.04	.00	1221.43	1298.00	4872.56	15127.44	.00	.00	.00	9897.77	11237.68	.00
	3.490	1221.30	.26	1222.26	634.76	.00	20000.00	.00	634.76	9969.75	9897.77	11237.68	10604.51

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	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	3.504	1220.95	.00	1221.79	1026.21	.00	20000.00	.00	.00	.00	9900.52	11240.74	.00
	3.504	1221.52	.57	1222.52	642.41	.00	20000.00	.00	642.41	9936.22	9900.52	11240.74	10578.63
	3.510	1221.47	.00	1222.05	1129.04	.00	20000.00	.00	.00	.00	9854.75	11125.82	.00
	3.510	1221.85	.39	1222.73	647.44	.00	20000.00	.00	647.44	9909.27	9854.75	11125.82	10556.71
	3.548	1222.29	.00	1222.76	1001.47	.00	20000.00	.00	1110.00	9668.00	9756.27	11167.19	10778.00
	3.548	1222.83	.54	1223.43	659.63	.00	20000.00	.00	659.63	9778.44	9756.27	11167.19	10438.07
	3.590	1222.61	.00	1223.02	916.37	.00	20000.00	.00	957.00	9719.00	9752.65	11227.80	10676.00
	3.590	1223.14	.53	1223.66	597.11	.00	20000.00	.00	597.11	9779.66	9752.65	11227.80	10376.77
	3.600	1222.87	.00	1223.32	822.50	.00	20000.00	.00	822.50	9725.50	9713.73	11126.37	10548.00
	3.600	1223.36	.49	1223.88	551.86	.00	20000.00	.00	551.86	9725.48	9713.73	11126.37	10277.34
	3.660	1223.43	.00	1223.97	684.90	.00	19990.20	9.80	684.90	9618.50	9601.51	10282.26	10303.40
	3.660	1223.75	.31	1224.37	444.92	.00	20000.00	.00	444.92	9628.47	9601.51	10282.26	10073.39
	3.710	1223.79	.00	1224.81	417.56	.00	20000.00	.00	.00	.00	9642.19	10111.05	.00
	3.710	1223.99	.21	1225.13	337.10	.00	20000.00	.00	337.10	9683.66	9642.19	10111.05	10020.76
	3.730	1223.88	.00	1225.16	385.10	.00	20000.00	.00	.00	.00	9672.39	10076.30	.00
	3.730	1223.99	.11	1225.62	304.85	.00	20000.00	.00	304.85	9683.44	9672.39	10076.30	9988.29
	3.760	1223.79	.00	1226.20	232.01	.00	20000.00	.00	232.01	9770.00	9752.45	10011.34	10002.01
	3.760	1224.18	.39	1226.34	232.01	.00	20000.00	.00	232.01	9770.00	9752.45	10011.34	10002.01
*	3.780	1224.64	.00	1226.64	232.01	.00	20000.00	.00	232.01	9770.00	9734.25	10009.70	10002.01
	3.780	1224.56	-.08	1226.60	231.97	.00	20000.00	.00	232.01	9770.00	9734.25	10009.70	10002.01
	3.811	1226.78	.00	1227.32	472.14	.00	20000.00	.00	.00	.00	9604.29	10196.19	.00
*	3.811	1225.77	-1.01	1227.19	286.06	.00	20000.00	.00	286.06	9776.94	9604.29	10196.19	10063.00
	3.883	1227.44	.00	1227.74	629.54	.00	20000.00	.00	.00	.00	9712.40	10402.79	.00
	3.883	1227.66	.22	1228.00	520.00	.00	20000.00	.00	520.00	9800.00	9712.40	10402.79	10320.00
	3.977	1227.79	.00	1228.16	606.63	.00	20000.00	.00	.00	.00	9533.25	10197.10	.00
	3.977	1228.05	.26	1228.40	574.26	.00	20000.00	.00	574.26	9581.83	9533.25	10197.10	10156.09

	4.072	1228.18	.00	1228.72	609.51	.00	20000.00	.00	.00	.00	9572.06	10308.17	.00
	4.072	1228.46	.28	1229.00	538.65	.00	20000.00	.00	538.65	9637.61	9572.06	10308.17	10176.26
	4.167	1228.85	.00	1229.08	652.77	.00	20000.00	.00	.00	.00	9543.14	10233.84	.00
	4.167	1229.19	.34	1229.40	621.87	.00	20000.00	.00	621.87	9577.84	9543.14	10233.84	10199.71
*	4.220	1228.87	.00	1229.26	612.84	.00	20000.00	.00	.00	.00	9441.20	10152.59	.00
*	4.220	1229.22	.35	1229.59	565.61	.00	20000.00	.00	565.61	9489.85	9441.20	10152.59	10055.46
	4.250	1229.00	.00	1229.41	637.87	.00	20000.00	.00	.00	.00	9420.58	10125.51	.00
	4.250	1229.29	.29	1229.81	485.91	.00	20000.00	.00	485.91	9548.81	9420.58	10125.51	10034.72

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	4.290	1229.06	.00	1229.73	664.02	.00	20000.00	.00	.00	.00	9346.07	10095.64	.00
*	4.290	1229.33	.26	1230.19	422.38	.00	20000.00	.00	422.38	9606.16	9346.07	10095.64	10028.54
	4.356	1229.76	.00	1230.26	643.98	.00	20000.00	.00	.00	.00	9471.79	10154.93	.00
	4.356	1230.02	.26	1230.74	450.19	.00	20000.00	.00	450.19	9663.12	9471.79	10154.93	10113.31
	4.451	1230.51	.00	1231.04	638.32	.00	20000.00	.00	.00	.00	9503.88	10185.38	.00
	4.451	1231.03	.53	1231.52	591.13	.00	20000.00	.00	591.13	9534.15	9503.88	10185.38	10125.28
*	4.546	1231.15	.00	1232.09	576.39	.00	20000.00	.00	.00	.00	9876.09	10706.51	.00
	4.546	1231.55	.40	1232.40	531.61	.00	20000.00	.00	531.61	9943.18	9876.09	10706.51	10474.79
	4.640	1232.92	.00	1233.54	645.90	.00	20000.00	.00	.00	.00	9748.98	10448.11	.00
	4.640	1232.94	.02	1233.75	497.11	.00	20000.00	.00	497.11	9898.92	9748.98	10448.11	10396.03
*	4.735	1233.96	.00	1234.24	735.58	.00	20000.00	.00	.00	.00	9662.50	10479.06	.00
*	4.735	1234.16	.20	1234.75	453.99	.00	20000.00	.00	453.99	9898.11	9662.50	10479.06	10352.10
	4.830	1234.19	.00	1234.57	696.87	.00	20000.00	.00	.00	.00	9273.28	10197.34	.00
*	4.830	1234.77	.58	1235.15	603.62	.00	20000.00	.00	603.62	9468.76	9273.28	10197.34	10072.38
*	4.850	1235.54	.00	1237.50	470.84	.00	20000.00	.00	.00	.00	9295.32	10225.30	.00
*	4.850	1235.49	-.05	1237.70	386.04	.00	20000.00	.00	633.63	9474.59	9295.32	10225.30	10108.22
*	4.855	1238.09	.00	1239.54	768.00	.00	20000.00	.00	768.00	9419.00	8954.28	10660.11	10187.00
*	4.855	1238.18	.09	1239.75	617.58	.00	20000.00	.00	617.58	9469.50	8954.28	10660.11	10087.08
*	4.870	1239.02	.00	1240.33	853.00	.00	20000.00	.00	853.00	9329.00	8868.29	10575.86	10182.00
*	4.870	1239.07	.05	1240.69	612.84	.00	20000.00	.00	612.84	9379.43	8868.29	10575.86	9992.27
*	4.873	1240.48	.00	1240.68	963.00	.00	17000.00	.00	963.00	9358.00	9102.88	10347.83	10321.00
*	4.873	1240.89	.41	1241.12	613.07	.00	17000.00	.00	613.07	9458.12	9102.88	10347.83	10071.19
*	4.892	1240.64	.00	1240.73	815.00	.00	17000.00	.00	815.00	9270.00	9135.34	10208.18	10085.00
*	4.892	1241.08	.44	1241.18	625.85	.00	17000.00	.00	625.85	9440.12	9135.34	10208.18	10065.97
	4.924	1240.67	.00	1240.74	1177.61	.00	17000.00	.00	.00	.00	8970.89	10215.23	.00
	4.924	1241.10	.44	1241.19	736.13	.00	17000.00	.00	736.13	9355.88	8970.89	10215.23	10092.01
	4.952	1240.70	.00	1240.75	1107.72	.00	17000.00	.00	.00	.00	8905.53	10063.08	.00
	4.952	1241.16	.46	1241.21	972.25	.00	17000.00	.00	972.25	9020.65	8905.53	10063.08	9992.90

*	4.990	1240.71	.00	1240.84	855.84	.00	17000.00	.00	.00	.00	8972.88	10099.11	.00
*	4.990	1241.16	.46	1241.32	934.50	.00	17000.00	.00	934.50	9051.29	8972.88	10099.11	9985.79
	5.110	1240.87	.00	1241.07	610.16	.00	13655.00	.00	.00	.00	9260.46	9925.39	.00
	5.110	1241.39	.51	1241.56	575.17	.00	13655.00	.00	575.17	9294.08	9260.46	9925.39	9869.25
	5.205	1241.10	.00	1241.28	625.33	.00	13655.00	.00	.00	.00	9252.28	9923.63	.00
	5.205	1241.54	.44	1241.81	421.82	.00	13655.00	.00	421.82	9351.59	9252.28	9923.63	9773.41

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	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	5.300	1241.48	.00	1241.82	712.75	.00	13655.00	.00	.00	.00	9021.99	9906.44	.00
	5.300	1241.97	.49	1242.32	467.76	.00	13655.00	.00	467.76	9265.39	9021.99	9906.44	9733.15
	5.357	1241.91	.00	1242.40	580.73	.00	13655.00	.00	.00	.00	8762.06	9807.90	.00
	5.357	1242.27	.35	1242.79	428.91	.00	13655.00	.00	428.91	9300.00	8762.06	9807.90	9728.91
*	5.360	1243.02	.00	1244.29	593.02	.00	13655.00	.00	.00	.00	8565.00	9934.75	.00
*	5.360	1242.91	-.12	1244.47	441.09	.00	13655.00	.00	441.09	9265.58	8565.00	9934.75	9706.67
*	5.372	1243.63	.00	1244.96	553.82	.00	13655.00	.00	.00	.00	8582.00	9933.11	.00
*	5.372	1243.58	-.05	1245.21	416.81	.00	13655.00	.00	433.75	9264.15	8582.00	9933.11	9697.90
*	5.385	1244.99	.00	1245.38	565.95	.00	13655.00	.00	.00	.00	9221.14	9795.21	.00
	5.385	1245.14	.15	1245.72	419.59	.00	13655.00	.00	419.59	9262.49	9221.14	9795.21	9682.08
	5.492	1245.41	.00	1245.77	505.38	.00	13655.00	.00	.00	.00	9215.04	9807.97	.00
*	5.492	1245.95	.55	1246.31	433.13	.00	13655.00	.00	433.13	9278.10	9215.04	9807.97	9711.23
	5.587	1245.82	.00	1246.09	427.06	.00	12972.00	.00	.00	.00	9332.70	9845.66	.00
	5.587	1246.38	.57	1246.65	378.91	.00	12972.00	.00	378.91	9364.78	9332.70	9845.66	9743.69
	5.682	1246.06	.00	1246.33	429.97	.00	12928.00	.00	.00	.00	9340.02	9839.19	.00
	5.682	1246.62	.56	1247.00	319.29	.00	12928.00	.00	319.29	9417.67	9340.02	9839.19	9736.96
	5.777	1246.32	.00	1246.60	406.32	.00	12836.00	.00	.00	.00	9324.75	9836.39	.00
	5.777	1247.04	.72	1247.39	319.16	.00	12836.00	.00	319.16	9417.14	9324.75	9836.39	9736.30
	5.867	1246.60	.00	1247.07	491.02	.00	11769.00	.00	.00	.00	9130.14	9835.35	.00
	5.867	1247.46	.86	1247.82	429.27	.00	11769.00	.00	429.27	9307.86	9130.14	9835.35	9737.13
*	5.871	1247.08	.00	1248.41	489.73	.00	11706.00	.00	.00	.00	9104.06	9834.26	.00
*	5.871	1247.07	-.01	1248.47	451.08	.00	11706.00	.00	451.08	9293.06	9104.06	9834.26	9744.14
*	5.886	1251.85	.00	1252.60	1231.21	.00	5822.23	5677.77	.00	.00	8587.00	9953.17	.00
*	5.886	1252.49	.64	1253.74	520.00	.00	11500.00	.00	520.00	9270.00	8587.00	9953.17	9790.00
*	5.900	1252.73	.00	1253.19	1416.64	.00	17000.00	.00	.00	.00	8629.10	10773.99	.00
*	5.900	1253.25	.52	1253.74	879.91	.00	17000.00	.00	879.91	9139.60	8629.10	10773.99	10019.51
	5.925	1253.05	.00	1253.65	1146.78	.00	17000.00	.00	.00	.00	8915.79	10095.26	.00
	5.925	1253.39	.35	1254.15	872.73	.00	17000.00	.00	872.73	9184.40	8915.79	10095.26	10057.13
*	5.966	1254.26	.00	1254.58	1054.90	.00	17000.00	.00	.00	.00	9059.61	10162.98	.00
*	5.966	1254.77	.51	1255.10	904.55	.00	17000.00	.00	904.55	9163.15	9059.61	10162.98	10067.70

6.060	1254.82	.00	1255.28	761.48	.00	17000.00	.00	.00	.00	9151.34	10080.75	.00
6.060	1255.36	.54	1255.72	841.56	.00	17000.00	.00	841.56	9218.73	9151.34	10080.75	10060.29
6.155	1255.47	.00	1255.64	700.63	.00	11920.00	.00	.00	.00	9099.22	9871.03	.00
6.155	1255.84	.38	1256.07	537.21	.00	11920.00	.00	537.21	9251.11	9099.22	9871.03	9788.32

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	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	6.250	1255.62	.00	1256.01	512.07	.00	11920.00	.00	.00	.00	9214.00	9881.31	.00
*	6.250	1256.07	.45	1256.41	472.80	.00	11920.00	.00	472.80	9367.86	9214.00	9881.31	9840.66
*	6.345	1257.60	.00	1258.96	483.25	.00	11920.00	.00	.00	.00	9278.21	9870.12	.00
*	6.345	1257.69	.09	1259.15	434.48	.00	11920.00	.00	434.48	9356.23	9278.21	9870.12	9790.71
*	6.390	1260.24	.00	1261.51	529.50	.00	11920.00	.00	.00	.00	9220.02	9836.22	.00
*	6.390	1260.20	-.04	1261.60	455.21	.00	11920.00	.00	455.21	9307.00	9220.02	9836.22	9762.21
*	6.400	1261.25	.00	1261.78	1072.44	.00	17000.00	.00	.00	.00	9165.74	10275.27	.00
	6.400	1260.88	-.37	1261.87	755.72	.00	17000.00	.00	839.76	9232.13	9165.74	10275.27	10071.89
	6.440	1261.99	.00	1262.37	925.22	.00	17000.00	.00	.00	.00	9096.62	10097.45	.00
*	6.440	1262.34	.35	1262.67	940.95	.00	17000.00	.00	940.95	9120.16	9096.62	10097.45	10061.11
	6.530	1262.98	.00	1263.32	937.69	.00	17000.00	.00	.00	.00	9107.03	10137.90	.00
	6.530	1263.18	.20	1263.50	940.18	.00	17000.00	.00	940.18	9130.69	9107.03	10137.90	10070.87
	6.630	1263.88	.00	1264.27	949.75	.00	17000.00	.00	.00	.00	9081.36	10109.49	.00
	6.630	1264.07	.19	1264.45	925.85	.00	17000.00	.00	925.85	9114.25	9081.36	10109.49	10040.10
	6.723	1264.86	.00	1265.19	927.81	.00	17000.00	.00	.00	.00	9121.83	10092.69	.00
	6.723	1265.01	.15	1265.33	895.17	.00	17000.00	.00	895.17	9156.56	9121.83	10092.69	10051.73
*	6.820	1265.97	.00	1266.84	848.13	.00	17000.00	.00	875.00	9225.00	8922.17	10141.05	10100.00
*	6.820	1265.94	-.02	1267.11	718.37	.00	17000.00	.00	725.67	9324.93	8922.17	10141.05	10050.60
*	6.856	1267.19	.00	1267.53	792.27	.00	17000.00	.00	.00	.00	9278.67	10135.98	.00
*	6.856	1267.54	.35	1267.89	713.52	.00	17000.00	.00	713.52	9345.74	9278.67	10135.98	10059.26
	6.879	1267.33	.00	1267.83	762.47	.00	17000.00	.00	.00	.00	8874.79	10148.46	.00
	6.879	1267.71	.37	1268.18	687.61	.00	17000.00	.00	784.26	9349.37	8874.79	10148.46	10133.63
*	6.880	1267.67	.00	1267.93	1075.23	.00	17000.00	.00	.00	.00	8773.68	10199.22	.00
*	6.880	1267.74	.07	1268.23	683.99	.00	17000.00	.00	772.88	9382.84	8773.68	10199.22	10155.72
*	6.893	1270.01	.00	1270.11	1413.00	11072.87	5927.13	.00	.00	.00	9843.43	10167.69	.00
*	6.893	1270.01	.00	1270.22	784.91	10310.91	6689.09	.00	784.91	9310.47	9843.43	10167.69	10095.38
	6.910	1269.99	.00	1270.14	928.43	.00	16993.32	6.68	.00	.00	9190.76	10137.11	.00
	6.910	1270.05	.06	1270.24	792.41	.00	17000.00	.00	792.41	9314.09	9190.76	10137.11	10106.50
	6.960	1270.04	.00	1270.23	772.04	.00	17000.00	.00	.00	.00	9344.88	10151.44	.00
	6.960	1270.14	.10	1270.32	736.62	.00	17000.00	.00	736.62	9364.71	9344.88	10151.44	10101.33
*	7.008	1269.87	.00	1270.56	592.77	.00	17000.00	.00	624.50	9521.50	9510.41	10163.36	10146.00
*	7.008	1269.89	.02	1270.74	450.09	.00	17000.00	.00	450.09	9666.50	9510.41	10163.36	10116.59

	7.102	1270.58	.00	1271.15	494.10	.00	17000.00	.00	.00	.00	9720.00	10235.76	.00
	7.102	1270.72	.14	1271.37	377.34	.00	17000.00	.00	377.34	9813.42	9720.00	10235.76	10190.76

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	7.197	1271.19	.00	1271.51	550.48	.00	17000.00	.00	.00	.00	9689.38	10344.54	.00
*	7.197	1271.43	.24	1271.75	516.00	.00	17000.00	.00	516.00	9725.03	9689.38	10344.54	10241.03
*	7.290	1271.44	.00	1271.93	657.88	.00	17000.00	.00	.00	.00	9606.28	10339.76	.00
*	7.290	1271.67	.23	1272.12	638.50	.00	17000.00	.00	638.50	9652.02	9606.28	10339.76	10290.52
*	7.390	1272.08	.00	1272.84	629.49	.00	17000.00	.00	.00	.00	9621.00	10325.14	.00
*	7.390	1272.18	.10	1272.97	583.27	.00	17000.00	.00	583.27	9693.80	9621.00	10325.14	10277.07
	7.481	1273.16	.00	1273.77	583.16	.00	17000.00	.00	.00	.00	9597.96	10312.56	.00
	7.481	1273.25	.09	1273.85	558.36	.00	17000.00	.00	558.36	9674.02	9597.96	10312.56	10232.38
	7.576	1273.86	.00	1274.56	546.84	.00	17000.00	.00	.00	.00	9665.00	10299.71	.00
	7.576	1273.95	.09	1274.64	526.50	.00	17000.00	.00	526.50	9729.23	9665.00	10299.71	10255.73
	7.670	1274.75	.00	1275.37	599.16	.00	17000.00	.00	.00	.00	9583.97	10258.36	.00
	7.670	1274.75	.00	1275.61	470.24	.00	17000.00	.00	470.24	9726.74	9583.97	10258.36	10196.98
	7.765	1275.50	.00	1276.19	522.20	.00	17000.00	.00	.00	.00	9690.02	10311.45	.00
	7.765	1275.80	.30	1276.46	485.68	.00	17000.00	.00	485.68	9722.28	9690.02	10311.45	10207.96
	7.837	1276.14	.00	1276.80	534.19	.00	17000.00	.00	.00	.00	9698.64	10304.67	.00
	7.837	1276.35	.21	1277.01	493.62	.00	17000.00	.00	493.62	9756.11	9698.64	10304.67	10249.73
*	7.883	1276.70	.00	1276.99	540.24	.00	17000.00	.00	.00	.00	9683.95	10317.03	.00
*	7.883	1276.88	.18	1277.24	402.97	.00	17000.00	.00	402.97	9837.47	9683.95	10317.03	10240.44
*	7.955	1276.45	.00	1277.66	368.15	.00	17000.00	.00	.00	.00	9790.04	10247.68	.00
*	7.955	1276.52	.07	1278.32	285.87	.00	17000.00	.00	285.87	9891.69	9790.04	10247.68	10177.56
*	7.979	1277.88	.00	1278.03	891.04	.00	17000.00	.00	.00	.00	9565.04	10485.63	.00
*	7.979	1278.51	.64	1278.84	496.65	.00	17000.00	.00	496.65	9726.27	9565.04	10485.63	10222.92
*	7.988	1284.07	.00	1284.96	1279.26	.00	17000.00	.00	.00	.00	9132.00	10958.29	.00
*	7.988	1284.58	.51	1285.79	803.80	.00	17000.00	.00	803.80	9518.76	9132.00	10958.29	10322.56
*	7.992	1284.35	.00	1285.23	1280.94	.00	17000.00	.00	.00	.00	9125.00	11174.97	.00
*	7.992	1285.31	.96	1286.03	899.18	.00	17000.00	.00	899.18	9408.03	9125.00	11174.97	10307.21
*	8.144	1286.12	.00	1286.44	1252.46	.00	16000.00	.00	.00	.00	8888.98	10695.80	.00
*	8.144	1286.49	.37	1286.81	1030.67	.00	16000.00	.00	1030.67	9055.29	8888.98	10695.80	10085.96
*	8.239	1287.16	.00	1288.55	633.67	.00	16000.00	.00	711.00	9399.00	8341.39	10671.00	10110.00
*	8.239	1287.22	.07	1288.63	624.40	.00	16000.00	.00	700.96	9399.35	8341.39	10671.00	10100.31
	8.333	1290.11	.00	1290.29	1404.14	.00	16000.00	.00	.00	.00	9038.59	10488.36	.00
	8.333	1290.55	.43	1290.88	739.17	.00	16000.00	.00	739.17	9362.60	9038.59	10488.36	10101.77
	8.428	1290.81	.00	1291.08	1311.00	.00	16000.00	.00	.00	.00	9148.11	10606.78	.00
	8.428	1291.66	.85	1291.99	952.71	.00	16000.00	.00	1017.64	9269.50	9148.11	10606.78	10287.14

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	8.523	1292.05	.00	1292.50	1018.41	.00	16000.00	.00	.00	.00	9166.51	10482.62	.00
	8.523	1293.03	.98	1293.43	889.94	.00	16000.00	.00	951.04	9506.56	9166.51	10482.62	10457.60
	8.656	1294.67	.00	1295.72	642.62	.00	16000.00	.00	.00	.00	9728.91	10454.18	.00
*	8.656	1295.29	.62	1296.51	557.30	.00	16000.00	.00	1014.84	9286.76	9728.91	10454.18	10301.60
*	8.752	1296.11	.00	1296.29	1027.82	.00	16000.00	.00	.00	.00	8325.44	10325.92	.00
*	8.752	1296.92	.81	1297.20	641.16	.00	16000.00	.00	641.16	9409.44	8325.44	10325.92	10050.60
	8.996	1296.45	.00	1296.57	1071.24	.00	16000.00	.00	.00	.00	9033.75	10366.99	.00
	8.996	1297.34	.90	1297.66	553.63	.00	16000.00	.00	553.63	9548.55	9033.75	10366.99	10102.18
	9.022	1296.52	.00	1296.61	1483.74	.00	16000.00	.00	.00	.00	8928.38	10678.03	.00
	9.022	1297.48	.96	1297.73	613.55	.00	16000.00	.00	613.55	9548.63	8928.38	10678.03	10162.18
*	9.125	1298.59	.00	1299.45	1292.79	.00	16000.00	.00	.00	.00	9249.48	10820.74	.00
*	9.125	1299.35	.77	1300.41	938.55	.00	16000.00	.00	938.55	9381.45	9249.48	10820.74	10320.00
*	9.126	1298.92	.00	1299.88	1137.57	.00	16000.00	.00	.00	.00	9170.11	10672.44	.00
*	9.126	1299.78	.86	1300.89	826.19	.00	16000.00	.00	849.93	9440.07	9170.11	10672.44	10290.00
*	9.128	1299.37	.00	1300.34	1119.74	.00	16000.00	.00	.00	.00	9292.76	10482.96	.00
	9.128	1300.01	.64	1301.17	840.06	.00	16000.00	.00	840.06	9459.94	9292.76	10482.96	10300.00
*	9.150	1300.44	.00	1300.78	1086.73	.00	16000.00	.00	.00	.00	9380.80	10482.44	.00
*	9.150	1300.56	.13	1301.17	845.00	.00	16000.00	.00	845.00	9440.00	9380.80	10482.44	10285.00
	9.243	1301.01	.00	1301.10	825.80	.00	9000.00	.00	.00	.00	9559.06	10412.65	.00
	9.243	1301.54	.54	1301.63	665.16	.00	9000.00	.00	665.16	9704.84	9559.06	10412.65	10370.00
*	9.283	1301.09	.00	1301.33	1193.95	.00	9000.00	.00	.00	.00	8865.10	10121.37	.00
*	9.283	1301.62	.53	1301.88	680.00	.00	9000.00	.00	680.00	9380.00	8865.10	10121.37	10060.00
*	9.375	1302.20	.00	1302.46	1612.37	.00	9000.00	.00	.00	.00	8732.49	10560.61	.00
	9.375	1302.54	.34	1302.99	710.00	.00	9000.00	.00	710.00	9470.00	8732.49	10560.61	10180.00
	9.470	1304.40	.00	1304.80	1197.81	.00	9000.00	.00	.00	.00	9186.77	10611.91	.00
	9.470	1304.45	.05	1304.97	750.00	.00	9000.00	.00	750.00	9550.00	9186.77	10611.91	10300.00
*	9.564	1306.40	.00	1306.62	886.17	.00	9000.00	.00	.00	.00	9447.11	10529.67	.00
	9.564	1306.49	.09	1306.75	723.12	.00	9000.00	.00	805.00	9475.00	9447.11	10529.67	10280.00
	9.578	1307.47	.00	1307.63	1009.28	.00	9000.00	.00	.00	.00	9474.81	10886.25	.00
	9.578	1307.64	.17	1307.81	840.00	.00	9000.00	.00	840.00	9700.00	9474.81	10886.25	10540.00
	9.659	1308.15	.00	1308.33	1218.75	.00	9000.00	.00	.00	.00	9340.16	10633.14	.00
	9.659	1308.30	.14	1308.47	860.00	.00	9000.00	.00	860.00	9600.00	9340.16	10633.14	10460.00
	9.754	1309.13	.00	1309.38	891.95	.00	9000.00	.00	.00	.00	9498.26	10550.48	.00
	9.754	1309.25	.12	1309.52	710.00	.00	9000.00	.00	710.00	9720.00	9498.26	10550.48	10430.00

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	9.849	1309.99	.00	1310.24	760.21	.00	9000.00	.00	.00	.00	9577.85	10583.29	.00
	9.849	1310.22	.23	1310.47	625.00	.00	9000.00	.00	625.00	9825.00	9577.85	10583.29	10450.00
*	9.943	1312.24	.00	1313.09	653.09	.00	9000.00	.00	.00	.00	9584.10	10852.41	.00
*	9.943	1312.11	-.13	1313.27	468.80	.00	9000.00	.00	468.80	9750.00	9584.10	10852.41	10218.80
*	10.040	1314.74	.00	1315.03	1277.11	.00	9000.00	.00	.00	.00	9436.90	10962.81	.00
*	10.040	1315.36	.62	1315.64	693.60	.00	9000.00	.00	693.60	9610.00	9436.90	10962.81	10303.60
	10.130	1316.37	.00	1316.98	490.00	.00	9000.00	.00	490.00	9800.00	9549.49	10335.77	10290.00
	10.130	1316.68	.31	1317.28	440.00	.00	9000.00	.00	440.00	9850.00	9549.49	10335.77	10290.00
	10.230	1318.09	.00	1318.70	528.55	.00	9000.00	.00	.00	.00	9642.87	10274.69	.00
	10.230	1318.17	.08	1318.94	360.00	.00	9000.00	.00	360.00	9820.00	9642.87	10274.69	10180.00
*	10.320	1319.31	.00	1319.59	645.38	.00	9000.00	.00	.00	.00	9643.82	10351.19	.00
	10.320	1319.65	.35	1320.02	429.46	.00	9000.00	.00	429.46	9699.54	9643.82	10351.19	10129.00
	10.380	1319.66	.00	1319.96	761.53	.00	9000.00	.00	.00	.00	9642.02	10574.64	.00
	10.380	1320.14	.48	1320.40	598.12	.00	9000.00	.00	598.12	9727.28	9642.02	10574.64	10325.40
*	10.400	1319.92	.00	1320.05	1208.30	.00	9000.00	.00	.00	.00	9199.40	10440.51	.00
	10.400	1320.21	.29	1320.47	638.53	.00	9000.00	.00	638.53	9701.97	9199.40	10440.51	10340.50
	10.410	1320.31	.00	1320.48	846.07	.00	9000.00	.00	.00	.00	9553.67	10449.52	.00
	10.410	1320.33	.02	1320.55	643.13	.00	9000.00	.00	643.13	9723.47	9553.67	10449.52	10366.60
	10.510	1320.58	.00	1320.81	616.82	.00	9000.00	.00	.00	.00	9633.57	10293.94	.00
	10.510	1320.60	.03	1320.91	471.08	.00	9000.00	.00	471.08	9792.82	9633.57	10293.94	10263.90
*	10.610	1321.38	.00	1322.47	499.90	.00	9000.00	.00	.00	.00	9505.26	10190.08	.00
*	10.610	1321.32	-.07	1322.53	430.15	.00	9000.00	.00	430.15	9724.62	9505.26	10190.08	10154.77
	10.700	1324.22	.00	1324.86	678.89	.00	9000.00	.00	.00	.00	9703.36	10409.29	.00
*	10.700	1324.57	.35	1325.22	540.91	.00	9000.00	.00	540.91	9794.49	9703.36	10409.29	10335.40
*	10.800	1325.43	.00	1325.61	680.92	.00	9000.00	.00	.00	.00	9787.41	10492.06	.00
*	10.800	1325.83	.40	1326.01	544.06	.00	9000.00	.00	544.06	9826.80	9787.41	10492.06	10370.86
*	10.890	1325.69	.00	1325.83	653.38	.00	9000.00	.00	.00	.00	9680.52	10386.00	.00
*	10.890	1326.10	.42	1326.28	474.28	.00	9000.00	.00	474.28	9727.32	9680.52	10386.00	10201.60
*	10.990	1327.26	.00	1328.24	574.09	.00	9000.00	.00	.00	.00	9587.35	10272.96	.00
*	10.990	1327.25	-.01	1328.24	572.94	.00	9000.00	.00	594.51	9636.09	9587.35	10272.96	10230.60
*	11.080	1329.46	.00	1329.79	640.51	.00	9000.00	.00	.00	.00	9631.22	10338.21	.00
*	11.080	1329.98	.52	1330.23	608.32	.00	9000.00	.00	608.32	9680.07	9631.22	10338.21	10288.39
	11.150	1329.91	.00	1330.39	679.73	.00	9000.00	.00	.00	.00	9649.22	10426.70	.00
	11.150	1330.68	.77	1330.96	668.63	.00	9000.00	.00	668.63	9694.37	9649.22	10426.70	10363.00

SECNO CWSEL DIFKWS EG TOPWID QLOB QCH QROB PERENC STENCL STCHL STCHR STENCR

	11.170	1331.77	.00	1332.06	714.30	.00	9000.00	.00	.00	.00	9659.14	10421.09	.00
	11.170	1331.83	.06	1332.11	680.61	.00	9000.00	.00	680.61	9691.49	9659.14	10421.09	10372.10
	11.270	1332.73	.00	1333.74	568.69	.00	9000.00	.00	.00	.00	9689.43	10501.46	.00
	11.270	1333.41	.68	1333.97	561.28	.00	9000.00	.00	561.28	9740.12	9689.43	10501.46	10301.40
*	11.360	1335.23	.00	1335.69	609.13	.00	9000.00	.00	.00	.00	9689.70	10406.72	.00
	11.360	1335.56	.33	1335.95	581.21	.00	9000.00	.00	581.21	9762.83	9689.70	10406.72	10344.04
*	11.460	1336.48	.00	1337.20	648.18	.00	9000.00	.00	.00	.00	9689.53	10386.29	.00
	11.460	1336.95	.47	1337.48	579.10	.00	9000.00	.00	579.10	9767.40	9689.53	10386.29	10346.50
*	11.550	1338.41	.00	1338.74	641.88	.00	9000.00	.00	.00	.00	9660.11	10416.47	.00
	11.550	1338.56	.15	1338.88	568.02	.00	9000.00	.00	568.02	9777.43	9660.11	10416.47	10345.45
*	11.650	1339.52	.00	1340.04	616.31	.00	9000.00	.00	.00	.00	9602.58	10342.28	.00
	11.650	1339.82	.30	1340.34	495.63	.00	9000.00	.00	495.63	9688.44	9602.58	10342.28	10184.07
	11.740	1341.57	.00	1342.45	581.50	.00	9000.00	.00	.00	.00	9640.17	10345.18	.00
	11.740	1341.89	.33	1342.92	375.57	.00	9000.00	.00	375.57	9741.33	9640.17	10345.18	10116.90
	11.840	1343.89	.00	1344.88	500.39	.00	9000.00	.00	.00	.00	9623.74	10379.09	.00
	11.840	1344.10	.21	1345.43	273.26	.00	9000.00	.00	273.26	9909.04	9623.74	10379.09	10182.30
	11.930	1345.97	.00	1346.62	521.10	.00	9000.00	.00	.00	.00	9626.11	10302.90	.00
	11.930	1346.45	.48	1347.18	332.78	.00	9000.00	.00	332.78	9890.96	9626.11	10302.90	10223.74
*	12.030	1346.91	.00	1347.08	689.75	.00	9000.00	.00	.00	.00	9850.90	10639.52	.00
	12.030	1347.43	.52	1347.67	460.96	.00	9000.00	.00	460.96	9947.14	9850.90	10639.52	10408.10
*	12.120	1347.05	.00	1347.59	604.06	.00	9000.00	.00	.00	.00	9893.70	10542.73	.00
*	12.120	1347.55	.50	1348.19	376.74	.00	9000.00	.00	376.74	9957.26	9893.70	10542.73	10334.00
	12.220	1348.64	.00	1349.52	534.35	.00	9000.00	.00	.00	.00	9767.79	10389.28	.00
*	12.220	1349.16	.53	1350.12	359.51	.00	9000.00	.00	359.51	9863.55	9767.79	10389.28	10223.06
*	12.310	1350.06	.00	1350.55	337.58	.00	9000.00	.00	.00	.00	9821.47	10216.42	.00
*	12.310	1350.57	.51	1351.12	243.82	.00	9000.00	.00	243.82	9880.80	9821.47	10216.42	10124.62
	12.410	1350.64	.00	1351.38	304.43	.00	9000.00	.00	.00	.00	9457.00	9829.13	.00
	12.410	1351.05	.41	1351.87	244.35	.00	9000.00	.00	244.35	9509.31	9457.00	9829.13	9753.66
	12.500	1351.50	.00	1352.37	241.46	.00	9000.00	.00	.00	.00	9879.22	10203.88	.00
	12.500	1351.93	.43	1352.69	233.47	.00	9000.00	.00	235.49	9941.51	9879.22	10203.88	10177.00
*	12.540	1351.81	.00	1353.67	224.08	.00	9000.00	.00	.00	.00	9920.51	10172.71	.00
*	12.540	1352.01	.20	1354.04	196.32	.00	9000.00	.00	196.32	9946.15	9920.51	10172.71	10142.47
*	12.560	1353.07	.00	1354.06	233.48	.00	9000.00	.00	.00	.00	9925.62	10182.48	.00
*	12.560	1353.07	.00	1354.14	215.55	.00	9000.00	.00	215.55	9941.17	9925.62	10182.48	10156.72

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	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
*	12.600	1355.70	.00	1357.28	283.31	.00	9000.00	.00	.00	.00	9827.22	10216.73	.00
*	12.600	1356.32	.62	1358.44	181.82	.00	9000.00	.00	181.82	9897.07	9827.22	10216.73	10078.89

*	12.690	1358.45	.00	1359.00	412.99	.00	9000.00	.00	.00	.00	9813.14	10254.89	.00
*	12.690	1359.37	.92	1359.95	295.17	.00	9000.00	.00	295.17	9925.24	9813.14	10254.89	10220.41
	12.780	1359.42	.00	1360.58	305.31	.00	9000.00	.00	305.31	9800.00	9572.00	10150.24	10105.31
	12.780	1360.07	.65	1361.11	270.49	.00	9000.00	.00	270.49	9834.82	9572.00	10150.24	10105.31
*	12.880	1361.24	.00	1361.51	563.05	.00	9000.00	.00	.00	.00	9651.35	10272.67	.00
*	12.880	1361.70	.45	1362.15	348.54	.00	9000.00	.00	348.54	9860.85	9651.35	10272.67	10209.39
*	12.970	1362.56	.00	1363.68	481.51	.00	9000.00	.00	.00	.00	9716.43	10240.65	.00
*	12.970	1362.84	.28	1364.20	359.70	.00	9000.00	.00	359.70	9809.27	9716.43	10240.65	10168.97
*	13.070	1365.11	.00	1365.46	620.04	.00	9000.00	.00	.00	.00	9617.61	10264.93	.00
*	13.070	1365.71	.59	1366.18	368.94	.00	9000.00	.00	368.94	9795.38	9617.61	10264.93	10164.32
*	13.160	1366.14	.00	1366.86	564.17	.00	9000.00	.00	.00	.00	9498.70	10227.67	.00
	13.160	1366.66	.52	1367.37	412.29	.00	9000.00	.00	412.29	9656.19	9498.70	10227.67	10068.48
*	13.250	1367.40	.00	1367.62	639.79	.00	9000.00	.00	.00	.00	9487.19	10186.86	.00
*	13.250	1367.95	.55	1368.31	420.13	.00	9000.00	.00	420.13	9610.09	9487.19	10186.86	10030.22
	13.380	1367.63	.00	1368.31	266.79	.00	9000.00	.00	.00	.00	9748.68	10149.74	.00
	13.380	1368.17	.54	1370.12	130.17	.00	9000.00	.00	130.17	9936.24	9748.68	10149.74	10066.41
	13.400	1367.69	.00	1369.07	171.01	.00	9000.00	.00	.00	.00	9926.96	10103.28	.00
	13.400	1368.56	.88	1370.65	118.23	.00	9000.00	.00	118.23	9971.07	9926.96	10103.28	10089.30
*	13.450	1369.35	.00	1371.15	237.02	.00	9000.00	.00	.00	.00	9818.38	10164.64	.00
	13.450	1369.51	.16	1371.81	164.30	.00	9000.00	.00	164.30	9923.23	9818.38	10164.64	10087.53
*	13.540	1372.49	.00	1373.07	437.72	.00	9000.00	.00	.00	.00	9755.67	10221.45	.00
*	13.540	1373.09	.60	1373.63	337.49	.00	9000.00	.00	337.49	9843.10	9755.67	10221.45	10180.59
	13.640	1373.74	.00	1374.35	477.31	.00	9000.00	.00	.00	.00	9872.45	10393.56	.00
*	13.640	1374.07	.33	1374.79	347.60	.00	9000.00	.00	347.60	9980.00	9872.45	10393.56	10327.60
*	13.730	1374.83	.00	1375.14	451.92	.00	9000.00	.00	.00	.00	9756.12	10220.51	.00
*	13.730	1375.28	.46	1375.58	369.15	.00	9000.00	.00	369.15	9780.92	9756.12	10220.51	10150.07
*	13.830	1375.32	.00	1376.42	456.20	.00	9000.00	.00	.00	.00	9637.61	10280.92	.00
*	13.830	1375.46	.15	1377.22	238.97	.00	9000.00	.00	238.97	9943.33	9637.61	10280.92	10182.30
	13.880	1376.80	.00	1377.72	339.83	.00	8998.89	1.11	.00	.00	9891.11	10249.01	.00
	13.880	1377.57	.78	1378.64	249.61	.00	9000.00	.00	280.78	9871.42	9891.11	10249.01	10152.20
*	13.920	1378.12	.00	1378.33	946.07	.00	8999.91	.09	.00	.00	9608.19	10723.78	.00
*	13.920	1378.93	.81	1379.26	470.51	.00	9000.00	.00	470.51	9859.69	9608.19	10723.78	10330.20

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	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	14.020	1378.88	.00	1380.01	505.07	.00	9000.00	.00	505.07	9836.83	9602.00	10534.10	10341.90
	14.020	1379.64	.76	1380.24	505.07	.00	9000.00	.00	505.07	9836.83	9602.00	10534.10	10341.90
*	14.060	1380.57	.00	1380.82	690.65	2584.18	6415.82	.00	.00	.00	9961.26	10474.87	.00
	14.060	1380.30	-.27	1381.07	333.59	.00	9000.00	.00	333.59	9976.21	9961.26	10474.87	10309.80

	14.110	1381.09	.00	1381.45	550.76	.00	9000.00	.00	.00	.00	9716.21	10292.93	.00
	14.110	1381.65	.56	1382.01	432.22	.00	9000.00	.00	432.22	9788.38	9716.21	10292.93	10220.60
	14.210	1381.88	.00	1382.31	528.91	.00	9000.00	.00	.00	.00	9706.07	10292.61	.00
	14.210	1382.33	.45	1383.11	279.18	.00	9000.00	.00	279.18	9926.42	9706.07	10292.61	10205.60
	14.300	1383.03	.00	1383.54	623.43	.00	9000.00	.00	.00	.00	9786.38	10527.72	.00
	14.300	1383.82	.79	1384.51	267.77	.00	9000.00	.00	298.73	9903.17	9786.38	10527.72	10201.90
	14.340	1383.31	.00	1384.06	528.83	.00	8177.16	822.84	.00	.00	9751.05	10053.35	.00
	14.340	1384.10	.79	1384.88	268.88	.00	9000.00	.00	268.88	9759.62	9751.05	10053.35	10028.50
*	14.390	1384.38	.00	1384.79	374.06	.00	9000.00	.00	374.06	9876.07	9795.69	10413.71	10250.13
	14.390	1385.00	.62	1385.54	286.57	.00	9000.00	.00	286.57	9926.73	9795.69	10413.71	10213.30
*	14.440	1384.03	.00	1385.90	197.92	.00	9000.00	.00	.00	.00	9812.38	10021.82	.00
	14.440	1384.92	.89	1386.23	186.05	.00	9000.00	.00	186.05	9827.27	9812.38	10021.82	10013.32
*	14.470	1384.03	.00	1385.90	211.79	.00	6000.00	.00	.00	.00	9813.54	10046.91	.00
*	14.470	1384.92	.89	1386.23	172.57	.00	6000.00	.00	172.57	9843.03	9813.54	10046.91	10015.60
*	14.490	1385.59	.00	1386.05	223.05	.00	6000.00	.00	.00	.00	9805.27	10049.11	.00
*	14.490	1385.91	.31	1386.33	204.88	.00	6000.00	.00	204.88	9826.04	9805.27	10049.11	10030.92
	14.580	1386.26	.00	1386.47	370.39	.00	6000.00	.00	.00	.00	9832.63	10224.78	.00
	14.580	1386.47	.21	1386.70	307.84	.00	6000.00	.00	307.84	9876.58	9832.63	10224.78	10184.42
	14.660	1386.51	.00	1386.74	504.73	.00	6000.00	.00	.00	.00	9568.32	10459.19	.00
	14.660	1386.70	.19	1386.94	411.16	.00	6000.00	.00	411.16	9771.64	9568.32	10459.19	10182.80

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	.437	.00	.00	.00	1144.00	20000.00	1167.30	1148.28	1167.34	.72	1.63	12300.70	23500.76
	.437	.00	.00	.00	1144.00	20000.00	1167.30	1148.28	1167.34	.72	1.63	12300.70	23500.76
*	.475	200.00	.00	.00	1158.00	20000.00	1167.23	1161.38	1167.44	8.55	3.71	5389.50	6841.85
*	.475	200.00	.00	.00	1158.00	20000.00	1167.23	1161.38	1167.44	8.54	3.71	5389.20	6844.65
	.491	280.00	.00	.00	1160.00	20000.00	1167.32	1164.63	1167.80	9.25	5.61	3567.47	6577.28
	.491	280.00	.00	.00	1160.00	20000.00	1167.31	1164.65	1167.81	9.50	5.71	3502.70	6487.17
*	.568	410.00	.00	.00	1160.00	20000.00	1167.38	1166.95	1168.85	33.52	9.73	2055.84	3454.32
*	.568	410.00	.00	.00	1160.00	20000.00	1167.41	1166.84	1168.98	46.21	10.04	1991.25	2941.99
*	.663	500.00	.00	.00	1160.00	20000.00	1169.53	1169.53	1171.53	38.00	11.34	1764.14	3244.53
	.663	500.00	.00	.00	1160.00	20000.00	1169.66	1169.45	1171.84	59.77	11.84	1689.15	2586.88
	.758	500.00	.00	.00	1162.00	20000.00	1172.44	1171.74	1173.97	56.83	9.93	2014.51	2653.06
	.758	500.00	.00	.00	1162.00	20000.00	1172.95	1171.63	1174.37	36.79	9.58	2087.53	3297.52

*	.776	99.00	.00	.00	1166.00	20000.00	1173.50	1173.50	1175.27	39.79	10.67	1874.47	3170.76
*	.776	99.00	.00	.00	1166.00	20000.00	1173.30	1173.30	1175.46	38.04	11.81	1694.16	3242.60
*	.791	78.00	1171.44	1168.76	1166.00	20000.00	1176.48	.00	1176.90	5.81	5.16	3877.12	8298.32
	.791	78.00	1171.44	1168.76	1166.00	20000.00	1176.68	.00	1177.30	5.57	6.36	3145.91	8477.93
*	.852	320.00	.00	.00	1166.00	20000.00	1176.49	1175.53	1177.48	29.10	7.97	2509.38	3707.48
*	.852	320.00	.00	.00	1166.00	20000.00	1176.84	1175.53	1177.81	37.06	7.90	2531.74	3285.36
*	.947	500.00	.00	.00	1170.00	20000.00	1178.29	1178.27	1179.90	71.30	10.17	1966.43	2368.54
	.947	500.00	.00	.00	1170.00	20000.00	1178.83	1178.24	1180.12	51.90	9.12	2193.05	2776.11
*	1.040	500.00	.00	.00	1174.00	20000.00	1181.99	1181.67	1183.46	86.59	9.71	2059.77	2149.27
	1.040	500.00	.00	.00	1174.00	20000.00	1182.00	1181.84	1183.70	94.16	10.45	1914.68	2061.04
*	1.136	500.00	.00	.00	1176.00	20000.00	1184.89	1183.73	1185.83	27.93	7.81	2561.32	3784.50
*	1.136	500.00	.00	.00	1176.00	20000.00	1185.44	1183.71	1186.32	30.07	7.52	2659.04	3647.01
	1.231	500.00	.00	.00	1176.00	20000.00	1186.26	1184.22	1186.89	14.87	6.38	3135.96	5186.13
	1.231	500.00	.00	.00	1176.00	20000.00	1186.76	1183.87	1187.47	17.22	6.75	2963.56	4819.49
	1.326	500.00	.00	.00	1176.00	20000.00	1186.90	1185.18	1187.93	21.30	8.15	2453.02	4334.01
	1.326	500.00	.00	.00	1176.00	20000.00	1187.25	1184.44	1188.90	26.48	10.29	1943.20	3886.38
	1.420	500.00	.00	.00	1176.00	20000.00	1188.01	1184.52	1188.92	16.82	7.62	2625.12	4876.94
	1.420	500.00	.00	.00	1176.00	20000.00	1188.71	1184.40	1189.99	15.12	9.07	2204.70	5142.95
*	1.515	497.00	.00	.00	1178.00	20000.00	1189.75	1189.75	1191.59	34.25	10.89	1836.96	3417.25
*	1.515	497.00	.00	.00	1178.00	20000.00	1189.75	1189.51	1191.79	73.80	11.47	1744.41	2328.08

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	1.554	190.00	.00	.00	1177.00	20000.00	1191.72	1189.81	1192.28	9.14	6.00	3335.53	6614.23
*	1.554	190.00	.00	.00	1177.00	20000.00	1191.67	1189.62	1192.55	10.29	7.57	2642.82	6235.41
	1.570	91.00	1187.80	1185.99	1177.00	20000.00	1192.33	.00	1192.95	10.90	6.31	3170.42	6059.06
	1.570	91.00	1187.80	1185.99	1177.00	20000.00	1191.78	.00	1192.94	18.57	8.66	2310.62	4640.81
	1.582	48.75	.00	.00	1180.00	20000.00	1192.57	1189.82	1193.05	12.62	5.58	3582.05	5629.24
	1.582	48.75	.00	.00	1180.00	20000.00	1192.67	1189.86	1193.21	12.09	5.85	3417.02	5752.58
*	1.610	210.00	.00	.00	1185.00	20000.00	1192.80	1189.39	1193.22	4.70	5.17	3866.50	9227.08
*	1.610	210.00	.00	.00	1185.00	20000.00	1192.94	1189.37	1193.39	5.69	5.36	3730.02	8382.61
	1.705	500.00	.00	.00	1185.00	20000.00	1193.06	1190.13	1193.55	8.32	5.59	3578.10	6932.72
	1.705	500.00	.00	.00	1185.00	20000.00	1193.25	1190.08	1193.78	9.38	5.85	3418.20	6531.25
	1.770	350.00	.00	.00	1185.00	20000.00	1193.27	1189.97	1193.80	5.47	5.84	3426.91	8548.95
	1.770	350.00	.00	.00	1185.00	20000.00	1193.46	1189.88	1194.10	6.53	6.44	3106.86	7826.33
	1.787	62.00	.00	.00	1185.00	20000.00	1193.19	1189.86	1193.91	5.90	6.81	2938.93	8234.34
	1.787	62.00	.00	.00	1185.00	20000.00	1193.47	1189.85	1194.16	6.15	6.63	3018.14	8061.60
*	1.794	55.00	.00	.00	1188.00	20000.00	1195.90	1195.90	1197.54	95.25	10.28	1945.16	2049.29
*	1.794	55.00	.00	.00	1188.00	20000.00	1195.99	1195.99	1198.19	114.08	11.89	1682.60	1872.55

*	1.799	25.00	.00	.00	1188.00	20000.00	1196.14	1196.14	1197.92	109.30	10.70	1868.78	1913.04
*	1.799	25.00	.00	.00	1188.00	20000.00	1196.43	1196.43	1198.57	116.88	11.72	1705.87	1849.94
*	1.827	144.00	.00	.00	1192.00	20000.00	1198.05	1196.76	1198.99	40.77	7.79	2567.66	3132.34
	1.827	144.00	.00	.00	1192.00	20000.00	1198.79	1196.77	1199.55	27.16	7.03	2844.82	3837.92
*	1.894	350.00	.00	.00	1191.00	20000.00	1199.06	1195.43	1199.45	4.41	5.05	3962.11	9518.48
*	1.894	350.00	.00	.00	1191.00	20000.00	1199.54	1195.41	1199.95	4.68	5.15	3882.50	9246.33
*	1.990	500.00	.00	.00	1191.00	20000.00	1199.40	1197.43	1199.93	22.23	5.85	3416.79	4241.66
*	1.990	500.00	.00	.00	1191.00	20000.00	1199.90	1197.34	1200.38	17.11	5.56	3599.37	4835.76
*	2.047	308.00	.00	.00	1191.00	20000.00	1200.13	1199.67	1201.20	59.79	8.29	2413.95	2586.47
*	2.047	308.00	.00	.00	1191.00	20000.00	1200.51	1199.80	1201.54	68.42	8.16	2450.92	2417.81
	2.080	192.00	.00	.00	1191.00	20000.00	1201.21	1200.30	1202.39	59.16	8.71	2295.19	2600.15
	2.080	192.00	.00	.00	1191.00	20000.00	1201.49	1200.50	1202.87	56.40	9.43	2121.33	2663.06
*	2.178	500.00	.00	.00	1194.00	20000.00	1203.52	1201.16	1204.11	20.23	6.18	3234.94	4446.45
*	2.178	500.00	.00	.00	1194.00	20000.00	1203.90	1201.17	1204.47	17.36	6.06	3302.38	4800.39
	2.273	500.00	.00	.00	1194.00	20000.00	1204.43	1201.32	1204.94	13.26	5.75	3476.59	5491.50
	2.273	500.00	.00	.00	1194.00	20000.00	1204.67	1201.33	1205.25	14.10	6.12	3265.98	5327.13
	2.367	500.00	.00	.00	1196.00	20000.00	1204.93	1201.89	1205.57	10.25	6.43	3112.01	6246.17
	2.367	500.00	.00	.00	1196.00	20000.00	1205.30	1201.85	1205.92	12.19	6.32	3164.54	5727.52

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	2.462	500.00	.00	.00	1194.00	20000.00	1205.58	1202.44	1206.20	15.71	6.34	3152.82	5046.38
	2.462	500.00	.00	.00	1194.00	20000.00	1205.98	1202.36	1206.58	14.18	6.24	3204.77	5312.12
	2.557	500.00	.00	.00	1196.00	20000.00	1206.18	1201.74	1206.77	8.13	6.12	3268.85	7014.82
*	2.557	500.00	.00	.00	1196.00	20000.00	1206.56	1201.77	1207.09	7.11	5.87	3406.38	7500.70
	2.610	283.00	.00	.00	1194.00	20000.00	1206.32	1201.08	1206.99	5.11	6.61	3024.11	8845.83
	2.610	283.00	.00	.00	1194.00	20000.00	1206.67	1201.09	1207.30	4.60	6.40	3124.67	9322.92
	2.620	50.00	.00	.00	1196.00	20000.00	1206.16	1202.30	1207.22	9.45	8.24	2426.20	6506.34
	2.620	50.00	.00	.00	1196.00	20000.00	1206.52	1202.30	1207.50	8.40	7.94	2518.08	6900.32
	2.629	50.00	.00	.00	1196.00	20000.00	1205.89	1203.43	1207.60	12.02	10.48	1907.85	5767.59
	2.629	50.00	.00	.00	1196.00	20000.00	1206.23	1203.50	1207.89	11.06	10.33	1935.84	6013.55
	2.652	120.00	1210.87	1209.20	1196.00	20000.00	1206.21	.00	1207.81	10.61	10.14	1972.72	6140.97
	2.652	120.00	1210.87	1209.20	1196.00	20000.00	1206.53	.00	1208.02	9.51	9.80	2040.59	6485.47
	2.653	7.00	.00	.00	1196.00	20000.00	1206.22	1203.44	1207.82	10.58	10.13	1974.42	6149.49
	2.653	7.00	.00	.00	1196.00	20000.00	1206.54	1203.42	1208.03	9.49	9.79	2042.13	6493.37
*	2.658	9.00	.00	.00	1196.00	20000.00	1206.09	1206.09	1209.31	34.87	14.39	1389.95	3387.12
	2.658	9.00	.00	.00	1196.00	20000.00	1206.17	1206.17	1209.31	33.46	14.21	1407.79	3457.62
*	2.662	9.00	.00	.00	1196.00	20000.00	1207.57	1206.14	1209.66	17.56	11.63	1720.26	4773.05
	2.662	9.00	.00	.00	1196.00	20000.00	1207.43	1206.10	1209.61	18.54	11.86	1686.35	4644.36

*	2.663	9.00	.00	.00	1196.00	20000.00	1209.23	1203.64	1210.05	4.01	7.29	2743.96	9981.31
*	2.663	9.00	.00	.00	1196.00	20000.00	1209.14	1203.64	1210.01	4.27	7.49	2670.89	9676.39
	2.700	200.00	.00	.00	1199.00	20000.00	1210.00	1204.76	1210.31	6.62	4.48	4459.95	7772.30
	2.700	200.00	.00	.00	1199.00	20000.00	1209.70	1204.84	1210.25	12.23	5.95	3362.72	5719.89
	2.746	190.00	.00	.00	1199.00	20000.00	1210.10	1206.46	1210.51	11.45	5.16	3879.20	5911.78
	2.746	190.00	.00	.00	1199.00	20000.00	1209.94	1206.73	1210.55	18.28	6.29	3179.17	4677.86
	2.770	150.00	.00	.00	1202.00	20000.00	1210.28	1207.27	1210.72	15.94	5.32	3760.94	5009.94
	2.770	150.00	.00	.00	1202.00	20000.00	1210.32	1207.37	1210.86	20.23	5.92	3380.53	4446.93
	2.775	25.00	.00	.00	1203.00	20000.00	1210.23	1208.34	1210.85	32.39	6.31	3167.40	3514.36
*	2.775	25.00	.00	.00	1203.00	20000.00	1210.23	1208.58	1211.04	42.92	7.21	2775.55	3052.88
*	2.780	25.00	.00	.00	1204.00	20000.00	1209.91	1209.68	1211.28	90.20	9.40	2128.05	2105.84
*	2.780	25.00	.00	.00	1204.00	20000.00	1209.85	1209.85	1211.57	117.60	10.54	1897.81	1844.31
*	2.790	50.00	.00	.00	1205.00	20000.00	1210.68	1210.68	1212.19	112.18	9.86	2028.67	1888.33
*	2.790	50.00	.00	.00	1205.00	20000.00	1210.75	1210.75	1212.48	126.78	10.58	1891.05	1776.27
	2.810	83.00	.00	.00	1206.00	20000.00	1211.94	1211.45	1212.99	60.06	8.22	2433.10	2580.70
	2.810	83.00	.00	.00	1206.00	20000.00	1212.01	1211.64	1213.40	77.19	9.45	2115.84	2276.37

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	2.820	67.00	.00	.00	1209.00	20000.00	1212.25	1212.25	1213.70	116.18	9.66	2070.90	1855.50
	2.820	67.00	.00	.00	1209.00	20000.00	1212.61	1212.61	1214.34	125.21	10.53	1898.44	1787.39
*	2.827	35.00	.00	.00	1209.00	20000.00	1213.51	1212.14	1214.09	18.92	6.14	3257.42	4597.57
*	2.827	35.00	.00	.00	1209.00	20000.00	1213.96	1212.44	1214.78	25.70	7.27	2752.37	3945.26
	2.841	65.00	.00	.00	1209.00	20000.00	1213.73	1212.04	1214.23	16.64	5.69	3516.77	4902.47
	2.841	65.00	.00	.00	1209.00	20000.00	1214.27	1212.40	1214.97	20.90	6.68	2993.29	4374.59
	2.936	500.00	.00	.00	1207.00	20000.00	1214.62	1212.36	1215.06	15.83	5.36	3732.34	5026.09
	2.936	500.00	.00	.00	1207.00	20000.00	1215.37	1212.61	1215.89	14.56	5.74	3481.37	5240.61
	3.030	500.00	.00	.00	1207.00	20000.00	1215.44	1213.60	1215.97	19.49	5.89	3396.09	4530.12
	3.030	500.00	.00	.00	1207.00	20000.00	1216.13	1214.13	1216.79	19.75	6.53	3064.73	4500.72
*	3.125	500.00	.00	.00	1206.00	20000.00	1216.38	1213.97	1216.68	8.99	4.44	4508.63	6670.03
*	3.125	500.00	.00	.00	1206.00	20000.00	1217.08	1214.12	1217.54	10.07	5.40	3703.62	6301.76
	3.220	500.00	.00	.00	1211.00	20000.00	1216.67	1215.25	1217.40	13.66	6.87	2909.33	5412.23
	3.220	500.00	.00	.00	1211.00	20000.00	1217.57	1215.26	1218.09	10.89	5.76	3472.27	6060.93
*	3.270	265.00	.00	.00	1211.00	20000.00	1217.19	1216.23	1217.95	33.81	6.99	2862.99	3439.64
*	3.270	265.00	.00	.00	1211.00	20000.00	1217.85	1216.45	1218.65	29.82	7.16	2792.26	3662.49
	3.280	55.00	.00	.00	1213.00	20000.00	1217.56	1216.23	1218.18	36.08	6.35	3147.80	3329.72
	3.280	55.00	.00	.00	1213.00	20000.00	1218.13	1216.48	1218.84	31.10	6.76	2959.11	3586.61
	3.409	489.92	.00	.00	1215.00	20000.00	1219.13	1217.79	1219.66	24.71	5.84	3421.84	4023.21
	3.409	489.92	.00	.00	1215.00	20000.00	1219.70	1218.41	1220.47	34.53	7.05	2837.73	3403.78

*	3.488	420.00	.00	.00	1215.00	20000.00	1220.50	1219.81	1221.22	54.83	6.81	2937.77	2701.08
	3.488	420.00	.00	.00	1215.00	20000.00	1221.22	1220.11	1222.09	41.15	7.45	2683.74	3117.90
*	3.490	30.00	.00	.00	1215.00	20000.00	1221.04	1219.67	1221.43	22.72	4.80	4031.38	4195.80
	3.490	30.00	.00	.00	1215.00	20000.00	1221.30	1220.39	1222.26	46.91	7.86	2543.57	2920.11
	3.504	50.00	.00	.00	1216.00	20000.00	1220.95	1220.50	1221.79	67.59	7.36	2719.04	2432.67
	3.504	50.00	.00	.00	1216.00	20000.00	1221.52	1220.73	1222.52	53.37	8.05	2484.86	2737.64
	3.510	35.00	.00	.00	1216.00	20000.00	1221.47	1220.58	1222.05	40.71	6.12	3267.01	3134.66
	3.510	35.00	.00	.00	1216.00	20000.00	1221.85	1220.81	1222.73	41.20	7.51	2662.22	3115.91
	3.548	200.00	.00	.00	1214.00	20000.00	1222.29	1220.86	1222.76	28.98	5.51	3628.54	3715.40
	3.548	200.00	.00	.00	1214.00	20000.00	1222.83	1220.87	1223.43	24.48	6.23	3210.50	4042.16
	3.590	98.00	.00	.00	1215.00	20000.00	1222.61	1220.48	1223.02	20.17	5.13	3901.78	4453.42
	3.590	98.00	.00	.00	1215.00	20000.00	1223.14	1220.55	1223.66	16.61	5.75	3475.61	4907.88
	3.600	142.00	.00	.00	1215.00	20000.00	1222.87	1220.61	1223.32	20.51	5.42	3688.13	4416.40
	3.600	142.00	.00	.00	1215.00	20000.00	1223.36	1220.52	1223.88	14.81	5.82	3433.89	5197.40

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	3.660	305.00	.00	.00	1214.00	20000.00	1223.43	1220.69	1223.97	19.75	5.88	3411.66	4499.91
	3.660	305.00	.00	.00	1214.00	20000.00	1223.75	1220.56	1224.37	14.47	6.33	3161.48	5257.02
	3.710	303.00	.00	.00	1216.00	20000.00	1223.79	1221.89	1224.81	23.02	8.11	2465.25	4168.64
	3.710	303.00	.00	.00	1216.00	20000.00	1223.99	1221.83	1225.13	24.35	8.57	2333.54	4052.98
	3.730	82.00	.00	.00	1217.00	20000.00	1223.88	1222.45	1225.16	32.88	9.07	2204.33	3488.05
	3.730	82.00	.00	.00	1217.00	20000.00	1223.99	1222.67	1225.62	37.00	10.24	1952.33	3288.01
	3.760	174.00	.00	.00	1215.00	20000.00	1223.79	1223.01	1226.20	22.92	12.45	1606.60	4177.68
	3.760	174.00	.00	.00	1215.00	20000.00	1224.18	1223.00	1226.34	19.27	11.80	1694.56	4556.46
*	3.780	85.50	1234.00	1232.33	1216.00	20000.00	1224.64	.00	1226.64	16.80	11.36	1760.99	4879.64
	3.780	85.50	1234.00	1232.33	1216.00	20000.00	1224.56	.00	1226.60	17.37	11.47	1743.03	4799.16
	3.811	159.85	.00	.00	1217.00	20000.00	1226.78	1223.18	1227.32	14.16	5.92	3377.76	5315.51
*	3.811	159.85	.00	.00	1217.00	20000.00	1225.77	1223.75	1227.19	37.65	9.54	2096.37	3259.28
	3.883	339.16	.00	.00	1217.00	20000.00	1227.44	1223.01	1227.74	7.73	4.40	4542.40	7193.37
*	3.883	339.16	.00	.00	1217.00	20000.00	1227.66	1223.04	1228.00	7.74	4.72	4238.88	7189.60
	3.977	500.00	.00	.00	1218.00	20000.00	1227.79	1224.08	1228.16	7.84	4.88	4098.94	7142.74
	3.977	500.00	.00	.00	1218.00	20000.00	1228.05	1224.11	1228.40	7.98	4.79	4178.75	7081.49
	4.072	500.00	.00	.00	1218.00	20000.00	1228.18	1225.26	1228.72	12.59	5.89	3394.26	5636.02
	4.072	500.00	.00	.00	1218.00	20000.00	1228.46	1225.28	1229.00	14.51	5.89	3396.41	5249.58
*	4.167	500.00	.00	.00	1220.00	20000.00	1228.85	1223.70	1229.08	2.97	3.86	5178.41	11608.89
	4.167	500.00	.00	.00	1220.00	20000.00	1229.19	1223.69	1229.40	3.38	3.75	5332.35	10874.84
*	4.220	250.00	.00	.00	1220.00	20000.00	1228.87	1225.30	1229.26	8.92	4.98	4012.45	6697.07
*	4.220	250.00	.00	.00	1220.00	20000.00	1229.22	1225.32	1229.59	8.50	4.86	4119.40	6858.81

	4.250	200.00	.00	.00	1220.00	20000.00	1229.00	1225.73	1229.41	5.91	5.14	3888.08	8229.17
	4.250	200.00	.00	.00	1220.00	20000.00	1229.29	1225.85	1229.81	7.12	5.75	3478.05	7494.27
*	4.290	215.00	.00	.00	1221.00	20000.00	1229.06	1226.93	1229.73	19.46	6.53	3060.70	4533.28
	4.290	215.00	.00	.00	1221.00	20000.00	1229.33	1227.06	1230.19	20.53	7.45	2685.02	4414.28
	4.356	285.00	.00	.00	1222.00	20000.00	1229.76	1227.32	1230.26	15.20	5.68	3521.15	5130.18
	4.356	285.00	.00	.00	1222.00	20000.00	1230.02	1227.42	1230.74	15.91	6.81	2938.37	5014.51
	4.451	500.00	.00	.00	1223.00	20000.00	1230.51	1228.20	1231.04	15.42	5.88	3402.23	5092.95
	4.451	500.00	.00	.00	1223.00	20000.00	1231.03	1228.26	1231.52	12.69	5.60	3571.43	5615.40
*	4.546	382.96	.00	.00	1224.00	20000.00	1231.15	1229.94	1232.09	38.56	7.75	2580.16	3220.59
*	4.546	382.96	.00	.00	1224.00	20000.00	1231.55	1229.95	1232.40	32.39	7.39	2706.41	3514.05
	4.640	433.00	.00	.00	1225.00	20000.00	1232.92	1230.83	1233.54	25.86	6.30	3174.67	3933.24
	4.640	433.00	.00	.00	1225.00	20000.00	1232.94	1231.03	1233.75	29.76	7.24	2764.18	3666.34

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	4.735	490.00	.00	.00	1226.00	20000.00	1233.96	1230.26	1234.24	7.22	4.26	4692.26	7443.58
*	4.735	490.00	.00	.00	1226.00	20000.00	1234.16	1230.92	1234.75	13.15	6.17	3240.16	5514.46
	4.830	500.00	.00	.00	1228.00	20000.00	1234.19	1231.19	1234.57	4.46	4.99	4010.22	9469.70
*	4.830	500.00	.00	.00	1228.00	20000.00	1234.77	1231.30	1235.15	4.00	4.95	4040.49	9997.81
	4.850	100.00	.00	.00	1228.00	20000.00	1235.54	1235.54	1237.50	114.65	11.25	1777.14	1867.82
	4.850	100.00	.00	.00	1228.00	20000.00	1235.49	1235.49	1237.70	106.58	11.93	1676.38	1937.30
*	4.855	25.00	.00	.00	1228.00	20000.00	1238.09	1238.09	1239.54	46.41	9.67	2068.89	2935.68
*	4.855	25.00	.00	.00	1228.00	20000.00	1238.18	1238.18	1239.75	39.85	10.04	1991.54	3168.07
*	4.870	84.00	1240.07	1235.04	1228.00	20000.00	1239.02	1238.93	1240.33	44.97	9.17	2181.07	2982.45
*	4.870	84.00	1240.07	1235.04	1228.00	20000.00	1239.07	1238.98	1240.69	42.17	10.22	1957.13	3079.92
*	4.873	15.00	.00	.00	1229.00	17000.00	1240.48	1236.48	1240.68	4.34	3.59	4733.69	8159.25
*	4.873	15.00	.00	.00	1229.00	17000.00	1240.89	1236.47	1241.12	3.92	3.92	4331.75	8581.02
*	4.892	100.00	.00	.00	1228.00	17000.00	1240.64	1231.79	1240.73	.74	2.39	7099.11	19780.90
*	4.892	100.00	.00	.00	1228.00	17000.00	1241.08	1231.79	1241.18	.61	2.51	6768.97	21853.44
	4.924	173.00	.00	.00	1228.00	17000.00	1240.67	1231.96	1240.74	.52	2.17	7831.33	23601.40
	4.924	173.00	.00	.00	1228.00	17000.00	1241.10	1231.96	1241.19	.70	2.40	7092.24	20288.15
	4.952	150.00	.00	.00	1228.00	17000.00	1240.70	1232.67	1240.75	.58	1.87	9080.89	22336.30
	4.952	150.00	.00	.00	1228.00	17000.00	1241.16	1232.69	1241.21	.61	1.84	9257.18	21738.51
*	4.990	499.13	.00	.00	1229.00	17000.00	1240.71	1235.51	1240.84	3.56	2.98	5707.47	9015.98
*	4.990	499.13	.00	.00	1229.00	17000.00	1241.16	1235.82	1241.32	5.62	3.21	5300.76	7173.81
*	5.110	491.90	.00	.00	1230.00	13655.00	1240.87	1235.99	1241.07	4.90	3.50	3901.47	6170.78
	5.110	491.90	.00	.00	1230.00	13655.00	1241.39	1235.97	1241.56	3.85	3.28	4161.94	6961.52
	5.205	429.00	.00	.00	1231.00	13655.00	1241.10	1236.84	1241.28	5.11	3.44	3974.55	6038.73
	5.205	429.00	.00	.00	1231.00	13655.00	1241.54	1236.89	1241.81	6.43	4.15	3289.48	5386.78

*	5.300	574.42	.00	.00	1234.00	13655.00	1241.48	1238.72	1241.82	15.32	4.68	2919.43	3488.31
	5.300	574.42	.00	.00	1234.00	13655.00	1241.97	1238.73	1242.32	11.51	4.76	2865.80	4024.86
	5.357	310.00	.00	.00	1235.00	13655.00	1241.91	1239.60	1242.40	18.77	5.59	2443.07	3151.62
	5.357	310.00	.00	.00	1235.00	13655.00	1242.27	1239.71	1242.79	14.54	5.80	2352.49	3581.18
*	5.360	100.00	.00	.00	1239.00	13655.00	1243.02	1243.02	1244.29	42.70	9.05	1509.04	2089.70
*	5.360	100.00	.00	.00	1239.00	13655.00	1242.91	1242.91	1244.47	41.02	10.04	1359.59	2131.92
*	5.372	80.00	.00	.00	1239.00	13655.00	1243.63	1243.63	1244.96	42.24	9.27	1473.12	2101.05
*	5.372	80.00	.00	.00	1239.00	13655.00	1243.58	1243.58	1245.21	40.49	10.24	1333.95	2145.94
*	5.385	70.00	.00	.00	1236.00	13655.00	1244.99	1242.61	1245.38	10.47	5.01	2727.83	4221.06
*	5.385	70.00	.00	.00	1236.00	13655.00	1245.14	1242.94	1245.72	20.23	6.08	2246.23	3036.25

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	5.492	440.00	.00	.00	1236.00	13655.00	1245.41	1242.42	1245.77	7.67	4.88	2800.05	4929.21
*	5.492	440.00	.00	.00	1236.00	13655.00	1245.95	1242.50	1246.31	8.40	4.78	2857.43	4712.37
	5.587	500.00	.00	.00	1236.00	12972.00	1245.82	1241.43	1246.09	4.84	4.24	3058.00	5899.38
	5.587	500.00	.00	.00	1236.00	12972.00	1246.38	1241.44	1246.65	5.23	4.16	3117.18	5671.80
	5.682	500.00	.00	.00	1236.00	12928.00	1246.06	1241.66	1246.33	4.28	4.12	3135.07	6246.46
	5.682	500.00	.00	.00	1236.00	12928.00	1246.62	1242.12	1247.00	7.29	4.95	2609.48	4788.49
	5.777	500.00	.00	.00	1236.00	12836.00	1246.32	1241.56	1246.60	6.85	4.22	3039.83	4906.12
	5.777	500.00	.00	.00	1236.00	12836.00	1247.04	1242.18	1247.39	7.71	4.73	2715.79	4623.29
	5.867	465.00	.00	.00	1238.00	11769.00	1246.60	1244.16	1247.07	10.90	5.48	2147.61	3564.74
	5.867	465.00	.00	.00	1238.00	11769.00	1247.46	1244.06	1247.82	11.38	4.84	2429.11	3488.00
*	5.871	20.00	.00	.00	1241.00	11706.00	1247.08	1247.08	1248.41	133.26	9.26	1264.72	1014.05
*	5.871	20.00	.00	.00	1241.00	11706.00	1247.07	1247.07	1248.47	131.66	9.50	1232.34	1020.19
*	5.886	78.00	.00	.00	1250.00	11500.00	1251.85	1251.85	1252.60	22.78	4.28	1999.68	2409.33
*	5.886	78.00	.00	.00	1250.00	11500.00	1252.49	1252.49	1253.74	44.18	8.97	1282.73	1730.07
*	5.900	80.00	1252.36	1250.86	1247.00	17000.00	1252.73	.00	1253.19	18.98	5.46	3113.26	3902.14
*	5.900	80.00	1252.36	1250.86	1247.00	17000.00	1253.25	.00	1253.74	11.29	5.63	3017.80	5058.51
*	5.925	130.00	.00	.00	1250.00	17000.00	1253.05	1252.50	1253.65	52.86	6.22	2730.99	2338.17
*	5.925	130.00	.00	.00	1250.00	17000.00	1253.39	1252.82	1254.15	54.69	6.97	2438.11	2298.68
*	5.966	360.00	.00	.00	1250.00	17000.00	1254.26	1252.40	1254.58	14.01	4.58	3712.16	4541.02
*	5.966	360.00	.00	.00	1250.00	17000.00	1254.77	1252.58	1255.10	13.54	4.62	3680.26	4620.45
	6.060	500.00	.00	.00	1250.00	17000.00	1254.82	1253.07	1255.28	11.86	5.44	3122.38	4935.39
	6.060	500.00	.00	.00	1250.00	17000.00	1255.36	1253.06	1255.72	10.97	4.78	3558.45	5131.75
	6.155	500.00	.00	.00	1250.00	11920.00	1255.47	1252.33	1255.64	3.14	3.39	3514.54	6724.12
	6.155	500.00	.00	.00	1250.00	11920.00	1255.84	1252.50	1256.07	3.62	3.82	3124.41	6263.15
*	6.250	500.00	.00	.00	1250.00	11920.00	1255.62	1253.39	1256.01	12.39	5.02	2374.67	3386.50
*	6.250	500.00	.00	.00	1250.00	11920.00	1256.07	1253.40	1256.41	11.22	4.70	2535.30	3558.66

*	6.345	500.00	.00	.00	1253.00	11920.00	1257.60	1257.60	1258.96	99.45	9.38	1270.63	1195.28
*	6.345	500.00	.00	.00	1253.00	11920.00	1257.69	1257.69	1259.15	100.91	9.69	1229.52	1186.64
*	6.390	230.00	.00	.00	1257.00	11920.00	1260.24	1260.24	1261.51	43.63	9.03	1320.72	1804.66
	6.390	230.00	.00	.00	1257.00	11920.00	1260.20	1260.20	1261.60	42.21	9.47	1258.21	1834.72
*	6.400	38.00	.00	.00	1257.00	17000.00	1261.25	1260.33	1261.78	28.37	5.85	2905.31	3191.84
	6.400	38.00	.00	.00	1257.00	17000.00	1260.88	1260.53	1261.87	59.78	8.00	2124.54	2198.78
	6.440	230.00	.00	.00	1257.00	17000.00	1261.99	1260.40	1262.37	21.10	4.98	3412.57	3701.03
*	6.440	230.00	.00	.00	1257.00	17000.00	1262.34	1260.40	1262.67	16.98	4.62	3676.22	4125.48

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	6.530	500.00	.00	.00	1255.00	17000.00	1262.98	1261.17	1263.32	16.78	4.67	3643.44	4149.59
	6.530	500.00	.00	.00	1255.00	17000.00	1263.18	1261.13	1263.50	16.24	4.54	3743.55	4218.06
	6.630	500.00	.00	.00	1258.00	17000.00	1263.88	1262.32	1264.27	20.86	5.00	3403.10	3722.56
	6.630	500.00	.00	.00	1258.00	17000.00	1264.07	1262.36	1264.45	21.25	4.95	3437.71	3687.61
	6.723	500.00	.00	.00	1259.00	17000.00	1264.86	1262.71	1265.19	15.84	4.58	3712.24	4271.92
	6.723	500.00	.00	.00	1259.00	17000.00	1265.01	1262.71	1265.33	14.27	4.49	3786.26	4501.02
*	6.820	500.00	.00	.00	1261.00	17000.00	1265.97	1265.56	1266.84	67.13	7.51	2264.18	2074.79
*	6.820	500.00	.00	.00	1261.00	17000.00	1265.94	1265.77	1267.11	86.52	8.67	1961.56	1827.65
	6.856	200.00	.00	.00	1261.00	17000.00	1267.19	1264.65	1267.53	16.02	4.66	3644.77	4247.92
*	6.856	200.00	.00	.00	1261.00	17000.00	1267.54	1264.81	1267.89	15.84	4.79	3551.11	4271.00
	6.879	120.00	.00	.00	1255.00	17000.00	1267.33	1265.56	1267.83	22.17	5.66	3002.03	3610.15
	6.879	120.00	.00	.00	1255.00	17000.00	1267.71	1265.49	1268.18	23.45	5.52	3078.27	3510.40
*	6.880	32.00	.00	.00	1262.00	17000.00	1267.67	1265.43	1267.93	5.12	4.11	4131.45	7513.59
*	6.880	32.00	.00	.00	1262.00	17000.00	1267.74	1265.78	1268.23	7.86	5.58	3044.77	6064.90
*	6.893	78.00	1272.84	1271.17	1255.00	17000.00	1270.01	.00	1270.11	2.16	3.16	6882.46	11561.97
*	6.893	78.00	1272.84	1271.17	1255.00	17000.00	1270.01	.00	1270.22	3.86	4.10	4725.02	8654.34
	6.910	45.00	.00	.00	1258.00	17000.00	1269.99	1265.74	1270.14	3.03	3.10	5498.51	9767.79
	6.910	45.00	.00	.00	1258.00	17000.00	1270.05	1265.93	1270.24	3.88	3.43	4956.05	8633.62
	6.960	250.00	.00	.00	1262.00	17000.00	1270.04	1265.63	1270.23	2.70	3.43	4962.60	10340.52
	6.960	250.00	.00	.00	1262.00	17000.00	1270.14	1265.63	1270.32	3.08	3.45	4923.51	9687.17
*	7.008	250.00	.00	.00	1263.00	17000.00	1269.87	1268.32	1270.56	15.06	6.69	2541.79	4380.34
*	7.008	250.00	.00	.00	1263.00	17000.00	1269.89	1268.30	1270.74	15.74	7.41	2295.36	4284.47
	7.102	500.00	.00	.00	1263.00	17000.00	1270.58	1267.49	1271.15	8.66	6.05	2809.14	5776.80
	7.102	500.00	.00	.00	1263.00	17000.00	1270.72	1267.52	1271.37	9.05	6.46	2631.83	5649.63
	7.197	500.00	.00	.00	1264.00	17000.00	1271.19	1267.31	1271.51	4.68	4.53	3749.66	7859.79
	7.197	500.00	.00	.00	1264.00	17000.00	1271.43	1267.32	1271.75	4.59	4.51	3769.39	7932.00
*	7.290	500.00	.00	.00	1263.00	17000.00	1271.44	1269.61	1271.93	11.54	5.59	3038.60	5003.39
*	7.290	500.00	.00	.00	1263.00	17000.00	1271.67	1269.60	1272.12	9.89	5.39	3152.98	5406.01

*	7.390	500.00	.00	.00	1264.00	17000.00	1272.08	1271.09	1272.84	24.04	7.01	2424.58	3467.47
*	7.390	500.00	.00	.00	1264.00	17000.00	1272.18	1271.10	1272.97	22.02	7.10	2395.87	3622.54
	7.481	500.00	.00	.00	1265.00	17000.00	1273.16	1271.36	1273.77	13.76	6.23	2729.37	4583.08
	7.481	500.00	.00	.00	1265.00	17000.00	1273.25	1271.35	1273.85	13.39	6.20	2742.66	4645.20
	7.576	500.00	.00	.00	1267.00	17000.00	1273.86	1272.28	1274.56	16.61	6.72	2528.61	4171.23
	7.576	500.00	.00	.00	1267.00	17000.00	1273.95	1272.27	1274.64	16.99	6.67	2549.42	4124.17

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	7.670	500.00	.00	.00	1268.00	17000.00	1274.75	1273.07	1275.37	15.08	6.29	2701.73	4378.12
	7.670	500.00	.00	.00	1268.00	17000.00	1274.75	1273.30	1275.61	19.50	7.44	2284.09	3850.18
	7.765	500.00	.00	.00	1270.00	17000.00	1275.50	1273.74	1276.19	16.57	6.65	2557.03	4176.75
	7.765	500.00	.00	.00	1270.00	17000.00	1275.80	1273.80	1276.46	13.72	6.55	2596.22	4589.90
	7.837	380.00	.00	.00	1271.00	17000.00	1276.14	1274.35	1276.80	15.46	6.51	2610.71	4324.25
	7.837	380.00	.00	.00	1271.00	17000.00	1276.35	1274.39	1277.01	15.05	6.51	2611.97	4382.33
*	7.883	240.00	.00	.00	1266.00	17000.00	1276.70	1270.88	1276.99	2.15	4.27	3985.17	11583.94
*	7.883	240.00	.00	.00	1266.00	17000.00	1276.88	1270.87	1277.24	3.99	4.79	3548.44	8515.24
*	7.955	400.00	.00	.00	1271.00	17000.00	1276.45	1275.23	1277.66	26.64	8.85	1921.38	3293.76
*	7.955	400.00	.00	.00	1271.00	17000.00	1276.52	1275.77	1278.32	35.48	10.78	1577.16	2854.22
	7.979	120.00	.00	.00	1271.00	17000.00	1277.88	1273.90	1278.03	1.59	3.12	5441.84	13499.44
*	7.979	120.00	.00	.00	1271.00	17000.00	1278.51	1274.39	1278.84	2.76	4.61	3687.71	10233.99
*	7.988	50.00	.00	.00	1282.00	17000.00	1284.07	1284.07	1284.96	49.02	7.57	2245.61	2427.97
*	7.988	50.00	.00	.00	1282.00	17000.00	1284.58	1284.58	1285.79	44.49	8.84	1923.85	2548.78
*	7.992	30.00	.00	.00	1282.00	17000.00	1284.35	1284.35	1285.23	48.61	7.54	2253.23	2438.34
*	7.992	30.00	.00	.00	1282.00	17000.00	1285.31	1284.75	1286.03	21.88	6.82	2492.01	3634.55
*	8.144	582.00	.00	.00	1282.00	16000.00	1286.12	1284.82	1286.44	9.61	4.57	3501.94	5161.25
*	8.144	582.00	.00	.00	1282.00	16000.00	1286.49	1285.01	1286.81	7.35	4.54	3521.17	5902.87
*	8.239	500.00	.00	.00	1282.00	16000.00	1287.16	1287.16	1288.55	132.23	9.46	1690.97	1391.39
*	8.239	500.00	.00	.00	1282.00	16000.00	1287.22	1287.22	1288.63	133.86	9.52	1681.05	1382.90
*	8.333	500.00	.00	.00	1283.00	16000.00	1290.11	1287.55	1290.29	12.88	3.35	4777.72	4458.56
*	8.333	500.00	.00	.00	1283.00	16000.00	1290.55	1287.90	1290.88	19.43	4.65	3440.06	3629.59
	8.428	500.00	.00	.00	1284.00	16000.00	1290.81	1289.33	1291.08	18.07	4.20	3808.29	3764.44
	8.428	500.00	.00	.00	1284.00	16000.00	1291.66	1289.67	1291.99	25.62	4.65	3441.82	3161.18
*	8.523	500.00	.00	.00	1287.00	16000.00	1292.05	1290.95	1292.50	44.30	5.33	3000.12	2403.93
	8.523	500.00	.00	.00	1287.00	16000.00	1293.03	1291.30	1293.43	31.20	5.06	3164.96	2864.31
	8.656	513.00	.00	.00	1290.00	16000.00	1294.67	1294.28	1295.72	79.35	8.23	1944.55	1796.16
	8.656	513.00	.00	.00	1290.00	16000.00	1295.29	1294.96	1296.51	112.87	8.86	1805.15	1505.99
*	8.752	480.00	.00	.00	1291.00	16000.00	1296.11	1293.31	1296.29	2.91	3.41	4698.61	9385.95
*	8.752	480.00	.00	.00	1291.00	16000.00	1296.92	1293.76	1297.20	3.67	4.28	3737.51	8351.42

8.996	1288.00	.00	.00	1291.00	16000.00	1296.45	1293.00	1296.57	1.65	2.86	5597.03	12456.77
8.996	1288.00	.00	.00	1291.00	16000.00	1297.34	1293.95	1297.66	3.30	4.56	3511.07	8804.61
9.022	174.00	.00	.00	1291.00	16000.00	1296.52	1292.93	1296.61	2.04	2.44	6567.17	11205.30
9.022	174.00	.00	.00	1291.00	16000.00	1297.48	1293.76	1297.73	2.50	4.03	3972.79	10113.33

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	9.125	529.00	.00	.00	1291.00	16000.00	1298.59	1298.59	1299.45	51.67	7.47	2142.66	2225.96
*	9.125	529.00	.00	.00	1291.00	16000.00	1299.35	1299.35	1300.41	47.33	8.25	1938.75	2325.71
*	9.126	10.00	.00	.00	1292.00	16000.00	1298.92	1298.92	1299.88	51.87	7.86	2035.29	2221.54
*	9.126	10.00	.00	.00	1292.00	16000.00	1299.78	1299.78	1300.89	43.36	8.45	1893.70	2429.94
*	9.128	23.00	.00	.00	1290.00	16000.00	1299.37	1299.37	1300.34	52.17	7.90	2026.50	2215.10
*	9.128	23.00	.00	.00	1290.00	16000.00	1300.01	1300.01	1301.17	48.67	8.64	1851.55	2293.43
*	9.150	100.00	1299.00	1293.00	1290.00	16000.00	1300.44	.00	1300.78	9.01	4.74	3377.24	5331.83
*	9.150	100.00	1299.00	1293.00	1290.00	16000.00	1300.56	.00	1301.17	16.58	6.26	2555.07	3929.69
	9.243	499.00	.00	.00	1294.00	9000.00	1301.01	1296.68	1301.10	2.55	2.39	3772.39	5637.68
	9.243	499.00	.00	.00	1294.00	9000.00	1301.54	1296.69	1301.63	2.76	2.40	3745.40	5416.80
*	9.283	316.00	.00	.00	1294.00	9000.00	1301.09	1299.94	1301.33	19.67	3.88	2317.03	2029.19
*	9.283	316.00	.00	.00	1294.00	9000.00	1301.62	1300.14	1301.88	18.74	4.08	2207.00	2079.15
	9.375	400.00	.00	.00	1298.00	9000.00	1302.20	1301.47	1302.46	43.32	4.08	2205.76	1367.37
	9.375	400.00	.00	.00	1300.00	9000.00	1302.54	1301.90	1302.99	38.08	5.39	1670.10	1458.52
	9.470	445.00	.00	.00	1300.00	9000.00	1304.40	1304.14	1304.80	61.75	5.06	1777.42	1145.31
	9.470	445.00	.00	.00	1300.00	9000.00	1304.45	1303.99	1304.97	50.78	5.75	1564.73	1263.02
*	9.564	484.00	.00	.00	1302.00	9000.00	1306.40	1304.94	1306.62	24.52	3.81	2362.60	1817.59
	9.564	484.00	.00	.00	1302.00	9000.00	1306.49	1304.94	1306.75	26.47	4.08	2204.56	1749.23
	9.578	500.00	.00	.00	1302.00	9000.00	1307.47	1305.77	1307.63	16.45	3.23	2783.59	2218.81
	9.578	500.00	.00	.00	1302.00	9000.00	1307.64	1305.85	1307.81	17.04	3.37	2670.79	2180.23
	9.659	377.00	.00	.00	1302.00	9000.00	1308.15	1306.60	1308.33	20.73	3.33	2701.20	1976.62
	9.659	377.00	.00	.00	1302.00	9000.00	1308.30	1306.60	1308.47	18.12	3.39	2651.80	2114.21
	9.754	476.00	.00	.00	1304.00	9000.00	1309.13	1307.90	1309.38	22.18	4.01	2244.16	1911.07
	9.754	476.00	.00	.00	1304.00	9000.00	1309.25	1307.85	1309.52	25.05	4.13	2181.63	1798.34
	9.849	427.00	.00	.00	1304.00	9000.00	1309.99	1308.57	1310.24	18.42	4.01	2246.01	2097.22
	9.849	427.00	.00	.00	1304.00	9000.00	1310.22	1308.55	1310.47	19.99	4.05	2224.08	2013.12
*	9.943	489.00	.00	.00	1308.00	9000.00	1312.24	1312.24	1313.09	63.85	7.38	1219.06	1126.28
*	9.943	489.00	.00	.00	1308.00	9000.00	1312.11	1312.11	1313.27	139.16	8.63	1043.05	762.92
*	10.040	435.00	.00	.00	1310.00	9000.00	1314.74	1314.21	1315.03	29.72	4.30	2092.50	1650.90
	10.040	435.00	.00	.00	1310.00	9000.00	1315.36	1314.07	1315.64	25.82	4.25	2117.29	1771.20
	10.130	500.00	.00	.00	1312.00	9000.00	1316.37	1315.58	1316.98	45.84	6.30	1429.43	1329.32
	10.130	500.00	.00	.00	1312.00	9000.00	1316.68	1315.69	1317.28	35.99	6.21	1449.21	1500.25

	10.230	500.00	.00	.00	1314.00	9000.00	1318.09	1317.34	1318.70	26.78	6.32	1424.47	1739.19
	10.230	500.00	.00	.00	1314.00	9000.00	1318.17	1317.30	1318.94	28.42	7.07	1273.51	1688.34

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	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	10.320	500.00	.00	.00	1314.00	9000.00	1319.31	1317.69	1319.59	11.03	4.28	2104.02	2710.50
	10.320	500.00	.00	.00	1314.00	9000.00	1319.65	1317.69	1320.02	14.58	4.83	1863.72	2357.32
	10.380	312.00	.00	.00	1314.00	9000.00	1319.66	1318.29	1319.96	12.17	4.37	2058.41	2580.13
	10.380	312.00	.00	.00	1314.00	9000.00	1320.14	1318.26	1320.40	9.51	4.08	2208.01	2918.14
*	10.400	90.00	.00	.00	1316.00	9000.00	1319.92	1318.52	1320.05	4.54	2.94	3059.77	4222.60
	10.400	90.00	.00	.00	1316.00	9000.00	1320.21	1318.59	1320.47	5.96	4.11	2191.63	3685.84
	10.410	58.00	1317.70	1316.23	1308.00	9000.00	1320.31	.00	1320.48	4.45	3.36	2677.95	4268.66
	10.410	58.00	1317.70	1316.23	1308.00	9000.00	1320.33	.00	1320.55	4.63	3.78	2379.65	4184.14
	10.510	542.00	.00	.00	1316.00	9000.00	1320.58	1318.55	1320.81	7.53	3.92	2297.60	3280.73
	10.510	542.00	.00	.00	1316.00	9000.00	1320.60	1318.54	1320.91	8.08	4.44	2028.04	3165.84
*	10.610	455.00	.00	.00	1318.00	9000.00	1321.38	1321.38	1322.47	53.16	8.37	1074.65	1234.39
*	10.610	455.00	.00	.00	1318.00	9000.00	1321.32	1321.32	1322.53	103.10	8.83	1019.12	886.38
	10.700	470.00	.00	.00	1322.00	9000.00	1324.22	1323.91	1324.86	45.26	6.44	1396.96	1337.81
*	10.700	470.00	.00	.00	1322.00	9000.00	1324.57	1324.04	1325.22	33.95	6.46	1392.29	1544.60
	10.800	480.00	.00	.00	1320.00	9000.00	1325.43	1323.04	1325.61	6.49	3.44	2618.66	3532.45
*	10.800	480.00	.00	.00	1320.00	9000.00	1325.83	1323.00	1326.01	8.15	3.47	2596.98	3151.83
*	10.890	500.00	.00	.00	1320.00	9000.00	1325.69	1322.61	1325.83	2.91	3.01	2986.22	5277.19
*	10.890	500.00	.00	.00	1320.00	9000.00	1326.10	1322.67	1326.28	3.81	3.41	2640.65	4608.98
*	10.990	480.00	.00	.00	1324.00	9000.00	1327.26	1327.26	1328.24	84.80	7.97	1129.25	977.34
*	10.990	480.00	.00	.00	1324.00	9000.00	1327.25	1327.25	1328.24	155.18	8.02	1122.60	722.47
*	11.080	476.00	.00	.00	1324.00	9000.00	1329.46	1328.08	1329.79	15.08	4.65	1934.69	2317.28
*	11.080	476.00	.00	.00	1324.00	9000.00	1329.98	1328.06	1330.23	17.19	4.08	2206.58	2170.51
	11.150	402.00	.00	.00	1320.00	9000.00	1329.91	1328.92	1330.39	12.02	5.59	1609.17	2596.43
	11.150	402.00	.00	.00	1320.00	9000.00	1330.68	1328.89	1330.96	18.53	4.21	2135.85	2090.69
	11.170	98.00	1329.37	1327.23	1326.00	9000.00	1331.77	.00	1332.06	13.00	4.36	2062.83	2496.25
	11.170	98.00	1329.37	1327.23	1326.00	9000.00	1331.83	.00	1332.11	24.47	4.32	2084.64	1819.57
*	11.270	493.00	.00	.00	1330.00	9000.00	1332.73	1332.73	1333.74	98.68	8.03	1120.13	906.01
*	11.270	493.00	.00	.00	1330.00	9000.00	1333.41	1332.72	1333.97	56.00	6.03	1492.75	1202.71
*	11.360	490.00	.00	.00	1330.00	9000.00	1335.23	1334.18	1335.69	19.69	5.45	1652.34	2028.20
	11.360	490.00	.00	.00	1330.00	9000.00	1335.56	1334.16	1335.95	29.53	5.02	1791.95	1656.18
*	11.460	460.00	.00	.00	1334.00	9000.00	1336.48	1336.24	1337.20	54.12	6.81	1321.17	1223.35
	11.460	460.00	.00	.00	1334.00	9000.00	1336.95	1336.24	1337.48	34.93	5.84	1540.50	1522.70
*	11.550	499.00	.00	.00	1334.00	9000.00	1338.41	1336.96	1338.74	18.29	4.60	1958.18	2104.69
	11.550	499.00	.00	.00	1334.00	9000.00	1338.56	1336.96	1338.88	21.70	4.51	1994.79	1932.08

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	11.650	480.00	.00	.00	1336.00	9000.00	1339.52	1338.83	1340.04	37.66	5.78	1556.01	1466.47
	11.650	480.00	.00	.00	1336.00	9000.00	1339.82	1338.84	1340.34	39.82	5.79	1554.31	1426.26
	11.740	502.00	.00	.00	1338.00	9000.00	1341.57	1341.45	1342.45	55.36	7.54	1193.60	1209.56
	11.740	502.00	.00	.00	1338.00	9000.00	1341.89	1341.54	1342.92	57.49	8.14	1105.43	1186.96
	11.840	463.00	.00	.00	1340.00	9000.00	1343.89	1343.71	1344.88	48.02	8.00	1125.39	1298.78
	11.840	463.00	.00	.00	1340.00	9000.00	1344.10	1343.77	1345.43	46.38	9.25	972.99	1321.51
	11.930	464.00	.00	.00	1340.00	9000.00	1345.97	1345.26	1346.62	27.99	6.48	1388.61	1701.02
	11.930	464.00	.00	.00	1340.00	9000.00	1346.45	1345.33	1347.18	27.59	6.87	1310.12	1713.52
*	12.030	441.00	.00	.00	1342.00	9000.00	1346.91	1344.47	1347.08	3.94	3.33	2706.10	4533.93
*	12.030	441.00	.00	.00	1342.00	9000.00	1347.43	1344.72	1347.67	4.31	3.92	2293.85	4333.41
*	12.120	434.00	.00	.00	1342.00	9000.00	1347.05	1346.47	1347.59	28.39	5.88	1529.39	1689.04
*	12.120	434.00	.00	.00	1342.00	9000.00	1347.55	1346.42	1348.19	23.05	6.43	1399.87	1874.50
	12.220	532.00	.00	.00	1344.00	9000.00	1348.64	1348.43	1349.52	40.55	7.56	1190.29	1413.36
*	12.220	532.00	.00	.00	1344.00	9000.00	1349.16	1348.64	1350.12	54.49	7.85	1146.29	1219.25
*	12.310	497.00	.00	.00	1344.00	9000.00	1350.06	1347.73	1350.55	10.94	5.57	1614.70	2720.80
*	12.310	497.00	.00	.00	1344.00	9000.00	1350.57	1347.82	1351.12	9.16	5.93	1518.72	2973.56
	12.410	509.00	.00	.00	1346.00	9000.00	1350.64	1349.29	1351.38	19.57	6.91	1301.73	2034.64
	12.410	509.00	.00	.00	1346.00	9000.00	1351.05	1349.47	1351.87	18.39	7.30	1233.02	2098.91
	12.500	493.00	.00	.00	1346.00	9000.00	1351.50	1349.91	1352.37	18.67	7.47	1204.62	2082.96
	12.500	493.00	.00	.00	1346.00	9000.00	1351.93	1349.89	1352.69	14.44	6.98	1290.27	2368.82
*	12.540	222.00	.00	.00	1348.00	9000.00	1351.81	1351.81	1353.67	38.65	10.94	822.71	1447.58
*	12.540	222.00	.00	.00	1348.00	9000.00	1352.01	1352.01	1354.04	39.06	11.42	788.08	1440.05
*	12.560	74.00	1361.33	1359.20	1348.00	9000.00	1353.07	.00	1354.06	14.26	7.97	1129.03	2383.24
*	12.560	74.00	1361.33	1359.20	1348.00	9000.00	1353.07	.00	1354.14	15.11	8.28	1086.47	2315.55
*	12.600	201.00	.00	.00	1352.00	9000.00	1355.70	1355.70	1357.28	62.54	10.09	892.30	1138.08
*	12.600	201.00	.00	.00	1352.00	9000.00	1356.32	1356.32	1358.44	59.74	11.69	769.68	1164.42
*	12.690	500.00	.00	.00	1354.00	9000.00	1358.45	1357.18	1359.00	17.78	5.95	1512.61	2134.18
*	12.690	500.00	.00	.00	1354.00	9000.00	1359.37	1357.43	1359.95	12.82	6.11	1472.69	2513.81
*	12.780	505.00	.00	.00	1356.00	9000.00	1359.42	1359.00	1360.58	43.39	8.64	1041.11	1366.32
*	12.780	505.00	.00	.00	1356.00	9000.00	1360.07	1359.25	1361.11	32.78	8.19	1098.37	1572.01
*	12.880	412.00	.00	.00	1356.00	9000.00	1361.24	1359.21	1361.51	9.99	4.13	2179.98	2847.07
*	12.880	412.00	.00	.00	1356.00	9000.00	1361.70	1359.62	1362.15	16.06	5.37	1676.96	2245.79
*	12.970	489.00	.00	.00	1359.50	9000.00	1362.56	1362.56	1363.68	95.23	8.49	1059.49	922.25
	12.970	489.00	.00	.00	1359.50	9000.00	1362.84	1362.84	1364.20	109.86	9.36	961.80	858.66

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
*	13.070	435.00	.00	.00	1358.00	9000.00	1365.11	1363.80	1365.46	19.90	4.75	1894.84	2017.50
	13.070	435.00	.00	.00	1358.00	9000.00	1365.71	1363.90	1366.18	21.68	5.54	1624.05	1932.90
*	13.160	448.00	.00	.00	1360.00	9000.00	1366.14	1365.80	1366.86	42.10	6.84	1316.56	1387.15
	13.160	448.00	.00	.00	1360.00	9000.00	1366.66	1365.95	1367.37	27.55	6.75	1332.62	1714.64
*	13.250	450.00	.00	.00	1360.00	9000.00	1367.40	1365.16	1367.62	6.52	3.77	2387.51	3523.43
*	13.250	450.00	.00	.00	1360.00	9000.00	1367.95	1365.79	1368.31	13.32	4.80	1874.36	2465.57
	13.380	598.00	.00	.00	1362.00	9000.00	1367.63	1365.70	1368.31	9.29	6.65	1353.85	2952.09
	13.380	598.00	.00	.00	1362.00	9000.00	1368.17	1367.28	1370.12	22.64	11.20	803.55	1891.43
	13.400	113.00	1372.00	1370.00	1362.00	9000.00	1367.69	.00	1369.07	17.07	9.42	955.34	2178.57
	13.400	113.00	1372.00	1370.00	1362.00	9000.00	1368.56	.00	1370.65	22.81	11.60	776.02	1884.38
*	13.450	252.00	.00	.00	1364.00	9000.00	1369.35	1369.35	1371.15	56.42	10.76	836.43	1198.15
*	13.450	252.00	.00	.00	1364.00	9000.00	1369.51	1369.51	1371.81	73.76	12.15	740.61	1047.89
*	13.540	477.00	.00	.00	1364.00	9000.00	1372.49	1371.31	1373.07	23.90	6.11	1473.16	1840.91
*	13.540	477.00	.00	.00	1364.00	9000.00	1373.09	1371.29	1373.63	16.83	5.90	1524.98	2193.87
	13.640	440.00	.00	.00	1368.00	9000.00	1373.74	1372.88	1374.35	35.68	6.27	1435.81	1506.78
*	13.640	440.00	.00	.00	1368.00	9000.00	1374.07	1373.00	1374.79	40.00	6.82	1319.88	1423.03
*	13.730	408.00	.00	.00	1368.00	9000.00	1374.83	1372.39	1375.14	10.57	4.45	2020.36	2767.66
*	13.730	408.00	.00	.00	1368.00	9000.00	1375.28	1372.36	1375.58	9.64	4.40	2044.93	2898.09
	13.830	459.00	.00	.00	1368.00	9000.00	1375.32	1375.18	1376.42	60.97	8.44	1065.99	1152.66
	13.830	459.00	.00	.00	1368.00	9000.00	1375.46	1375.46	1377.22	75.55	10.65	845.42	1035.47
	13.880	237.05	.00	.00	1370.00	9000.00	1376.80	1376.17	1377.72	47.07	7.72	1165.88	1311.76
	13.880	237.05	.00	.00	1370.00	9000.00	1377.57	1376.55	1378.64	40.52	8.30	1084.57	1413.90
*	13.920	233.68	.00	.00	1370.00	9000.00	1378.12	1376.77	1378.33	10.76	3.66	2460.41	2743.21
*	13.920	233.68	.00	.00	1370.00	9000.00	1378.93	1377.04	1379.26	12.01	4.59	1958.94	2597.51
*	14.020	475.00	.00	.00	1372.00	9000.00	1378.88	1378.88	1380.01	88.22	8.53	1054.62	958.20
*	14.020	475.00	.00	.00	1372.00	9000.00	1379.64	1378.94	1380.24	31.35	6.25	1440.27	1607.40
*	14.060	276.92	.00	.00	1374.00	9000.00	1380.57	1378.89	1380.82	10.37	4.25	2248.92	2794.91
	14.060	276.92	.00	.00	1374.00	9000.00	1380.30	1379.27	1381.07	24.28	7.07	1273.66	1826.62
	14.110	500.00	.00	.00	1374.00	9000.00	1381.09	1378.90	1381.45	13.29	4.78	1881.55	2468.45
	14.110	500.00	.00	.00	1374.00	9000.00	1381.65	1379.05	1382.01	12.73	4.82	1869.11	2522.86
	14.210	473.00	.00	.00	1376.00	9000.00	1381.88	1380.61	1382.31	24.32	5.29	1701.17	1824.88
*	14.210	473.00	.00	.00	1376.00	9000.00	1382.33	1380.96	1383.11	34.69	7.11	1265.70	1528.13
	14.300	465.00	.00	.00	1376.00	9000.00	1383.03	1382.35	1383.54	27.04	5.73	1570.44	1730.63
	14.300	465.00	.00	.00	1376.00	9000.00	1383.82	1381.87	1384.51	25.04	6.64	1355.36	1798.69

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SECNO XLCH ELTRD ELLC ELMIN Q CWSEL CRIWS EG 10*KS VCH AREA .01K

	14.340	125.92	.00	.00	1376.00	9000.00	1383.31	1382.87	1384.06	36.29	7.23	1386.61	1494.00
	14.340	125.92	.00	.00	1376.00	9000.00	1384.10	1382.60	1384.88	27.18	7.11	1266.52	1726.30
*	14.390	283.00	.00	.00	1378.00	9000.00	1384.38	1382.25	1384.79	14.30	5.09	1767.78	2379.60
	14.390	283.00	.00	.00	1378.01	9000.00	1385.00	1382.76	1385.54	15.90	5.88	1531.91	2257.35
*	14.440	184.00	.00	.00	1378.00	9000.00	1384.03	1383.86	1385.90	32.97	10.97	820.05	1567.52
	14.440	184.00	.00	.00	1378.00	9000.00	1384.92	1383.80	1386.23	17.27	9.19	979.04	2165.84
*	14.470	92.00	1391.30	1389.26	1378.00	6000.00	1384.03	.00	1385.90	3.39	4.55	1317.87	3258.53
*	14.470	92.00	1391.30	1389.26	1378.00	6000.00	1384.92	.00	1386.23	3.53	4.89	1226.09	3194.03
*	14.490	148.00	.00	.00	1380.00	6000.00	1385.59	1383.26	1386.05	9.93	5.42	1106.01	1904.50
*	14.490	148.00	.00	.00	1380.00	6000.00	1385.91	1383.27	1386.33	8.23	5.26	1141.49	2091.17
	14.580	483.00	.00	.00	1380.00	6000.00	1386.26	1383.72	1386.47	5.53	3.72	1611.83	2551.08
	14.580	483.00	.00	.00	1380.00	6000.00	1386.47	1383.73	1386.70	5.21	3.90	1537.43	2628.58
	14.660	369.00	.00	.00	1382.00	6000.00	1386.51	1384.75	1386.74	9.36	3.85	1557.01	1960.94
	14.660	369.00	.00	.00	1382.00	6000.00	1386.70	1384.74	1386.94	7.84	3.95	1518.26	2143.31

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	.437	20000.00	1167.30	.00	.00	.00	599.27	.00
	.437	20000.00	1167.30	.00	.00	.00	599.27	.00
*	.475	20000.00	1167.23	.00	-.07	.00	599.05	200.00
*	.475	20000.00	1167.23	.00	-.07	.00	598.00	200.00
	.491	20000.00	1167.32	.00	.08	.00	611.37	280.00
	.491	20000.00	1167.31	-.01	.08	-.01	594.04	280.00
*	.568	20000.00	1167.38	.00	.06	.00	533.75	410.00
*	.568	20000.00	1167.41	.03	.10	.03	440.00	410.00
*	.663	20000.00	1169.53	.00	2.15	.00	467.47	500.00
	.663	20000.00	1169.66	.13	2.25	.13	355.00	500.00
	.758	20000.00	1172.44	.00	2.90	.00	435.00	500.00
	.758	20000.00	1172.95	.51	3.29	.51	355.00	500.00
*	.776	20000.00	1173.50	.00	1.06	.00	543.37	99.00
*	.776	20000.00	1173.30	-.20	.35	-.20	405.00	99.00
*	.791	20000.00	1176.48	.00	2.99	.00	790.44	78.00
*	.791	20000.00	1176.68	.19	3.38	.19	445.00	78.00
	.852	20000.00	1176.49	.00	.01	.00	582.66	320.00
*	.852	20000.00	1176.84	.35	.17	.35	500.00	320.00
*	.947	20000.00	1178.29	.00	1.79	.00	552.66	500.00

	.947	20000.00	1178.83	.54	1.98	.54	502.55	500.00
*	1.040	20000.00	1181.99	.00	3.70	.00	578.35	500.00
	1.040	20000.00	1182.00	.01	3.18	.01	514.30	500.00
	1.136	20000.00	1184.89	.00	2.89	.00	590.91	500.00
*	1.136	20000.00	1185.44	.55	3.43	.55	498.70	500.00
	1.231	20000.00	1186.26	.00	1.37	.00	586.18	500.00
	1.231	20000.00	1186.76	.50	1.32	.50	430.30	500.00
	1.326	20000.00	1186.90	.00	.64	.00	582.48	500.00
	1.326	20000.00	1187.25	.35	.49	.35	226.00	500.00
	1.420	20000.00	1188.01	.00	1.11	.00	550.22	500.00
	1.420	20000.00	1188.71	.70	1.46	.70	205.10	500.00
*	1.515	20000.00	1189.75	.00	1.74	.00	542.98	497.00
*	1.515	20000.00	1189.75	.00	1.04	.00	341.75	497.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	1.554	20000.00	1191.72	.00	1.97	.00	755.55	190.00
*	1.554	20000.00	1191.67	-.06	1.91	-.06	451.14	190.00
	1.570	20000.00	1192.33	.00	.61	.00	754.27	91.00
	1.570	20000.00	1191.78	-.55	.11	-.55	499.45	91.00
	1.582	20000.00	1192.57	.00	.23	.00	629.19	48.75
	1.582	20000.00	1192.67	.11	.89	.11	534.82	48.75
*	1.610	20000.00	1192.80	.00	.23	.00	618.17	210.00
*	1.610	20000.00	1192.94	.14	.27	.14	526.99	210.00
	1.705	20000.00	1193.06	.00	.26	.00	612.29	500.00
	1.705	20000.00	1193.25	.19	.31	.19	501.10	500.00
	1.770	20000.00	1193.27	.00	.21	.00	573.08	350.00
	1.770	20000.00	1193.46	.19	.20	.19	395.78	350.00
	1.787	20000.00	1193.19	.00	-.08	.00	399.06	62.00
	1.787	20000.00	1193.47	.28	.02	.28	377.44	62.00
*	1.794	20000.00	1195.90	.00	2.71	.00	564.52	55.00
*	1.794	20000.00	1195.99	.09	2.52	.09	400.69	55.00
*	1.799	20000.00	1196.14	.00	.24	.00	562.08	25.00
*	1.799	20000.00	1196.43	.29	.44	.29	420.30	25.00
*	1.827	20000.00	1198.05	.00	1.91	.00	539.58	144.00
*	1.827	20000.00	1198.79	.74	2.35	.74	499.52	144.00
	1.894	20000.00	1199.06	.00	1.01	.00	622.86	350.00
*	1.894	20000.00	1199.54	.48	.75	.48	501.62	350.00
*	1.990	20000.00	1199.40	.00	.34	.00	715.10	500.00

*	1.990	20000.00	1199.90	.51	.36	.51	638.62	500.00
*	2.047	20000.00	1200.13	.00	.74	.00	799.73	308.00
*	2.047	20000.00	1200.51	.37	.60	.37	625.64	308.00
	2.080	20000.00	1201.21	.00	1.07	.00	531.97	192.00
	2.080	20000.00	1201.49	.28	.98	.28	417.14	192.00
*	2.178	20000.00	1203.52	.00	2.31	.00	601.08	500.00
*	2.178	20000.00	1203.90	.38	2.41	.38	526.36	500.00
	2.273	20000.00	1204.43	.00	.91	.00	546.32	500.00
	2.273	20000.00	1204.67	.24	.77	.24	452.87	500.00
	2.367	20000.00	1204.93	.00	.50	.00	463.92	500.00
	2.367	20000.00	1205.30	.37	.63	.37	417.46	500.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	2.462	20000.00	1205.58	.00	.65	.00	461.17	500.00
	2.462	20000.00	1205.98	.40	.68	.40	417.15	500.00
	2.557	20000.00	1206.18	.00	.61	.00	370.37	500.00
*	2.557	20000.00	1206.56	.37	.58	.37	370.37	500.00
	2.610	20000.00	1206.32	.00	.13	.00	287.55	283.00
	2.610	20000.00	1206.67	.35	.11	.35	287.55	283.00
	2.620	20000.00	1206.16	.00	-.15	.00	253.24	50.00
	2.620	20000.00	1206.52	.36	-.14	.36	253.24	50.00
	2.629	20000.00	1205.89	.00	-.27	.00	213.69	50.00
	2.629	20000.00	1206.23	.34	-.29	.34	208.28	50.00
	2.652	20000.00	1206.21	.00	.32	.00	214.03	120.00
	2.652	20000.00	1206.53	.32	.30	.32	213.94	120.00
	2.653	20000.00	1206.22	.00	.01	.00	214.03	7.00
	2.653	20000.00	1206.54	.32	.01	.32	213.94	7.00
*	2.658	20000.00	1206.09	.00	-.13	.00	224.00	9.00
*	2.658	20000.00	1206.17	.08	-.37	.08	224.00	9.00
*	2.662	20000.00	1207.57	.00	1.47	.00	226.77	9.00
	2.662	20000.00	1207.43	-.14	1.26	-.14	223.58	9.00
*	2.663	20000.00	1209.23	.00	1.66	.00	239.53	9.00
*	2.663	20000.00	1209.14	-.08	1.71	-.08	229.25	9.00
	2.700	20000.00	1210.00	.00	.77	.00	531.83	200.00
*	2.700	20000.00	1209.70	-.30	.55	-.30	355.96	200.00
	2.746	20000.00	1210.10	.00	.10	.00	578.82	190.00
	2.746	20000.00	1209.94	-.16	.24	-.16	451.52	190.00
	2.770	20000.00	1210.28	.00	.19	.00	637.00	150.00

	2.770	20000.00	1210.32	.04	.38	.04	535.29	150.00
	2.775	20000.00	1210.23	.00	-.05	.00	697.70	25.00
*	2.775	20000.00	1210.23	.00	-.09	.00	545.83	25.00
	2.780	20000.00	1209.91	.00	-.32	.00	658.54	25.00
*	2.780	20000.00	1209.85	-.06	-.38	-.06	570.10	25.00
*	2.790	20000.00	1210.68	.00	.77	.00	675.37	50.00
*	2.790	20000.00	1210.75	.07	.90	.07	571.73	50.00
	2.810	20000.00	1211.94	.00	1.26	.00	756.62	83.00
	2.810	20000.00	1212.01	.07	1.26	.07	563.32	83.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	2.820	20000.00	1212.25	.00	.31	.00	722.41	67.00
*	2.820	20000.00	1212.61	.36	.60	.36	557.62	67.00
*	2.827	20000.00	1213.51	.00	1.26	.00	817.77	35.00
*	2.827	20000.00	1213.96	.45	1.34	.45	558.52	35.00
	2.841	20000.00	1213.73	.00	.22	.00	819.46	65.00
	2.841	20000.00	1214.27	.54	.31	.54	573.95	65.00
	2.936	20000.00	1214.62	.00	.88	.00	730.00	500.00
	2.936	20000.00	1215.37	.76	1.10	.76	571.36	500.00
	3.030	20000.00	1215.44	.00	.82	.00	770.00	500.00
	3.030	20000.00	1216.13	.69	.75	.69	582.63	500.00
*	3.125	20000.00	1216.38	.00	.94	.00	949.54	500.00
*	3.125	20000.00	1217.08	.71	.96	.71	582.37	500.00
	3.220	20000.00	1216.67	.00	.29	.00	676.92	500.00
	3.220	20000.00	1217.57	.90	.49	.90	644.18	500.00
*	3.270	20000.00	1217.19	.00	.53	.00	795.12	265.00
*	3.270	20000.00	1217.85	.65	.28	.65	608.25	265.00
	3.280	20000.00	1217.56	.00	.36	.00	800.10	55.00
	3.280	20000.00	1218.13	.57	.28	.57	604.58	55.00
	3.409	20000.00	1219.13	.00	1.58	.00	900.82	489.92
	3.409	20000.00	1219.70	.57	1.57	.57	651.70	489.92
*	3.488	20000.00	1220.50	.00	1.37	.00	1003.78	420.00
	3.488	20000.00	1221.22	.72	1.53	.72	636.22	420.00
*	3.490	20000.00	1221.04	.00	.53	.00	1298.00	30.00
	3.490	20000.00	1221.30	.26	.07	.26	634.76	30.00
	3.504	20000.00	1220.95	.00	-.09	.00	1026.21	50.00
	3.504	20000.00	1221.52	.57	.22	.57	642.41	50.00
	3.510	20000.00	1221.47	.00	.52	.00	1129.04	35.00

3.510	20000.00	1221.85	.39	.33	.39	647.44	35.00
3.548	20000.00	1222.29	.00	.83	.00	1001.47	200.00
3.548	20000.00	1222.83	.54	.98	.54	659.63	200.00
3.590	20000.00	1222.61	.00	.32	.00	916.37	98.00
3.590	20000.00	1223.14	.53	.31	.53	597.11	98.00
3.600	20000.00	1222.87	.00	.26	.00	822.50	142.00
3.600	20000.00	1223.36	.49	.21	.49	551.86	142.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	3.660	20000.00	1223.43	.00	.57	.00	684.90	305.00
	3.660	20000.00	1223.75	.31	.39	.31	444.92	305.00
	3.710	20000.00	1223.79	.00	.35	.00	417.56	303.00
	3.710	20000.00	1223.99	.21	.25	.21	337.10	303.00
	3.730	20000.00	1223.88	.00	.10	.00	385.10	82.00
	3.730	20000.00	1223.99	.11	.00	.11	304.85	82.00
	3.760	20000.00	1223.79	.00	-.09	.00	232.01	174.00
	3.760	20000.00	1224.18	.39	.19	.39	232.01	174.00
	3.780	20000.00	1224.64	.00	.84	.00	232.01	85.50
	3.780	20000.00	1224.56	-.08	.38	-.08	231.97	85.50
	3.811	20000.00	1226.78	.00	2.14	.00	472.14	159.85
*	3.811	20000.00	1225.77	-1.01	1.21	-1.01	286.06	159.85
	3.883	20000.00	1227.44	.00	.66	.00	629.54	339.16
*	3.883	20000.00	1227.66	.22	1.89	.22	520.00	339.16
	3.977	20000.00	1227.79	.00	.35	.00	606.63	500.00
	3.977	20000.00	1228.05	.26	.39	.26	574.26	500.00
	4.072	20000.00	1228.18	.00	.39	.00	609.51	500.00
	4.072	20000.00	1228.46	.28	.42	.28	538.65	500.00
*	4.167	20000.00	1228.85	.00	.67	.00	652.77	500.00
*	4.167	20000.00	1229.19	.34	.72	.34	621.87	500.00
*	4.220	20000.00	1228.87	.00	.03	.00	612.84	250.00
*	4.220	20000.00	1229.22	.35	.04	.35	565.61	250.00
	4.250	20000.00	1229.00	.00	.13	.00	637.87	200.00
	4.250	20000.00	1229.29	.29	.07	.29	485.91	200.00
*	4.290	20000.00	1229.06	.00	.06	.00	664.02	215.00
*	4.290	20000.00	1229.33	.26	.03	.26	422.38	215.00
	4.356	20000.00	1229.76	.00	.70	.00	643.98	285.00
	4.356	20000.00	1230.02	.26	.70	.26	450.19	285.00
	4.451	20000.00	1230.51	.00	.74	.00	638.32	500.00

	4.451	20000.00	1231.03	.53	1.01	.53	591.13	500.00
*	4.546	20000.00	1231.15	.00	.65	.00	576.39	382.96
*	4.546	20000.00	1231.55	.40	.52	.40	531.61	382.96
	4.640	20000.00	1232.92	.00	1.77	.00	645.90	433.00
	4.640	20000.00	1232.94	.02	1.39	.02	497.11	433.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	4.735	20000.00	1233.96	.00	1.04	.00	735.58	490.00
*	4.735	20000.00	1234.16	.20	1.22	.20	453.99	490.00
	4.830	20000.00	1234.19	.00	.23	.00	696.87	500.00
*	4.830	20000.00	1234.77	.58	.61	.58	603.62	500.00
*	4.850	20000.00	1235.54	.00	1.35	.00	470.84	100.00
*	4.850	20000.00	1235.49	-.05	.72	-.05	386.04	100.00
*	4.855	20000.00	1238.09	.00	2.55	.00	768.00	25.00
*	4.855	20000.00	1238.18	.09	2.70	.09	617.58	25.00
*	4.870	20000.00	1239.02	.00	.93	.00	853.00	84.00
*	4.870	20000.00	1239.07	.05	.89	.05	612.84	84.00
	4.873	17000.00	1240.48	.00	1.45	.00	963.00	15.00
	4.873	17000.00	1240.89	.41	1.81	.41	613.07	15.00
*	4.892	17000.00	1240.64	.00	.16	.00	815.00	100.00
*	4.892	17000.00	1241.08	.44	.20	.44	625.85	100.00
	4.924	17000.00	1240.67	.00	.03	.00	1177.61	173.00
	4.924	17000.00	1241.10	.44	.02	.44	736.13	173.00
	4.952	17000.00	1240.70	.00	.03	.00	1107.72	150.00
	4.952	17000.00	1241.16	.46	.05	.46	972.25	150.00
*	4.990	17000.00	1240.71	.00	.01	.00	855.84	499.13
*	4.990	17000.00	1241.16	.46	.00	.46	934.50	499.13
*	5.110	13655.00	1240.87	.00	.17	.00	610.16	491.90
	5.110	13655.00	1241.39	.51	.23	.51	575.17	491.90
	5.205	13655.00	1241.10	.00	.22	.00	625.33	429.00
	5.205	13655.00	1241.54	.44	.15	.44	421.82	429.00
*	5.300	13655.00	1241.48	.00	.38	.00	712.75	574.42
	5.300	13655.00	1241.97	.49	.43	.49	467.76	574.42
	5.357	13655.00	1241.91	.00	.44	.00	580.73	310.00
	5.357	13655.00	1242.27	.35	.30	.35	428.91	310.00
	5.360	13655.00	1243.02	.00	1.11	.00	593.02	100.00
*	5.360	13655.00	1242.91	-.12	.64	-.12	441.09	100.00
*	5.372	13655.00	1243.63	.00	.61	.00	553.82	80.00

*	5.372	13655.00	1243.58	-.05	.67	-.05	416.81	80.00
*	5.385	13655.00	1244.99	.00	1.36	.00	565.95	70.00
*	5.385	13655.00	1245.14	.15	1.56	.15	419.59	70.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	5.492	13655.00	1245.41	.00	.42	.00	505.38	440.00
*	5.492	13655.00	1245.95	.55	.81	.55	433.13	440.00
	5.587	12972.00	1245.82	.00	.41	.00	427.06	500.00
	5.587	12972.00	1246.38	.57	.43	.57	378.91	500.00
	5.682	12928.00	1246.06	.00	.25	.00	429.97	500.00
	5.682	12928.00	1246.62	.56	.24	.56	319.29	500.00
	5.777	12836.00	1246.32	.00	.26	.00	406.32	500.00
	5.777	12836.00	1247.04	.72	.42	.72	319.16	500.00
	5.867	11769.00	1246.60	.00	.28	.00	491.02	465.00
	5.867	11769.00	1247.46	.86	.42	.86	429.27	465.00
*	5.871	11706.00	1247.08	.00	.48	.00	489.73	20.00
*	5.871	11706.00	1247.07	-.01	-.38	-.01	451.08	20.00
	5.886	11500.00	1251.85	.00	4.77	.00	1231.21	78.00
	5.886	11500.00	1252.49	.64	5.42	.64	520.00	78.00
*	5.900	17000.00	1252.73	.00	.88	.00	1416.64	80.00
*	5.900	17000.00	1253.25	.52	.76	.52	879.91	80.00
*	5.925	17000.00	1253.05	.00	.32	.00	1146.78	130.00
*	5.925	17000.00	1253.39	.35	.15	.35	872.73	130.00
*	5.966	17000.00	1254.26	.00	1.21	.00	1054.90	360.00
*	5.966	17000.00	1254.77	.51	1.38	.51	904.55	360.00
	6.060	17000.00	1254.82	.00	.56	.00	761.48	500.00
	6.060	17000.00	1255.36	.54	.59	.54	841.56	500.00
	6.155	11920.00	1255.47	.00	.65	.00	700.63	500.00
	6.155	11920.00	1255.84	.38	.48	.38	537.21	500.00
*	6.250	11920.00	1255.62	.00	.15	.00	512.07	500.00
*	6.250	11920.00	1256.07	.45	.22	.45	472.80	500.00
*	6.345	11920.00	1257.60	.00	1.98	.00	483.25	500.00
*	6.345	11920.00	1257.69	.09	1.62	.09	434.48	500.00
*	6.390	11920.00	1260.24	.00	2.65	.00	529.50	230.00
*	6.390	11920.00	1260.20	-.04	2.51	-.04	455.21	230.00
*	6.400	17000.00	1261.25	.00	1.01	.00	1072.44	38.00
	6.400	17000.00	1260.88	-.37	.67	-.37	755.72	38.00
	6.440	17000.00	1261.99	.00	.74	.00	925.22	230.00

*	6.440	17000.00	1262.34	.35	1.46	.35	940.95	230.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	6.530	17000.00	1262.98	.00	.99	.00	937.69	500.00
	6.530	17000.00	1263.18	.20	.84	.20	940.18	500.00
	6.630	17000.00	1263.88	.00	.90	.00	949.75	500.00
	6.630	17000.00	1264.07	.19	.89	.19	925.85	500.00
	6.723	17000.00	1264.86	.00	.98	.00	927.81	500.00
	6.723	17000.00	1265.01	.15	.94	.15	895.17	500.00
*	6.820	17000.00	1265.97	.00	1.11	.00	848.13	500.00
*	6.820	17000.00	1265.94	-.02	.93	-.02	718.37	500.00
*	6.856	17000.00	1267.19	.00	1.22	.00	792.27	200.00
*	6.856	17000.00	1267.54	.35	1.59	.35	713.52	200.00
	6.879	17000.00	1267.33	.00	.14	.00	762.47	120.00
	6.879	17000.00	1267.71	.37	.17	.37	687.61	120.00
*	6.880	17000.00	1267.67	.00	.34	.00	1075.23	32.00
*	6.880	17000.00	1267.74	.07	.04	.07	683.99	32.00
	6.893	17000.00	1270.01	.00	2.34	.00	1413.00	78.00
	6.893	17000.00	1270.01	.00	2.26	.00	784.91	78.00
	6.910	17000.00	1269.99	.00	-.02	.00	928.43	45.00
	6.910	17000.00	1270.05	.06	.05	.06	792.41	45.00
	6.960	17000.00	1270.04	.00	.05	.00	772.04	250.00
	6.960	17000.00	1270.14	.10	.08	.10	736.62	250.00
*	7.008	17000.00	1269.87	.00	-.17	.00	592.77	250.00
*	7.008	17000.00	1269.89	.02	-.25	.02	450.09	250.00
	7.102	17000.00	1270.58	.00	.71	.00	494.10	500.00
	7.102	17000.00	1270.72	.14	.83	.14	377.34	500.00
	7.197	17000.00	1271.19	.00	.61	.00	550.48	500.00
*	7.197	17000.00	1271.43	.24	.71	.24	516.00	500.00
*	7.290	17000.00	1271.44	.00	.25	.00	657.88	500.00
*	7.290	17000.00	1271.67	.23	.24	.23	638.50	500.00
*	7.390	17000.00	1272.08	.00	.64	.00	629.49	500.00
*	7.390	17000.00	1272.18	.10	.51	.10	583.27	500.00
	7.481	17000.00	1273.16	.00	1.09	.00	583.16	500.00
	7.481	17000.00	1273.25	.09	1.07	.09	558.36	500.00
	7.576	17000.00	1273.86	.00	.69	.00	546.84	500.00
	7.576	17000.00	1273.95	.09	.70	.09	526.50	500.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	7.670	17000.00	1274.75	.00	.90	.00	599.16	500.00
	7.670	17000.00	1274.75	.00	.81	.00	470.24	500.00
	7.765	17000.00	1275.50	.00	.75	.00	522.20	500.00
	7.765	17000.00	1275.80	.30	1.04	.30	485.68	500.00
	7.837	17000.00	1276.14	.00	.64	.00	534.19	380.00
	7.837	17000.00	1276.35	.21	.56	.21	493.62	380.00
*	7.883	17000.00	1276.70	.00	.56	.00	540.24	240.00
*	7.883	17000.00	1276.88	.18	.53	.18	402.97	240.00
*	7.955	17000.00	1276.45	.00	-.26	.00	368.15	400.00
*	7.955	17000.00	1276.52	.07	-.37	.07	285.87	400.00
*	7.979	17000.00	1277.88	.00	1.43	.00	891.04	120.00
*	7.979	17000.00	1278.51	.64	2.00	.64	496.65	120.00
*	7.988	17000.00	1284.07	.00	6.19	.00	1279.26	50.00
*	7.988	17000.00	1284.58	.51	6.07	.51	803.80	50.00
*	7.992	17000.00	1284.35	.00	.28	.00	1280.94	30.00
*	7.992	17000.00	1285.31	.96	.73	.96	899.18	30.00
	8.144	16000.00	1286.12	.00	1.77	.00	1252.46	582.00
	8.144	16000.00	1286.49	.37	1.18	.37	1030.67	582.00
*	8.239	16000.00	1287.16	.00	1.04	.00	633.67	500.00
*	8.239	16000.00	1287.22	.07	.74	.07	624.40	500.00
*	8.333	16000.00	1290.11	.00	2.96	.00	1404.14	500.00
*	8.333	16000.00	1290.55	.43	3.32	.43	739.17	500.00
	8.428	16000.00	1290.81	.00	.70	.00	1311.00	500.00
	8.428	16000.00	1291.66	.85	1.11	.85	952.71	500.00
*	8.523	16000.00	1292.05	.00	1.25	.00	1018.41	500.00
	8.523	16000.00	1293.03	.98	1.37	.98	889.94	500.00
	8.656	16000.00	1294.67	.00	2.61	.00	642.62	513.00
*	8.656	16000.00	1295.29	.62	2.26	.62	557.30	513.00
*	8.752	16000.00	1296.11	.00	1.44	.00	1027.82	480.00
*	8.752	16000.00	1296.92	.81	1.63	.81	641.16	480.00
	8.996	16000.00	1296.45	.00	.34	.00	1071.24	1288.00
	8.996	16000.00	1297.34	.90	.43	.90	553.63	1288.00
	9.022	16000.00	1296.52	.00	.07	.00	1483.74	174.00
	9.022	16000.00	1297.48	.96	.13	.96	613.55	174.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	9.125	16000.00	1298.59	.00	2.07	.00	1292.79	529.00
*	9.125	16000.00	1299.35	.77	1.88	.77	938.55	529.00
	9.126	16000.00	1298.92	.00	.34	.00	1137.57	10.00
*	9.126	16000.00	1299.78	.86	.43	.86	826.19	10.00
*	9.128	16000.00	1299.37	.00	.45	.00	1119.74	23.00
*	9.128	16000.00	1300.01	.64	.23	.64	840.06	23.00
*	9.150	16000.00	1300.44	.00	1.07	.00	1086.73	100.00
*	9.150	16000.00	1300.56	.13	.55	.13	845.00	100.00
	9.243	9000.00	1301.01	.00	.57	.00	825.80	499.00
	9.243	9000.00	1301.54	.54	.98	.54	665.16	499.00
*	9.283	9000.00	1301.09	.00	.09	.00	1193.95	316.00
*	9.283	9000.00	1301.62	.53	.08	.53	680.00	316.00
*	9.375	9000.00	1302.20	.00	1.11	.00	1612.37	400.00
	9.375	9000.00	1302.54	.34	.92	.34	710.00	400.00
	9.470	9000.00	1304.40	.00	2.20	.00	1197.81	445.00
	9.470	9000.00	1304.45	.05	1.91	.05	750.00	445.00
*	9.564	9000.00	1306.40	.00	1.99	.00	886.17	484.00
	9.564	9000.00	1306.49	.09	2.03	.09	723.12	484.00
	9.578	9000.00	1307.47	.00	1.07	.00	1009.28	500.00
	9.578	9000.00	1307.64	.17	1.15	.17	840.00	500.00
	9.659	9000.00	1308.15	.00	.69	.00	1218.75	377.00
	9.659	9000.00	1308.30	.14	.66	.14	860.00	377.00
	9.754	9000.00	1309.13	.00	.97	.00	891.95	476.00
	9.754	9000.00	1309.25	.12	.96	.12	710.00	476.00
	9.849	9000.00	1309.99	.00	.86	.00	760.21	427.00
	9.849	9000.00	1310.22	.23	.96	.23	625.00	427.00
*	9.943	9000.00	1312.24	.00	2.25	.00	653.09	489.00
*	9.943	9000.00	1312.11	-.13	1.90	-.13	468.80	489.00
*	10.040	9000.00	1314.74	.00	2.50	.00	1277.11	435.00
*	10.040	9000.00	1315.36	.62	3.25	.62	693.60	435.00
	10.130	9000.00	1316.37	.00	1.63	.00	490.00	500.00
	10.130	9000.00	1316.68	.31	1.32	.31	440.00	500.00
	10.230	9000.00	1318.09	.00	1.72	.00	528.55	500.00
	10.230	9000.00	1318.17	.08	1.49	.08	360.00	500.00

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	10.320	9000.00	1319.31	.00	1.22	.00	645.38	500.00

	10.320	9000.00	1319.65	.35	1.49	.35	429.46	500.00
	10.380	9000.00	1319.66	.00	.35	.00	761.53	312.00
	10.380	9000.00	1320.14	.48	.49	.48	598.12	312.00
	10.400	9000.00	1319.92	.00	.26	.00	1208.30	90.00
	10.400	9000.00	1320.21	.29	.06	.29	638.53	90.00
	10.410	9000.00	1320.31	.00	.39	.00	846.07	58.00
	10.410	9000.00	1320.33	.02	.12	.02	643.13	58.00
	10.510	9000.00	1320.58	.00	.27	.00	616.82	542.00
	10.510	9000.00	1320.60	.03	.27	.03	471.08	542.00
*	10.610	9000.00	1321.38	.00	.81	.00	499.90	455.00
*	10.610	9000.00	1321.32	-.07	.71	-.07	430.15	455.00
	10.700	9000.00	1324.22	.00	2.84	.00	678.89	470.00
*	10.700	9000.00	1324.57	.35	3.25	.35	540.91	470.00
*	10.800	9000.00	1325.43	.00	1.21	.00	680.92	480.00
*	10.800	9000.00	1325.83	.40	1.26	.40	544.06	480.00
*	10.890	9000.00	1325.69	.00	.26	.00	653.38	500.00
*	10.890	9000.00	1326.10	.42	.28	.42	474.28	500.00
*	10.990	9000.00	1327.26	.00	1.57	.00	574.09	480.00
*	10.990	9000.00	1327.25	-.01	1.14	-.01	572.94	480.00
*	11.080	9000.00	1329.46	.00	2.20	.00	640.51	476.00
	11.080	9000.00	1329.98	.52	2.73	.52	608.32	476.00
	11.150	9000.00	1329.91	.00	.45	.00	679.73	402.00
	11.150	9000.00	1330.68	.77	.71	.77	668.63	402.00
	11.170	9000.00	1331.77	.00	1.86	.00	714.30	98.00
	11.170	9000.00	1331.83	.06	1.14	.06	680.61	98.00
*	11.270	9000.00	1332.73	.00	.97	.00	568.69	493.00
*	11.270	9000.00	1333.41	.68	1.58	.68	561.28	493.00
*	11.360	9000.00	1335.23	.00	2.49	.00	609.13	490.00
	11.360	9000.00	1335.56	.33	2.15	.33	581.21	490.00
*	11.460	9000.00	1336.48	.00	1.25	.00	648.18	460.00
	11.460	9000.00	1336.95	.47	1.39	.47	579.10	460.00
*	11.550	9000.00	1338.41	.00	1.93	.00	641.88	499.00
	11.550	9000.00	1338.56	.15	1.61	.15	568.02	499.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	11.650	9000.00	1339.52	.00	1.10	.00	616.31	480.00
	11.650	9000.00	1339.82	.30	1.26	.30	495.63	480.00
	11.740	9000.00	1341.57	.00	2.05	.00	581.50	502.00

	11.740	9000.00	1341.89	.33	2.08	.33	375.57	502.00
	11.840	9000.00	1343.89	.00	2.32	.00	500.39	463.00
	11.840	9000.00	1344.10	.21	2.20	.21	273.26	463.00
	11.930	9000.00	1345.97	.00	2.08	.00	521.10	464.00
	11.930	9000.00	1346.45	.48	2.35	.48	332.78	464.00
*	12.030	9000.00	1346.91	.00	.94	.00	689.75	441.00
*	12.030	9000.00	1347.43	.52	.98	.52	460.96	441.00
*	12.120	9000.00	1347.05	.00	.14	.00	604.06	434.00
*	12.120	9000.00	1347.55	.50	.12	.50	376.74	434.00
	12.220	9000.00	1348.64	.00	1.58	.00	534.35	532.00
*	12.220	9000.00	1349.16	.53	1.61	.53	359.51	532.00
*	12.310	9000.00	1350.06	.00	1.43	.00	337.58	497.00
*	12.310	9000.00	1350.57	.51	1.41	.51	243.82	497.00
	12.410	9000.00	1350.64	.00	.57	.00	304.43	509.00
	12.410	9000.00	1351.05	.41	.47	.41	244.35	509.00
	12.500	9000.00	1351.50	.00	.87	.00	241.46	493.00
	12.500	9000.00	1351.93	.43	.89	.43	233.47	493.00
*	12.540	9000.00	1351.81	.00	.31	.00	224.08	222.00
*	12.540	9000.00	1352.01	.20	.08	.20	196.32	222.00
	12.560	9000.00	1353.07	.00	1.26	.00	233.48	74.00
	12.560	9000.00	1353.07	.00	1.06	.00	215.55	74.00
*	12.600	9000.00	1355.70	.00	2.63	.00	283.31	201.00
*	12.600	9000.00	1356.32	.62	3.24	.62	181.82	201.00
*	12.690	9000.00	1358.45	.00	2.75	.00	412.99	500.00
*	12.690	9000.00	1359.37	.92	3.05	.92	295.17	500.00
*	12.780	9000.00	1359.42	.00	.97	.00	305.31	505.00
*	12.780	9000.00	1360.07	.65	.70	.65	270.49	505.00
*	12.880	9000.00	1361.24	.00	1.83	.00	563.05	412.00
*	12.880	9000.00	1361.70	.45	1.63	.45	348.54	412.00
*	12.970	9000.00	1362.56	.00	1.31	.00	481.51	489.00
*	12.970	9000.00	1362.84	.28	1.14	.28	359.70	489.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
*	13.070	9000.00	1365.11	.00	2.56	.00	620.04	435.00
*	13.070	9000.00	1365.71	.59	2.87	.59	368.94	435.00
*	13.160	9000.00	1366.14	.00	1.03	.00	564.17	448.00
	13.160	9000.00	1366.66	.52	.95	.52	412.29	448.00
*	13.250	9000.00	1367.40	.00	1.26	.00	639.79	450.00

*	13.250	9000.00	1367.95	.55	1.29	.55	420.13	450.00
	13.380	9000.00	1367.63	.00	.23	.00	266.79	598.00
	13.380	9000.00	1368.17	.54	.23	.54	130.17	598.00
	13.400	9000.00	1367.69	.00	.06	.00	171.01	113.00
	13.400	9000.00	1368.56	.88	.39	.88	118.23	113.00
*	13.450	9000.00	1369.35	.00	1.66	.00	237.02	252.00
*	13.450	9000.00	1369.51	.16	.95	.16	164.30	252.00
*	13.540	9000.00	1372.49	.00	3.14	.00	437.72	477.00
*	13.540	9000.00	1373.09	.60	3.57	.60	337.49	477.00
	13.640	9000.00	1373.74	.00	1.25	.00	477.31	440.00
*	13.640	9000.00	1374.07	.33	.98	.33	347.60	440.00
*	13.730	9000.00	1374.83	.00	1.09	.00	451.92	408.00
*	13.730	9000.00	1375.28	.46	1.21	.46	369.15	408.00
*	13.830	9000.00	1375.32	.00	.49	.00	456.20	459.00
*	13.830	9000.00	1375.46	.15	.18	.15	238.97	459.00
	13.880	9000.00	1376.80	.00	1.48	.00	339.83	237.05
	13.880	9000.00	1377.57	.78	2.11	.78	249.61	237.05
*	13.920	9000.00	1378.12	.00	1.32	.00	946.07	233.68
*	13.920	9000.00	1378.93	.81	1.36	.81	470.51	233.68
	14.020	9000.00	1378.88	.00	.76	.00	505.07	475.00
	14.020	9000.00	1379.64	.76	.70	.76	505.07	475.00
*	14.060	9000.00	1380.57	.00	1.69	.00	690.65	276.92
	14.060	9000.00	1380.30	-.27	.66	-.27	333.59	276.92
	14.110	9000.00	1381.09	.00	.52	.00	550.76	500.00
	14.110	9000.00	1381.65	.56	1.35	.56	432.22	500.00
	14.210	9000.00	1381.88	.00	.78	.00	528.91	473.00
*	14.210	9000.00	1382.33	.45	.68	.45	279.18	473.00
	14.300	9000.00	1383.03	.00	1.15	.00	623.43	465.00
	14.300	9000.00	1383.82	.79	1.49	.79	267.77	465.00

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	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	14.340	9000.00	1383.31	.00	.28	.00	528.83	125.92
	14.340	9000.00	1384.10	.79	.28	.79	268.88	125.92
*	14.390	9000.00	1384.38	.00	1.07	.00	374.06	283.00
	14.390	9000.00	1385.00	.62	.90	.62	286.57	283.00
*	14.440	9000.00	1384.03	.00	-.35	.00	197.92	184.00
	14.440	9000.00	1384.92	.89	-.08	.89	186.05	184.00
*	14.470	6000.00	1384.03	.00	.00	.00	211.79	92.00

*	14.470	6000.00	1384.92	.89	.00	.89	172.57	92.00
*	14.490	6000.00	1385.59	.00	1.56	.00	223.05	148.00
*	14.490	6000.00	1385.91	.31	.99	.31	204.88	148.00
	14.580	6000.00	1386.26	.00	.66	.00	370.39	483.00
	14.580	6000.00	1386.47	.21	.56	.21	307.84	483.00
	14.660	6000.00	1386.51	.00	.25	.00	504.73	369.00
	14.660	6000.00	1386.70	.19	.23	.19	411.16	369.00

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SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO= .475 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= .475 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= .568 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= .568 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= .663 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= .663 PROFILE= 1 MINIMUM SPECIFIC ENERGY

ON SECNO= .776 PROFILE= 1 CRITICAL DEPTH ASSUMED
ON SECNO= .776 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= .776 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= .776 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= .791 PROFILE= 1 HYDRAULIC JUMP D.S.
WARNING SECNO= .791 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO= .791 PROFILE= 2 HYDRAULIC JUMP D.S.
WARNING SECNO= .791 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= .852 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= .852 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= .947 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1.040 PROFILE= 1 WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO= 1.040 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 1.136 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 1.136 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1.515 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.515 PROFILE= 1 MINIMUM SPECIFIC ENERGY
WARNING SECNO= 1.515 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NG SECNO= 1.554 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
NG SECNO= 1.554 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1.610 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 1.610 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1.794 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.794 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1.794 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.794 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 1.799 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.799 PROFILE= 1 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 1.799 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1.799 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 1.827 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 1.827 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1.894 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 1.894 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1.990 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 1.990 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2.047 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 2.047 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2.178 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 2.178 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2.557 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 2.658 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.658 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.658 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.658 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 2.662 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2.663 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 2.663 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2.700 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2.775 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 2.780 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO= 2.780 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.780 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 2.790 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.790 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.790 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.790 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 2.820 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.820 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 2.820 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 2.820 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 2.827 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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 WARNING SECNO=      2.827  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      3.125  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
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 WARNING SECNO=      3.125  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      3.270  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      3.270  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      3.488  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      3.490  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      3.504  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=      3.780  PROFILE=  1  HYDRAULIC JUMP D.S.

 WARNING SECNO=      3.811  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      3.883  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      4.167  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      4.167  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      4.220  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      4.220  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

     NG SECNO=      4.290  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      4.290  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      4.546  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      4.546  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      4.735  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=      4.735  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=      4.830  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=      4.850  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      4.850  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      4.850  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      4.850  PROFILE=  2  MINIMUM SPECIFIC ENERGY

 CAUTION SECNO=      4.855  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      4.855  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      4.855  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=      4.855  PROFILE=  2  MINIMUM SPECIFIC ENERGY

 CAUTION SECNO=      4.870  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      4.870  PROFILE=  1  WSEL ASSUMED BASED ON MIN DIFF
 CAUTION SECNO=      4.870  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
 C' 'ON SECNO=      4.870  PROFILE=  1  HYDRAULIC JUMP D.S.
     ON SECNO=      4.870  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=      4.870  PROFILE=  2  WSEL ASSUMED BASED ON MIN DIFF
 CAUTION SECNO=      4.870  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL
1
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CAUTION SECNO= 4.870 PROFILE= 2 HYDRAULIC JUMP D.S.

NG SECNO= 4.873 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
NG SECNO= 4.873 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4.892 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 4.892 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 4.990 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 4.990 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5.110 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5.300 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 5.360 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.360 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5.360 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.360 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 5.372 PROFILE= 1 CRITICAL DEPTH ASSUMED
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CAUTION SECNO= 5.372 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.372 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 5.385 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5.385 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NG SECNO= 5.492 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 5.871 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.871 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5.871 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.871 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 5.886 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.886 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5.886 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.886 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 5.900 PROFILE= 1 HYDRAULIC JUMP D.S.
WARNING SECNO= 5.900 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5.900 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5.925 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5.925 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5.966 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5.966 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6.250 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6.250 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 6.345 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 6.345 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 6.345 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 6.345 PROFILE= 2 MINIMUM SPECIFIC ENERGY

ON SECNO= 6.390 PROFILE= 1 CRITICAL DEPTH ASSUMED
ION SECNO= 6.390 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 6.390 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 6.390 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 6.400 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6.440 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6.820 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 6.820 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6.856 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 6.856 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 6.880 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 6.880 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 6.893 PROFILE= 1 HYDRAULIC JUMP D.S.
WARNING SECNO= 6.893 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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WARNING SECNO= 6.893 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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NG SECNO= 7.197 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7.290 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 7.290 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7.390 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 7.390 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7.883 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 7.883 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7.955 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 7.955 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 7.979 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 7.979 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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CAUTION SECNO= 7.988 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 7.988 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 7.988 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 7.992 PROFILE= 1 CRITICAL DEPTH ASSUMED
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WARNING SECNO= 7.992 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 8.144 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 8.144 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 8.239 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 8.239 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 8.239 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 8.239 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 8.333 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 8.333 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 8.523 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 8.656 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 8.752 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 8.752 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 9.125 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.125 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 9.125 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.125 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 9.126 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.126 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 9.126 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.126 PROFILE= 2 MINIMUM SPECIFIC ENERGY

CAUTION SECNO= 9.128 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.128 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 9.128 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.128 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 9.150 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 9.150 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 9.283 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 9.283 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 9.375 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 9.564 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 9.943 PROFILE= 1 CRITICAL DEPTH ASSUMED

CAUTION SECNO= 9.943 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 9.943 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 9.943 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 10.040 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 10.040 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10.320 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 10.400 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 10.610 PROFILE= 1 CRITICAL DEPTH ASSUMED

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 CAUTION SECNO=     10.610  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=     10.610  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     10.610  PROFILE=  2  MINIMUM SPECIFIC ENERGY

     NG SECNO=     10.700  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     10.800  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=     10.800  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     10.890  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=     10.890  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=     10.990  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     10.990  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=     10.990  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     10.990  PROFILE=  2  MINIMUM SPECIFIC ENERGY

 WARNING SECNO=     11.080  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=     11.080  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=     11.270  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     11.270  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 WARNING SECNO=     11.270  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     11.360  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     11.460  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     11.550  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

     NG SECNO=     11.650  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     12.030  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=     12.030  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     12.120  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=     12.120  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 WARNING SECNO=     12.220  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
1
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 WARNING SECNO=     12.310  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 WARNING SECNO=     12.310  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=     12.540  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     12.540  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=     12.540  PROFILE=  2  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     12.540  PROFILE=  2  MINIMUM SPECIFIC ENERGY

 CAUTION SECNO=     12.560  PROFILE=  1  HYDRAULIC JUMP D.S.
 WARNING SECNO=     12.560  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
 C   'ON SECNO=     12.560  PROFILE=  2  HYDRAULIC JUMP D.S.
     NG SECNO=     12.560  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

 CAUTION SECNO=     12.600  PROFILE=  1  CRITICAL DEPTH ASSUMED
 CAUTION SECNO=     12.600  PROFILE=  1  MINIMUM SPECIFIC ENERGY
 CAUTION SECNO=     12.600  PROFILE=  2  CRITICAL DEPTH ASSUMED
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CAUTION SECNO= 12.600 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 12.690 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12.690 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 12.780 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12.780 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 12.880 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 12.880 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 12.970 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 12.970 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 12.970 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 12.970 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 13.070 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 13.070 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 13.160 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 13.250 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 13.250 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 13.450 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 13.450 PROFILE= 1 MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 13.450 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 13.450 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 13.540 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 13.540 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 13.640 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 13.730 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 13.730 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 13.830 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO= 13.830 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 13.830 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 13.920 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 13.920 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 14.020 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 14.020 PROFILE= 1 MINIMUM SPECIFIC ENERGY
WARNING SECNO= 14.020 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 14.060 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 14.210 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 14.390 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 14.440 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 14.470 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 14.470 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 14.490 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 14.490 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

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FLOODWAY DATA,
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
.437	632.	12301.	1.6	1167.3	1167.3	.0
.475	631.	5389.	3.7	1167.2	1167.2	.0
.491	605.	3503.	5.7	1167.3	1167.3	.0
.568	440.	1991.	10.0	1167.4	1167.4	.0
.663	355.	1689.	11.8	1169.6	1169.5	.1
.758	355.	2088.	9.6	1172.9	1172.4	.5
.776	405.	1694.	11.8	1173.3	1173.5	-.2
.791	445.	3146.	6.4	1176.7	1176.5	.2
.852	500.	2532.	7.9	1176.8	1176.5	.3
.947	503.	2193.	9.1	1178.8	1178.3	.5
1.040	514.	1915.	10.4	1182.0	1182.0	.0
1.136	499.	2659.	7.5	1185.5	1184.9	.6
1.231	430.	2964.	6.7	1186.8	1186.3	.5
1.326	226.	1943.	10.3	1187.3	1186.9	.4
1.420	205.	2205.	9.1	1188.7	1188.0	.7
1.515	342.	1744.	11.5	1189.8	1189.8	.0
1.554	451.	2643.	7.6	1191.6	1191.7	-.1
1.570	499.	2311.	8.7	1191.7	1192.3	-.6
1.582	535.	3417.	5.9	1192.7	1192.6	.1
1.610	527.	3730.	5.4	1192.9	1192.8	.1
1.705	501.	3418.	5.9	1193.3	1193.1	.2
1.770	396.	3107.	6.4	1193.5	1193.3	.2
1.787	377.	3018.	6.6	1193.5	1193.2	.3
1.794	401.	1683.	11.9	1196.0	1195.9	.1
1.799	420.	1706.	11.7	1196.4	1196.1	.3
1.827	500.	2845.	7.0	1198.8	1198.1	.7
1.894	502.	3882.	5.2	1199.6	1199.1	.5
1.990	639.	3599.	5.6	1199.9	1199.4	.5
2.047	626.	2451.	8.2	1200.5	1200.1	.4
2.080	417.	2121.	9.4	1201.5	1201.2	.3
2.178	526.	3302.	6.1	1203.9	1203.5	.4
2.273	453.	3266.	6.1	1204.6	1204.4	.2
2.367	417.	3165.	6.3	1205.3	1204.9	.4
2.462	417.	3205.	6.2	1206.0	1205.6	.4
2.557	370.	3406.	5.9	1206.6	1206.2	.4
2.610	288.	3125.	6.4	1206.7	1206.3	.4
2.620	253.	2518.	7.9	1206.6	1206.2	.4
2.629	208.	1936.	10.3	1206.2	1205.9	.3
2.652	214.	2041.	9.8	1206.5	1206.2	.3
2.653	214.	2042.	9.8	1206.5	1206.2	.3

2.658	224.	1408.	14.2	1206.2	1206.1	.1
2.662	224.	1686.	11.9	1207.5	1207.6	-.1

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FLOODWAY DATA,
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
2.663	229.	2671.	7.5	1209.1	1209.2	-.1
2.700	356.	3363.	5.9	1209.7	1210.0	-.3
2.746	452.	3179.	6.3	1209.9	1210.1	-.2
2.770	535.	3381.	5.9	1210.3	1210.3	.0
2.775	546.	2776.	7.2	1210.2	1210.2	.0
2.780	570.	1898.	10.5	1209.8	1209.9	-.1
2.790	572.	1891.	10.6	1210.8	1210.7	.1
2.810	563.	2116.	9.5	1212.0	1211.9	.1
2.820	558.	1898.	10.5	1212.7	1212.3	.4
2.827	559.	2752.	7.3	1214.0	1213.5	.5
2.841	574.	2993.	6.7	1214.2	1213.7	.5
2.936	571.	3481.	5.7	1215.4	1214.6	.8
3.030	583.	3065.	6.5	1216.1	1215.4	.7
3.125	582.	3704.	5.4	1217.1	1216.4	.7
3.220	644.	3472.	5.8	1217.6	1216.7	.9
3.270	608.	2792.	7.2	1217.9	1217.2	.7
3.280	605.	2959.	6.8	1218.2	1217.6	.6
3.409	652.	2838.	7.0	1219.7	1219.1	.6
3.488	636.	2684.	7.5	1221.2	1220.5	.7
3.490	635.	2544.	7.9	1221.3	1221.0	.3
3.504	642.	2485.	8.0	1221.5	1220.9	.6
3.510	647.	2662.	7.5	1221.9	1221.5	.4
3.548	660.	3210.	6.2	1222.8	1222.3	.5
3.590	597.	3476.	5.8	1223.1	1222.6	.5
3.600	552.	3434.	5.8	1223.4	1222.9	.5
3.660	445.	3161.	6.3	1223.7	1223.4	.3
3.710	337.	2334.	8.6	1224.0	1223.8	.2
3.730	305.	1952.	10.2	1224.0	1223.9	.1
3.760	232.	1695.	11.8	1224.2	1223.8	.4
3.780	232.	1743.	11.5	1224.5	1224.6	-.1
3.811	286.	2096.	9.5	1225.8	1226.8	-1.0
3.883	520.	4239.	4.7	1227.6	1227.4	.2
3.977	574.	4179.	4.8	1228.1	1227.8	.3
4.072	539.	3396.	5.9	1228.5	1228.2	.3
4.167	622.	5332.	3.8	1229.1	1228.8	.3
4.220	566.	4119.	4.9	1229.3	1228.9	.4
4.250	486.	3478.	5.8	1229.3	1229.0	.3
4.290	422.	2685.	7.4	1229.4	1229.1	.3
4.356	450.	2938.	6.8	1230.1	1229.8	.3
4.451	591.	3571.	5.6	1231.0	1230.5	.5
4.546	532.	2706.	7.4	1231.6	1231.2	.4
4.640	497.	2764.	7.2	1232.9	1232.9	.0

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WAY DATA,
LE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
4.735	454.	3240.	6.2	1234.2	1234.0	.2
4.830	604.	4040.	4.9	1234.8	1234.2	.6
4.850	634.	1676.	11.9	1235.5	1235.5	.0
4.855	618.	1992.	10.0	1238.2	1238.1	.1
4.870	613.	1957.	10.2	1239.0	1239.0	.0
4.873	613.	4332.	3.9	1240.9	1240.5	.4
4.892	626.	6769.	2.5	1241.0	1240.6	.4
4.924	736.	7092.	2.4	1241.1	1240.7	.4
4.952	972.	9257.	1.8	1241.2	1240.7	.5
4.990	934.	5301.	3.2	1241.2	1240.7	.5
5.110	575.	4162.	3.3	1241.4	1240.9	.5
5.205	422.	3289.	4.2	1241.5	1241.1	.4
5.300	468.	2866.	4.8	1242.0	1241.5	.5
5.357	429.	2352.	5.8	1242.3	1241.9	.4
5.360	441.	1360.	10.0	1242.9	1243.0	-.1
5.372	417.	1334.	10.2	1243.5	1243.6	-.1
5.385	420.	2246.	6.1	1245.2	1245.0	.2
5.492	433.	2857.	4.8	1245.9	1245.4	.5
5.587	379.	3117.	4.2	1246.4	1245.8	.6
5.682	319.	2609.	5.0	1246.7	1246.1	.6
5.777	319.	2716.	4.7	1247.0	1246.3	.7
5.867	429.	2429.	4.8	1247.5	1246.6	.9
5.871	451.	1232.	9.5	1247.1	1247.1	.0
5.886	520.	1283.	9.0	1252.5	1251.9	.6
5.900	880.	3018.	5.6	1253.2	1252.7	.5
5.925	873.	2438.	7.0	1253.3	1253.0	.3
5.966	905.	3680.	4.6	1254.8	1254.3	.5
6.060	842.	3558.	4.8	1255.3	1254.8	.5
6.155	537.	3124.	3.8	1255.9	1255.5	.4
6.250	473.	2535.	4.7	1256.0	1255.6	.4
6.345	434.	1230.	9.7	1257.7	1257.6	.1
6.390	455.	1258.	9.5	1260.2	1260.2	.0
6.400	840.	2125.	8.0	1260.9	1261.3	-.4
6.440	941.	3676.	4.6	1262.4	1262.0	.4
6.530	940.	3744.	4.5	1263.2	1263.0	.2
6.630	926.	3438.	4.9	1264.1	1263.9	.2
6.723	895.	3786.	4.5	1265.1	1264.9	.2
6.820	726.	1962.	8.7	1266.0	1266.0	.0
6.856	714.	3551.	4.8	1267.5	1267.2	.3
6.879	765.	3078.	5.5	1267.7	1267.3	.4
6.880	773.	3045.	5.6	1267.8	1267.7	.1
6.893	785.	4725.	3.6	1270.0	1270.0	.0

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FLOODWAY DATA,
PROFILE NO. 2

TION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
6.910	792.	4956.	3.4	1270.1	1270.0	.1
6.960	737.	4924.	3.5	1270.1	1270.0	.1
7.008	450.	2295.	7.4	1269.9	1269.9	.0
7.102	377.	2632.	6.5	1270.7	1270.6	.1
7.197	516.	3769.	4.5	1271.4	1271.2	.2
7.290	638.	3153.	5.4	1271.6	1271.4	.2
7.390	583.	2396.	7.1	1272.2	1272.1	.1
7.481	558.	2743.	6.2	1273.3	1273.2	.1
7.576	526.	2549.	6.7	1274.0	1273.9	.1
7.670	470.	2284.	7.4	1274.8	1274.8	.0
7.765	486.	2596.	6.5	1275.8	1275.5	.3
7.837	494.	2612.	6.5	1276.3	1276.1	.2
7.883	403.	3548.	4.8	1276.9	1276.7	.2
7.955	286.	1577.	10.8	1276.5	1276.4	.1
7.979	497.	3688.	4.6	1278.5	1277.9	.6
7.988	804.	1924.	8.8	1284.6	1284.1	.5
7.992	899.	2492.	6.8	1285.3	1284.3	1.0
8.144	1031.	3521.	4.5	1286.5	1286.1	.4
8.239	701.	1681.	9.5	1287.3	1287.2	.1
8.333	739.	3440.	4.7	1290.5	1290.1	.4
8.428	1018.	3442.	4.6	1291.6	1290.8	.8
8.523	951.	3165.	5.1	1293.1	1292.1	1.0
8.656	557.	1805.	8.9	1295.3	1294.7	.6
8.752	641.	3738.	4.3	1296.9	1296.1	.8
8.996	554.	3511.	4.6	1297.3	1296.4	.9
9.022	614.	3973.	4.0	1297.5	1296.5	1.0
9.125	939.	1939.	8.3	1299.4	1298.6	.8
9.126	850.	1894.	8.4	1299.8	1298.9	.9
9.128	840.	1852.	8.6	1300.0	1299.4	.6
9.150	845.	2555.	6.3	1300.5	1300.4	.1
9.243	665.	3745.	2.4	1301.5	1301.0	.5
9.283	680.	2207.	4.1	1301.6	1301.1	.5
9.375	710.	1670.	5.4	1302.5	1302.2	.3
9.470	750.	1565.	5.8	1304.4	1304.4	.0
9.564	786.	2205.	4.1	1306.5	1306.4	.1
9.578	840.	2671.	3.4	1307.7	1307.5	.2
9.659	860.	2652.	3.4	1308.3	1308.2	.1
9.754	710.	2182.	4.1	1309.2	1309.1	.1
9.849	625.	2224.	4.0	1310.2	1310.0	.2
9.943	469.	1043.	8.6	1312.1	1312.2	-.1
10.040	694.	2117.	4.3	1315.3	1314.7	.6
10.130	440.	1449.	6.2	1316.7	1316.4	.3

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WAY DATA,
PROFILE NO. 2

FLOODWAY ------- WATER SURFACE ELEVATION

STATION	WIDTH	SECTION AREA	MEAN VELOCITY	WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
10.230	360.	1274.	7.1	1318.2	1318.1	.1
10.320	429.	1864.	4.8	1319.6	1319.3	.3
10.380	598.	2208.	4.1	1320.2	1319.7	.5
10.400	639.	2192.	4.1	1320.2	1319.9	.3
10.410	643.	2380.	3.8	1320.3	1320.3	.0
10.510	471.	2028.	4.4	1320.6	1320.6	.0
10.610	430.	1019.	8.8	1321.3	1321.4	-.1
10.700	541.	1392.	6.5	1324.5	1324.2	.3
10.800	544.	2597.	3.5	1325.8	1325.4	.4
10.890	474.	2641.	3.4	1326.1	1325.7	.4
10.990	573.	1123.	8.0	1327.3	1327.3	.0
11.080	608.	2207.	4.1	1330.0	1329.5	.5
11.150	669.	2136.	4.2	1330.7	1329.9	.8
11.170	681.	2085.	4.3	1331.9	1331.8	.1
11.270	561.	1493.	6.0	1333.4	1332.7	.7
11.360	581.	1792.	5.0	1335.5	1335.2	.3
11.460	579.	1541.	5.8	1337.0	1336.5	.5
11.550	568.	1995.	4.5	1338.6	1338.4	.2
11.650	496.	1554.	5.8	1339.8	1339.5	.3
11.740	376.	1105.	8.1	1341.9	1341.6	.3
11.840	273.	973.	9.2	1344.1	1343.9	.2
11.930	333.	1310.	6.9	1346.5	1346.0	.5
12.030	461.	2294.	3.9	1347.4	1346.9	.5
12.120	377.	1400.	6.4	1347.6	1347.1	.5
12.220	360.	1146.	7.9	1349.1	1348.6	.5
12.310	244.	1519.	5.9	1350.6	1350.1	.5
12.410	244.	1233.	7.3	1351.0	1350.6	.4
12.500	233.	1290.	7.0	1351.9	1351.5	.4
12.540	196.	788.	11.4	1352.0	1351.8	.2
12.560	216.	1086.	8.3	1353.1	1353.1	.0
12.600	182.	770.	11.7	1356.3	1355.7	.6
12.690	295.	1473.	6.1	1359.3	1358.4	.9
12.780	270.	1098.	8.2	1360.1	1359.4	.7
12.880	349.	1677.	5.4	1361.7	1361.2	.5
12.970	360.	962.	9.4	1362.9	1362.6	.3
13.070	369.	1624.	5.5	1365.7	1365.1	.6
13.160	412.	1333.	6.8	1366.6	1366.1	.5
13.250	420.	1874.	4.8	1367.9	1367.4	.5
13.380	130.	804.	11.2	1368.1	1367.6	.5
13.400	118.	776.	11.6	1368.6	1367.7	.9
13.450	164.	741.	12.2	1369.6	1369.4	.2
13.540	337.	1525.	5.9	1373.1	1372.5	.6

1

FLOODWAY DATA,
PROFILE NO. 2

ATION	------- FLOODWAY ------- WIDTH	SECTION AREA	MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE

13.640	348.	1320.	6.8	1374.0	1373.7	.3
13.730	369.	2045.	4.4	1375.3	1374.8	.5
13.830	239.	845.	10.6	1375.4	1375.3	.1
13.880	250.	1085.	8.3	1377.6	1376.8	.8
3.920	471.	1959.	4.6	1378.9	1378.1	.8
4.020	505.	1440.	6.2	1379.7	1378.9	.8
14.060	334.	1274.	7.1	1380.3	1380.6	-.3
14.110	432.	1869.	4.8	1381.7	1381.1	.6
14.210	279.	1266.	7.1	1382.4	1381.9	.5
14.300	299.	1355.	6.6	1383.8	1383.0	.8
14.340	269.	1267.	7.1	1384.1	1383.3	.8
14.390	287.	1532.	5.9	1385.0	1384.4	.6
14.440	186.	979.	9.2	1384.9	1384.0	.9
14.470	173.	1226.	4.9	1384.9	1384.0	.9
14.490	205.	1141.	5.3	1385.9	1385.6	.3
14.580	308.	1537.	3.9	1386.5	1386.3	.2
14.660	411.	1518.	4.0	1386.7	1386.5	.2

SECTION 4: Hydraulic Analysis

4.7. Final Results
Computer Runs
Split-flow

```
SF
TW
WS     2    6.39     6.4      -1     2.7
WC     0    1261      38    1261

WS     2   6.345    6.39      -1     2.7
WC     0    1261     230    1261
TW
WS     2    6.25   6.345      -1     2.7
WC     0    1259     500    1261
TW
WS     2   6.155    6.25      -1     2.7
WC     0    1257     500    1259
TW
WS     2    6.06   6.155      -1     2.7
WC     0    1255     500    1257
EE
C
C      2
C   6.39JACKRABBIT ROAD
C   6.39DOWNSTREAM EDGE
T1
T2
T3
J1   -10       2                                                5100  1254.8
JS     5       0       0       0    1000      20
J2     1              -1                                          -6
J3   150     110     200
NC                             0.3     0.5
       6   0.035 9352.92    0.02 9645.25   0.035 9820.08    0.02 9903.15   0.025
      069   0.03510137.61
ET                    7.1                          9218.7310060.29
X1  6.06      42 9903.1510137.61
X3    10    1250
GR  1257    8954    1256 8969.47    1256 8991.43    1256 9103.87    1255 9123.28
GR  1255 9137.28    1256 9146.71    1257 9148.99    1258 9151.34    1258 9179.66
GR  1257 9180.91    1256 9192.64    1255 9218.73    1254 9223.89    1253 9229.36
GR  1252 9235.91    1251 9271.69    1250  9299.8    1249 9327.18    1248 9352.92
GR  1248 9645.25    1249 9676.26    1250 9722.28    1251 9745.17    1252  9758.2
GR  1253 9792.84    1254 9812.51    1255 9820.08    1255 9903.15    1254 9918.53
GR  1253 9929.95    1252 9936.48    1251 9942.86    1250 9949.08    1250 9994.73
GR  125110044.94    125210052.27    125310059.46    125410065.25    1255   10069
GR  125610080.75    125710137.61
NC                             0.2     0.4
NH     6   0.035 9295.57    0.02 9723.69   0.035 9861.73    0.02 9915.33   0.029
NH 10166   0.03510267.53
ET                    7.1                              9915   10160
X1 6.155      53 9911.4410210.62     500     500     500
X3    10    1250
GR  1261    9044    1260 9099.22    1259 9124.62    1258 9145.04    1257 9149.56
GR  1256 9153.82    1255 9157.91    1254 9162.58    1253 9169.44    1252  9177.3
GR  1251 9188.21    1250 9194.15    1249 9198.88    1248 9204.21    1248 9241.26
GR  1249 9246.69    1250  9252.7    1250 9256.55    1249 9279.67    1248 9295.57
GR  1248 9459.73    1249 9511.81    1249 9514.71    1248  9569.2    1248 9723.69
      249 9733.49    1250  9764.2    1251  9786.1    1252  9801.5    1253 9810.99
       53 9816.79    1253 9821.36    1254 9850.33    1255 9852.16    1256 9861.73
GR  1257 9871.03    1257 9873.42    1257 9883.78    1257 9906.75    1257 9907.85
GR  1257 9911.44    1256 9915.33    1255 9920.77    1254 9926.49    1254 9946.13
GR  1254 9998.35    125410014.51    125410044.16    125410148.25    1257   10166
GR  125810204.02    125910210.62    125910267.53
```

```
NC                              0.2     0.4
NH     5   0.035 9563.51    0.02 9663.52   0.035 9870.63    0.02 9931.25   0.029
NH 10297
ET                    7.1                             9927   10173
      25       52 9892.0510181.86     500      500      500
X3    10     1250
GR  1263     9214    1262 9231.21    1261 9244.33    1260 9254.12    1259 9261.92
GR  1258 9326.76    1257 9338.37    1256 9348.67    1255 9355.64    1254  9361.6
GR  1253 9367.86    1252 9430.77    1251 9463.22    1250 9510.34    1249 9563.51
GR  1248 9600.19    1248 9663.52    1248 9737.95    1248 9748.79    1249 9753.93
GR  1250  9781.4    1251 9806.19    1252 9812.91    1253 9823.38    1253 9826.25
GR  1253 9831.34    1254 9850.09    1255 9860.47    1256 9865.24    1257 9870.63
GR  1258 9875.99    1259 9881.31    1259 9883.66    1259 9892.05    1259 9922.46
GR  1258 9926.97    1257 9931.25    1256 9935.33    1255 9939.47    1254 9984.12
GR  1253 9985.48    125310060.32    125310115.96    125310136.59    125410149.51
GR  125510159.48    125610163.88    125710168.28    125810172.88    125910177.34
GR  126010181.86    1260   10297
NC                              0.2     0.4
NH     5   0.035 9396.49    0.03 9860.82    0.02 9925.95   0.02510158.82   0.035
NH 10409
ET                    7.1                             9935   10140
X1 6.345       52 9874.3310215.81     500      500      500
X3    10
GR  1260     8988    1261 9024.95    1262 9060.04    1262 9084.02    1261 9085.55
GR  1260 9087.08    1259  9088.6    1258 9090.28    1258 9099.36    1259 9264.93
GR  1260 9266.06    1261 9266.96    1262 9268.21    1262 9278.21    1261 9297.77
GR  1260  9309.3    1259 9317.98    1258 9326.23    1257 9334.38    1256 9343.59
GR  1255 9396.49    1255 9480.04    1255 9523.35    1255  9532.8    1255 9677.92
GR  1254  9770.4    1253 9790.71    1253  9791.9    1254 9795.29    1255 9799.09
      256 9803.76    1257 9809.09    1258 9815.25    1258 9817.17    1258 9823.84
      259 9852.39    1260 9860.82    1261 9870.12    1261 9874.33    1260 9925.95
GR  1259 9938.67    1258 9948.24    1257 9961.94    1256 9985.73    125610002.39
GR  125710108.52    125810127.81    125910140.56    126010151.13    126110158.82
GR  126210215.81    1262   10409
NC                              0.2     0.4
NH     1   0.0210887.48
ET                    7.1                             9915   10326
* JACKRABBIT ROAD
* DOWNSTREAM EDGE
X1  6.39       14 9913.9710887.48     230      230      230
X2                                                                      15
X3    10
GR  1261 9913.97    1260 9930.98    1259 9942.91    1258 9961.73    1257 9987.44
GR  125710075.85    125810165.85    125910189.84    126010215.25    126110326.08
GR  126210474.26    126310610.23    126410834.68    126510887.48
NC                              0.2     0.4
NH     3    0.02 9936.53   0.02510225.37   0.03510378.46
X1   6.4       12 9917.74   10276       38       38       38
GR  1261 9917.74    1260 9936.53    1259 9955.76    1258 9972.53    125810098.75
GR  125910200.36    126010225.37    126010231.17    126010243.17    126110275.27
GR  1262   10276    126210378.46
EJ
T1
T2
T3
      10        3                                          5100  1255.3
J2    15               -1                                   -6
```

ER

```
SF
TW
WS     2   5.871   5.886      -1     2.7
WC     0    1251      78    1251

       2   5.867   5.871      -1     2.7
WC     0    1251      20    1251
TW
WS     2   5.777   5.867      -1     2.7
WC     0    1251     465    1251
TW
WS     2   5.682   5.777      -1     2.7
WC     0    1252     500    1251
TW
WS     2   5.587   5.682      -1     2.7
WC     0    1248     500    1252
TW
WS     2   5.492   5.587      -1     2.7
WC     0    1246     500    1248
TW
WS     2   5.385   5.492      -1     2.7
WC     0    1245     440    1246
TW
WS     2   5.372   5.385      -1     2.7
WC     0    1245      70    1245
TW
WS     2    5.36   5.372      -1     2.7
WC     0    1245      80    1245
TW
       2   5.357    5.36      -1     2.7
       0    1244     100    1245
TW
WS     2     5.3   5.357      -1     2.7
WC     0    1243     310    1244
TW
WS     2   5.205     5.3      -1     2.7
WC     0    1243     574    1243
TW
WS     2    5.11   5.205      -1     2.7
WC     0    1242     429    1243
TW
WS     2    4.99    5.11      -1     2.7
WC     0    1241     492    1242
EE
C
C     10
C   4.99GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
C   4.99AREA BETWEEN STA. 9685 AND STA. 9909
C    5.3NON-EFFECTIVE FLOW AREA REMOVED
C   5.36CAMELBACK ROAD
C   5.36DOWNSTREAM EDGE
C   5.36begin file 08ibw.dwg
C  5.372CAMELBACK ROAD
C  5.372UPSTREAM EDGE
C   5.886CHAPARRAL ROAD
       36DOWNSTREAM EDGE
T1
T2
T3
J1   -10       2                                          5500  1240.4
```

```
J2     1              -1                                    -6
J3   150             110             200
NC                              0.2     0.4
NH     2   0.02510086.17   0.035   10302
      ATA ADJUST TO REMOVE NON EFFECTIVE FLOW
     EA BETWEEN STA. 9685 AND STA. 9909
X1  4.99       21 9936.7910099.11
X3    10
GR  1241 9936.79    1240 9941.38    1239 9946.03    1238 9951.12    1237 9957.71
GR  1236 9966.56    1235 9977.15    1234 9985.79    1233 9994.27    123310031.41
GR  123410042.05    123510049.87    123610065.37    1237 10074.6    123810077.99
GR  123910082.15    124010086.17    124110090.97    124210099.11    124210209.31
GR  1241   10302
NC                              0.2     0.4
NH     2   0.02510104.13   0.03510133.17
ET                      7.1                             9945   10060
X1  5.11       17 9925.3910111.15  192.95  604.15   491.9
X3    10
GR  1242 9925.39    1241  9937.8    1240 9941.76    1239 9945.67    1238 9949.58
GR  1237 9953.31    123610005.88    1236 10014.6    123710039.94    123810058.01
GR  123910060.05    124010062.14    1241 10064.4    124210066.47    124310104.13
GR  124410111.15    124510133.17
NC                              0.2     0.4
NH     2   0.02510063.03   0.035 10290.3
ET                      7.1                             9945   10056
X1 5.205       19 9934.0110113.31     306     501     429
X3    10
GR  1243 9934.01    1242 9939.99    1241 9944.74    1240 9949.58    1239 9954.35
GR  1238 9959.19    1237 9964.01    1237 10037.6    123810045.76    123910049.13
     24010052.66    1241   10056    124210059.52    124310063.03    1244 10066.3
     24510113.31    124610160.65    1246 10222.6    1246 10290.3
NC                              0.2     0.4
NH     2   0.02510043.98   0.03510234.75
ET                      7.1                             9920   10050
* NON-EFFECTIVE FLOW AREA REMOVED
X1   5.3       19 9918.9910058.55  714.64  474.02  574.42
X3    10
GR  1243 9918.99    1242 9923.55    1241 9928.17    1240 9932.65    1239 9937.23
GR  1238 9941.84    1237 9967.53    1237 9983.76    123810036.62    1239 10040.3
GR  124010043.98    124110047.69    124210051.34    124310054.86    124410058.55
GR  124510062.18    124610065.73    124710129.11    124810234.75
NC                              0.2     0.4
NH     3    0.02 9902.78   0.02510054.07   0.035 10289.6
ET                      7.1                             9910   10050
X1 5.357       18 9902.3610060.85     310     310     310
X3    10
GR  1244 9902.36    1243 9902.78    1242 9917.54    1241  9924.3    1240  9929.4
GR  1239     9941   123810008.56    123810018.55    123910040.42    124010043.81
GR  1241 10047.2    124210050.73    124310054.07    124410057.44    124510060.85
GR  124610064.22    124710081.54    1248 10289.6
NC                              0.3     0.5
NH     1    0.0210861.38
ET                      7.1                             9935   10040
* CAMELBACK ROAD
* DOWNSTREAM EDGE
      n file 08ibw.dwg
X1  5.36       31 9934.7510043.95     100     100     100
X3    10
GR  1245 9934.75    1244 9936.71    1243 9938.52    1242 9940.31    1241 9942.19
GR  1240 9943.84    1239 9945.55    1238 9947.08    1237 9948.56    1236 9950.23
```

```
GR  1236  9958.1    1237 9961.44    1238 9964.53    1239 9967.35    1239    9970
GR  123810024.65    123810040.49    123910041.11    124010041.62    124110042.14
GR  1242 10042.5    124310042.98    124410043.59    124510043.95    124510192.59
GR  124510399.04    124610488.92    124710613.56    124810697.98    124910783.99
      5010861.38
NC                              0.3     0.5
NH     1    0.0210809.09
ET                      7.1                             9940   10040
SB  1.25     1.5     2.6       0   105.5       3  646.77       0 1238.63 1238.13
* CAMELBACK ROAD
* UPSTREAM EDGE
X1 5.372       32 9933.1110063.37      80      80      80
X2                      1 1244.94 1246.44                       2
X3    10
BT    -6 9933.11    1245    124510038.62    1245    124510051.06    1246    1246
BT      10255.83    1245    124510480.22    1246      010809.09     1249       0
GR  1245 9933.11    1244 9934.41    1243 9935.67    1242 9936.94    1241 9938.23
GR  1240 9939.57    1239 9940.85    1238 9942.12    1237 9943.21    1236 9944.56
GR  1236 9953.39    1237 9955.99    1238 9958.52    1239 9961.17    1240 9963.59
GR  1240  9963.6    123910023.29    123910034.75    1240 10035.5    124110036.16
GR  124210036.83    124310037.34    124410037.96    124510038.62    124610051.06
GR  124610063.37    124510255.83    124510332.04    124610480.22    124710588.81
GR  124810711.49    124910809.09
NC                              0.3     0.5
NH     2   0.025   10045   0.03510161.36
ET                      7.1                             9900   10025
X1 5.385       25 9888.9810060.53      70      70      70
X3    10
GR  1245 9888.98    1244 9897.25    1243 9902.04    1242 9905.45    1241 9916.17
      241 9918.36    1241 9936.97    124110017.71    124210022.14    124310026.59
      247   10045    124810050.16    124910055.39    125010060.53    125010062.21
GR  124910067.85    124810073.57    124710079.38    124610085.73    124510092.62
GR  124410099.73    124310106.94    124310109.66    124310117.46    124210161.36
NC                              0.2     0.4
NH     2   0.025  9991.4   0.03510104.73
ET                      7.1                         9834.51  9991.4
X1 5.492       13 9834.5110009.27     440     440     440
X3    10
GR  1246 9834.51    1245 9856.84    1244 9861.83    1243 9866.69    1243 9979.74
GR  1244 9983.97    1245 9987.63    1246  9991.4    1247 9995.28    1248  9999.1
GR  124910002.75    125010009.27    125110104.73
NC                              0.2     0.4
NH     3    0.02 9883.97   0.025   10023   0.03510146.46
ET                      7.1                             9860 10026.7
X1 5.587       20 9859.1210033.73     500     500     500
X3    10
GR  1248 9859.12    1247 9883.97    1246 9889.27    1245 9894.21    1245 9928.36
GR  1246 9934.23    1246 9953.36    1245 9985.65    1244 9993.37    1244 9999.31
GR  1245 10013.5    124610018.54    1247   10023    1248 10026.7    124910030.26
GR  125010033.73    125110071.38    125110080.58    125110116.64    125210146.46
NC                              0.2     0.4
NH     3    0.02 9904.73   0.025   10025   0.03510078.65
ET                      7.1                         9898.6310033.44
X1 5.682       25 9866.0310041.82     500     500     500
X3    10
      252 9866.03    1251 9883.44    1250 9898.63    1249 9900.94    1248 9904.73
GR  1247 9908.86    1247 9916.96    1247 9919.05    1246 9923.28    1245 9927.36
GR  1244 9931.33    1244 9933.78    1245 9940.68    1246  9947.8    1246 9984.75
GR  1245 9992.46    124510012.46    124610016.68    124710020.88    1248   10025
GR  124910029.29    125010033.44    125110037.63    125210041.82    125310078.65
```

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NC                              0.2     0.4
NH     3    0.02 9889.13   0.02510033.69   0.035 10189.8
ET                    7.1                          9836.4 10040.5
X1 5.777       22 9836.3910047.66      500      500      500
      10
GR   1251 9836.39     1249 9889.13     1248 9899.43     1247 9905.62     1246  9909.6
GR   1245 9913.67     1245 9922.35     1246 9928.08     1247 9933.83     124710001.45
GR   124610005.12     124610023.23     124710026.89     124810030.37     124910033.69
GR   1250 10037.3     125110040.68     125210044.15     125310047.66     125310139.95
GR   1253 10165.2     1254 10189.8
NC                              0.2     0.4
NH     3    0.02 9914.33    0.025    10098   0.03510678.81
ET                    7.1                          9908    10098
X1 5.867       25 9907.05    10098      465      465      465
X3    10
GR   1251 9907.05     1250 9914.33     1249 9921.29     1248 9928.15     1247 9935.04
GR   1246 9941.83     124610025.38     124710071.09     124810076.56     124910081.87
GR   125010087.38     125110092.67     1252   10098     125310163.69     1253 10163.7
GR   125410375.17     125410397.72     1254 10402.7     125410411.07     125410417.01
GR   125410443.46     1254 10455.5     125510477.72     125610571.87     125710678.81
NC                              0.3     0.5
NH     2   0.02510095.62    0.035 10685.8
ET                    7.1                      9915.6410095.62
X1 5.871       20 9915.6410128.49       20       20       20
X3    10
GR   1251 9915.64     1250     9923     1249 9929.36     1248 9935.38     1247 9941.12
GR   1246 9951.17     124610017.54     124710065.79     124810071.89     124910077.81
GR   125010083.97     125110089.79     125210095.62     125310128.49     125410371.99
GR   125410395.74     125410399.43     125510481.61     125610540.93     1257 10685.8
                              0.3     0.5
N      1    0.0210744.02
ET                    7.1                          9960    10080
* CHAPARRAL ROAD
* DOWNSTREAM EDGE
X1 5.886       25 9953.1710080.58       80       80       80
X3    10
GR   1251 9953.17     1250 9953.84     1249 9954.69     1248 9955.38     1247 9956.05
GR   124710055.03     124810056.07     124910059.94     125010068.72     125110080.58
GR   125110085.15     125010098.44     125010104.59     125110148.42     125210161.26
GR   125310180.92     125310212.54     125310267.51     125410448.81     125410460.68
GR   125410470.06     125510543.98     125610705.93     125610739.43     125610744.02
NH     1    0.0210744.02
SB   1.25      1.5      2.6        0    105.5        3   402.83        0 1246.93 1246.53
X1   9999       25 9953.1710080.58       78       78       78
X2                      1 1250.86 1252.36                          2
X3    10
GR   1251 9953.17     1250 9953.84     1249 9954.69     1248 9955.38     1247 9956.05
GR   124710055.03     124810056.07     124910059.94     125010068.72     125110080.58
GR   125110085.15     125010098.44     125010104.59     125110148.42     125210161.26
GR   125310180.92     125310212.54     125310267.51     125410448.81     125410460.68
GR   125410470.06     125510543.98     125610705.93     125610739.43     125610744.02
EJ
T1
T2
T
     -10        3                                          5500    1241
J2    15                 -1                                  -6
```

ER

```
1*******************************************
 *  HEC-2 WATER SURFACE PROFILES           *
 *                                         *
 *  Version   4.6.2;  May 1991             *
 *                                         *
    .UN DATE    19SEP97    TIME   14:41:21  *
 *******************************************
```

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

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

1

THIS RUN EXECUTED 19SEP97 14:41:21

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**************************************
  C-2 WATER SURFACE PROFILES

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

THIS IS AN ARCHIVAL RUN ALL DATA AND RESULTS ARE SAVED ON UNIT 96

AC

SPLIT FLOW BEING PERFORMED

SF

```
TW
WS     2    6.39     6.4      -1     2.7
WC     0    1261      38    1261

TW
WS     2   6.345    6.39      -1     2.7
WC     0    1261     230    1261


..     2    6.25   6.345      -1     2.7
WC     0    1259     500    1261

TW
```

```
 WS     2   6.155    6.25      -1     2.7
 WC     0    1257     500    1259

 TW
        2    6.06   6.155      -1     2.7
        0    1255     500    1257
1
    19SEP97       14:41:21                                                    PAGE     2


 T1
 T2
 T3

 J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q          WSEL       FQ

      -10         2                                                              5100     1254.8

 JS     **********ASSUMED DISCHARGES FOR SPLIT FLOW**********

                        0          0          0       1000         20

 J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW        CHNIM      ITRACE

       1                   -1                                                    -6


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     150         110         200
     :KRABBIT ROAD
   DOWNSTREAM EDGE
1
    19SEP97       14:41:21                                                    PAGE     3


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


 *PROF 1
0

 CCHV=      .300 CEHV=      .500
 1490 NH CARD USED
 *SECNO 6.060

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1255.00 ELREA=      1257.00

      6.060      4.80    1254.80       .00    1254.80    1256.05       1.25       .00        .00    1255.00
     5081.5        .0     5081.5        .0         .0      567.1         .0        .0         .0    1257.00
        .00        .00       8.96       .00       .000       .025       .000      .000    1250.00    9906.23
     004299         0.         0.         0.          0          0          0       .00     162.02   10068.25


 CCHV=      .200 CEHV=      .400
 1490 NH CARD USED
 *SECNO 6.155
```

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3710 WSEL ASSUMED BASED ON MIN DIFF

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1257.00 ELREA= 1259.00

6.155	2.96	1256.96	1256.47	.00	1257.76	.80	2.32	.59	1257.00
5081.5	.0	5081.5	.0	.0	706.6	.0	7.3	2.4	1259.00
.02	.00	7.19	.00	.000	.029	.000	.000	1254.00	9911.59
.005009	500.	500.	500.	25	11	0	.00	254.19	10165.77

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.250

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.34

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1259.00 ELREA= 1260.00

6.250	5.47	1258.47	.00	.00	1258.77	.30	.90	.10	1259.00
5081.5	.0	5081.5	.0	.0	1164.1	.0	18.0	5.3	1260.00
.05	.00	4.37	.00	.000	.029	.000	.000	1253.00	9924.89
.000916	500.	500.	500.	9	0	0	.00	250.06	10174.94

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.345

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1261.00 ELREA= 1262.00

6.345	3.57	1259.57	1259.57	.00	1260.88	1.31	.98	.40	1261.00
5081.5	.0	5081.5	.0	.0	553.9	.0	27.9	8.0	1262.00
.07	.00	9.17	.00	.000	.025	.000	.000	1256.00	9931.44
006758	500.	500.	500.	20	14	0	.00	215.13	10146.57

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.390

3280 CROSS SECTION 6.39 EXTENDED .28 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 2.41

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1261.00 ELREA= 1265.00

JACKRABBIT ROAD
DOWNSTREAM EDGE

6.390	4.28	1261.28	.00	.00	1261.61	.33	.54	.20	1261.00
5087.5	.0	5087.5	.0	.0	1105.7	.0	32.3	9.7	1265.00
.08	.00	4.60	.00	.000	.020	.000	.000	1257.00	9913.97
.001169	230.	230.	230.	3	0	0	.00	453.26	10367.23

FLOW DISTRIBUTION FOR SECNO= 6.39 CWSEL= 1261.28

1

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

STA= 9914. 10474.
PER Q= 100.0
AREA= 1105.7
VEL= 4.6
DEPTH= 2.4

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 6.400
3280 CROSS SECTION 6.40 EXTENDED .21 FEET

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .65

6.400	3.21	1261.21	.00	.00	1261.76	.55	.07	.09	1261.00
5100.0	.0	5100.0	.0	.0	860.1	.0	33.1	10.1	1262.00
.08	.00	5.93	.00	.000	.024	.000	.000	1258.00	9917.74
.002779	38.	38.	38.	3	0	0	.00	357.68	10275.42

1

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TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
12.54	12.52	.09	12.54	12.52	.09	14	1261.278	1261.213	6.390	6.400

TW

SQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
5.93	5.93	.08	18.47	18.46	.09	14	1259.568	1261.278	6.345	6.390

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	18.47	18.46	.09	14	1258.469	1259.568	6.250	6.345

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	18.47	18.46	.09	14	1256.962	1258.469	6.155	6.250

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	18.47	18.46	.09	14	1254.800	1256.962	6.060	6.155

T1
T2
T3

ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
-10	3						5100	1255.3	

J2 NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
15		-1					-6		

1

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

*PROF 2
0

CCHV= .300 CEHV= .500
NH CARD USED
O 6.060
330 MANNINGS N VALUES FOR CHANNEL COMPOSITED

3470 ENCROACHMENT STATIONS= 9218.7 10060.3 TYPE= 1 TARGET= 841.560

```
3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1255.00 ELREA=    100000.00

     6.060      5.30   1255.30       .00   1255.30   1255.33       .03       .00       .00   1255.00
    5052.5    4244.5     808.1        .0    2865.1     638.0        .0        .0        .0 100000.00
       .00      1.48      1.27       .00      .025      .025      .000      .000   1250.00   9218.73
   .000072        0.        0.        0.         0         0         0       .00    841.56  10060.29


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
*SECNO 6.155

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9915.0   10160.0  TYPE=      1  TARGET=      245.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     6.155      2.46   1256.46   1256.46   1256.46   1257.66      1.20       .12       .47 100000.00
    5084.2        .0    5084.2        .0        .0     579.4        .0      23.4       6.2 100000.00
       .02       .00      8.78       .00      .000      .029      .000      .000   1254.00   9915.00
   .009353      500.      500.      500.        20        14         0       .00    245.00  10160.00


CCHV=     .200 CEHV=     .400
  NH CARD USED
  IO 6.250
1
   19SEP97      14:41:21                                                                    PAGE    8


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



3301 HV CHANGED MORE THAN HVINS


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.30


3470 ENCROACHMENT STATIONS=     9927.0   10173.0  TYPE=      1  TARGET=      246.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     6.250      5.56   1258.56       .00   1258.56   1258.85       .29      1.01       .18 100000.00
    5084.2        .0    5084.2        .0        .0    1186.7        .0      33.6       9.1 100000.00
       .05       .00      4.28       .00      .000      .029      .000      .000   1253.00   9927.00
   .00858      500.      500.      500.         4         0         0       .00    246.00  10173.00


CCHV=     .200 CEHV=     .400
1490 NH CARD USED
```

```
*SECNO 6.345

3301 HV CHANGED MORE THAN HVINS

   20 TRIALS ATTEMPTED WSEL,CWSEL
   PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9935.0   10140.0  TYPE=      1  TARGET=      205.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     6.345      3.54   1259.54   1259.54   1259.53   1260.89      1.35       .93       .43 100000.00
    5084.2        .0    5084.2        .0        .0     544.7        .0      43.5      11.6 100000.00
       .06       .00      9.33       .00      .000      .025      .000      .000   1256.00   9935.00
   .006746      500.      500.      500.        20        14         0       .00    205.00  10140.00


CCHV=      .200 CEHV=      .400
1490 NH CARD USED
*SECNO 6.390

3301 HV CHANGED MORE THAN HVINS

1
   19SEP97       14:41:21                                                                                PAGE     9


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



3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.51


3470 ENCROACHMENT STATIONS=     9915.0   10326.0  TYPE=      1  TARGET=      411.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

        JACKRABBIT ROAD
        DOWNSTREAM EDGE
     6.390      4.26   1261.26       .00   1261.26   1261.60       .34       .50       .20 100000.00
    5089.1        .0    5089.1        .0        .0    1091.5        .0      47.8      13.3 100000.00
       .08       .00      4.66       .00      .000      .020      .000      .000   1257.00   9915.00
   .001073      230.      230.      230.         3         0         0       .00    411.00  10326.00


FLOW DISTRIBUTION FOR SECNO=      6.39          CWSEL=   1261.26

STA=    9915.   10326.
  PER Q=     100.0
   AREA=    1091.5
     EL=       4.7
  DEPTH=       2.7

CCHV=      .200 CEHV=      .400
1490 NH CARD USED
```

*SECNO 6.400
3280 CROSS SECTION 6.40 EXTENDED .19 FEET

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .61

6.400	3.19	1261.19	.00	1261.19	1261.75	.56	.06	.09	1261.00
5100.0	.0	5100.0	.0	.0	851.5	.0	48.7	13.6	1262.00
.08	.00	5.99	.00	.000	.024	.000	.000	1258.00	9917.74
.002866	38.	38.	38.	3	0	0	.00	357.67	10275.41

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TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
10.92	10.92	.04	10.92	10.92	.04	5	1261.259	1261.190	6.390	6.400

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
4.90	4.90	.07	15.83	15.82	.05	5	1259.536	1261.259	6.345	6.390

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	15.83	15.82	.05	5	1258.564	1259.536	6.250	6.345

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	15.83	15.82	.05	5	1256.460	1258.564	6.155	6.250

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
31.65	31.71	.17	47.48	47.53	.10	5	1255.300	1256.460	6.060	6.155

1
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THIS RUN EXECUTED 19SEP97 14:41:24

****
WSP-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

SUMMARY PRINTOUT TABLE 110

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	6.060	1254.80	.00	1256.05	162.02	.00	5081.53	.00	.00	.00	9903.15	10137.61	.00
	6.060	1255.30	.00	1255.33	841.56	4244.46	808.06	.00	841.56	9218.73	9903.15	10137.61	10060.29
*	6.155	1256.96	.00	1257.76	254.19	.00	5081.53	.00	.00	.00	9911.44	10210.62	.00
*	6.155	1256.46	.00	1257.66	245.00	.00	5084.17	.00	245.00	9915.00	9911.44	10210.62	10160.00
*	6.250	1258.47	.00	1258.77	250.06	.00	5081.53	.00	.00	.00	9892.05	10181.86	.00
*	6.250	1258.56	.00	1258.85	246.00	.00	5084.17	.00	246.00	9927.00	9892.05	10181.86	10173.00
*	6.345	1259.57	.00	1260.88	215.13	.00	5081.53	.00	.00	.00	9874.33	10215.81	.00
*	6.345	1259.54	.00	1260.89	205.00	.00	5084.17	.00	205.00	9935.00	9874.33	10215.81	10140.00
*	6.390	1261.28	.00	1261.61	453.26	.00	5087.46	.00	.00	.00	9913.97	10887.48	.00
*	6.390	1261.26	.00	1261.60	411.00	.00	5089.08	.00	411.00	9915.00	9913.97	10887.48	10326.00
*	6.400	1261.21	.00	1261.76	357.68	.00	5100.00	.00	.00	.00	9917.74	10276.00	.00
*	6.400	1261.19	.00	1261.75	357.67	.00	5100.00	.00	.00	.00	9917.74	10276.00	.00

1

SUMMARY PRINTOUT TABLE 150

	SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
	6.060	.00	.00	.00	1250.00	5081.53	1254.80	.00	1256.05	42.99	8.96	567.07	774.98
	6.060	.00	.00	.00	1250.00	5052.52	1255.30	.00	1255.33	.72	1.27	3503.18	5969.31
*	6.155	500.00	.00	.00	1254.00	5081.53	1256.96	1256.47	1257.76	50.09	7.19	706.62	717.98
*	6.155	500.00	.00	.00	1254.00	5084.17	1256.46	1256.46	1257.66	93.53	8.78	579.39	525.72
*	6.250	500.00	.00	.00	1253.00	5081.53	1258.47	.00	1258.77	9.16	4.37	1164.10	1678.76
*	6.250	500.00	.00	.00	1253.00	5084.17	1258.56	.00	1258.85	8.58	4.28	1186.69	1735.67
*	6.345	500.00	.00	.00	1256.00	5081.53	1259.57	1259.57	1260.88	67.58	9.17	553.93	618.13
*	6.345	500.00	.00	.00	1256.00	5084.17	1259.54	1259.54	1260.89	67.46	9.33	544.66	619.02
*	6.390	230.00	.00	.00	1257.00	5087.46	1261.28	.00	1261.61	11.69	4.60	1105.74	1487.89
*	6.390	230.00	.00	.00	1257.00	5089.08	1261.26	.00	1261.60	10.73	4.66	1091.46	1553.33
	6.400	38.00	.00	.00	1258.00	5100.00	1261.21	.00	1261.76	27.79	5.93	860.08	967.36
	6.400	38.00	.00	.00	1258.00	5100.00	1261.19	.00	1261.75	28.66	5.99	851.53	952.67

1

SUMMARY PRINTOUT TABLE 150

	SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
	6.060	5081.53	1254.80	.00	.00	.00	162.02	.00
	6.060	5052.52	1255.30	.50	.00	.00	841.56	.00
*	6.155	5081.53	1256.96	.00	2.16	.00	254.19	500.00
*	6.155	5084.17	1256.46	-.50	1.16	.00	245.00	500.00
*	6.250	5081.53	1258.47	.00	1.51	.00	250.06	500.00
*	6.250	5084.17	1258.56	.09	2.10	.00	246.00	500.00
*	6.345	5081.53	1259.57	.00	1.10	.00	215.13	500.00
*	6.345	5084.17	1259.54	-.03	.97	.00	205.00	500.00
*	6.390	5087.46	1261.28	.00	1.71	.00	453.26	230.00
*	6.390	5089.08	1261.26	-.02	1.72	.00	411.00	230.00
*	6.400	5100.00	1261.21	.00	-.06	.00	357.68	38.00
*	6.400	5100.00	1261.19	-.02	-.07	.00	357.67	38.00

1

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=      6.155  PROFILE=  1  WSEL ASSUMED BASED ON MIN DIFF
CAUTION SECNO=      6.155  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      6.155  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      6.155  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      6.155  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=      6.250  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      6.250  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=      6.345  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      6.345  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      6.345  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=      6.345  PROFILE=  2  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      6.345  PROFILE=  2  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      6.345  PROFILE=  2  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=      6.390  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=      6.390  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

[illegible]ING SECNO=      6.400  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
  .NG SECNO=      6.400  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

1

FLOODWAY DATA,
LE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
6.060	842.	3503.	1.4	1255.3	1254.8	.5
6.155	245.	579.	8.8	1256.5	1257.0	-.5
6.250	246.	1187.	4.3	1258.6	1258.5	.1
6.345	205.	545.	9.3	1259.6	1259.6	.0
6.390	411.	1091.	4.7	1261.3	1261.3	.0
6.400	358.	852.	6.0	1261.2	1261.2	.0

```
1*****************************************
 *  HEC-2 WATER SURFACE PROFILES          *
 *                                        *
 *  Version   4.6.2;  May 1991            *
 *                                        *
    UN DATE    19SEP97    TIME   14:42:38 *
 *****************************************
```

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

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

1

THIS RUN EXECUTED 19SEP97 14:42:38

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

 version   4.6.2;  May 1991
*************************************
```

THIS IS AN ARCHIVAL RUN ALL DATA AND RESULTS ARE SAVED ON UNIT 96

```
AC


SPLIT FLOW BEING PERFORMED


SF


TW
WS     2   5.871   5.886      -1     2.7
WC     0    1251      78    1251

TW
WS     2   5.867   5.871      -1     2.7
WC     0    1251      20    1251


WS     2   5.777   5.867      -1     2.7
WC     0    1251     465    1251

TW
```

WS	2	5.682	5.777	-1	2.7
WC	0	1252	500	1251	

TW

	2	5.587	5.682	-1	2.7
	0	1248	500	1252	

TW

WS	2	5.492	5.587	-1	2.7
WC	0	1246	500	1248	

TW

WS	2	5.385	5.492	-1	2.7
WC	0	1245	440	1246	

TW

WS	2	5.372	5.385	-1	2.7
WC	0	1245	70	1245	

1

TW

WS	2	5.36	5.372	-1	2.7
WC	0	1245	80	1245	

TW

WS	2	5.357	5.36	-1	2.7
	0	1244	100	1245	

TW

WS	2	5.3	5.357	-1	2.7
WC	0	1243	310	1244	

TW

WS	2	5.205	5.3	-1	2.7
WC	0	1243	574	1243	

TW

WS	2	5.11	5.205	-1	2.7
WC	0	1242	429	1243	

TW

WS	2	4.99	5.11	-1	2.7
WC	0	1241	492	1242	

1

T1
T2
T3

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10	2						5500	1240.4	

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE

```
      1                -1                                        -6


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     150                 110                  200
   GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
   AREA BETWEEN STA. 9685 AND STA. 9909
   NON-EFFECTIVE FLOW AREA REMOVED
   CAMELBACK ROAD
   DOWNSTREAM EDGE
   begin file 08ibw.dwg
   CAMELBACK ROAD
   UPSTREAM EDGE
   CHAPARRAL ROAD
   DOWNSTREAM EDGE
1
    19SEP97      14:42:38                                                                          PAGE    4


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


 *PROF 1
0

CCHV=     .200 CEHV=     .400
     NH CARD USED
 *SECNO 4.990

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1241.00 ELREA=      1242.00

         GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
         AREA BETWEEN STA. 9685 AND STA. 9909
      4.990      7.40   1240.40       .00   1240.40   1240.70       .30       .00       .00   1241.00
     3342.3        .0    3342.3        .0        .0     757.3        .0        .0        .0   1242.00
        .00       .00      4.41       .00      .000      .025      .000      .000   1233.00   9939.54
    .000625        0.        0.        0.         0         0         0       .00    148.55  10088.09


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 5.110

 3301 HV CHANGED MORE THAN HVINS


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .47


 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1242.00 ELREA=      1244.00

      5.110      4.64   1240.64       .00       .00   1241.49       .85       .57       .22   1242.00
     3342.3        .0    3342.3        .0        .0     452.6        .0       6.8       1.5   1244.00
        .02       .00      7.39       .00      .000      .025      .000      .000   1236.00   9939.22
    .002791       193.      492.      604.         3         0         0       .00    124.37  10063.59
```

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.205

5 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1243.00 ELREA= 1245.00

5.205	4.80	1241.80	.00	.00	1242.59	.79	1.09	.01	1243.00
3342.3	.0	3342.3	.0	.0	467.4	.0	11.4	2.7	1245.00
.04	.00	7.15	.00	.000	.025	.000	.000	1237.00	9940.99
.002333	306.	429.	501.	2	0	0	.00	117.80	10058.78

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.300
1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED
3280 CROSS SECTION 5.30 EXTENDED .11 FEET

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.50

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1243.00 ELREA= 1244.00

NON-EFFECTIVE FLOW AREA REMOVED

5.300	6.11	1243.11	.00	.00	1243.52	.41	.86	.08	1243.00
3344.0	.0	3344.0	.0	.0	646.9	.0	18.7	4.4	1244.00
.07	.00	5.17	.00	.000	.026	.000	.000	1237.00	9918.99
.001032	715.	574.	474.	3	0	0	.00	136.26	10055.25

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.357
1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1244.00 ELREA= 1245.00

5.357	5.44	1243.44	.00	.00	1243.90	.46	.36	.02	1244.00
3345.9	.0	3345.9	.0	.0	617.8	.0	23.2	5.4	1245.00
.08	.00	5.42	.00	.000	.025	.000	.000	1238.00	9902.59
.001314	310.	310.	310.	3	0	0	.00	152.97	10055.56

.300 CEHV= .500
..0 NH CARD USED
*SECNO 5.360

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1245.00 ELREA= 1245.00

CAMELBACK ROAD
DOWNSTREAM EDGE
begin file 08ibw.dwg

5.360	7.47	1243.47	.00	.00	1244.07	.60	.10	.07	1245.00
3345.9	.0	3345.9	.0	.0	538.4	.0	24.5	5.7	1245.00
.09	.00	6.21	.00	.000	.020	.000	.000	1236.00	9937.66
.000857	100.	100.	100.	4	0	0	.00	105.61	10043.27

1

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

CCHV= .300 CEHV= .500
1490 NH CARD USED

SPECIAL BRIDGE

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	105.50	3.00	646.77	.00	1238.63	1238.13

*SECNO 5.372
CLASS A LOW FLOW

3420 BRIDGE W.S.= 1243.69 BRIDGE VELOCITY= 6.15 CALCULATED CHANNEL AREA= 518.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1244.37	.08	0.	3346.	647.	647.	1244.94	1246.44	0.

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1245.00 ELREA= 1246.00

CAMELBACK ROAD
UPSTREAM EDGE

5.372	7.55	1243.55	.00	.00	1244.37	.82	.30	.00	1245.00
3345.9	.0	3345.9	.0	.0	460.4	.0	25.5	5.9	1246.00
.09	.00	7.27	.00	.000	.020	.000	.000	1236.00	9934.98
.001394	80.	80.	80.	0	0	0	.00	102.70	10037.68

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.385
3280 CROSS SECTION 5.39 EXTENDED 2.00 FEET

HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1245.00 ELREA= 1250.00

5.385	3.00	1244.00	1244.00	.00	1245.35	1.35	.18	.27	1245.00
3345.9	.0	3345.9	.0	.0	358.4	.0	26.1	6.1	1250.00
.09	.00	9.34	.00	.000	.025	.000	.000	1241.00	9897.27
.006679	70.	70.	70.	20	18	0	.00	133.90	10031.17

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.492
3280 CROSS SECTION 5.49 EXTENDED .65 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.49

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1246.00 ELREA= 1250.00

5.492	3.66	1246.66	.00	.00	1247.42	.77	1.96	.12	1246.00
3445.9	.0	3445.9	.0	.0	490.5	.0	30.4	7.6	1250.00
.11	.00	7.03	.00	.000	.025	.000	.000	1243.00	9834.51
.003201	440.	440.	440.	2	0	0	.00	159.41	9993.92

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.587
1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED
3280 CROSS SECTION 5.59 EXTENDED .48 FEET

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1248.00 ELREA= 1250.00

5.587	4.48	1248.48	.00	.00	1249.61	1.13	2.04	.15	1248.00
4027.7	.0	4027.7	.0	.0	471.6	.0	35.9	9.5	1250.00
.13	.00	8.54	.00	.000	.025	.000	.000	1244.00	9859.12
.005181	500.	500.	500.	3	0	0	.00	169.29	10028.42

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.682
1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.59

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1252.00 ELREA= 1252.00

5.682	6.53	1250.53	.00	.00	1251.25	.72	1.56	.08	1252.00
4072.2	.0	4072.2	.0	.0	597.0	.0	42.1	11.3	1252.00
.15	.00	6.82	.00	.000	.025	.000	.000	1244.00	9890.54
.002086	500.	500.	500.	3	0	0	.00	145.13	10035.67

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.777
1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED
3280 CROSS SECTION 5.78 EXTENDED .67 FEET

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1251.00 ELREA= 1253.00

5.777	6.67	1251.67	.00	.00	1252.08	.41	.76	.06	1251.00
4163.6	.0	4163.6	.0	.0	808.2	.0	50.1	13.3	1253.00
.17	.00	5.15	.00	.000	.024	.000	.000	1245.00	9836.39
.001168	500.	500.	500.	2	0	0	.00	206.60	10042.99

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.867
3280 CROSS SECTION 5.87 EXTENDED 1.12 FEET

5.867	6.12	1252.12	.00	.00	1252.58	.46	.48	.02	1251.00
5231.0	.0	5230.9	.1	.0	963.8	.5	59.6	15.5	1252.00
.20	.00	5.43	.20	.000	.025	.035	.000	1246.00	9907.05
.000945	465.	465.	465.	3	0	0	.00	198.83	10105.88

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.871
3280 CROSS SECTION 5.87 EXTENDED 1.09 FEET

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1251.00 ELREA= 1253.00

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV

TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA
SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST
5.871	6.09	1252.09	.00	.00	1252.65	.56	.02	.05	1251.00
5293.8	.0	5293.8	.0	.0	884.6	.0	60.0	15.6	1253.00
.20	.00	5.98	.00	.000	.025	.000	.000	1246.00	9915.64
.001230	20.	20.	20.	2	0	0	.00	183.00	10098.64

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.886
3280 CROSS SECTION 5.89 EXTENDED .88 FEET

3301 HV CHANGED MORE THAN HVINS

CHAPARRAL ROAD
DOWNSTREAM EDGE

5.886	4.88	1251.88	.00	.00	1253.13	1.25	.13	.35	1251.00
5500.0	.0	5062.4	437.6	.0	546.7	99.8	61.4	15.9	1251.00
.20	.00	9.26	4.39	.000	.020	.020	.000	1247.00	9953.17
.002310	80.	80.	80.	3	0	0	.00	206.61	10159.78

1490 NH CARD USED

SPECIAL BRIDGE

XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
1.25	1.50	2.60	.00	105.50	3.00	402.83	.00	1246.93	1246.53

*SECNO 9999.000
3280 CROSS SECTION 9999.00 EXTENDED 5.12 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 5.00

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

1

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

.S	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1256.22	1253.21	.27	0.	5495.	403.	403.	1250.86	1252.36	0.

9999.000	9.12	1256.12	.00	.00	1256.21	.09	3.09	.00	1251.00
5500.0	.0	3113.8	2386.2	.0	1086.9	1530.2	64.3	16.8	1251.00
.21	.00	2.86	1.56	.000	.020	.020	.000	1247.00	9953.17
.000092	78.	78.	78.	2	0	3	.00	790.85	10744.02

1

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
206.19	206.14	.02	206.19	206.14	.02	13	1252.092	1251.878	5.871	5.886

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
62.79	62.80	.01	268.98	268.94	.01	13	1252.120	1252.092	5.867	5.871

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1067.39	1067.43	.00	1336.37	1336.37	.00	13	1251.666	1252.120	5.777	5.867

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
91.39	91.43	.05	1427.76	1427.80	.00	13	1250.531	1251.666	5.682	5.777

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
44.57	44.56	.01	1472.32	1472.36	.00	13	1248.482	1250.531	5.587	5.682

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
581.76	581.29	.08	2054.08	2053.64	.02	13	1246.657	1248.482	5.492	5.587

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
100.04	99.95	.09	2154.13	2153.59	.02	13	1243.996	1246.657	5.385	5.492

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2154.13	2153.59	.02	13	1243.550	1243.996	5.372	5.385

1

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2154.13	2153.59	.02	13	1243.474	1243.550	5.360	5.372

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2154.13	2153.59	.02	13	1243.442	1243.474	5.357	5.360

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1.85	1.85	.04	2155.97	2155.44	.02	13	1243.106	1243.442	5.300	5.357

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1.73	1.73	.06	2157.71	2157.17	.02	13	1241.796	1243.106	5.205	5.300

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2157.71	2157.17	.02	13	1240.640	1241.796	5.110	5.205

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2157.71	2157.17	.02	13	1240.400	1240.640	4.990	5.110

T1
T2
T3

J1	ICHECK	INQ	NINV	IDIR	STRT	METRIC	HVINS	Q	WSEL	FQ
	-10	3						5500	1241	

J2	NPROF	IPLOT	PRFVS	XSECV	XSECH	FN	ALLDC	IBW	CHNIM	ITRACE
	15		-1					-6		

1

SECNO	DEPTH	CWSEL	CRIWS	WSELK	EG	HV	HL	OLOSS	L-BANK ELEV
Q	QLOB	QCH	QROB	ALOB	ACH	AROB	VOL	TWA	R-BANK ELEV
TIME	VLOB	VCH	VROB	XNL	XNCH	XNR	WTN	ELMIN	SSTA

SLOPE	XLOBL	XLCH	XLOBR	ITRIAL	IDC	ICONT	CORAR	TOPWID	ENDST

*PROF 2

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 4.990

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1241.00 ELREA= 1242.00

GR DATA ADJUST TO REMOVE NON EFFECTIVE FLOW
AREA BETWEEN STA. 9685 AND STA. 9909

4.990	8.00	1241.00	.00	1241.00	1241.24	.24	.00	.00	1241.00
3362.6	.0	3362.6	.0	.0	848.1	.0	.0	.0	1242.00
.00	.00	3.96	.00	.000	.025	.000	.000	1233.00	9936.79
.000448	0.	0.	0.	0	0	0	.00	154.18	10090.97

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.110

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = .49

3470 ENCROACHMENT STATIONS= 9945.0 10060.0 TYPE= 1 TARGET= 115.000

5 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.110	5.13	1241.13	.00	1241.13	1241.82	.70	.40	.18	100000.00
3362.6	.0	3362.6	.0	.0	501.3	.0	7.6	1.5	100000.00
.02	.00	6.71	.00	.000	.025	.000	.000	1236.00	9945.00
.001885	193.	492.	604.	3	0	0	.00	115.00	10060.00

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.205

3470 ENCROACHMENT STATIONS= 9945.0 10056.0 TYPE= 1 TARGET= 111.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.205	4.93	1241.93	.00	1241.93	1242.69	.76	.84	.03	100000.00
3362.6	.0	3362.6	.0	.0	479.8	.0	12.5	2.6	100000.00
.04	.00	7.01	.00	.000	.025	.000	.000	1237.00	9945.00
.002041	306.	429.	501.	2	0	0	.00	111.00	10056.00

1

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

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 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 5.300
      MANNINGS N VALUES FOR CHANNEL COMPOSITED

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44


 3470 ENCROACHMENT STATIONS=     9920.0   10050.0  TYPE=      1  TARGET=      130.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

         NON-EFFECTIVE FLOW AREA REMOVED
     5.300      6.12   1243.12       .00   1243.12   1243.55       .42       .79       .07 100000.00
    3365.4        .0    3365.4        .0        .0     645.2        .0      19.9       4.2 100000.00
       .07       .00      5.22       .00      .000      .026      .000      .000   1237.00   9920.00
   .000984      715.      574.      474.         3         0         0       .00    130.00  10050.00


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 5.357

 3470 ENCROACHMENT STATIONS=     9910.0   10050.0  TYPE=      1  TARGET=      140.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

     5.357      5.44   1243.44       .00   1243.43   1243.91       .48       .34       .02 100000.00
    3367.9        .0    3367.9        .0        .0     607.4        .0      24.3       5.2 100000.00
       .08       .00      5.54       .00      .000      .025      .000      .000   1238.00   9910.00
   .001268      310.      310.      310.         3         0         0       .00    140.00  10050.00


 CCHV=     .300 CEHV=     .500
 1490 NH CARD USED
 *SECNO 5.360

 3470 ENCROACHMENT STATIONS=     9935.0   10040.0  TYPE=      1  TARGET=      105.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

       CAMELBACK ROAD
       DOWNSTREAM EDGE
1
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       begin file 08ibw.dwg
     5.360      7.46   1243.46       .00   1243.46   1244.10       .63       .11       .08 100000.00
    3367.9        .0    3367.9        .0        .0     526.8        .0      25.6       5.5 100000.00
       .09       .00      6.39       .00      .000      .020      .000      .000   1236.00   9937.68
   .000921      100.      100.      100.         4         0         0       .00    102.32  10040.00


      .300 CEHV=     .500
 1490 NH CARD USED

 SPECIAL BRIDGE
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SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	105.50	3.00	646.77	.00	1238.63	1238.13

*SECNO 5.372
) A LOW FLOW

3420 BRIDGE W.S.= 1243.67 BRIDGE VELOCITY= 6.21 CALCULATED CHANNEL AREA= 517.

EGPRS	EGLWC	H3	QWEIR	QLOW	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
.00	1244.42	.08	0.	3368.	647.	647.	1244.94	1246.44	0.

3470 ENCROACHMENT STATIONS= 9940.0 10040.0 TYPE= 1 TARGET= 100.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CAMELBACK ROAD
UPSTREAM EDGE

5.372	7.55	1243.55	.00	1243.55	1244.42	.87	.32	.00	100000.00
3367.9	.0	3367.9	.0	.0	450.4	.0	26.5	5.6	100000.00
.09	.00	7.48	.00	.000	.020	.000	.000	1236.00	9940.00
.001474	80.	80.	80.	0	0	0	.00	97.68	10037.68

CCHV= .300 CEHV= .500
1490 NH CARD USED
*SECNO 5.385
)0 CROSS SECTION 5.39 EXTENDED 1.98 FEET

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS= 9900.0 10025.0 TYPE= 1 TARGET= 125.000
1

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

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.385	2.98	1243.98	1243.98	1243.98	1245.41	1.42	.19	.28	100000.00
3367.9	.0	3367.9	.0	.0	351.7	.0	27.2	5.8	100000.00
.09	.00	9.58	.00	.000	.025	.000	.000	1241.00	9900.00
06696	70.	70.	70.	20	18	0	.00	125.00	10025.00

CCHV= .200 CEHV= .400
1490 NH CARD USED

*SECNO 5.492

3301 HV CHANGED MORE THAN HVINS

WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.52

3470 ENCROACHMENT STATIONS= 9834.5 9991.4 TYPE= 1 TARGET= 156.891

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 1296.00 ELREA= 100000.00

5.492	3.68	1246.68	.00	1246.68	1247.45	.77	1.92	.13	1296.00
3476.5	.0	3476.5	.0	.0	493.8	.0	31.4	7.2	100000.00
.11	.00	7.04	.00	.000	.025	.000	.000	1243.00	9834.51
.003091	440.	440.	440.	2	0	0	.00	156.89	9991.40

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.587
1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED

3470 ENCROACHMENT STATIONS= 9860.0 10026.7 TYPE= 1 TARGET= 166.700

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.587	4.47	1248.47	.00	1248.47	1249.64	1.17	2.03	.16	100000.00
4069.2	.0	4069.2	.0	.0	468.6	.0	37.0	9.1	100000.00
.13	.00	8.68	.00	.000	.025	.000	.000	1244.00	9860.00
005275	500.	500.	500.	3	0	0	.00	166.70	10026.70

1

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

CCHV= .200 CEHV= .400
1490 NH CARD USED
*SECNO 5.682
1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 1.63

3470 ENCROACHMENT STATIONS= 9898.6 10033.4 TYPE= 1 TARGET= 134.811

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

5.682	6.52	1250.52	.00	1250.52	1251.27	.75	1.54	.08	100000.00
4111.3	.0	4111.3	.0	.0	591.7	.0	43.0	10.8	100000.00
.15	.00	6.95	.00	.000	.025	.000	.000	1244.00	9898.63
.002028	500.	500.	500.	3	0	0	.00	134.81	10033.44

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 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 5.777
     MANNINGS N VALUES FOR CHANNEL COMPOSITED

 3470 ENCROACHMENT STATIONS=     9836.4   10040.5  TYPE=      1  TARGET=      204.100

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      5.777      6.66   1251.66       .00   1251.66   1252.08       .42       .75       .07 100000.00
     4201.7        .0    4201.7        .0        .0     807.0        .0      51.1      12.8 100000.00
        .17       .00      5.21       .00      .000      .024      .000      .000   1245.00   9836.40
    .001169      500.      500.      500.         2         0         0       .00    204.10  10040.50


 CCHV=     .200 CEHV=     .400
 1490 NH CARD USED
 *SECNO 5.867
 1530 MANNINGS N VALUES FOR CHANNEL COMPOSITED

 3470 ENCROACHMENT STATIONS=     9908.0   10098.0  TYPE=      1  TARGET=      190.000

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=    100000.00 ELREA=    100000.00

      5.867      6.13   1252.13       .00   1252.13   1252.59       .46       .49       .02 100000.00
     5273.6        .0    5273.6        .0        .0     964.0        .0      60.5      14.9 100000.00
        .20       .00      5.47       .00      .000      .025      .000      .000   1246.00   9908.00
    .000971      465.      465.      465.         3         0         0       .00    190.00  10098.00


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


 CCHV=     .300 CEHV=     .500
 1490 NH CARD USED
 *SECNO 5.871

 3470 ENCROACHMENT STATIONS=     9915.6   10095.6  TYPE=      1  TARGET=      179.980

 3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA=      1301.00 ELREA=    100000.00

      5.871      6.10   1252.10       .00   1252.10   1252.66       .56       .02       .05   1301.00
     5337.0        .0    5337.0        .0        .0     885.7        .0      61.0      15.0 100000.00
        .20       .00      6.03       .00      .000      .025      .000      .000   1246.00   9915.64
    .001246       20.       20.       20.         2         0         0       .00    179.98  10095.62


        .300 CEHV=     .500
    0 NH CARD USED
 *SECNO 5.886

 3301 HV CHANGED MORE THAN HVINS
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7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

ENCROACHMENT STATIONS= 9960.0 10080.0 TYPE= 1 TARGET= 120.000

3495 OVERBANK AREA ASSUMED NON-EFFECTIVE, ELLEA= 100000.00 ELREA= 100000.00

CHAPARRAL ROAD
DOWNSTREAM EDGE

5.886	4.57	1251.57	1251.57	1251.57	1253.60	2.03	.16	.73	100000.00
5500.0	.0	5500.0	.0	.0	481.3	.0	62.2	15.2	100000.00
.20	.00	11.43	.00	.000	.020	.000	.000	1247.00	9960.00
.003953	80.	80.	80.	4	15	0	.00	120.00	10080.00

1490 NH CARD USED

SPECIAL BRIDGE

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

DOWNSTREAM ELEV IS 1250.38 , NOT 1251.57 HYDRAULIC JUMP OCCURS DOWNSTREAM (IF LOW FLOW CONTROLS)

SB	XK	XKOR	COFQ	RDLEN	BWC	BWP	BAREA	SS	ELCHU	ELCHD
	1.25	1.50	2.60	.00	105.50	3.00	402.83	.00	1246.93	1246.53

*SECNO 9999.000
3280 CROSS SECTION 9999.00 EXTENDED 4.80 FEET

3301 HV CHANGED MORE THAN HVINS

3302 WARNING: CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE, KRATIO = 5.86

PRESSURE AND WEIR FLOW, Weir Submergence Based on TRAPEZOIDAL Shape

EGPRS	EGLWC	H3	QWEIR	QPR	BAREA	TRAPEZOID AREA	ELLC	ELTRD	WEIRLN
1255.92	1253.60	.00	0.	5497.	403.	403.	1250.86	1252.36	0.

9999.000	8.80	1255.80	.00	1255.80	1255.91	.11	2.31	.00	1251.00
5500.0	.0	3267.8	2232.2	.0	1046.0	1328.0	64.8	16.0	1251.00
.21	.00	3.12	1.68	.000	.020	.020	.000	1247.00	9953.17
.00115	78.	78.	78.	2	0	3	.00	720.89	10674.06

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TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
162.99	163.08	.06	162.99	163.08	.06	10	1252.099	1251.573	5.871	5.886

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
63.40	63.41	.01	226.39	226.49	.04	10	1252.127	1252.099	5.867	5.871

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
1071.95	1072.32	.03	1298.34	1298.80	.04	10	1251.664	1252.127	5.777	5.867

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
90.34	90.23	.12	1388.68	1389.03	.03	10	1250.516	1251.664	5.682	5.777

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
42.09	41.62	1.11	1430.77	1430.66	.01	10	1248.469	1250.516	5.587	5.682

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
592.74	593.47	.12	2023.51	2024.12	.03	10	1246.684	1248.469	5.492	5.587

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
108.55	108.03	.49	2132.07	2132.15	.00	10	1243.981	1246.684	5.385	5.492

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2132.07	2132.15	.00	10	1243.548	1243.981	5.372	5.385

1

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2132.07	2132.15	.00	10	1243.465	1243.548	5.360	5.372

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2132.07	2132.15	.00	10	1243.436	1243.465	5.357	5.360

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
2.56	2.63	2.65	2134.63	2134.78	.01	10	1243.124	1243.436	5.300	5.357

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
2.73	2.80	2.60	2137.36	2137.58	.01	10	1241.928	1243.124	5.205	5.300

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2137.36	2137.58	.01	10	1241.126	1241.928	5.110	5.205

TW

ASQ	QCOMP	ERRAC	TASQ	TCQ	TABER	NITER	DSWS	USWS	DSSNO	USSNO
.00	.00	.00	2137.36	2137.58	.01	10	1241.000	1241.126	4.990	5.110

THIS RUN EXECUTED 19SEP97 14:42:43

****
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

SUMMARY PRINTOUT TABLE 110

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	4.990	1240.40	.00	1240.70	148.55	.00	3342.29	.00	.00	.00	9936.79	10099.11	.00
	4.990	1241.00	.00	1241.24	154.18	.00	3362.64	.00	.00	.00	9936.79	10099.11	.00
*	5.110	1240.64	.00	1241.49	124.37	.00	3342.29	.00	.00	.00	9925.39	10111.15	.00
*	5.110	1241.13	.00	1241.82	115.00	.00	3362.64	.00	115.00	9945.00	9925.39	10111.15	10060.00

	5.205	1241.80	.00	1242.59	117.80	.00	3342.29	.00	.00	.00	9934.01	10113.31	.00
	5.205	1241.93	.00	1242.69	111.00	.00	3362.64	.00	111.00	9945.00	9934.01	10113.31	10056.00
*	5.300	1243.11	.00	1243.52	136.26	.00	3344.03	.00	.00	.00	9918.99	10058.55	.00
	5.300	1243.12	.00	1243.55	130.00	.00	3365.37	.00	130.00	9920.00	9918.99	10058.55	10050.00
	5.357	1243.44	.00	1243.90	152.97	.00	3345.88	.00	.00	.00	9902.36	10060.85	.00
	5.357	1243.44	.00	1243.91	140.00	.00	3367.93	.00	140.00	9910.00	9902.36	10060.85	10050.00
	5.360	1243.47	.00	1244.07	105.61	.00	3345.88	.00	.00	.00	9934.75	10043.95	.00
	5.360	1243.46	.00	1244.10	102.32	.00	3367.93	.00	105.00	9935.00	9934.75	10043.95	10040.00
	5.372	1243.55	.00	1244.37	102.70	.00	3345.88	.00	.00	.00	9933.11	10063.37	.00
	5.372	1243.55	.00	1244.42	97.68	.00	3367.93	.00	100.00	9940.00	9933.11	10063.37	10040.00
*	5.385	1244.00	.00	1245.35	133.90	.00	3345.88	.00	.00	.00	9888.98	10060.53	.00
*	5.385	1243.98	.00	1245.41	125.00	.00	3367.93	.00	125.00	9900.00	9888.98	10060.53	10025.00
*	5.492	1246.66	.00	1247.42	159.41	.00	3445.92	.00	.00	.00	9834.51	10009.27	.00
*	5.492	1246.68	.00	1247.45	156.89	.00	3476.49	.00	156.89	9834.51	9834.51	10009.27	9991.40
	5.587	1248.48	.00	1249.61	169.29	.00	4027.68	.00	.00	.00	9859.12	10033.73	.00
	5.587	1248.47	.00	1249.64	166.70	.00	4069.23	.00	166.70	9860.00	9859.12	10033.73	10026.70
*	5.682	1250.53	.00	1251.25	145.13	.00	4072.24	.00	.00	.00	9866.03	10041.82	.00
*	5.682	1250.52	.00	1251.27	134.81	.00	4111.32	.00	134.81	9898.63	9866.03	10041.82	10033.44

1

	SECNO	CWSEL	DIFKWS	EG	TOPWID	QLOB	QCH	QROB	PERENC	STENCL	STCHL	STCHR	STENCR
	5.777	1251.67	.00	1252.08	206.60	.00	4163.63	.00	.00	.00	9836.39	10047.66	.00
	5.777	1251.66	.00	1252.08	204.10	.00	4201.66	.00	204.10	9836.40	9836.39	10047.66	10040.50
	5.867	1252.12	.00	1252.58	198.83	.00	5230.93	.09	.00	.00	9907.05	10098.00	.00
	5.867	1252.13	.00	1252.59	190.00	.00	5273.61	.00	190.00	9908.00	9907.05	10098.00	10098.00
	5.871	1252.09	.00	1252.65	183.00	.00	5293.81	.00	.00	.00	9915.64	10128.49	.00
	5.871	1252.10	.00	1252.66	179.98	.00	5337.01	.00	179.98	9915.64	9915.64	10128.49	10095.62
	5.886	1251.88	.00	1253.13	206.61	.00	5062.38	437.62	.00	.00	9953.17	10080.58	.00
*	5.886	1251.57	.00	1253.60	120.00	.00	5500.00	.00	120.00	9960.00	9953.17	10080.58	10080.00
*	9999.000	1256.12	.00	1256.21	790.85	.00	3113.84	2386.16	.00	.00	9953.17	10080.58	.00
*	9999.000	1255.80	.00	1255.91	720.89	.00	3267.82	2232.18	.00	.00	9953.17	10080.58	.00

1

SUMMARY PRINTOUT TABLE 150

SECNO	XLCH	ELTRD	ELLC	ELMIN	Q	CWSEL	CRIWS	EG	10*KS	VCH	AREA	.01K
4.990	.00	.00	.00	1233.00	3342.29	1240.40	.00	1240.70	6.25	4.41	757.31	1337.17

	4.990	.00	.00	.00	1233.00	3362.64	1241.00	.00	1241.24	4.48	3.96	848.12	1589.15
*	5.110	491.90	.00	.00	1236.00	3342.29	1240.64	.00	1241.49	27.91	7.39	452.57	632.65
*	5.110	491.90	.00	.00	1236.00	3362.64	1241.13	.00	1241.82	18.85	6.71	501.35	774.46
	5.205	429.00	.00	.00	1237.00	3342.29	1241.80	.00	1242.59	23.33	7.15	467.38	692.01
	5.205	429.00	.00	.00	1237.00	3362.64	1241.93	.00	1242.69	20.41	7.01	479.82	744.38
*	5.300	574.42	.00	.00	1237.00	3344.03	1243.11	.00	1243.52	10.32	5.17	646.94	1040.79
*	5.300	574.42	.00	.00	1237.00	3365.37	1243.12	.00	1243.55	9.84	5.22	645.19	1072.66
	5.357	310.00	.00	.00	1238.00	3345.88	1243.44	.00	1243.90	13.14	5.42	617.84	923.07
	5.357	310.00	.00	.00	1238.00	3367.93	1243.44	.00	1243.91	12.68	5.54	607.41	945.99
	5.360	100.00	.00	.00	1236.00	3345.88	1243.47	.00	1244.07	8.57	6.21	538.38	1142.62
	5.360	100.00	.00	.00	1236.00	3367.93	1243.46	.00	1244.10	9.21	6.39	526.79	1109.89
	5.372	80.00	1246.44	1244.94	1236.00	3345.88	1243.55	.00	1244.37	13.94	7.27	460.42	896.25
	5.372	80.00	1246.44	1244.94	1236.00	3367.93	1243.55	.00	1244.42	14.74	7.48	450.35	877.17
*	5.385	70.00	.00	.00	1241.00	3345.88	1244.00	1244.00	1245.35	66.79	9.34	358.39	409.41
*	5.385	70.00	.00	.00	1241.00	3367.93	1243.98	1243.98	1245.41	66.96	9.58	351.70	411.59
*	5.492	440.00	.00	.00	1243.00	3445.92	1246.66	.00	1247.42	32.01	7.03	490.51	609.10
*	5.492	440.00	.00	.00	1243.00	3476.49	1246.68	.00	1247.45	30.91	7.04	493.83	625.28
	5.587	500.00	.00	.00	1244.00	4027.68	1248.48	.00	1249.61	51.81	8.54	471.58	559.58
	5.587	500.00	.00	.00	1244.00	4069.23	1248.47	.00	1249.64	52.75	8.68	468.61	560.25
	5.682	500.00	.00	.00	1244.00	4072.24	1250.53	.00	1251.25	20.86	6.82	596.98	891.66
	5.682	500.00	.00	.00	1244.00	4111.32	1250.52	.00	1251.27	20.28	6.95	591.73	913.00
	5.777	500.00	.00	.00	1245.00	4163.63	1251.67	.00	1252.08	11.68	5.15	808.22	1218.55
	5.777	500.00	.00	.00	1245.00	4201.66	1251.66	.00	1252.08	11.69	5.21	806.97	1228.86
	5.867	465.00	.00	.00	1246.00	5231.02	1252.12	.00	1252.58	9.45	5.43	964.32	1701.34
	5.867	465.00	.00	.00	1246.00	5273.61	1252.13	.00	1252.59	9.71	5.47	964.04	1691.97
	5.871	20.00	.00	.00	1246.00	5293.81	1252.09	.00	1252.65	12.30	5.98	884.61	1509.19
	5.871	20.00	.00	.00	1246.00	5337.01	1252.10	.00	1252.66	12.46	6.03	885.74	1512.22
	5.886	80.00	.00	.00	1247.00	5500.00	1251.88	.00	1253.13	23.10	9.26	646.50	1144.26
*	5.886	80.00	.00	.00	1247.00	5500.00	1251.57	1251.57	1253.60	39.53	11.43	481.34	874.83
*	9999.000	78.00	1252.36	1250.86	1247.00	5500.00	1256.12	.00	1256.21	.92	2.86	2617.12	5724.02
*	9999.000	78.00	1252.36	1250.86	1247.00	5500.00	1255.80	.00	1255.91	1.15	3.12	2373.95	5124.73

SUMMARY PRINTOUT TABLE 150

SECNO	Q	CWSEL	DIFWSP	DIFWSX	DIFKWS	TOPWID	XLCH
4.990	3342.29	1240.40	.00	.00	.00	148.55	.00
4.990	3362.64	1241.00	.60	.00	.00	154.18	.00

*	5.110	3342.29	1240.64	.00	.24	.00	124.37	491.90
*	5.110	3362.64	1241.13	.49	.13	.00	115.00	491.90
	5.205	3342.29	1241.80	.00	1.16	.00	117.80	429.00
	5.205	3362.64	1241.93	.13	.80	.00	111.00	429.00
*	5.300	3344.03	1243.11	.00	1.31	.00	136.26	574.42
*	5.300	3365.37	1243.12	.02	1.20	.00	130.00	574.42
	5.357	3345.88	1243.44	.00	.34	.00	152.97	310.00
	5.357	3367.93	1243.44	-.01	.31	.00	140.00	310.00
	5.360	3345.88	1243.47	.00	.03	.00	105.61	100.00
	5.360	3367.93	1243.46	-.01	.03	.00	102.32	100.00
	5.372	3345.88	1243.55	.00	.08	.00	102.70	80.00
	5.372	3367.93	1243.55	.00	.08	.00	97.68	80.00
*	5.385	3345.88	1244.00	.00	.45	.00	133.90	70.00
*	5.385	3367.93	1243.98	-.01	.43	.00	125.00	70.00
*	5.492	3445.92	1246.66	.00	2.66	.00	159.41	440.00
*	5.492	3476.49	1246.68	.03	2.70	.00	156.89	440.00
	5.587	4027.68	1248.48	.00	1.82	.00	169.29	500.00
	5.587	4069.23	1248.47	-.01	1.78	.00	166.70	500.00
*	5.682	4072.24	1250.53	.00	2.05	.00	145.13	500.00
	5.682	4111.32	1250.52	-.02	2.05	.00	134.81	500.00
	5.777	4163.63	1251.67	.00	1.13	.00	206.60	500.00
	5.777	4201.66	1251.66	.00	1.15	.00	204.10	500.00
	5.867	5231.02	1252.12	.00	.45	.00	198.83	465.00
	5.867	5273.61	1252.13	.01	.46	.00	190.00	465.00
	5.871	5293.81	1252.09	.00	-.03	.00	183.00	20.00
	5.871	5337.01	1252.10	.01	-.03	.00	179.98	20.00
	5.886	5500.00	1251.88	.00	-.21	.00	206.61	80.00
*	5.886	5500.00	1251.57	-.30	-.53	.00	120.00	80.00
*	9999.000	5500.00	1256.12	.00	4.25	.00	790.85	78.00
*	9999.000	5500.00	1255.80	-.32	4.23	.00	720.89	78.00

SUMMARY OF ERRORS AND SPECIAL NOTES

NG SECNO= 5.110 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
NG SECNO= 5.110 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5.300 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5.300 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 5.385 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.385 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5.385 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL
ION SECNO= 5.385 PROFILE= 2 CRITICAL DEPTH ASSUMED
ION SECNO= 5.385 PROFILE= 2 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 5.385 PROFILE= 2 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 5.492 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5.492 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 5.682 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO= 5.682 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 5.886 PROFILE= 2 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 5.886 PROFILE= 2 MINIMUM SPECIFIC ENERGY

WARNING SECNO= 9999.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
CAUTION SECNO= 9999.000 PROFILE= 2 HYDRAULIC JUMP D.S.
WARNING SECNO= 9999.000 PROFILE= 2 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

1

FLOODWAY DATA,
PROFILE NO. 2

STATION	FLOODWAY WIDTH	FLOODWAY SECTION AREA	FLOODWAY MEAN VELOCITY	WATER SURFACE ELEVATION WITH FLOODWAY	WITHOUT FLOODWAY	DIFFERENCE
4.990	154.	848.	4.0	1241.0	1240.4	.6
5.110	115.	501.	6.7	1241.1	1240.6	.5
5.205	111.	480.	7.0	1241.9	1241.8	.1
5.300	130.	645.	5.2	1243.1	1243.1	.0
5.357	140.	607.	5.5	1243.4	1243.4	.0
5.360	102.	527.	6.4	1243.5	1243.5	.0
5.372	98.	450.	7.5	1243.5	1243.5	.0
5.385	125.	352.	9.6	1244.0	1244.0	.0
5.492	157.	494.	7.0	1246.7	1246.7	.0
5.587	167.	469.	8.7	1248.5	1248.5	.0
5.682	135.	592.	6.9	1250.5	1250.5	.0
5.777	204.	807.	5.2	1251.7	1251.7	.0
5.867	190.	964.	5.5	1252.1	1252.1	.0
5.871	180.	886.	6.0	1252.1	1252.1	.0
5.886	120.	481.	11.4	1251.6	1251.9	-.3
9999.000	721.	2374.	2.3	1255.8	1256.1	-.3

SECTION 5: Reference Material

INDIAN BEND WASH
FLOOD INSURANCE STUDY
DATA COLLECTION SUMMARY REPORT

FCD 93-05

Prepared for:
Flood Control District of Maricopa County
2801 West Durango
Phoenix, Arizona 85009

Prepared by:
Simons, Li & Associates, Inc.
4600 South Mill Avenue, Suite 200
Tempe, Arizona 85282

July, 1997

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APPENDIEK 6A. Data Collection Reference Database

6.0 INTRODUCTION

This report presents a summary of the data collected as part of the Floodplain Delineation for Indian Bend Wash (IBW). The report is formatted to coincide with the Arizona Department of Water Resources (ADWR), "Instructions for Organizing and Submitting Technical Documentation for Flood Studies," Section 6, State Standard Attachment SSA 1-90, Revised September 1991. The data compiled is from various sources including: the Flood Control District of Maricopa County (FCDMC), City of Scottsdale (COS), City of Phoenix (COP), the Town of Paradise Valley (PV), City of Tempe (COT), and ADWR. The data collected includes previous flood hazard reports and hydrology for the study area; existing topographic mapping; historical flooding information; land subsidence; as-built plans and construction plans for existing structures; FEMA Flood Hazard Boundary Maps and Letters of Map Amendment and/or Revisions; and, other pertinent information.

A database was developed to organize the collected reference material. For each item collected or reviewed, the pertinent data was recorded in the database referenced by the following fields:

1. Description
2. Author
3. Date
4. Project/Job/Report/File/FEMA Case Number
5. Type
6. Source Code
7. Source Document Code
8. Media, Size, No. Pages
9. Application to FIS

A brief description of each field and the methodology used to enter data follows:

Description

The Description field contains the name or title of the item in the database. The exact wording found on the item is used in this field. Keyword(s) of the title are entered first in the field, followed by the rest of the title's text. An example of a keyword would be the name of any bridge or culvert crossing of Indian Bend Wash. The structure's name will start the description field. The keyword first convention promotes easier searching and sorting of related items in the database.

Author

The Author field contains the primary writer or developer of the listed item. When the item is a letter, the author field will contain the name of the sender and recipient of the correspondence.

Date

The Date field contains a date found on the item. For an as-built item type, the date will be the noted as-built date. For a plan item type, the date will be the engineer's stamp date, if the item was stamped. If unstamped, then the date may be any other date noted on the plan set. If NONE is indicated, no date was found on the item.

Project/Job/Report/File/FEMA Case Number

This field provides a unique number for which the item references or regards.

Type

The item Type field contains one word which describes the kind of item listed. Valid entries in the Type field include: as-built, plan, report, letter, map and photo. A plan entry indicates a construction drawing for which no as-built information was indicated. A report entry would include any journal articles, consultant reports and flood insurance studies.

Source Code

The Source Code indicates where the original item was located. A summary of the Source Codes is presented in Appendix 6.A.

Source Document Code

The Source Document Code is any code or indicator used by the source to locate or file the original item.

Media, Size, No. Pages

The Media, Size, No. Pages fields indicate the physical features of the listed item. Many original documents can only be found on microfilm or fiche, therefore the Media field indicates the type or storage method of the item. The Media field may contain the following keywords: fiche, vellum, mylar, xerox (if a copy of an original report was located) and original (if the original of a report was located). The Size and No. Pages fields are self explanatory and are useful when trying to relocate a listed item.

Application to FIS

The Application to FIS field contains one or more keywords indicating where and/or how the listed item may be utilized in the IBW FIS study. Valid keywords in the Application to FIS field include:

LOMR - If the item relates to a Letter Of Map Revision
LOMA - If the item relates to a Letter Of Map Amendment
History - If the item contains historical information regarding Indian Bend Wash
Hydrology - If the item relates to IBW hydrology
Hydraulic - If the item relates to IBW hydraulics
Subsidence - If the item relates to subsidence issues

Database Abbreviations

Following is a list of commonly used abbreviations in the Indian Bend Wash database.

ADOT - Arizona Department of Transportation
ADWR - Arizona Department of Water Resources
COP - City of Phoenix
COS - City of Scottsdale
COT - City of Tempe
IBW - Indian Bend Wash
FCDMC - Flood Control District of Maricopa County
FEMA - Federal Emergency Management Association
FIRM - Flood Insurance Rate Map
FIS - Flood Insurance Study
PV - Paradise Valley, Town of
SLA - Simons, Li & Associates, Inc.
USCOE - United States Corps of Engineers
USGS - United States Geological Survey

6.1 OTHER PUBLISHED FLOOD STUDIES

The references presented in this section include Letters of Map Revision/Amendments (LOMR/LOMA) and Certified Letters of Map Revision (CLOMR). The references listed in this section were collected from the City of Phoenix and ADWR. Additional data from the other municipalities will be added as the study progresses and will be documented in the technical data notebook (TDN).

References for Other Published Flood Studies collected to date include:

1. Buckley, M.K. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 95, Roadrunner Estates, 12414 North 38th Str., Panel 1680 E", February 17, 1994

2. Buckley, M.K. (FEMA) to Erie, Len (Erie & Assoc., Inc.), "LOMR, COP, 52nd Str. and Shea Blvd., Request for additional fees, Panel 1680 E", April 8, 1994

3. Buckley, M.K. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 101, Roadrunner Estates, 12414 North 37th Way, Panel 1660 E", February 22, 1994

4. Creighton, D.E. to Miller, Terri (ADWR memo), "Review documents master drainage study West Side Scottsdale Rd. at McCormick Pkwy.", Erie & Assoc., January 21, 1993

5. Creighton, D.E. to Miller, Terri (ADWR memo), "Review documents master drainage study West Side Scottsdale Rd. at McCormick Pkwy.", Erie & Assoc., Rev. May 1992, October 30, 1992

6. Eldridge, J.W. (FEMA) to Kienow, P.E. (COP), "LOMA, COP Lot 14, Roadrunner Estates, 3715 East Wethersfield Rd., Panel 1660 E", October 21, 1991

7. FEMA, Erie L., Neil/McGill Consultants, "Shea Blvd. and 52nd Street Folder; LOMRs, Grading & Drainage Plans, Correspondence", Various Dates

8. Jamieson, G.H. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 102, Roadrunner Estates, 12408 North 37th Way, Panel 1660 E", November 15, 1994

9. Jamieson, G.H. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 153, Paradise Valley Village Unit 3, 3726 East Aster Dr., Panel 1660 E", July 26, 1994

10. Jamieson, G.H. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 33, Roadrunner Estates, 12213 North 36th Place, Panel 1660 E", April 22, 1993

11. Jamieson, G.H. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 90, Roadrunner Estates, 3747 East Bloomfield Rd., Panel 1680 E", October 1, 1993

12. Jamieson, G.H. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 93, Roadrunner Estates, 12402 North 38th Str., Panel 1680 E", November 16, 1993

13. Jamieson, G.H. (FEMA) to Acuna, R.U. (COP), "LOMA, COP Lot 94, Roadrunner Estates, 12408 North 38th Str., Panel 1680 E", September 22, 1993

14. Jamieson, G.H. (FEMA) to Kienow, P.E. (COP), "LOMA, COP Lot 99, Roadrunner Estates, 12421 North 37th Way, Panel 1660 E", December 10, 1992

15. Lindsey, C.A. (FEMA) to Badilla, F.M. (COP), "LOMR, COP, Eagle's Eyre III Phase 1 & 2, Panel 1680 D", March 16, 1989

16. Lindsey, C.A. (FEMA) to Johnson, Paul (Mayor COP), "LOMR, COP Lot 134-152 & 162-164, Paradise Valley Village Unit 3, Panel 1660 E & 1680 E", October 4, 1991

17. Locke, W.R. (FEMA) to Mead, W.C. (PV), "LOMR, PV, Cheney Estates, Acceptance of request, Panel 1695 D", September 24, 1992

18. Locke, W.R. (FEMA) to Mead, W.C. (PV), "Cheney Estates, IBW", September 24, 1992

19. Mead, W.C. (PV) to Matticks, J.L. (FEMA), "Cheney Estates - Request for CLOMR for Town Paradise Valley, AZ.", June 3, 1992

6.2 PREVIOUS FEMA STUDIES

The references presented in this section include Flood Insurance Rate Maps (FIRM), Flood Insurance Studies (FIS), and other previous FEMA studies of Indian Bend Wash. The references listed in this section are for the effective FIS for Indian Bend Wash.

References to Previous FEMA Studies collected to date include:

1. FEMA, "FIRM; Maricopa County & Incorporated Areas, Panel 1660 of 4350", September 29, 1989

2. FEMA, "FIRM; Maricopa County & Incorporated Areas, Panel 1680 of 4350", September 29, 1989

3. FEMA, "FIRM; Maricopa County & Incorporated Areas, Panel 1685 of 4350", April 15, 1988

4. FEMA, "FIRM; Maricopa County & Incorporated Areas, Panel 1690 of 4350", April 15, 1988

5. FEMA, "FIRM; Maricopa County & Incorporated Areas, Panel 1695 of 4350", December 3, 1993

6. FEMA, "FIRM; Maricopa County & Incorporated Areas, Panel 2160 of 4350", April 15, 1988

7. FEMA, "FIRM; Maricopa County & Incorporated Areas, Panel 2170 of 4350", September 4, 1991

8. FEMA, "FIS City of Phoenix, AZ. Maricopa County", June 1979

9. FEMA, "FIS City of Phoenix, AZ. Maricopa County", June 1, 1984

10. FEMA, "FIS City of Scottsdale, AZ. Maricopa County", June 4, 1984

11. FEMA, "FIS Maricopa County, AZ. & Incorporated Areas", Vol. 1-3 & 5 of 7, September 4, 1991

12. FEMA, "FIS Maricopa County, AZ. Unincorporated Areas", May 1979

13. FEMA, "FIS Maricopa County, AZ. & Incorporated Areas, Volumes 1-3, 5 of 9", December 3, 1993

14. Harris-Toups Assoc., "Flood Boundary & Floodway Map, Work Sheets", IBW Maricopa County, Final Draft, No Date

15. PRC Engineering, "Flood Boundary & Floodway Map, Work Sheets", Town of Paradise Valley, No Date

16. Various Authors, "COP FIS Backup: Correspondence, HEC-2 Data, Etc.", 1975-91

6.3 OTHER APPLICABLE STUDIES

The references presented in this section can be conveniently grouped into three categories: hydrologic studies, hydraulic studies, and studies related to subsidence. The hydrologic and hydraulic studies presented in this section were developed after the U.S. Army Corps of Engineers (Corps) Indian Bend Wash project was constructed.

The Other Applicable Studies collected and referenced to date include:

1. ADOT, "McKellips Rd.; ADOT Structural Inspection & Inventory, IBW Bridge, Structure #09357", Sample of Available Data, Several Dates

2. ADOT, "McKellips Road Over IBW, Bridge Inspection Reports - Field Forms", Sample of Available Data, Various Dates

3. Author Unknown, "Scottsdale Rd.; Drainage Report IBW at", May 1985

4. Boyle Engineering Corp., "COS Master Drainage Plan, Pima/Doubletree Area", November 1989

5. Boyle Engineering Corp., "COS Storm Water Master Plan and Management Program, Basin Reports", Vol. 1, October 1993

6. Baker Engineers, "Final Hydrology Report Squaw Peak Highway", November 1988

7. Boyle Engineering Corp., "Pima/Doubletree Area Master Drainage Plan, Addendum 2 - Hayden/Shea Area", January 25, 1991

8. Carpenter, Michael C. (USGS), "Water-level Declines, Land Subsidence, & Specific Compaction near Apache Junction, South-Central Arizona", January 1987

9. Collar, Williams & White, "PVSP Drainage Study Phase III", July 21, 1978

10. Cox, G.D. to Briggs, P. & Others, "Report on Attendance at Subsidence Symposium", March 9, 1982

11. Dewberry & Davis, Various HEC-2 Input & Output Datasets for IBW FIS, 1984

12. Erie & Associates, Inc., "Camelback Golf Course Golf Cart Crossings; Analysis of, Floodplain Report, IBW....", March 6, 1992

13. Erie & Associates, Inc., "Paradise Valley/Scottsdale: Lincoln Drive to Cheney Drive", October, 1986

14. Erie & Associates, Inc., "Paradise Valley/Scottsdale: Lincoln Drive to Cheney Drive Appendix B:TR-20 Output Data Part II", October, 1986

15. Erie & Associates, Inc., "Scottsdale Road; West Side Master Drainage Study at McCormick Parkway, Revised", November 1991

16. Howard, Needles, Tammen, & Bergendoff, "Squaw Peek Highway SR 51: Glendale Avenue to Northern Avenue, Final Drainage Design Report", September 1989

17. Larson, M.K. & Pewe, T.L. (Bulletin Assoc. Engr. Geologists), "Origin of Land Subsidence and Earth Fissuring, Northeast Phoenix, Arizona", 1986

18. Kaminski-Hubbard Engineering, Inc., "Final Hydrology report for Tatum Boulevard, Caida Del Sol to Shea Boulevard", COP Project No. P-886515, January 22, 1993

19. Simons, Li & Associates, Inc., "Outer loop freeway; concept drainage design, CAP aqueduct to Salt River Indian Reservation", December 15, 1986

20. Simons, Li & Associates, Inc., "Outer loop freeway; hydrology report, CAP aqueduct to Salt River Indian Reservation", August 19, 1986

21. Simons, Li & Associates, Inc., "Outer loop highway; concept drainage design report, Camelback walk to Arizona Canal Rev. 1", November 1989

22. Simons, Li & Associates, Inc., "Outer loop highway; concept drainage design report., Arizona Canal to Salt River Rev. 1", November 1989

23. Simons, Li & Associates, Inc., "Outer loop highway; concept drainage design, University Drive to Salt River", July 1989

24. Simons, Li & Associates, Inc., "Outer loop highway; Final Report Drainage analysis for state trust lands, Scottsdale Road to Pima Road", June 1987

25. Simons, Li & Associates, Inc., "Outer loop highway; hydrology report, University Drive to Salt River", July 1989

26. Sullivan & Masson Consulting Engineers, "Final Report Lateral Drainage IBW Project", March 7, 1978

27. Sverdrup, Parcel & Assoc., "McKellips Rd. Bridge Over IBW Scottsdale, AZ., Bridge Inspection Reports", December 1, 1975

28. USGS, "Maps Showing Water-Level Declines, Land Subsidence, and Earth Fissures

in South-Central Arizona", June 1978

29. Val-Tec, Inc., "Cactus Road Bridge Crossing; Backwater Analysis Indian Bend Wash", July 11, 1978

30. Water Resources Associates, Inc., "Invergordon Road to 65th Street; Hydraulic Analyses Indian Bend Wash", April 2, 1980

31. Water Resources Associates, Inc., "Invergordon Road to Mountain View Road; Hydraulic Analyses Indian Bend Wash", July 9, 1980

32. Yost and Gardner Engineers, "Master Drainage Study IBW", April 1975

6.4 PUBLISHED/UNPUBLISHED HISTORICAL FLOOD INFORMATION

The references presented in this section are historical by nature. The maps, reports, and plans are considered historical because the design conditions have changed or modifications were made to the original construction. A large majority of the references are reports, General Design Memorandums, developed by the Corps for the Indian Bend Wash flood control improvements.

The Historical Flood Information references collected to date include:

1. John R. Erickson, "Indian Bend Wash; Report on Flood Alleviation Studies, Scottsdale, Arizona", October 26, 1966

2. MacLean, Marjorie (Public Information Office, COS), "History IBW Flood Control Greenbelt", June 1980

3. USCOE, "Design Memo. NO. 1, GDM - Phase I, Plan Formulation for IBW", October 23, 1973

4. USCOE, "Design Memo. NO. 1, GDM - Phase I, Plan Formulation for IBW, Supplementary Report on Side Channels System", January 9, 1975

5. USCOE, "Design Memo. NO. 1, GDM - Phase II, Plan Formulation for IBW", May 16, 1975

6. USCOE, "Design Memo. NO. 3, Feature Design for Inlet Channel IBW", January 31, 1978

7. USCOE, "Design Memo. NO. 4, Feature Design for Interceptor Channel IBW", January 1980

8. USCOE, "Flood Plain Information Study for Maricopa County, Vol. I Indian Bend Wash", June 1964

9. USCOE, "Hydrology for Type 15 FIS, Phoenix, Arizona", April 12, 1973

10. USGS in cooperation with ADWR & FCDMC, "Basin characteristics and streamflow statistics in Arizona as of 1989", 1991

11. USGS for FCDMC, "Compilation of flood data for Maricopa County, Arizona through September 1989", May 1991

12. Aerial Mapping Co. Inc., IBW Topo. Maps - COS, 1"=100, , C.I.=1, , February 23, 1984

13. John Carollo Engineers, "Location Study E. Papago & Hohokam Freeways", Topo. Maps, 1986

14. Scottsdale Color Aerial Photos, No.s 30-36, 1" =760, September & October, 1993

6.5 REFERENCED TECHNICAL PAPERS/DOCUMENTS USED IN STUDY

The technical references presented in the section were used to perform the Indian Bend Wash FIS. These references include:

1. Arizona Department of Water Resources, "Technical Study Documentation Notebook Standards," Revised September 1991.

2. Federal Emergency Management Agency, "Flood Insurance Study - Guidelines and Specifications for Study Contractors," FEMA 37, Federal Insurance Administration, 1993.

3. Federal Insurance Administration, "Appeals, Revisions, and Amendments to Flood Insurance Rate Maps," January 1990.

4. Flood Control District of Maricopa County, "Drainage Design Manual for Maricopa County, Arizona: Volume I, Hydrology," June, 1992.

5. United States Geological Survey, Water Resources Division, "Estimated Manning's Roughness Coefficients for Stream Channels and Floodplains in Maricopa County, Arizona," Prepared for the Flood Control District of Maricopa County, April, 1991.

6. U.S. Army Corps of Engineers, "HEC-1 Generalized Computer Program," Version 4.01, 1991.

7. U.S. Army Corps of Engineers, "HEC-2 Generalized Computer Program," Version 4.6.2, May 1991.

8. U.S. Army Corps of Engineers, "HEC-1 Flood Hydrograph Package," Users Manual, September, 1990.

9. U.S. Army Corps of Engineers, "HEC-2 Water Surface Profiles," Users Manual, September, 1990.

10. U.S. Army Corps of Engineers, "Floodway Determination Using Computer Program HEC-2," Training Document No. 5, January, 1988.

6.6 STRUCTURE PLANS AND AS-BUILTS

The references presented in this section are the available plans and as-builts collected to date for structures along Indian Bend Wash.

1. Alpha Engineers Inc. for ADOT, "East Papago Freeway, Indian Bend Wash Bridge", June 11, 1992

2. Coe & Van Loo for COS, "Arizona Canal - IBW Temporary Spillway", July 1975

3. Coe & Van Loo, "Double Tree Ranch Road; Indian Bend Wash Improvements", (also Invergordon Rd.), July 23, 1976

4. Coe & Van Loo, "Osborn Road Paving Project Miller to Hayden", January 1968

5. Coe & Van Loo for COS, "IBW 78th St. Dyke, 2nd St. to Earll Dr., Phase I", 1973

6. COP Engineering Dept., "Cactus Road 36th Street to Tatum Blvd.", October 23, 1974

7. COP Engr. Dept. Storm Drain, "Sweetwater Ave.; IBW Low Flow Channel, Box Culvert & 35th Str. Dip", February 10, 1977

8. COS, "Arizona Canal - IBW; Wasteway Enlargement", October 1973

9. COS, "Chaparal Road; Grading Plan Low Flow Channel North of", No Date

10. COS, "Dike along Miller Rd. in El Dorado Park", October 1977

11. COS, "Flood Proofing Dikes-Low Flow Channel by Villa San Marcos", June 1979

12. COS, "Hayden Road Widen, Indian School to Camelback Road", June 1986

13. COS, "Hayden Rd. - Camelback Rd. to McDonald Dr.", July 13, 1982

14. COS, "IBW Dyke Location at Princess Dr. & COS Property", No Date

15. COS, "Indian Bend Road Drainage Ditch", No Date

16. COS, "Indian School Road Bridge, Inlet-Outlet Grading", File No. MC-024, No Date

17. COS, "McDowell Road Bridge Inlet (at IBW)", October 24, 1974

18. COS, "McDowell Road & IBW Topo.; (Hohokam Plaza Existing Topo.)", January 1977

19. COS, "McDonald Drive; IBW Low Flow Channel South of", January 1975

20. COS, "Scottsdale Road; Box Culvert Inlet Protection West Side Scottsdale Road & McCormick Parkway", January 1982

21. COS, "Thomas Rd. Bridge Inlet-Outlet, Bike Path North of West Abutment", November 1981

22. COS, "Thomas Road Bridge Inlet & Outlet", June 1976

23. COS - USCOE, "IBW Side Channel Systems", January 1982

24. COT, "Curry Rd. Bridge Overlay", Sheet 6/6, March 25, 1981

25. CRSS, Inc. for COT/ADOT, "Indian Bend Wash Drop Structure", November 20, 1990

26. Hoffman-Miller Engr.s, Inc., "Indian School Road Bridge over IBW", September 1977

27. Hoffman-Miller and Brooks & Kelly, "Thomas Road Bridge & Approaches", 1975

28. Hoffman-Miller (bridge) and Brooks & Kelly (approaches), "McDonald Drive Bridge", 10, 1974

29. Hoffman-Miller and Brooks & Kelly, "McDowell Road Bridge", 1973

30. Hoffman-Miller Engineers Inc., "Shea Blvd. Bridge over Indian Bend Wash", June 15, 1976

31. International Engr. Co., Inc. for COS, "Indian Bend Road; Scottsdale Road to Hayden Road", April 1981

32. International Engr. Co., Inc. for COS, "Camelback Road; IBW Low-Flow Channel Bridge", May 1978

33. International Engr. Co., Inc. for COS, "Chaparral Road; IBW Low-Flow Channel Bridge", January 1979

34. Johannessen & Girand, for FCDMC, "McKellips Rd. Bridge Over IBW", 1973??

35. Johannessen & Girand, "Princess Drive Bridge over IBW", December 1974

36. RHP Consulting Engr.s for Town of Paradise Valley, "Golf Dr. at IBW; Low Flow Crossing", Sheets 1 thru 13, June 3, 1981

37. Ritoch-Herz-Powell, "Doubletree Ranch Road Ivergordon Road Paving and Bridge Plans", June 11, 1979

38. USCOE, "IBW Inlet Channel - General Plan", January 24, 1986

39. USCOE, "IBW Inlet Channel - Index to Contract Drawings", January 24, 1986

40. USCOE, "IBW Inlet Channel - Project Location", January 24, 1986

41. USCOE, "IBW Outlet Channel - Index to Contract Drawings", August 31, 1978

42. USCOE, "IBW Outlet Channel - Project Location", June 13, 1986

43. USCOE, "IBW Inlet & Greenbelt Floodway, Plan & Profile - Hydraulic Design", No Date

44. USCOE, "IBW Outlet Channel - Channel Cross Sections No. 2", November 14, 1975

45. USCOE, "IBW Outlet Channel - General Plan No. 1, Station 119+99.17 To 88+00", November 14, 1975

46. USCOE, "IBW Outlet Channel - General Plan No. 2, Station 88+00 to 60+00", November 14, 1975

47. USCOE, "IBW Outlet Channel - General Plan No. 3, Station 60+00 to 34+00", November 14, 1975

48. USCOE, "IBW Outlet Channel - General Plan No. 4, Station 34+00 to 10+00", November 14, 1975

49. USCOE, "IBW Outlet Channel - Low Flow Channel Drop Structures; Plans, Sections and Details", November 14, 1975

50. USCOE, "IBW Outlet Channel - Main Channel Drop Structure; Plan, Sections and Details", November 14, 1975

51. USCOE, "IBW Outlet Channel - McKellips Lake Rec. Area; General Plan & Grading Details", November 14, 1975

52. USCOE, "IBW Outlet Channel - Princess Drive; Plan & Profile, Station 52+00 to 58+50", November 17, 1975

53. USCOE, "IBW Outlet Channel - Princess Drive; Plan & Profile, Station 58+50 to 65+00", November 17, 1975

54. USCOE, "IBW Outlet Channel - Princess Drive; Stone Protection and Misc. Details", November 14, 1975

55. USCOE, "IBW Side Channels System", May 1982

56. USCOE, "IBW Side Channels System - Reach 4", April 1983

57. Van Loo & Patel, "Doubletree Ranch Road from Indian Bend Wash to 60th Str.", April 1985

58. Val-Tec, Inc., "Cactus Road Bridge over IBW", June 1979

59. Willdan Assoc. for Vincent & Evans, Inc. (Private developers), "Lincoln Drive; Paving Improvements for", May 7, 1981

6.7 SUMMARY

As the study progresses, additional data will be collected and referenced in the TDN. To date, over 125 documents have been reviewed and referenced for the Indian Bend Wash FIS. A printout of the current document data base is provided in Appendix 6A.

APPENDIX 6A. DATA COLLECTION REFERENCE DATABASE

CLIENT: FCDMC
PROJECT: INDIAN BEND WASH FLOODPLAIN DELINEATION
DETAIL: SOURCE AGENCY/CONTACT CODES FOR DATABASE

DATE: 09–Jun–94
SLA NO.: AZ–MC–16
FCDMC NO.: 93–5
BY: CJP

CODE	ADDRESS	CONTACT	TEL. NO.
PV	TOWN OF PARADISE VALLEY		
a.	ENGINEERING DEPARTMENT 6401 E. LINCOLN DR., 85253	RICHARD EDWARDS	948–7411
COT	CITY OF TEMPE		
a.	PUBLIC WORKS DEPARTMENT P.O. BOX 5002 31 E. FIFTH STREET, 85280	TONY ORTIZ	350–8288
COS	CITY OF SCOTTSDALE		
a.	ENGINEERING RECORDS DEPT. 7447 E. INDIAN SCHOOL, 85251	JOE MALYS	994–7069
b.	ENGINEERING DEPARTMENT 7447 E. INDIAN SCHOOL, 85251	COLLIS LOVELY BILL ERICSON	994–7652
FCDMC	FLOOD CONTROL DIST MARICOPA CNTY. 3335 W. DURANGO STREET PHOENIX, 85009		506–1501 (ALL CONTACTS)
a.	LIBRARY	AFSHIN AHOURAIYAN	
b.	LIBRARY SHELVES & DRAWERS	ANA GORBENKO	
c.	PEDRO CALZA		
d.	CENTRAL FILES (AS–BUILTS)	DANNY	
e.	JIM STEWART		
COP	CITY OF PHOENIX 200 W. WASHINGTON STR., 85003		
a.	ENGR. & ARCHITECTURAL SERVICES DEPT. CENTRAL RECORDS		262–4936
b.	FLOODPLAIN MANAGEMENT	DONNA WEISS/RAY ACUNA	262–4960
ADWR	ARIZONA DEPARTMENT OF WATER RESOURCES		
a.	ENGINEERING DIVISION FLOOD MANAGEMENT 15 SOUTH 15TH AVENUE PHOENIX, 85007	DAVID E. CREIGHTON, JR. TERRY MILLER	542–1541
SLA	SIMONS, LI & ASSOCIATES, INC. 4600 S. MILL AVENUE, SUITE 200 TEMPE, 85282	ROBERT EICHINGER	491–1393
a.	TEMPE LIBRARY		
b.	ROBERT EICHINGER		

CLIENT: FCDMC
PROJECT: INDIAN BEND WASH FLOODPLAIN DELIN.
DETAIL: REFERENCE SOURCES

DATE: 30-Jun-97
JOB NO.: AZ-MC-16

ITEM NO.	ITEM DESCRIPTION	ITEM AUTHOR	ITEM DATE	PROJECT/JOB/REPORT FILE/FEMA CASE NUMBER	ITEM TYPE	SOURCE CODE	SOURCE DOC. CODE
1	Arizona Canal - IBW Temporary Spillway	COE& Van Loo For COS	July 1975	FC-7428-C	Plan	COSa.	16479
2	Arizona Canal - IBW; Wasteway Enlargement	COS	October 1973	FC-7430-C	Plan	COSa.	16509
3	Basin Characteristics And Streamflow Statistics In Arizona As Of 1989	USGS In Cooperation With ADWR & FCDMC	1991	WRI 91-4041	Report	FCDMCb.	
4	Cactus Road 36th Street To Tatum Blvd.	COP Engr. Dept.	October 23, 1974	P-73228.00	As-Built	COPa.	42191
5	Cactus Road Bridge Crossing; Backwater Analysis Indian Bend Wash	Val-Tec, Inc.	July 11, 1978	VT 3-22	Report	COPb.	
6	Cactus Road Bridge Over IBW	Val-Tec, Inc.	June 1979	BR-77162	Plan	COPa.	
7	Camelback Golf Course Golf Cart Crossings; Analysis Of, Floodplain RPT., IBW...	Erie & Associates, Inc.	March 6, 1993	EA #1379.1	Report	SLAb.	
8	Camelback Road; IBW Low-Flow Channel Bridge	International Engr. Co., Inc. For COS	May 1978	B-7706, FC-042	As-Built	COSa.	16373
9	Chaparral Road; Grading Plan Low Flow Channel North Of	COS	No Date	FC-7633, FC-034	Plan	COSa.	16470
10	Chaparral Road; IBW Low-Flow Channel Bridge	International Engr. Co., Inc. For COS	January 1979	B-7707, FC-044	As-Built	COSa.	16350
11	Cheney Estates - Request For CLOMR For Town Of Paradise Valley, Arizona	Mead, W.C. (PV) To Mattlcks, J.L. (FEMA)	June 3, 1992	92MB102/BILL	Letter	ADWRa.	
12	Cheney Estates, IBW	Locke, W.R. (FEMA) To Mead, W.C. (PV)	September 24, 1992	316-ACK	Letter	ADWRa.	
13	Compilation Of Flood Data For Maricopa County, Arizona Through Sept. 1989	USGS For FCDMC	May 1991		Report	FCDMCd.	
14	COP FIS Backup: Correspondence, HEC-2 Data, Etc.	Various	1975-91		Letters/Data	FCDMCc.	
15	COS Master Drainage Plan, Pima/Doubletree Area	Boyle Engineering Corp.	November 11, 1989		Report	FCDMCa.	
16	COS Storm Water Master Plan And Management Program, Basin RPT.S, Vol.1	Boyle Engineering Corp.	October 1993		Report	FCDMCa.	
17	Curry Rd. Bridge Overlay, Sht. 6/6	COT	March 25, 1981	76044	Plan	COTa.	
18	Design Memo. No. 1, GDM - Phase II, Project Design For IBW	USCOE	May 16, 1975		Report	FCDMCd.	
19	Design Memo. No. 1, GDM - Phase I, Plan Formulation For IBW	USCOE	October 23, 1973		Report	SLAa.	
20	Design Memo. No. 1, GDM - Phase I, Plan Formulation For IBW, Supplementary Report On Side Cha	USCOE	January 9, 1975		Report	FCDMCd.	
21	Design Memo. No. 3, Feature Design For Inlet Channel IBW	USCOE	January 31, 1978		Report	SLAa.	
22	Design Memo. No. 4, Feature Design For Interceptor Channel IBW	USCOE	January 1980		Report	SLAa.	
23	Dike Along Miller Rd. In El Dorado Park	COS	October 1977	FC-7550	Plan	COSa.	16547
24	Double Tree Ranch Road; Indian Bend Wash Improvements, (Also Invergordon Rd.)	COE & Van Loo	July 23, 1976	704-01-05	Plan	PVa.	
25	Doubletree Ranch Road From Indian Bend Wash To 60th St.	Van Loo & Patel	April 1985	VLP NO. 020-07	Plan	PVa.	
26	Doubletree Ranch Road Ivergordon Road Paving And Bridge Plans	Ritoch-Herz-Powell	June 11, 1979	79009	Plan	PVa.	
27	East Papago Freeway, Indian Bend Wash Bridge	Alpha Engineers Inc. For ADOT	June 11, 1992	RAM-600-5-517	Plan	SLAa.	
28	Final Hydrology Report Squaw Peak Highway	Baker Engineers	November 11, 1988	87-40	Report	FCDMCa.	
29	Final Report Lateral Drainage IBW Project	Sullivan & Masson Consulting Engineers	March 7, 1978	NONE	Report	FCDMCd.	
30	FIRM; Maricopa County & Incorporated Areas, Panel 1660 Of 4350	FEMA	September 29, 1989	04013C1660 E	Map	FCDMCe.	
31	FIRM; Maricopa County & Incorporated Areas, Panel 1680 Of 4350	FEMA	September 29, 1989	04013C1680 E	Map	FCDMCe.	
32	FIRM; Maricopa County & Incorporated Areas, Panel 1685 Of 4350	FEMA	April 15, 1988	04013C1685 D	Map	SLAa.	
33	FIRM; Maricopa County & Incorporated Areas, Panel 1690 Of 4350	FEMA	April 15, 1988	04013C1690 D	Map	SLAa.	
34	FIRM; Maricopa County & Incorporated Areas, Panel 1695 Of 4350	FEMA	December 3, 1993	04013C1695 E	Map	FCDMCe.	
35	FIRM; Maricopa County & Incorporated Areas, Panel 2160 Of 4350	FEMA	April 15, 1988	04013C2160 D	Map	SLAa.	
36	FIRM; Maricopa County & Incorporated Areas, Panel 2170 Of 4350	FEMA	September 4, 1991	04013C2170 E	Map	FCDMCe.	
37	FIS City Of Phoenix, Arizona. Maricopa County	FEMA	June 1, 1984		Report	COPb.	
38	FIS City Of Phoenix, Arizona. Maricopa County	FEMA	June 1979		Report	FCDMCb.	
39	FIS City Scottsdale, Arizona Maricopa County	FEMA	June 4, 1984		Report	SLAa.	
40	FIS Maricopa County, Arizona. Unincorporated Areas	FEMA	May 1979		Report	SLAa.	
41	FIS Maricopa County, Arizona. & Incorporated Areas, Volumes 1-3,5 Of 9	FEMA	December 3, 1993		Report	SLAa.	
42	FIS Maricopa County, Arizona. & Incorporated Areas, Vol. 1-3 & 5 Of 7	FEMA	September 4, 1991		Report	SLAa.	
43	FIS Town of Paradise Valley, Arizona. Maricopa County	FEMA	June 3, 1986		Report	ADWRa.	
44	FIS Town of Paradise Valley, Arizona. Maricopa County	FEMA	November, 1979		Report	ADWRa.	
45	Flood Boundary & Floodway Map, Work Sheets, IBW Maricopa County, Final Draft	Harris-Toups Assoc.	None		Map	SLAa.	
46	Flood Boundary & Floodway Map, Work Sheets, Town Of Paradise Valley	PRC Engineering	None		Map	SLAa.	
47	Flood Proofing Dikes-Low Flow Channel By Villa San Marcos	COS	June 1979	FC-7859, FC-046	Plan	COSa.	15810
48	Floodplain Information Study For Maricopa County, Vol. I Indian Bend Wash	USCOE	June 1964		Report	SLAb.	
49	Golf Dr. At IBW; Low Flow Crossing, Sheets 1 Thru 13	RHP Consulting Engineers For Town Of Paradise Valley	June 3, 1981	79020	Plan	PVa.	
50	Haden Road Widen, Indian School To Camelback Road	COS	June 1986	S-5502, P-072	Plan	COSa.	16023
51	Hayden Rd. - Camelback Rd. To McDonald Dr.	COS	July 13, 1982	8067, P-045	As-Built	COSa.	16839
52	History IBW Flood Control Greenbelt	MacLean, Marjorie (Public Information Office, COS)	June 1980	NONE	Report	FCDMCd.	
53	Hydrology For Type 15 FIS, Phoenix, Arizona	USCOE	April 12, 1973	NONE	Report	ADWRa.	
54	IBW 78th St. Dike, 2nd St. To Earll Dr., Phase I	COE & Van Loo For COS	1973	FC-7429-C, (FC-19-1)	Plan	COSa.	16579
55	IBW Dike Location At Princess Dr. & COS Property	COS	None	MC-014	Plan	COSa.	15802

CLIENT: FCDMC
PROJECT: INDIAN BEND WASH FLOODPLAIN DELIN.
DETAIL: REFERENCE SOURCES

DATE: 30-Jun-97
JOB NO.: AZ-MC-16

ITEM NO.	ITEM DESCRIPTION	ITEM AUTHOR	ITEM DATE	PROJECT/JOB/REPORT FILE/FEMA CASE NUMBER	ITEM TYPE	SOURCE CODE	SOURCE DOC. CODE
56	FIS City Of Tempe, Arizona. Maricopa County	FEMA	February, 1980		Report	ADWRa	
57	IBW Inlet Channel - General Plan	USCOE	January 24, 1986	246/126 REV. C	As-Built	FCDMCd.	
58	IBW Inlet Channel - Index To Contract Drawings	USCOE	January 24, 1986	246/124 REV. A	As-Built	FCDMCd.	
59	IBW Inlet Channel - Project Location	USCOE	January 24, 1986	246/125	As-Built	FCDMCd.	
60	IBW Inlet & Greenbelt Floodway, Plan & Profile - Hydraulic Design	USCOE	None	FC-018	Plan	COSa.	16584
61	IBW Outlet Channel - Channel Cross Sections No. 2	USCOE	November 14, 1975	238/125 REV. A	Plan	SLAa.	74059
62	IBW Outlet Channel - General Plan No. 1, Station 119+99.17 To 88+00	USCOE	November 14, 1975	238/120 REV. A	Plan	SLAa.	74059
63	IBW Outlet Channel - General Plan No. 2, Station 88+00 To 60+00	USCOE	November 14, 1975	238/121 REV. A	Plan	SLAa.	74059
64	IBW Outlet Channel - General Plan No. 3, Station 60+00 To 34+00	USCOE	November 14, 1975	238/122 REV. A	Plan	SLAa.	74059
65	IBW Outlet Channel - General Plan No. 4, Station 34+00 To 10+00	USCOE	November 14, 1975	238/123 REV. A	Plan	SLAa.	74059
66	IBW Outlet Channel - Index To Contract Drawings	USCOE	August 31, 1978	238/116 REV. B	As-Built	FCDMCd.	
67	IBW Outlet Channel - Low Flow Channel Drop Structures; Plans, Sections And Details	USCOE	November 14, 1975	238/127 REV. A	Plan	SLAa.	74059
68	IBW Outlet Channel - Main Channel Drop Structure; Plan, Sections And Details	USCOE	November 14, 1975	238/126 REV. A	Plan	SLAa.	74059
69	IBW Outlet Channel - McKellips Lake Rec. Area; General Plan & Grading Details	USCOE	November 14, 1975	238/140 REV. A	Plan	SLAa.	74059
70	IBW Outlet Channel - Princess Drive; Plan & Profile, Station 52+00 To 58+50	USCOE	November 14, 1975	238/171 REV. A	Plan	SLAa.	74059
71	IBW Outlet Channel - Princess Drive; Plan & Profile, Station 58+50 To 65+00	USCOE	November 14, 1975	238/172 REV. A	Plan	SLAa.	74059
72	IBW Outlet Channel - Princess Drive; Stone Protection And Misc. Details	USCOE	November 14, 1975	238/129 REV. A	Plan	SLAa.	74059
73	IBW Outlet Channel - Project Location	USCOE	June 13, 1986	238/117	As-Built	FCDMCd.	
74	IBW Side Channel Systems	COS - USCOE	January 1982	8501	Plan	COSa.	
75	IBW Side Channels System	USCOE	May 1982	241/144-184	Plan	COSa.	
76	IBW Side Channels System - Reach 4	USCOE	April 1983	241/185-222	Plan	COSa.	
77	IBW Topo. Maps - COS, 1"=100', C.I.=1'	Aerial Mapping Co. Inc.	Februay 23, 1984		Map	FCDMCd.	
78	Indian Bend Road Drainage Ditch	COS	None	7040, M-089	Plan	COSa.	16275
79	Indian Bend Road; Scottsdale Road To Hayden Road	International Engineering Co., Inc. For COS	April 1981	B-8105	Plan	COSa.	16109
80	Indian Bend Wash Drop Structure	CRSS, Inc. For COT/ADOT	November 20, 1990	RAM-600-5-517	Plan	SLAa.	
81	Indian Bend Wash; Report On Flood Alleviation Studies, Scottsdale, Arizona	John R. Erickson	October 26, 1966		Report	COPb.	
82	Indian School Road Bridge Over IBW	Hoffman-Miller Engineers, Inc.	September 1977	B-7501, FC-041	Plan	COSa.	16398
83	Indian School Road Bridge, Inlet-Outlet Grading, File No. MC-024	COS	None	MC-024	Plan	COSa.	15804
84	Invergordon Dr., Reconstruction Of; Channel, Etc., Sheets 1 Thru 11					PVa.	
85	Invergordon Road To 65th Street; Hydraulic Analysis Indian Bend Wash	Water Resources Associates, Inc.	April 2, 1980		Report	COPb.	
86	Invergordon Road To Mountain View Road; Hydraulic Analysis Indian Bend Wash	Water Resources Associates, Inc.	July 9, 1980		Report	COPb.	
87	Lincoln Drive; Paving Improvements For	Willdan Assoc. For Vincent & Evans, Inc.(Private Developers)	May 7, 1981	83021	As-Built	COSa.	
88	Location Study East Papago & Hohokam Freeways, Topo. Maps	John Carollo Engineers	1986	AZM-600-5-304, BPM-600-	Map	SLAa.	E5
89	LOMA, COP Lot 101, Roadrunner Estates, 12414 North 37th Way, Panel 1660 E	Buckley, M.K. (FEMA) To Acuna, R.U. (COP)	February 22, 1994	94-09-125A	Letter	COPb.	
90	LOMA, COP Lot 102, Roadrunner Estates, 12408 North 37th Way, Panel 1660 E	Jamieson, G.H. (FEMA) To Acuna, R.U. (COP)	November 15, 1994	94-09-010A	Letter	COPb.	
91	LOMA, COP Lot 14, Roadrunner Estates, 3715 East Wethersfield Rd., Panel 1660 E	Eldridge, J.W. (FEMA) To Klenow, P.E. (COP)	October 21, 1991	RIX-218-70-R (REI)	Letter	COPb.	
92	LOMA, COP Lot 153, Paradise Valley Village Unit 3, 3726 East Aster Dr., Panel 1660 E	Jamieson, G.H. (FEMA) To Acuna, R.U. (COP)	July 26, 1994	93-09-619A	Letter	COPb.	
93	LOMA, COP Lot 33, Roadrunner Estates, 12213 North 36th Place, Panel 1660 E	Jamieson, G.H. (FEMA) To Acuna, R.U. (COP)	April 22, 1993	93-09-390A	Letter	COPb.	
94	LOMA, COP Lot 90, Roadrunner Estates, 3747 East Bloomfield Rd., Panel 1680 E	Jamieson, G.H. (FEMA) To Acuna, R.U. (COP)	October 1, 1993	93-09-737A	Letter	COPb.	
95	LOMA, COP Lot 93, Roadrunner Estates, 12402 North 38th Str., Panel 1680 E	Jamieson, G.H. (FEMA) To Acuna, R.U. (COP)	November 16, 1993	94-09-024A	Letter	COPb.	
96	LOMA, COP Lot 94, Roadrunner Estates, 12408 North 38th Str., Panel 1680 E	Jamieson, G.H. (FEMA) To Acuna, R.U. (COP)	September 22, 1993	93-09-738A	Letter	COPb.	
97	LOMA, COP Lot 95, Roadrunner Estates, 12414 North 38th Str., Panel 1680 E	Buckley, M.K. (FEMA) To Acuna, R.U. (COP)	February 17, 1994	94-09-183A	Letter	COPb.	
98	LOMA, COP Lot 99, Roadrunner Estates, 12421 North 37th Way, Panel 1660 E	Jamieson, G.H. (FEMA) To Klenow, P.E. (COP)	December 10, 1992	93-09-109A	Letter	COPb.	
99	LOMR, COP Lot 134-152 & 162-164, Paradise Valley Village Unit 3, Panel 1660E &1680E	Lindsey, C.A. (FEMA) To Johnson, Paul (Mayor COP)	October 4, 1991	T-218-65-RS (REI)	Letter	COPb.	
100	LOMR, COP, 52nd Str. And Shea Blvd., Panel 1680 E	Buckley, M.K. (FEMA) To Johnson, Paul (Mayor COP)	June 7, 1994	93-09-815P	Letter	FCDMCc.	
101	LOMR, COP, 52nd Str. And Shea Blvd., Request For Additional Fees, Panel 1680 E	Buckley, M.K. (FEMA) To Erie, Len (Erie & Assoc., Inc.)	April 8, 1994	93-09-815P	Letter	COPb.	
102	LOMR, COP, Eagle's Eyre III Phase 1 & 2, Panel 1680 D	Lindsey, C.A. (FEMA) To Badilla, F.M. (COP)	March 16, 1989	IA-RA-TO (218-70)	Letter	COPb.	
103	LOMR, Of Paradise Valley, Cheney Estates, Acceptance Of Request, Panel 1695 D	Locke, W.R. (FEMA) To Mead, W.C. (PV)	September 24, 1992	92-09-053R	Letter	ADWRa.	
104	Master Drainage Study IBW	Yost And Gardner Engineers	April 1975	ST-73140	Report	FCDMCd.	
105	McDonald Drive Bridge	Hoffman-Miller (Bridge) And Brooks & Kelly (Approaches)	October 1974	B-7311-C	As-Built	COSa.	
106	McDonald Drive; IBW Low Flow Channel South Of	COS	January 1975	FC-7590-C, FC-012	As-Built	COSa.	16608
107	McDowell Road Bridge	Hoffman-Miller And Brooks & Kelly	1973	B-7312-C	As-Built	COSa.	5857
108	McDowell Road Bridge Inlet (At IBW)	COS	October 24, 1974	SD-7547, FC-014	Plan	COSa.	16597
109	McDowell Road & IBW Topo.; (Hohokam Plaza Existing Topo)	COS	January 1977	MC-022	Plan	COSa.	15803
110	McKellips Rd. Bridge Over IBW	Johannessen & Girand, For FCDMC	1973??	FCD 73-10	Plan	COSa.	
111	McKellips Rd. Bridge Over IBW Scottscale, Arizona. Bridge Inspection Reports	Sverdrup, Parcel & Assoc.	December 1, 1975		Report	COSb.	

CLIENT: FCDMC
PROJECT: INDIAN BEND WASH FLOODPLAIN DELIN.
DETAIL: REFERENCE SOURCES

DATE: 30-Jun-97
JOB NO.: AZ-MC-16

ITEM NO.	ITEM DESCRIPTION	ITEM AUTHOR	ITEM DATE	PROJECT/JOB/REPORT FILE/FEMA CASE NUMBER	ITEM TYPE	SOURCE CODE	SOURCE DOC. CODE
112	McKellips Rd.; ADOT Structural Inspection & Inventory, IBW Bridge, Structure #09357	ADOT	Various		Data	COSb.	
113	McKellips Road Over IBW, Bridge Inspection Reports - Field Forms	ADOT	Various		Data	COSb.	
114	Osborn Road Paving Project Miller To Hayden	COE & Van Loo	January 1968	P-6316, 90-04-03	As-Built	COSa.	10033
115	Outer Loop Freeway; Concept Drainage Design, CAP Aqueduct To Salt R. Indian Reservation	Simons, Li & Associates, Inc.	December 15, 1986		Report	SLAa.	86.5
116	Outer Loop Freeway; Hydrology Rpt., CAP Aqueduct To Salt R. Indian Reservation	Simons, Li & Associates, Inc.	August 19, 1986		Report	SLAa.	86.4
117	Outer Loop Highway; Concept Drainage Design Report, Camelback Walk To Arizona Canal Rev. 1	Simons, Li & Associates, Inc.	November 1989	PAZ-DC-02.5	Report	SLAa.	89.16
118	Outer Loop Highway; Concept Drainage Design Rpt., Arizona Canal To Salt River Rev. 1	Simons, Li & Associates, Inc.	November 1989	PAZ-DC-02.6	Report	SLAa.	89.15
119	Outer Loop Highway; Concept Drainage Design, University Drive To Salt River	Simons, Li & Associates, Inc.	July 1989		Report	SLAa.	89.10
120	Outer Loop Highway; Final Rpt. Drainage Analysis For State Trust Lands, Scottsdale Rd. To Pima Rd	Simons, Li & Associates, Inc.	June 1987	PAZ-DC-01	Report	SLAa.	87.6
121	Outer Loop Highway; Hydrology Report, University Drive To Salt River	Simons, Li & Associates, Inc.	July 1989	PAZ-DC-02	Report	SLAa.	89.9
122	Pima/Doubletree Area Master Drainage Plan, Addendum 2 - Hayden/Shea Area	Boyle Engineering Corp.	January 25, 1991	NONE	Report	FCDMCa.	
123	Princess Drive Bridge Over IBW	Johannessen & Girand	December 1974	74059P????	Plan	SLAa.	D22
124	PVSP Drainage Study Phase III	Collar, Williams & White	July 21, 1978	NONE	Report	FCDMCa.	
125	Review Documents Master Drainage Study W. Side Scottscale Rd. At McCormick Pkwy., Erie & Asso	Creighton, D.E. To Miller, Terri (ADWR Memo)	January 21 1993	MSS10093	Letter	ADWRa.	
126	Review Documents Master Drainage Study W. Side Scottsdale Rd. At McCormick Pkwy., Erie & Asso	Creighton, D.E. To Miller, Terri (ADWR Memo)	October 30, 1992	MSS10062	Letter	ADWRa.	
127	Scottsdale Color Aerial Photos, No.s 30-36, 1"=760'	Unknown	Sept.&Oct. 1993	269160D/152,48	Photo	FCDMCa.	
128	Scottsdale Rd.; Drainage Report IBW At	Unknown (HDR?)	May 1985	S-5510	Report	FCDMCd.	
129	Scottsdale Road; Box Culvert Inlet Protection West Side Scottsdale Road & McCormick Parkway	COS	January 1982	8502, M-090	Plan	COSa.	16272
130	Scottsdale Road; West Side Master Drainage Study At McCormick Parkway, Revised	Erie & Associates, Inc.	November 1991	EA #1017.6	Report	COPb.	
131	Shea Blvd. And 52nd Street Folder; LOMRS, Grading & Drainage Plans, Correspondence	FEMA, Erie L., Neil/McGill Consultants	Various			COPb.	
132	Shea Blvd. Bridge Over Indian Bend Wash	Hoffman-Miller Engineers Inc.	June 15, 1976	BR 73143.00	As-Built	COPa.	46901
133	Subsidence; Maps Showing Water-Level Declines, Land , And Earth Fissures In South-Central Arizon	USGS	June 1978	WRI 78-83	Map	ADWRa.	
134	Subsidence; Origin Of Land, And Earth Fissuring, Northeast Phoenix, Arizona	Larson, M.K. & Pewe, T.L. (Bulletin Assoc. Engr. Geologists)	1986	VOL. 23, NO. 2	Report	ADWRa.	
135	Subsidence; Report On Attendance At, Symposium	Cox, G.D. To Briggs, P. & Others	March 9 1982	NONE	Letter	ADWRa.	
136	Subsidence; Water-Level Declines, Land , & Specific Compaction Near Apache Junction, South-Centr	Carpenter, Michael C. (USGS)	January 1987	WRI 86-4071	Report	FCDMCd.	
137	Sweetwater Ave.; IBW Low Flow Channel, Box Culvert & 35th Str. Dip	COP Engineering Department Storm Drain	February 10, 1977	ST-71038	As-Built	COPa.	
138	Thomas Rd. Bridge Inlet-Outlet, Bike Path North Of West Abutment	COS	November 1981	SD-7545, FC-024	Plan	COSa.	16632
139	Thomas Road Bridge Inlet & Outlet	COS	June 1978	SD-7545, FC-024	Plan	COSa.	16525
140	Thomas Road Bridge & Approaches	Hoffman-Miller And Brooks & Kelly	1975	SD-7307-C & P-7549-C	Plan	COSa.	16484
141	Various HEC-2 Input & Output Datasets For IBW FIS	Dewberry & Davis	1984		Data	SLAa.	
142							
143							
144	Squaw Peak Highway SR 51:Glendale Avenue To Northern Avenue. Final Drainage Design Report	HNTB	September, 1989	RAM-600-2-502	Report	FCDMCb	
145	Tatum Boulevard: Calda Del Sol To Shea Boulevard. Final Hydrology Report	Kaminski-Hubbard Engineering, Inc.	January 22, 1993	P-886515	Report	FCDMCa	
146	Paradise Valley/Scottsdale: Lincoln Drive To Cheney Drive	Erie & Associates, Inc.	October, 1986		Report	FCDMCb	
147	Paradise Valley/Scottsdale: Lincoln Drive To Cheney Drive. Appendix B: TR-20 Output Data Part II		October, 1986		Report	FCDMCb	
148							
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CLIENT: FCDMC 30-Jun-97
PROJECT: INDIAN B AZ-MC-16
DETAIL: REFERENCE SOURCES

ITEM NO.	ORIGINAL ITEM: MEDIA	SIZE	NO. PG.S	APPLICATION	NOTES
				Hydraulic	
1	Vellum	24"x36"	4	Hydraulic	
2	Vellum	24"x36"	16	Hydraulic	
3	Original	8.5"x11"	612	Hydraulic	CALIBRATION
4	Original		23	Hydraulic	CULVERT
5	Original	8.5"x11"	21	Hydraulic	LIMITED VALUE HAND CALC.S
6	Fiche		40	Hydraulic	
7	Xerox	8.5"x11"	26	Hydraulic	
8	Mylars/Vellum	24"x36"	23	Hydraulic	
9	Vellum	24"x36"	6	Hydraulic	
10	Mylars/Vellum	24"x36"	22	Hydraulic	
11	Xerox	8.5"x12"	8	LOMR	Town Of Paradise Valley
12	Xerox	8.5"x12"	1	LOMR	Town Of Paradise Valley
13	Original	8.5"x11"	250	Hydraulic	CALIBRATION
14	Fiche		LOTS	Floodplain, LOMR	
15	Xerox	8.5"x11"	21	Hydrology	
16	Xerox	8.5"x11"	LOTS	Hydrology	
17	Xerox		6	Hydrology	TOP ROAD ELV.S
18	Xerox	8.5"x11"	LOTS	Hydraulic, Hydrology	
19	Xerox	8.5"x11"	53	Hydraulic, Hydrology	
20	Xerox	8.5"x11"	15	Hydraulic, Hydrology	
21	Xerox	8.5"x11"	LOTS	Hydraulic	
22	Xerox	8.5"x11"		Hydraulic	
23	Vellum	24"x36"	25A	Hydraulic	
24	Fiche	4"x6"	10	Hydraulic	
25	Fiche	4"x6"	10	Hydraulic	
26	Fiche	4"x6"	10	Hydraulic	
27	Original	11"x17"	184	Hydraulic	BRIDGE
28	Xerox	8.5"x11"	27	Hydrology	
29	Xerox	8.5"x11"	11	Hydrology	
30		26"x26"	1	Floodplain	
31		26"x26"	1	Floodplain	
32		26"x26"	1	Floodplain	
33		26"x26"	1	Floodplain	
34		26"x26"	1	Floodplain	
35		26"x26"	1	Floodplain	
36		26"x26"	1	Floodplain	
37	Original	8.5"x11"	42	Floodplain	
38	Original	8.5"x11"	33	Floodplain	
39	Xerox	8.5"x11"	25	Floodplain	
40	Original	8.5"x11"		Floodplain	
41	Original	8.5"x11"	LOTS	Floodplain	
42	Xerox	8.5"x11"	VARIOUS	Floodplain	
43	Original	8.5"x11"	19	Floodplain	Town Of Paradise Valley
44	Original	8.5"x11"	17	Floodplain	
45	Vellum	36"x48"	1	Floodplain	
46	Vellum	36"x48"	1	Floodplain	
47	Vellum	24"x36"	4	Hydraulic	
48	Xerox	8.5"x11"	21	History	FLOODPLAIN
49	Fiche	4"x6"	4	Hydraulic	
50	Mylar	24"x36"	10	Hydraulic	
51	Vellum	24"x36"	56	Hydraulic	TOP ROAD ELEV.S
52	Xerox	8.5"x11"	50	History	
53	Xerox	8.5"x12"	60	Hydrology	
54	Vellum	24"x36"	5	Hydraulic	
55	Vellum	24"x36"	1	Hydraulic	

CLIENT: FCDMC 30-Jun-97
PROJECT: INDIAN B AZ-MC-16
DETAIL: REFERENCE SOURCES

ITEM NO.	ORIGINAL ITEM: MEDIA	SIZE	NO. PG.S	APPLICATION	NOTES
56	Original	8.5"X11"	23	Floodplain	No Mention IBW
57	Mylar	30"x40"	69	Hydraulic	
58	Mylar	30"x40"	69	Hydraulic	
59	Mylar	30"x40"	69	Hydraulic	
60	Vellum	36"x48"	5	Hydraulic	DESIGN MEMO 1, GDM PHASE II
61			C-22	Hydraulic	
62			C-22	Hydraulic	ORIG. SOURCE?? POSS. COT OR
63			C-22	Hydraulic	
64			C-22	Hydraulic	
65			C-22	Hydraulic	
66	Mylar	30"x40"	2	Hydraulic	
67			C-22	Hydraulic	
68			C-22	Hydraulic	
69			R-3	Hydraulic	
70			P-12	Hydraulic	
71			P-12	Hydraulic	
72			C-22	Hydraulic	
73	Mylar	30"x40"	2	Hydraulic	
74	Xerox	36"x42"	10	Hydraulic, Hydrology	
75	Xerox	36"x42"	41	Hydraulic, Hydrology	
76	Xerox	36"x42"	38	Hydraulic, Hydrology	
77	Mylar	36"x36"	9	History, Hydraulic	
78	Vellum	24"x36"	2	Hydraulic	
79	Mylar	24"x36"	30	Hydraulic	
80	Original	11"x17"	184	Hydraulic	DROP STRUCTURE
81	Original	8.5"x11"	19	History	
82	Vellum	24"x36"	26	Hydraulic	
83	Xerox	18"x24"	1	Hydraulic	
84	Fiche	4"x6"	3	Hydraulic	NOT COPIED, SIDE CHANNELS
85	Original	8.5"x11"	28	Hydraulic	
86	Original	8.5"x11"	31	Hydraulic	
87	Fiche	3"x6"	3	Hydraulic	
88			14A	History, Hydraulic	
89	Original	8.5"x11"	2	LOMA	COP
90	Original	8.5"x11"	2	LOMA	COP
91	Original	8.5"x11"	2	LOMA	COP
92	Original	8.5"x11"	2	LOMA	COP
93	Original	8.5"x11"	2	LOMA	COP
94	Original	8.5"x11"	2	LOMA	COP
95	Original	8.5"x11"	2	LOMA	COP
96	Original	8.5"x11"	2	LOMA	COP
97	Original	8.5"x11"	2	LOMA	COP
98	Original	8.5"x11"	2	LOMA	COP
99	Original	8.5"x11"	2	LOMR	COP
100	Original	8.5"x11"	5	LOMR	COP
101	Original	8.5"x11"	1	LOMR	COP
102	Original	8.5"x11"	2	LOMR	COP
103	Original	8.5"x11"	1	LOMR	Town Of Paradise Valley
104	Xerox	8.5"x11"	67	Hydrology	
105	Fiche	3"x6"	8	Hydraulic	
106	Vellum	24"x36"	4	Hydraulic	
107	Xerox	18"x24"	14	Hydraulic	
108	Vellum	24"x36"	10	Hydraulic	
109	Vellum	36"x48"	1	Hydraulic	
110	Xerox	18"x24"	9	Hydraulic	
111	Xerox	8.5"x11"	25	Hydraulic	SAMPLE OF AVAILABLE INFO.

CLIENT: FCDMC 30-Jun-97
PROJECT: INDIAN B AZ-MC-16
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ITEM NO.	ORIGINAL ITEM: MEDIA	SIZE	NO. PG.S	APPLICATION	NOTES
112	Gr/Wh, Comp. Pr	8.5"x14"	6	Hydraulic	SAMPLE OF AVAILABLE INFO.
113	Xerox	8.5"x11"	14	Hydraulic	SAMPLE OF AVAILABLE INFO.
114	Waxeys	24"x36"	5	Hydraulic	
115	Original	8.5"x11"	36	Hydrology	
116	Original	8.5"x11"	34	Hydrology	
117	Original	8.5"x11"	26	Hydrology	
118	Original	8.5"x11"	44	Hydrology	
119	Original	8.5"x11"	29	Hydrology	
120	Original	8.5"x11"	49	Hydrology	
121	Original	8.5"x11"	36	Hydrology	
122	Xerox	8.5"x11"	11	Hydrology	
123			9	Hydraulic	ORIG. SOURCE?? POSS. COT OR
124	Xerox	8.5"x11"	226	Hydrology	
125	Xerox	8.5"x12"	1	LOMR	Town Of Paradise Valley
126	Xerox	8.5"x12"	3	LOMR, Subsidence	Town Of Paradise Valley
127	Photo	10"x10"	54	History, Hydrology	
128	Xerox	8.5"x11"	8	Hydraulic	
129	Mylar	24"x36"	2	Hydraulic	
130	Original	8.5"x11"	17	Hydraulic, Hydrology, Floodplain	
131				LOMR, Hydraulic	COP
132	Original		20	Hydraulic	BRIDGE
133	Xerox	8.5"x12"	2	Subsidence	
134	Xerox	8.5"x11"	27	Subsidence	
135	Xerox	8.5"x12"	4	Subsidence	
136	Xerox	8.5"x11"	21	Subsidence	
137	Fiche		17	Hydraulic	CULVERT
138	Vellum	24"x36"	1	Hydraulic	CHANGE ORDER 3, ENCLOSURE
139	Vellum	24"x36"	20	Hydraulic	BRIDGE
140	Xerox	18"x24"	23 (26)	Hydraulic	BRIDGE
141	Gr/Wh, Comp. Pr	8.5"x14"	VARIOUS	Hydraulic	
142					
143					
144	Original	8.5"x11"	20	Hydraulic	
145	Original	8.5"x11"	13	Hydrology	
146	Original	8.5"x11"	31	Hydrology	
147	Original	8.5"x11"	LOTS	Hydrology	
148					
149					
150					
151					
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SECTION 7: Cross-Referencing and Labeling Information

SECTION 7: CROSS-SECTION LABELING AND LABELING INFORMATION

7.3. Key to Cross-Section Labeling

Key to Cross-Section Labeling

Community Name: **County:** **State:**	City of Phoenix, City of Scottsdale, City of Tempe, and Town of Paradise Valley Maricopa Arizona
Prepared by:	Simons, Li & Associates, Inc.
Stream Name:	Indian Bend Wash Salt River Confluence to 40th Street

HEC-2 Cross-Section	Distance upstream of confluence (ft)	Letter Designation FIS	Letter Designation Revised
0.437	2,308	---	---
0.475	2,508	---	---
0.491	2,788	---	---
0.568	3,198	---	---
0.663	3,698	---	---
0.758	4,198	---	---
0.776	4,297	---	---
0.791	4,375	---	---
0.852	4,695	---	---
0.947	5,195	---	---
1.040	5,695	---	---
1.136	6,195	---	---
1.231	6,695	---	---
1.326	7,195	---	---
1.420	7,695	---	---
1.515	8,192	---	---
1.554	8,382	---	---
1.570	8,473	---	---
1.582	8,522	---	---
1.610	8,732	---	---
1.705	9,232	---	---
1.770	9,582	---	---
1.787	9,644	---	---
1.794	9,699	---	---
1.799	9,724	---	---
1.827	9,868	---	---
1.894	10,218	---	---
1.990	10,718	---	---
2.047	11,026	A	A
2.080	11,200	---	---
2.178	11,700	---	---
2.273	12,200	B	B
2.367	12,700	C	C
2.462	13,200	---	---
2.557	13,700	D	D
2.610	13,983	---	---
2.620	14,033	---	---
2.629	14,083	---	---

Community Name: County: State:	City of Phoenix, City of Scottsdale, City of Tempe, and Town of Paradise Valley Maricopa Arizona		
Prepared by:	Simons, Li & Associates, Inc.		
Stream Name:	Indian Bend Wash Salt River Confluence to 40th Street		
HEC-2 Cross-Section	**Distance upstream of confluence (ft)**	Letter Designation FIS	Letter Designation Revised
2.652	14,203	---	---
2.653	14,210	---	---
2.658	14,219	---	---
2.662	14,228	---	---
2.663	14,237	---	---
2.700	14,437	E	E
2.746	14,627	---	---
2.770	14,777	---	---
2.775	14,802	---	---
2.780	14,827	---	---
2.790	14,877	---	---
2.810	14,960	---	---
2.820	15,027	---	---
2.827	15,062	---	---
2.841	15,127	---	---
2.936	15,627	F	F
3.030	16,127	---	---
3.125	16,627	G	G
3.220	17,127	---	---
3.270	17,392	---	---
3.280	17,447	---	---
3.409	17,937	H	H
3.488	18,357	---	---
3.490	18,387	---	---
3.504	18,437	---	---
3.510	18,472	---	---
3.548	18,672	I	I
3.590	18,770	---	---
3.600	18,912	---	---
3.660	19,217	---	---
3.710	19,520	---	---
3.730	19,602	J	J
3.760	19,776	---	---
3.780	19,861	---	---
3.811	20,021	---	---
3.883	20,360	---	---
3.977	20,860	K	K
4.072	21,360	---	---

Community Name: County: State:	City of Phoenix, City of Scottsdale, City of Tempe, and Town of Paradise Valley Maricopa Arizona		
Prepared by:	Simons, Li & Associates, Inc.		
Stream Name:	Indian Bend Wash Salt River Confluence to 40th Street		
HEC-2 Cross-Section	Distance upstream of confluence (ft)	Letter Designation FIS	Letter Designation Revised
4.167	21,860	---	---
4.220	22,110	L	L
4.250	22,310	---	---
4.290	22,525	---	---
4.356	22,810	---	---
4.451	23,310	M	M
4.546	23,693	---	---
4.640	24,126	N	N
4.735	24,616	---	---
4.830	25,116	---	---
4.850	25,216	---	---
4.855	25,241	---	---
4.870	25,325	---	---
4.873	25,340	---	---
4.892	25,440	O	O
4.924	25,613	---	---
4.952	25,763	---	---
4.990	26,262	P	P
5.110	26,754	---	---
5.205	27,183	---	---
5.300	27,758	---	---
5.357	28,068	---	---
5.360	28,168	---	---
5.372	28,248	---	---
5.385	28,318	---	---
5.492	28,758	---	---
5.587	29,258	Q	Q
5.682	29,758	---	---
5.777	30,258	R	R
5.867	30,723	---	---
5.871	30,743	---	---
5.886	30,821	---	---
5.900	30,901	---	---
5.925	31,031	---	---
5.966	31,391	S	S
6.060	31,891	---	---
6.155	32,391	T	T
6.250	32,891	---	---

Community Name: **County:** **State:**	City of Phoenix, City of Scottsdale, City of Tempe, and Town of Paradise Valley Maricopa Arizona
Prepared by:	Simons, Li & Associates, Inc.
Stream Name:	Indian Bend Wash Salt River Confluence to 40th Street

HEC-2 Cross-Section	Distance upstream of confluence (ft)	Letter Designation FIS	Letter Designation Revised
6.345	33,391	---	---
6.390	33,621	U	U
6.400	33,659	---	---
6.440	33,889	---	---
6.530	34,389	---	---
6.630	34,889	V	V
6.723	35,389	---	---
6.820	35,889	---	---
6.856	36,089	---	---
6.879	36,209	---	---
6.880	36,241	---	---
6.893	36,319	---	---
6.910	36,364	---	---
6.960	36,614	---	---
7.008	36,864	---	---
7.102	37,364	---	---
7.197	37,864	---	---
7.290	38,364	---	---
7.390	38,864	---	---
7.481	39,364	---	---
7.576	39,864	---	---
7.670	40,364	---	---
7.765	40,864	---	---
7.837	41,244	---	---
7.883	41,484	---	---
7.955	41,884	---	---
7.979	42,004	---	---
7.988	42,054	---	---
7.992	42,084	---	---
8.144	42,666	W	W
8.239	43,166	---	---
8.333	43,666	---	---
8.428	44,166	X	X
8.523	44,666	---	---
8.656	45,179	---	---
8.752	45,659	---	---
8.996	46,947	Y	Y
9.022	47,121	---	---

Community Name: County: State:	City of Phoenix, City of Scottsdale, City of Tempe, and Town of Paradise Valley Maricopa Arizona		
Prepared by:	Simons, Li & Associates, Inc.		
Stream Name:	Indian Bend Wash Salt River Confluence to 40th Street		
HEC-2 Cross-Section	Distance upstream of confluence (ft)	Letter Designation FIS	Letter Designation Revised
9.125	47,650	---	---
9.126	47,660	---	---
9.128	47,683	---	---
9.150	47,783	---	---
9.243	48,282	Z	Z
9.283	48,598	AA	AA
9.375	48,998	AB	AB
9.470	49,443	---	---
9.564	49,927	AC	AC
9.578	50,427	---	---
9.659	50,804	AD	AD
9.754	51,280	---	---
9.849	51,707	AE	AE
9.943	52,196	---	---
10.040	52,631	AF	AF
10.130	53,131	---	---
10.230	53,631	AG	AG
10.320	54,131	---	---
10.380	54,443	AH	AH
10.400	54,533	AI	AI
10.410	54,591	AJ	AJ
10.510	55,133	AK	AK
10.610	55,588	AL	AL
10.700	56,058	---	---
10.800	56,538	AM	AM
10.890	57,038	---	---
10.990	57,518	AN	AN
11.080	57,994	AO	AO
11.150	58,396	AP	AP
11.170	58,494	AQ	AQ
11.270	58,987	AR	AR
11.360	59,477	---	---
11.460	59,937	AS	AS
11.550	60,436	---	---
11.650	60,916	AT	AT
11.740	61,418	---	---
11.840	61,881	AU	AU
11.930	62,345	AV	AV

Community Name: County: State:	City of Phoenix, City of Scottsdale, City of Tempe, and Town of Paradise Valley Maricopa Arizona		
Prepared by:	Simons, Li & Associates, Inc.		
Stream Name:	Indian Bend Wash Salt River Confluence to 40th Street		
HEC-2 Cross-Section	Distance upstream of confluence (ft)	Letter Designation FIS	Letter Designation Revised
12.030	62,786	---	---
12.120	63,220	AW	AW
12.220	63,752	---	---
12.310	64,249	---	AX
12.410	64,758	---	---
12.500	65,251	---	AY
12.540	65,473	---	---
12.560	65,547	---	---
12.600	65,748	---	AZ
12.690	66,248	---	---
12.780	66,753	---	---
12.880	67,165		BA
12.970	67,654	---	---
13.070	68,089	---	---
13.160	68,537	---	---
13.250	68,987	---	BB
13.380	69,585	---	---
13.400	69,698	---	---
13.450	69,950	---	BC
13.540	70,427	---	---
13.640	70,867	---	BD
13.730	71,275	---	---
13.830	71,734	---	---
13.880	71,971	---	---
13.920	72,204	---	---
14.020	72,679	---	---
14.060	72,956	---	---
14.110	73,456	---	---
14.210	73,929	---	---
14.300	74,394	---	---
14.340	74,520	---	BE
14.390	74,803	---	---
14.440	74,987	---	---
14.470	75,079	---	---
14.490	75,227	---	---
14.580	75,710	AY	BF
14.660	76,079		

Community Name: County: State:	City of Phoenix, City of Scottsdale, City of Tempe, and Town of Paradise Valley Maricopa Arizona		
Prepared by:	Simons, Li & Associates, Inc.		
Stream Name:	Indian Bend Wash Salt River Confluence to 40th Street		
HEC-2 Cross-Section	Distance upstream of confluence (ft)	Letter Designation FIS	Letter Designation Revised
12.030	62,786	---	---
12.120	63,220	AW	AW
12.220	63,752	---	---
12.310	64,249	---	AX
12.410	64,758	---	---
12.500	65,251	---	AY
12.540	65,473	---	---
12.560	65,547	---	---
12.600	65,748	---	AZ
12.690	66,248	---	---
12.780	66,753	---	---
12.880	67,165		BA
12.970	67,654	---	---
13.070	68,089	---	---
13.160	68,537	---	---
13.250	68,987	---	BB
13.380	69,585	---	---
13.400	69,698	---	---
13.450	69,950	---	BC
13.540	70,427	---	---
13.640	70,867	---	BD
13.730	71,275	---	---
13.830	71,734	---	---
13.880	71,971	---	---
13.920	72,204	---	---
14.020	72,679	---	---
14.060	72,956	---	---
14.110	73,456	---	---
14.210	73,929	---	---
14.300	74,394	---	---
14.340	74,520	---	BE
14.390	74,803	---	---
14.440	74,987	---	---
14.470	75,079	---	---
14.490	75,227	---	---
14.580	75,710	AY	BF
14.660	76,079		