HEC-RAS Model Documentation

BROWN AND CALDWELL

HEC-RAS MODEL SCHEMATIC

NORTH

NOT TO SCALE

24+30 PROPOSED INFLOW CULVERT LOCATION

UPSTREAM GRADIENT EL 15.95 NGVD

EXISTING STRUCTURE G337A

INFLOW CANAL REACH

℄ EXIST. CELL 3 PERIMETER LEVEE

℄ INFLOW CANAL

INFLOW CANAL REACH

INFLOW CANAL

SPREADER CANAL

NORTH NEW RIVER CANAL

U.S. 27

EXIST. LEVEE ROAD (102'±WIDE)

CELL 4

CELL 4 EXT REACH

℄ EXIST. CELL 3 PERIMETER LEVEE

JUNCTION

℄ COLLECTOR CANAL

MIAMI

BCON. COLLECTOR CANAL

COLLECTOR CANAL EXT REACH

PROPOSED OUTLET CONTROL STRUCTURE

BCON. DISCHARGE CANAL

℄ DISCHARGE CANAL

DISCHARGE CANAL REACH

200' FPL ROW

EXISTING STRUCTURES G332 & G334

PROPOSED TIE-IN STRUCTURE

DISCHARGE BOUNDARY LOCATION EL 9.54 NGVD

G-335 PUMPING STATION

DATE	REV.#	REVISION DESCRIPTION

BROWN AND CALDWELL

ENGINEER: JD
DRAWN: KG
CHECKED: JS
DATE: MARCH 2005
SCALE: AS SHOWN

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ENGINEERING & CONSTRUCTION DEPARTMENT
PHONE: 561-686-8800
3301 GUN CLUB ROAD
WEST PALM BEACH, FLORIDA 33406

STORMWATER TREATMENT AREA 2
CELL 4 EXPANSION

HEC-RAS MODEL SCHEMATIC

CONTRACT NO.
- - - - - -
DRAWING NO.
- - - - - -
SHEET
X OF X

J:\Land Projects R2\97030.02\dwg\C3.dwg 3/18/2005 10:19:07 AM EST

HEC-RAS MODEL INPUT

HEC-RAS Version 3.1.2 April 2004
U.S. Army Corp of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

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

PROJECT DATA
Project Title: cell 4 DC-rev-10-B
Project File : XSG337B.prj
Run Date and Time: 5/2/2005 8:36:07 AM

Project in English units

Note:
Please see page 25 for an explanation of the Manning's n values used in the body of Cell 4 (Cell4 Ext)

PLAN DATA

Plan Title: G-337A rev/orifice
Plan File :
p:\GEN\SFWMD\126242_STA2\WorkOrder4_BODR\4022_H&H_Modeling\HECRAS\XSG337B.p11

Geometry Title: Cross-2x
Geometry File :
p:\GEN\SFWMD\126242_STA2\WorkOrder4_BODR\4022_H&H_Modeling\HECRAS\XSG337B.g04

Flow Title : Cell-4FlowData
Flow File :
p:\GEN\SFWMD\126242_STA2\WorkOrder4_BODR\4022_H&H_Modeling\HECRAS\XSG337B.f01

Plan Summary Information:

Number of:	Cross Sections	= 46	Multiple Openings	=	0
	Culverts	= 1	Inline Structures	=	2
	Bridges	= 0	Lateral Structures	=	6

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

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

FLOW DATA

Flow Title: Cell-4FlowData
Flow File :
p:\GEN\SFWMD\126242_STA2\WorkOrder4_BODR\4022_H&H_Modeling\HECRAS\XSG337B.f01

Flow Data (cfs)

River	Reach	RS	PF 1	PF 2
Cell 4	Collect Canal Ex	13760	1	1
Cell 4	Cell 4 Ext	10172.5	1	1
Cell 4	Discharge Canal	8740	1	1
Cell 4	Inflow Canal	22560	200	1011

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
Cell 4	Inflow Canal	PF 1	Known WS = 10.50417	
Cell 4	Inflow Canal	PF 2	Known WS = 13.21515	
Cell 4	Discharge Canal	PF 1	Known WS = 9.54	
Cell 4	Discharge Canal	PF 2	Known WS = 9.54	

Inline Structure Gate Openings
River = Cell 4
Reach = Inflow Canal RS = 17300
Gate = Gate #1

# Open	Open Ht	# Open	Open Ht
5	1	5	1

River = Cell 4
Reach = Inflow Canal RS = 17300
Gate = Gate #2

# Open	Open Ht	# Open	Open Ht
5	1	5	1

River = Cell 4
Reach = Inflow Canal RS = 17300
Gate = Gate #3

# Open	Open Ht	# Open	Open Ht
5	1	5	1

River = Cell 4
Reach = Inflow Canal RS = 17300
Gate = Gate #4

# Open	Open Ht	# Open	Open Ht
5	1	5	1

GEOMETRY DATA

Geometry Title: Cross-2x
Geometry File :
p:\GEN\SFWMD\126242_STA2\WorkOrder4_BODR\4022_H&H_Modeling\HECRAS\XSG337B.g04

Reach Connection Table

River	Reach	Upstream Boundary	Downstream Boundary
Cell 4	Collect Canal Ex		J2
Cell 4	Cell 4 Ext		J2
Cell 4	Inflow Canal		
Cell 4	Discharge Canal	J2	

JUNCTION INFORMATION

Name: J2
Description: cell joints collector canal
Momentum computation Method
Add Friction
Add Weight

Length across Junction

River	Reach	Tributary River	Tributary Reach	Length	Angle
Cell 4	Collect Canal Ex to	Cell 4	Discharge Canal	4720	0
Cell 4	Cell 4 Ext to	Cell 4	Discharge Canal	200	90

CROSS SECTION

RIVER: Cell 4
REACH: Collect Canal Ex RS: 13760

INPUT
Description: u/s most section
Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.5	68	8.5	73	6.5	90	-2.5	146	-2.5
161	6.5	168	8.5	180	8.5	215	20	229	20

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	68	.044	168	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
68	168	300	300	300	.1	.3

CROSS SECTION

RIVER: Cell 4
REACH: Collect Canal Ex RS: 13460

INPUT
Description: u/s most section
Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	8.5	68	8.5	73	6.5	90	-2.5	146	-2.5
161	6.5	168	8.5	180	8.5	215	20	229	20

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	68	.044	168	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
68	168	0	0	0	.1	.3

CROSS SECTION

Note:
Please see page 25 for an explanation of the Manning's n values used in the body of Cell4 (Cell4 Ext)

```
RIVER: Cell 4
REACH: Cell 4 Ext         RS: 10172.5

INPUT
Description: u/s most section
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    81.5       2 11801.5       2   11869      20
   11909      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0       0      14       0   11869       0

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14   11869             28.5    28.5    28.5              .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 10144

INPUT
Description: In spreader canal
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    81.5       2 11801.5       2   11869      20
   11909      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0       0      14       0   11869       0

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14   11869             55.5    55.5    55.5              .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 10088.5

INPUT
Description: Im spreader canal
Station Elevation Data    num=       6
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    81.5       2 11801.5       2   11869      20
   11909      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0       0      14       0   11869       0

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14   11869             28.5    28.5    28.5              .1       .3

CROSS SECTION


RIVER: Cell 4
```

Note:
Please see page 25 for an explanation of the Manning's n values used in the body of Cell4 (Cell4 Ext)


```
REACH: Cell 4 Ext         RS: 10060

INPUT
Description: CE 100+60
Station Elevation Data    num=      12
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  2318.5       8  3648.5       8
  5048.5     8.5  5808.5     8.5 10668.5       9 11708.5     8.5 11753.5      10
 11783.5      20 11823.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0       0      14       0 11783.5       0

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14 11783.5               60      60      60              .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 10000

INPUT
Description: CE 100+00
Station Elevation Data    num=      12
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  2318.5       8  3648.5       8
  5048.5     8.5  5808.5     8.5 10668.5       9 11708.5     8.5 11753.5      10
 11783.5      20 11823.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044 11783.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14 11783.5             1000    1000    1000              .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 9000

INPUT
Description: CE 90+00
Station Elevation Data    num=      20
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  4148.5     8.5  5848.5     8.5
  6388.5       9  6598.5       9  7528.5     8.5  8968.5       8  9418.5       8
  9878.5     8.5 10348.5       9 10848.5       9 10888.5       9 10928.5       9
 10968.5       9 10998.5     8.5 11043.5      10 11073.5      20 11113.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044 11073.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14 11073.5             1140    1140    1140              .1       .3

CROSS SECTION
```

Note:
Please see page 25 for an explanation of the Manning's n values used in the body of Cell4 (Cell4 Ext)

```
RIVER: Cell 4
REACH: Cell 4 Ext         RS: 7860

INPUT
Description:
Station Elevation Data    num=      23
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5   138.5       9   388.5       9
   708.5       8   798.5     8.5   938.5       9  1288.5       8  1478.5     8.5
  1588.5       9  1898.5     9.5  2358.5     9.5  4188.5      10  5168.5     9.5
  6318.5     9.5  7348.5      10  7918.5     9.5  8898.5     9.5 10118.5     8.5
 10163.5      10 10193.5      20 10233.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044 10193.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14 10193.5             1360    1360    1360             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 6500

INPUT
Description: CE 65+00
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  1098.5       9  3168.5       9
  9078.5       9  9188.5     8.5  9233.5      10  9263.5      20  9303.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044  9263.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14  9263.5             1380    1380    1380             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 5120

INPUT
Description: CE 51+20
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  1918.5       9  5948.5     9.5
  7688.5     8.5  8168.5     8.5  8368.5     8.5  8431.5      10  8443.5      18
  8483.5      18

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044  8443.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14  8443.5             1320    1320    1320             .1       .3

CROSS SECTION
```

Note:
Please see page 25 for an explanation of the Manning's n values used in the body of Cell4 (Cell4 Ext)

```
RIVER: Cell 4
REACH: Cell 4 Ext         RS: 3800

INPUT
Description: CE 38+00
Station Elevation Data    num=      14
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  1278.5     8.5  1928.5       8
  3558.5       8  4388.5     8.5  4888.5       9  5828.5       9  7248.5       9
  7408.5     8.5  7453.5      10  7483.5      20  7523.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044  7483.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14  7483.5             2380    2380    2380             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 2620

INPUT
Description: CE 26+20
Station Elevation Data    num=      14
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5   938.5       9  1398.5     8.5
  4278.5       9  4728.5       8  5068.5       8  5208.5     8.5  6498.5     9.5
  6548.5     8.5  6593.5      10  6623.5      18  6663.5      18

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044  6623.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14  6623.5             1420    1420    1420             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Cell 4 Ext         RS: 1200

INPUT
Description: CE 12+00
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  1338.5       9  1928.5     8.5
  2598.5       8  2738.5       8  5148.5     8.5  5548.5       9  5588.5     8.5
  5633.5      10  5663.5      20  5703.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044  5663.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14  5663.5             1200    1200    1200             .1       .3

CROSS SECTION
```

Note:
Please see page 25 for an explanation of the Manning's n values used in the body of Cell4 (Cell4 Ext)

```
RIVER: Cell 4
REACH: Cell 4 Ext         RS: 0

INPUT
Description: CE 0+00
Station Elevation Data    num=       8
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20      14      20    48.5     8.5  2938.5     8.5  4768.5     8.5
  4813.5      10  4843.5      20  4883.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      14    .044  4843.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            14  4843.5                 0       0       0              .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 22560

INPUT
Description: u/s most section along Cell 3
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    18.5      12    18.5    37.5      10    57.5      10    93.5      -2
     113      -2   149.5      10   169.5      10     195      19     207      19

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    57.5    .044   149.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          57.5   149.5              1870    1870    1870              .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 20690

INPUT
Description: u/s most section along Cell 3
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    18.5      12    18.5    37.5      10    57.5      10    93.5      -2
     113      -2   149.5      10   169.5      10     195      19     207      19

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    57.5    .044   149.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          57.5   149.5              2310    2310    2310              .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 18380
```

```
INPUT
Description: 3rd section along Cell 3
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    18.5      12    18.5    37.5      10    57.5      10    93.5      -2
   113.5      -2   149.5      10   169.5      10     195      19     207      19

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    57.5    .044   149.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          57.5   149.5             2990    2990    2990             .1       .3

INLINE STRUCTURE


RIVER: Cell 4
REACH: Inflow Canal       RS: 17300

INPUT
Description: G-337A
Distance from Upstream XS =    1080
Deck/Roadway Width        =      20
Weir Coefficient          =     2.6
 Weir Embankment Coordinates    num =        2
     Sta    Elev     Sta    Elev
      12    18.5     195      19

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Weir crest shape                            = Broad Crested

INLINE STRUCTURE GATE    Gate #1
      Height            =       5
      Width             =    6.67
      Invert            =     2.5
      Gate Coefficient  =     .75
      Gate Type         = Sluice
      Trunion Exponent  =       0
      Opening Exponent  =       1
      Head Exponent     =      .5
      Weir Coefficient  =     2.6
      Weir crest shape  = Broad Crested
Number of Gate Openings =       1
     Sta
      90

INLINE STRUCTURE GATE    Gate #2
      Height            =       5
      Width             =    6.67
      Invert            =     2.5
      Gate Coefficient  =     .75
      Gate Type         = Sluice
      Trunion Exponent  =       0
      Opening Exponent  =       1
      Head Exponent     =      .5
      Weir Coefficient  =     2.6
      Weir crest shape  = Broad Crested
Number of Gate Openings =       1
```

```
     Sta
     100

INLINE STRUCTURE GATE    Gate #3
      Height            =       5
      Width             =    6.67
      Invert            =     2.5
      Gate Coefficient  =     .75
      Gate Type         = Sluice
      Trunion Exponent  =       0
      Opening Exponent  =       1
      Head Exponent     =      .5
      Weir Coefficient  =     2.6
      Weir crest shape  = Broad Crested
Number of Gate Openings =       1
     Sta
     110

INLINE STRUCTURE GATE    Gate #4
      Height            =       5
      Width             =    6.67
      Invert            =     2.5
      Gate Coefficient  =     .75
      Gate Type         = Sluice
      Trunion Exponent  =       0
      Opening Exponent  =       1
      Head Exponent     =      .5
      Weir Coefficient  =     2.6
      Weir crest shape  = Broad Crested
Number of Gate Openings =       1
     Sta
     120


CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 17210

INPUT
Description: 3rd section along Cell 3
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    18.5      12    18.5    37.5      10    57.5      10    93.5      -2
   113.5      -2   149.5      10   169.5      10     195      19     207      19

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    57.5    .044   149.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          57.5   149.5              300     300     300             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 16910

INPUT
Description: 2nd section along Cell 3
Station Elevation Data    num=      10
```

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.5	12	18.5	37.5	10	57.5	10	92	-2
113	-2	149.5	10	169.5	10	195	19	207	19

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	57.5	.044	149.5	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
57.5	149.5	710	720	720	.1	.3

CROSS SECTION

RIVER: Cell 4
REACH: Inflow Canal RS: 16190

INPUT
Description: 2nd section along Cell 3
Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.5	12	18.5	37.5	10	57.5	10	92	-2
113	-2	149.5	10	169.5	10	195	19	207	19

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	57.5	.044	149.5	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
57.5	149.5	2090	2090	2090	.1	.3

CROSS SECTION

RIVER: Cell 4
REACH: Inflow Canal RS: 14100

INPUT
Description: 1st section along Cell 3
Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.5	12	18.5	37.5	10	57.5	10	93.5	-2
113	-2	149.5	10	169.5	10	195	19	207	19

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	57.5	.044	149.5	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
57.5	149.5	150	150	150	.1	.3

CROSS SECTION

RIVER: Cell 4
REACH: Inflow Canal RS: 13950

INPUT
Description: 7th section from d/s
Station Elevation Data num= 10

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.8	14	19.8	48	8.5	68	8.5	110.5	-5.7
127.5	-5.7	170	8.5	190	8.5	224.5	20	238.5	20

```
Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      68    .044     170      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            68     170             1950    1950    1950             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 12000

INPUT
Description: 7th section from d/s
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    19.8      14    19.8      48     8.5      68     8.5   110.5    -5.7
   127.5    -5.7     170     8.5     190     8.5   224.5      20   238.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      68    .044     170      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            68     170              160     160     160             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 11840

INPUT
Description: 7th section from d/s
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5             1880    1880    1880             .1       .3

LATERAL STRUCTURE


RIVER: Cell 4
REACH: Inflow Canal       RS: 11800

INPUT
Description: u/s most section
Lateral structure position     = Left overbank
Distance from Upstream XS =       0
Deck/Roadway Width        =      14
Weir Coefficient          =     2.6
Weir Flow Reference       = Water Surface
 Weir Embankment Coordinates    num =        2
```

```
     Sta    Elev     Sta    Elev
   11840      20    9960      20

Weir crest shape                           = Broad Crested


Number of Culverts =  1

Culvert Name     Shape      Rise    Span
Culvert #1      Circular     5.5
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
                      181.5     .013     .013        0                   .5
      1
Upstream   Elevation =  1
           Centerline Station =  10850
Downstream Elevation =  1
           Centerline Station =  10850

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 9960

INPUT
Description: 6th section from d/s
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5             1880    1880    1880             .1       .3

LATERAL STRUCTURE


RIVER: Cell 4
REACH: Inflow Canal       RS: 9050

INPUT
Description: 2nd u/s most section
Lateral structure position     = Left overbank
Distance from Upstream XS =       0
Deck/Roadway Width        =      14
Weir Coefficient          =     2.6
Weir Flow Reference       = Water Surface
 Weir Embankment Coordinates    num =        2
     Sta    Elev     Sta    Elev
    9960      20    8080      20

Weir crest shape                           = Broad Crested
```

```
Number of Culverts =  1

Culvert Name     Shape      Rise    Span
Culvert #1      Circular     5.5
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
                     181.5     .013     .013        0                  .5
      1
Upstream   Elevation =  1
           Centerline Station =  9050
Downstream Elevation =  1
           Centerline Station =  9050

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 8080

INPUT
Description: 5th section from d/s
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5             1880    1880    1880             .1       .3

LATERAL STRUCTURE


RIVER: Cell 4
REACH: Inflow Canal       RS: 8000

INPUT
Description: 3rd u/s most section
Lateral structure position     = Left overbank
Distance from Upstream XS =       0
Deck/Roadway Width        =      14
Weir Coefficient          =     2.6
Weir Flow Reference       = Water Surface
 Weir Embankment Coordinates    num =        2
     Sta    Elev     Sta    Elev
    8080      20    6200      20

Weir crest shape                            = Broad Crested


Number of Culverts =  1

Culvert Name     Shape      Rise    Span
Culvert #1      Circular     5.5
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
```

```
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
                     181.5     .013     .013        0                  .5
      1
Upstream   Elevation =  1
           Centerline Station =  7150
Downstream Elevation =  1
           Centerline Station =  7150

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 6200

INPUT
Description: 4th section from d/s
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5             1880    1880    1880             .1       .3

LATERAL STRUCTURE


RIVER: Cell 4
REACH: Inflow Canal       RS: 6190

INPUT
Description: 4th u/s most section
Lateral structure position     = Left overbank
Distance from Upstream XS =      10
Deck/Roadway Width        =      14
Weir Coefficient          =     2.6
Weir Flow Reference       = Water Surface
 Weir Embankment Coordinates    num =        2
     Sta    Elev     Sta    Elev
    6200      20    4320      20

Weir crest shape                           = Broad Crested


Number of Culverts =  1

Culvert Name     Shape      Rise    Span
Culvert #1      Circular     5.5
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
                     181.5     .013     .013        0                  .5
      1
Upstream   Elevation =  1
```

```
           Centerline Station =  5250
Downstream Elevation =  1
           Centerline Station =  5250

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 4320

INPUT
Description: 3rd section from d/s
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5             1880    1880    1880             .1       .3

LATERAL STRUCTURE


RIVER: Cell 4
REACH: Inflow Canal       RS: 4310

INPUT
Description: 5th u/s most section
Lateral structure position     = Left overbank
Distance from Upstream XS =       0
Deck/Roadway Width        =      14
Weir Coefficient          =     2.6
Weir Flow Reference       = Water Surface
 Weir Embankment Coordinates    num =        2
     Sta    Elev     Sta    Elev
    4320      20    2440      20

Weir crest shape                            = Broad Crested


Number of Culverts =  1

Culvert Name     Shape      Rise    Span
Culvert #1      Circular     5.5
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
                     181.5     .013     .013        0                   .5
      1
Upstream   Elevation =  1
           Centerline Station =  3350
Downstream Elevation =  1
           Centerline Station =  3350

CROSS SECTION
```

```
RIVER: Cell 4
REACH: Inflow Canal       RS: 2440

INPUT
Description: 2nd section from d/s
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5             2440    2440    2440             .1       .3

LATERAL STRUCTURE


RIVER: Cell 4
REACH: Inflow Canal       RS: 2430

INPUT
Description: 6th u/s most section
Lateral structure position     = Left overbank
Distance from Upstream XS =      10
Deck/Roadway Width        =      14
Weir Coefficient          =     2.6
Weir Flow Reference       = Water Surface
 Weir Embankment Coordinates    num =        2
     Sta    Elev     Sta    Elev
    2440      20       0      20

Weir crest shape                           = Broad Crested


Number of Culverts =  1

Culvert Name     Shape      Rise    Span
Culvert #1      Circular     5.5
FHWA Chart # 1 - Concrete Pipe Culvert
FHWA Scale # 1 - Square edge entrance with headwall
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
                     181.5     .013     .013        0                   .5
      1
Upstream   Elevation =  1
           Centerline Station =  1450
Downstream Elevation =  1
           Centerline Station =  1450

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: 0

INPUT
Description: D/s Most section
```

```
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5               10      10      10             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Inflow Canal       RS: -10

INPUT
Description: D/s Most section
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0      20    34.5     8.5    54.5     8.5    60.5     6.5    84.5    -5.5
   111.5    -5.5   135.5     6.5   141.5     8.5   161.5     8.5     196      20
     210      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    54.5    .044   141.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          54.5   141.5                0       0       0             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 8740

INPUT
Description: u/s of culverts
Station Elevation Data    num=      11
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   -34.3    18.3       0     8.5      68     8.5      73     6.5      90    -2.5
     146    -2.5     161     6.5     168     8.5     180     8.5     215      20
     229      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
   -34.3      .2      68    .044     168      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             68     168               80      80      80             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 8660

INPUT
Description: u/s of weir
```

```
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
    -6.1      20   24.95    9.65    28.4     8.5      68     8.5      73     6.5
      90    -2.5   188.5    -2.5   203.5     6.5   210.5     8.5   222.5     8.5
  225.95    9.65   257.5      20   271.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
    -6.1      .2      68    .044   210.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            68   210.5            151.5   151.5   151.5             .1       .3

INLINE STRUCTURE


RIVER: Cell 4
REACH: Discharge Canal    RS: 8610

INPUT
Description:
Distance from Upstream XS =      50
Deck/Roadway Width        =       1
Weir Coefficient          =    3.33
 Weir Embankment Coordinates    num =        2
     Sta    Elev     Sta    Elev
   24.95    9.65  225.95    9.65

Upstream Embankment side slope              =       0 horiz. to 1.0 vertical
Downstream Embankment side slope            =       0 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =
Weir crest shape                            = Broad Crested


CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 8590

INPUT
Description: u/s of culverts
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
    -6.1      20   24.95    9.65    28.4     8.5      68     8.5      73     6.5
      90    -2.5   188.5    -2.5   203.5     6.5   210.5     8.5   222.5     8.5
  225.95    9.65   257.5      20   271.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
    -6.1      .2      68    .044   210.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            68   210.5            151.5   151.5   151.5             .1       .3

CULVERT


RIVER: Cell 4
REACH: Discharge Canal    RS: 8561.5

INPUT
```

```
Description: RCB culverts
Distance from Upstream XS =    28.5
Deck/Roadway Width        =      14
Weir Coefficient          =     2.6
Upstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   -60.6      20      -3   257.5      20      -3

Upstream Bridge Cross Section Data
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
    -6.1      20   24.95    9.65    28.4     8.5      68     8.5      73     6.5
      90    -2.5   188.5    -2.5   203.5     6.5   210.5     8.5   222.5     8.5
  225.95    9.65   257.5      20   271.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
    -6.1      .2      68    .044   210.5      .2

Bank Sta: Left   Right    Coeff Contr.   Expan.
            68   210.5             .1       .3

Downstream  Deck/Roadway Coordinates
    num=       2
     Sta Hi Cord Lo Cord     Sta Hi Cord Lo Cord
   -60.6      20      -3   257.5      20      -3

Downstream Bridge Cross Section Data
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     8.5      68     8.5      73     6.5      90   -6.25   188.5   -6.25
   203.5     6.5   210.5     8.5   222.5     8.5   257.5      20   271.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      68    .044   210.5      .2

Bank Sta: Left   Right    Coeff Contr.   Expan.
            68   210.5             .1       .3

Upstream Embankment side slope              =       3 horiz. to 1.0 vertical
Downstream Embankment side slope            =       3 horiz. to 1.0 vertical
Maximum allowable submergence for weir flow =     .95
Elevation at which weir flow begins         =      20
Energy head used in spillway design         =
Spillway height used in design              =
Weir crest shape                            = Broad Crested

Number of Culverts =  4

Culvert Name     Shape      Rise    Span
Culvert #1           Box       8       8
FHWA Chart # 58- Rectangular concrete
FHWA Scale # 1 - Side tapered; Less favorable edges
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
               28.5     102     .013     .013        0                   .5
      1
Upstream   Elevation = -2.5
           Centerline Station =  110
Downstream Elevation = -2.5
```

```
           Centerline Station =  110

Culvert Name     Shape      Rise    Span
Culvert #2           Box       8       8
FHWA Chart # 58- Rectangular concrete
FHWA Scale # 1 - Side tapered; Less favorable edges
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
               28.5     102     .013     .013        0                   .5
      1
Upstream   Elevation = -2.5
           Centerline Station =  130
Downstream Elevation = -2.5
           Centerline Station =  130

Culvert Name     Shape      Rise    Span
Culvert #3           Box       8       8
FHWA Chart # 58- Rectangular concrete
FHWA Scale # 1 - Side tapered; Less favorable edges
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
               28.5     102     .013     .013        0                   .5
      1
Upstream   Elevation = -2.5
           Centerline Station =  150
Downstream Elevation = -2.5
           Centerline Station =  150

Culvert Name     Shape      Rise    Span
Culvert #4           Box       8       8
FHWA Chart # 58- Rectangular concrete
FHWA Scale # 1 - Side tapered; Less favorable edges
Solution Criteria = Highest U.S. EG
Culvert Upstrm Dist  Length    Top n  Bottom n  Depth Blocked  Entrance Loss Coef
Exit Loss Coef
               28.5     102     .013     .013        0                   .5
      1
Upstream   Elevation = -2.5
           Centerline Station =  170
Downstream Elevation = -2.5
           Centerline Station =  170

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 8438.5

INPUT
Description: u/s of culverts
Station Elevation Data    num=      10
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     8.5      68     8.5      73     6.5      90   -6.25   188.5   -6.25
   203.5     6.5   210.5     8.5   222.5     8.5   257.5      20   271.5      20

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      68    .044   210.5      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
            68   210.5            238.5   238.5   238.5             .1       .3
```

CROSS SECTION

RIVER: Cell 4
REACH: Discharge Canal RS: 8200

INPUT
Description: Furthest u/s
Station Elevation Data num= 17

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.4	4.2	19.2	21.7	18.9	35.6	15.7	46.9	12.3
64.2	9.5	68.9	7.4	74.8	4	81.8	1.4	88.4	-1.5
107.5	-6.25	126.5	-6.25	152	8.9	158	10.9	170	10.9
204.5	22.4	218.5	22.4						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	46.9	.044	158	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
46.9	158	900	900	900	.1	.3

CROSS SECTION

RIVER: Cell 4
REACH: Discharge Canal RS: 7300

INPUT
Description: 9 th Cross Section
Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	20.2	14.5	19.9	49.1	10.1	57.8	9.9	63.7	7.2
79.3	1	95.1	-6.25	114.1	-6.25	139.6	8.7	145.6	10.7
157.6	10.7	192.1	22.2	206.1	22.2				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	49.1	.044	145.6	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
49.1	145.6	1000	1000	1000	.1	.3

CROSS SECTION

RIVER: Cell 4
REACH: Discharge Canal RS: 6300

INPUT
Description: 8 th Cross Section
Station Elevation Data num= 16

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	19.8	20	19.7	41.7	12.3	51.2	11.2	64.7	9.1
67.1	7.2	73.6	3.7	79	.8	89	-4.4	101.4	-6.25
120.4	-6.25	145.9	8.5	151.9	10.5	163.9	10.5	198.4	22
212.4	22								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	51.2	.044	151.9	.2

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          51.2   151.9             1000    1000    1000             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 5300

INPUT
Description: 7 th Cross Section
Station Elevation Data    num=      16
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    20.5    12.8    20.9    21.3    20.4    53.6    10.4    61.9     9.4
    65.2     7.7    69.1     4.6    84.2     -.6      89    -1.4    97.9   -6.25
   116.9   -6.25   142.4     8.5   148.4    10.5   160.4    10.5   194.9      22
   208.9      22

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    53.6    .044   148.4      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          53.6   148.4             1000    1000    1000             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 4300

INPUT
Description: 6 th Cross Section
Station Elevation Data    num=      15
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    20.7    17.6    20.5    48.1    11.1    65.3     9.6    69.6     7.4
      73     4.6    79.7     -.8    87.3    -2.9   100.3   -6.25   119.3   -6.25
   144.8     9.6   150.8    11.6   162.8    11.6   197.3    23.1   211.3    23.1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    48.1    .044   150.8      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          48.1   150.8             1000    1000    1000             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 3300

INPUT
Description: 5 th Cross Section
Station Elevation Data    num=      14
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    19.6    17.8    19.5    46.7    11.9    51.2    11.2    75.8    10.3
    78.7     7.2    90.1      .4    98.4   -6.25   117.4   -6.25   142.9     9.6
   148.9    11.6   160.9    11.6   195.4    23.1   209.4    23.1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    46.7    .044   148.9      .2
```

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          46.7   148.9              800     800     800             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 2500

INPUT
Description: 4 th Cross Section
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    19.9    16.6    19.7    37.1    13.2    43.1    11.7    74.8     8.1
    80.4     7.8    94.2   -6.25   113.2   -6.25   138.7     8.2   144.7    10.2
   156.7    10.2   191.2    21.7   205.2    21.7

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    43.1    .044   144.7      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          43.1   144.7             1200    1200    1200             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 1300

INPUT
Description: 3 rd cross section
Station Elevation Data    num=      12
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    20.3    14.4    20.1    31.9    14.8    43.2    11.1    67.9    10.3
    96.4   -6.25   115.4   -6.25   140.9     7.4   146.9     9.4   158.9     9.4
   227.9    20.9   241.9    20.9

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2    67.9    .044   146.9      .2

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          67.9   146.9             1000    1000    1000             .1       .3

CROSS SECTION


RIVER: Cell 4
REACH: Discharge Canal    RS: 300

INPUT
Description: D/s Most
Station Elevation Data    num=      13
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    18.4 14.4135    17.9      39    10.1      48     9.4    58.6       9
    70.6     7.2    89.5   -6.25   108.5   -6.25     134     7.4     140     9.4
     152     9.4   186.5    20.9     230    20.9

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0      .2      48    .044     140      .2
```

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
48	140	1320	1320	1320	.1	.3

CROSS SECTION

RIVER: Cell 4
REACH: Discharge Canal RS: -1020

INPUT
Description: D/s Most
Station Elevation Data num= 13

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	18.41	13.5	17.9	39	10.1	48	9.4	58.6	9
70.6	7.2	89.5	-6.25	108.5	-6.25	134	7.4	140	9.4
152	9.4	186.5	20	230	20				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.2	48	.044	140	.2

Bank Sta: Left	Right	Lengths: Left	Channel	Right	Coeff Contr.	Expan.
48	140	0	0	0	.1	.3

SUMMARY OF MANNING'S N VALUES

River:Cell 4

Reach	River Sta.	n1	n2	n3
Collect Canal Ex	13760	.2	.044	.2
Collect Canal Ex	13460	.2	.044	.2
Cell 4 Ext	10172.5	0	0	0
Cell 4 Ext	10144	0	0	0
Cell 4 Ext	10088.5	0	0	0
Cell 4 Ext	10060	0	0	0
Cell 4 Ext	10000	.2	.044	.2
Cell 4 Ext	9000	.2	.044	.2
Cell 4 Ext	7860	.2	.044	.2
Cell 4 Ext	6500	.2	.044	.2
Cell 4 Ext	5120	.2	.044	.2
Cell 4 Ext	3800	.2	.044	.2
Cell 4 Ext	2620	.2	.044	.2
Cell 4 Ext	1200	.2	.044	.2
Cell 4 Ext	0	.2	.044	.2
Inflow Canal	22560	.2	.044	.2
Inflow Canal	20690	.2	.044	.2
Inflow Canal	18380	.2	.044	.2
Inflow Canal	17300	Inl Struct		
Inflow Canal	17210	.2	.044	.2
Inflow Canal	16910	.2	.044	.2
Inflow Canal	16190	.2	.044	.2
Inflow Canal	14100	.2	.044	.2
Inflow Canal	13950	.2	.044	.2
Inflow Canal	12000	.2	.044	.2
Inflow Canal	11840	.2	.044	.2
Inflow Canal	11800	Lat Struct		
Inflow Canal	9960	.2	.044	.2
Inflow Canal	9050	Lat Struct		
Inflow Canal	8080	.2	.044	.2

Note:
The values presented here for the Cell 4 Ext do not reflect the ACTUAL values in the model. Cell 4Ext manning's n values are modeled as depth dependent. The depth depended values were modeled as follows:

Elev/Sta	Manning's n
9.6	0.8
10.6	0.55
11.6	0.3
18.0	0.3

Inflow Canal	8000	Lat Struct		
Inflow Canal	6200	.2	.044	.2
Inflow Canal	6190	Lat Struct		
Inflow Canal	4320	.2	.044	.2
Inflow Canal	4310	Lat Struct		
Inflow Canal	2440	.2	.044	.2
Inflow Canal	2430	Lat Struct		
Inflow Canal	0	.2	.044	.2
Inflow Canal	-10	.2	.044	.2
Discharge Canal	8740	.2	.044	.2
Discharge Canal	8660	.2	.044	.2
Discharge Canal	8610	Inl Struct		
Discharge Canal	8590	.2	.044	.2
Discharge Canal	8561.5	Culvert		
Discharge Canal	8438.5	.2	.044	.2
Discharge Canal	8200	.2	.044	.2
Discharge Canal	7300	.2	.044	.2
Discharge Canal	6300	.2	.044	.2
Discharge Canal	5300	.2	.044	.2
Discharge Canal	4300	.2	.044	.2
Discharge Canal	3300	.2	.044	.2
Discharge Canal	2500	.2	.044	.2
Discharge Canal	1300	.2	.044	.2
Discharge Canal	300	.2	.044	.2
Discharge Canal	-1020	.2	.044	.2

SUMMARY OF REACH LENGTHS

River: Cell 4

Reach	River Sta.	Left	Channel	Right
Collect Canal Ex	13760	300	300	300
Collect Canal Ex	13460	0	0	0
Cell 4 Ext	10172.5	28.5	28.5	28.5
Cell 4 Ext	10144	55.5	55.5	55.5
Cell 4 Ext	10088.5	28.5	28.5	28.5
Cell 4 Ext	10060	60	60	60
Cell 4 Ext	10000	1000	1000	1000
Cell 4 Ext	9000	1140	1140	1140
Cell 4 Ext	7860	1360	1360	1360
Cell 4 Ext	6500	1380	1380	1380
Cell 4 Ext	5120	1320	1320	1320
Cell 4 Ext	3800	2380	2380	2380
Cell 4 Ext	2620	1420	1420	1420
Cell 4 Ext	1200	1200	1200	1200
Cell 4 Ext	0	0	0	0
Inflow Canal	22560	1870	1870	1870
Inflow Canal	20690	2310	2310	2310
Inflow Canal	18380	2990	2990	2990
Inflow Canal	17300	Inl Struct		
Inflow Canal	17210	300	300	300
Inflow Canal	16910	710	720	720
Inflow Canal	16190	2090	2090	2090
Inflow Canal	14100	150	150	150
Inflow Canal	13950	1950	1950	1950
Inflow Canal	12000	160	160	160
Inflow Canal	11840	1880	1880	1880
Inflow Canal	11800	Lat Struct		
Inflow Canal	9960	1880	1880	1880

Inflow Canal	9050	Lat Struct		
Inflow Canal	8080	1880	1880	1880
Inflow Canal	8000	Lat Struct		
Inflow Canal	6200	1880	1880	1880
Inflow Canal	6190	Lat Struct		
Inflow Canal	4320	1880	1880	1880
Inflow Canal	4310	Lat Struct		
Inflow Canal	2440	2440	2440	2440
Inflow Canal	2430	Lat Struct		
Inflow Canal	0	10	10	10
Inflow Canal	-10	0	0	0
Discharge Canal	8740	80	80	80
Discharge Canal	8660	151.5	151.5	151.5
Discharge Canal	8610	Inl Struct		
Discharge Canal	8590	151.5	151.5	151.5
Discharge Canal	8561.5	Culvert		
Discharge Canal	8438.5	238.5	238.5	238.5
Discharge Canal	8200	900	900	900
Discharge Canal	7300	1000	1000	1000
Discharge Canal	6300	1000	1000	1000
Discharge Canal	5300	1000	1000	1000
Discharge Canal	4300	1000	1000	1000
Discharge Canal	3300	800	800	800
Discharge Canal	2500	1200	1200	1200
Discharge Canal	1300	1000	1000	1000
Discharge Canal	300	1320	1320	1320
Discharge Canal	-1020	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: Cell 4

Reach	River Sta.	Contr.	Expan.
Collect Canal Ex	13760	.1	.3
Collect Canal Ex	13460	.1	.3
Cell 4 Ext	10172.5	.1	.3
Cell 4 Ext	10144	.1	.3
Cell 4 Ext	10088.5	.1	.3
Cell 4 Ext	10060	.1	.3
Cell 4 Ext	10000	.1	.3
Cell 4 Ext	9000	.1	.3
Cell 4 Ext	7860	.1	.3
Cell 4 Ext	6500	.1	.3
Cell 4 Ext	5120	.1	.3
Cell 4 Ext	3800	.1	.3
Cell 4 Ext	2620	.1	.3
Cell 4 Ext	1200	.1	.3
Cell 4 Ext	0	.1	.3
Inflow Canal	22560	.1	.3
Inflow Canal	20690	.1	.3
Inflow Canal	18380	.1	.3
Inflow Canal	17300	Inl Struct	
Inflow Canal	17210	.1	.3
Inflow Canal	16910	.1	.3
Inflow Canal	16190	.1	.3
Inflow Canal	14100	.1	.3
Inflow Canal	13950	.1	.3
Inflow Canal	12000	.1	.3
Inflow Canal	11840	.1	.3

Inflow Canal	11800	Lat Struct		
Inflow Canal	9960		.1	.3
Inflow Canal	9050	Lat Struct		
Inflow Canal	8080		.1	.3
Inflow Canal	8000	Lat Struct		
Inflow Canal	6200		.1	.3
Inflow Canal	6190	Lat Struct		
Inflow Canal	4320		.1	.3
Inflow Canal	4310	Lat Struct		
Inflow Canal	2440		.1	.3
Inflow Canal	2430	Lat Struct		
Inflow Canal	0		.1	.3
Inflow Canal	-10		.1	.3
Discharge Canal	8740		.1	.3
Discharge Canal	8660		.1	.3
Discharge Canal	8610	Inl Struct		
Discharge Canal	8590		.1	.3
Discharge Canal	8561.5	Culvert		
Discharge Canal	8438.5		.1	.3
Discharge Canal	8200		.1	.3
Discharge Canal	7300		.1	.3
Discharge Canal	6300		.1	.3
Discharge Canal	5300		.1	.3
Discharge Canal	4300		.1	.3
Discharge Canal	3300		.1	.3
Discharge Canal	2500		.1	.3
Discharge Canal	1300		.1	.3
Discharge Canal	300		.1	.3
Discharge Canal	-1020		.1	.3

HEC-RAS LOW FLOW MODEL OUTPUT

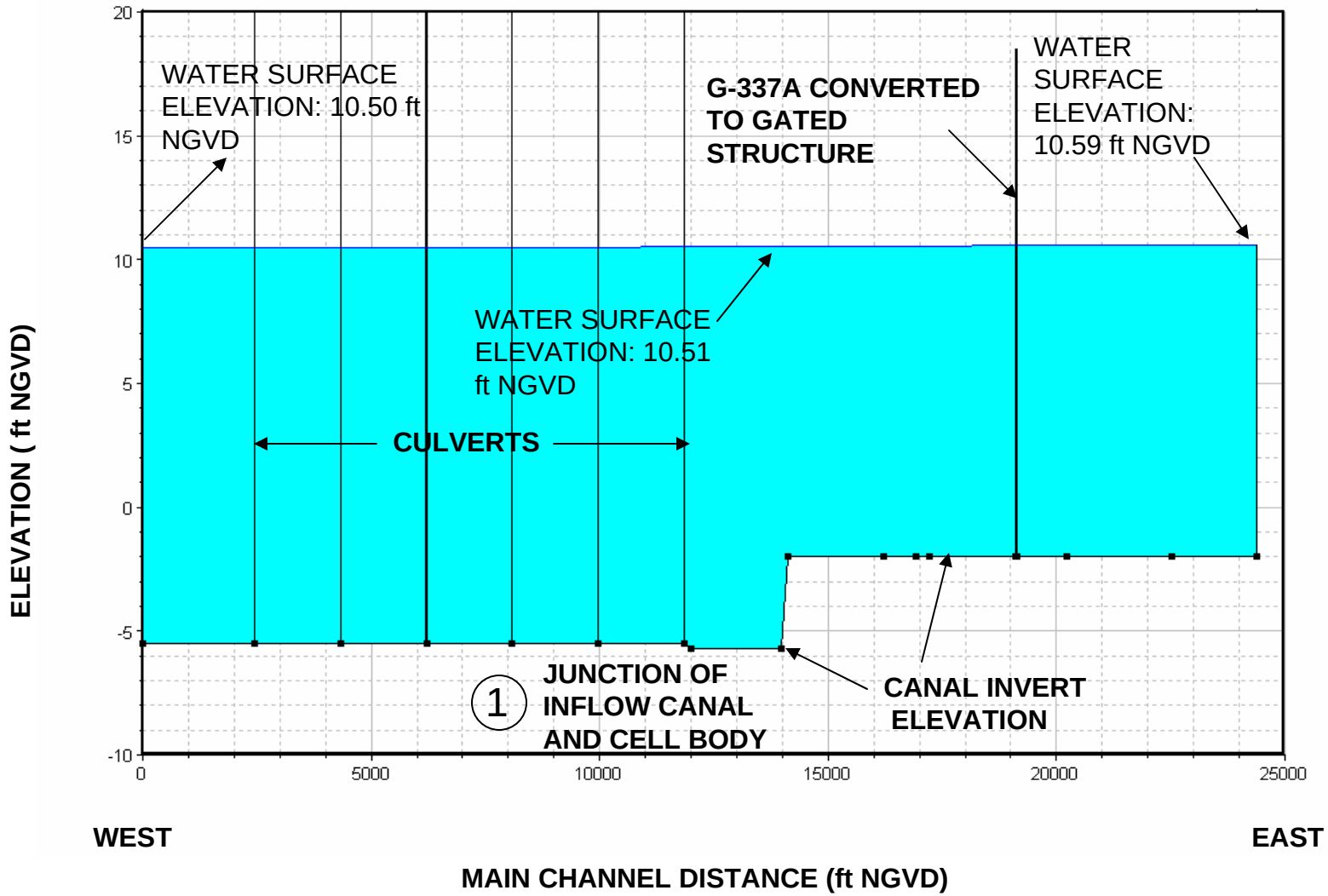
HECRAS OUTPUT PROFILE 1- LOW FLOW

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Inflow Canal	22560	PF 1	200	-2	10.59		10.6	0.000005	0.28	748.44	135.46	0.02
Inflow Canal	20690	PF 1	200	-2	10.59		10.59	0.000005	0.28	747.29	135.42	0.02
Inflow Canal	18380	PF 1	200	-2	10.58	-0.64	10.58	0.000004	0.28	748.88	135.35	0.02
Inflow Canal	17300		**Inl Struct**									
Inflow Canal	17210	PF 1	200	-2	10.53		10.53	0.000005	0.28	742.43	135.08	0.02
Inflow Canal	16910	PF 1	200	-2	10.53		10.53	0.000004	0.28	748.25	135.07	0.02
Inflow Canal	16190	PF 1	200	-2	10.52		10.52	0.000004	0.28	747.81	135.05	0.02
Inflow Canal	14100	PF 1	200	-2	10.51		10.51	0.000005	0.28	737.52	134.99	0.02
Inflow Canal	13950	PF 1	200	-5.7	10.51		10.51	0.000001	0.19	1142.98	154.1	0.01
Inflow Canal	12000	PF 1	200	-5.7	10.51		10.51	0.000001	0.19	1142.53	154.08	0.01
Inflow Canal	11840	PF 1	200	-5.5	10.51		10.51	0.000002	0.21	1041.4	139.06	0.01
Inflow Canal	11800		**Lat Struct**									
Inflow Canal	9960	PF 1	165.02	-5.5	10.51		10.51	0.000001	0.17	1041.04	139.04	0.01
Inflow Canal	9050		**Lat Struct**									
Inflow Canal	8080	PF 1	130.84	-5.5	10.51		10.51	0.000001	0.14	1040.81	139.03	0.01
Inflow Canal	8000		**Lat Struct**									
Inflow Canal	6200	PF 1	97.17	-5.5	10.50		10.5	0	0.1	1040.67	139.03	0.01
Inflow Canal	6190		**Lat Struct**									
Inflow Canal	4320	PF 1	64.54	-5.5	10.50		10.5	0	0.07	1040.6	139.03	0
Inflow Canal	4310		**Lat Struct**									
Inflow Canal	2440	PF 1	32.91	-5.5	10.50		10.5	0	0.03	1040.58	139.03	0
Inflow Canal	2430		**Lat Struct**									
Inflow Canal	0	PF 1	0.93	-5.5	10.50		10.5	0	0	1040.58	139.03	0
Inflow Canal	-10	PF 1	0.93	-5.5	10.50	-5.47	10.5	0	0	1040.58	139.03	0
Cell 4 Ext	10172.5	PF 1	1	2	10.45		10.45	0	0	99250.84	11783.34	0
Cell 4 Ext	10144	PF 1	200.07	2	10.45		10.45	0	0	99250.84	11783.34	0
Cell 4 Ext	10088.5	PF 1	200.07	2	10.45		10.45	0	0	99250.82	11783.34	0
Cell 4 Ext	10060	PF 1	200.07	8	10.45		10.45	0.000005	0.01	22853.82	11712.17	0
Cell 4 Ext	10000	PF 1	200.07	8	10.45		10.45	0.000005	0.01	22850.3	11712.17	0
Cell 4 Ext	9000	PF 1	200.07	8	10.44		10.44	0.000006	0.01	21093.86	11002.14	0
Cell 4 Ext	7860	PF 1	200.07	8	10.42		10.42	0.000058	0.02	10353.95	10122.05	0

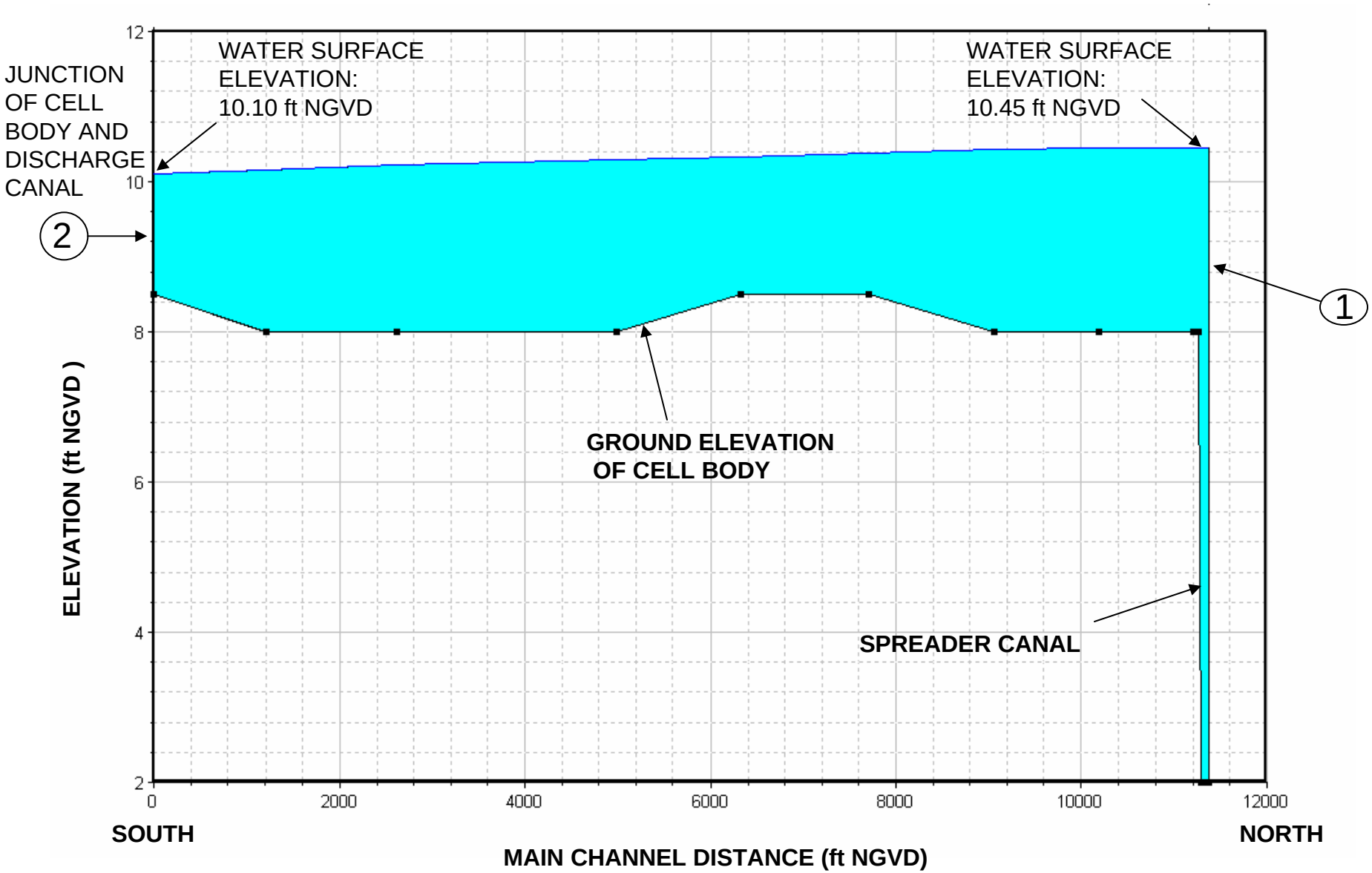
HECRAS OUTPUT PROFILE 1- LOW FLOW

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Cell 4 Ext	6500	PF 1	200.07	8.5	10.37		10.37	0.000025	0.02	12902.92	9191.74	0
Cell 4 Ext	5120	PF 1	200.07	8.5	10.33		10.33	0.000041	0.02	10934.42	8388.98	0
Cell 4 Ext	3800	PF 1	200.07	8	10.29		10.29	0.000019	0.02	13092.42	7411.26	0
Cell 4 Ext	2620	PF 1	200.07	8	10.23		10.23	0.000047	0.02	9746.95	6551.03	0
Cell 4 Ext	1200	PF 1	200.07	8	10.16		10.16	0.000043	0.02	9520.66	5590.48	0
Cell 4 Ext	0	PF 1	200.07	8.5	10.10		10.1	0.000078	0.03	7573.47	4770.07	0
Collect Canal Ex	13760	PF 1	1	-2.5	10.10		10.1	0	0	1127.29	184.86	0
Collect Canal Ex	13460	PF 1	1	-2.5	10.10		10.1	0	0	1127.29	184.86	0
Discharge Canal	8740	PF 1	200.07	-2.5	10.09		10.09	0.000002	0.2	1131.23	190.43	0.01
Discharge Canal	8660	PF 1	200.07	-2.5	10.09	-2	10.09	0.000001	0.13	1620.55	203.69	0.01
Discharge Canal	8610		**Inl Struct**									
Discharge Canal	8590	PF 1	200.07	-2.5	9.59	-2	9.59	0.000001	0.14	1518.63	200.64	0.01
Discharge Canal	8561.5		**Culvert**									
Discharge Canal	8438.5	PF 1	200.07	-6.25	9.57		9.57	0	0.11	1973.62	225.77	0.01
Discharge Canal	8200	PF 1	200.07	-6.25	9.57		9.57	0.000002	0.22	908.29	90.27	0.01
Discharge Canal	7300	PF 1	200.07	-6.25	9.57		9.57	0.000003	0.25	798.73	83.69	0.01
Discharge Canal	6300	PF 1	200.07	-6.25	9.57		9.57	0.000002	0.23	886.32	87.42	0.01
Discharge Canal	5300	PF 1	200.07	-6.25	9.57		9.57	0.000003	0.24	818.35	85.07	0.01
Discharge Canal	4300	PF 1	200.07	-6.25	9.56		9.56	0.000002	0.24	840.15	79.37	0.01
Discharge Canal	3300	PF 1	200.07	-6.25	9.56		9.56	0.000004	0.3	673.3	66.34	0.02
Discharge Canal	2500	PF 1	200.07	-6.25	9.56		9.56	0.000006	0.3	661.34	80.78	0.02
Discharge Canal	1300	PF 1	200.07	-6.25	9.55		9.55	0.000003	0.27	752.8	90.61	0.02
Discharge Canal	300	PF 1	200.07	-6.25	9.55		9.55	0.000005	0.27	730.17	106.32	0.02
Discharge Canal	-1020	PF 1	200.07	-6.25	9.54	-4.81	9.54	0.000005	0.27	729.51	106.26	0.02

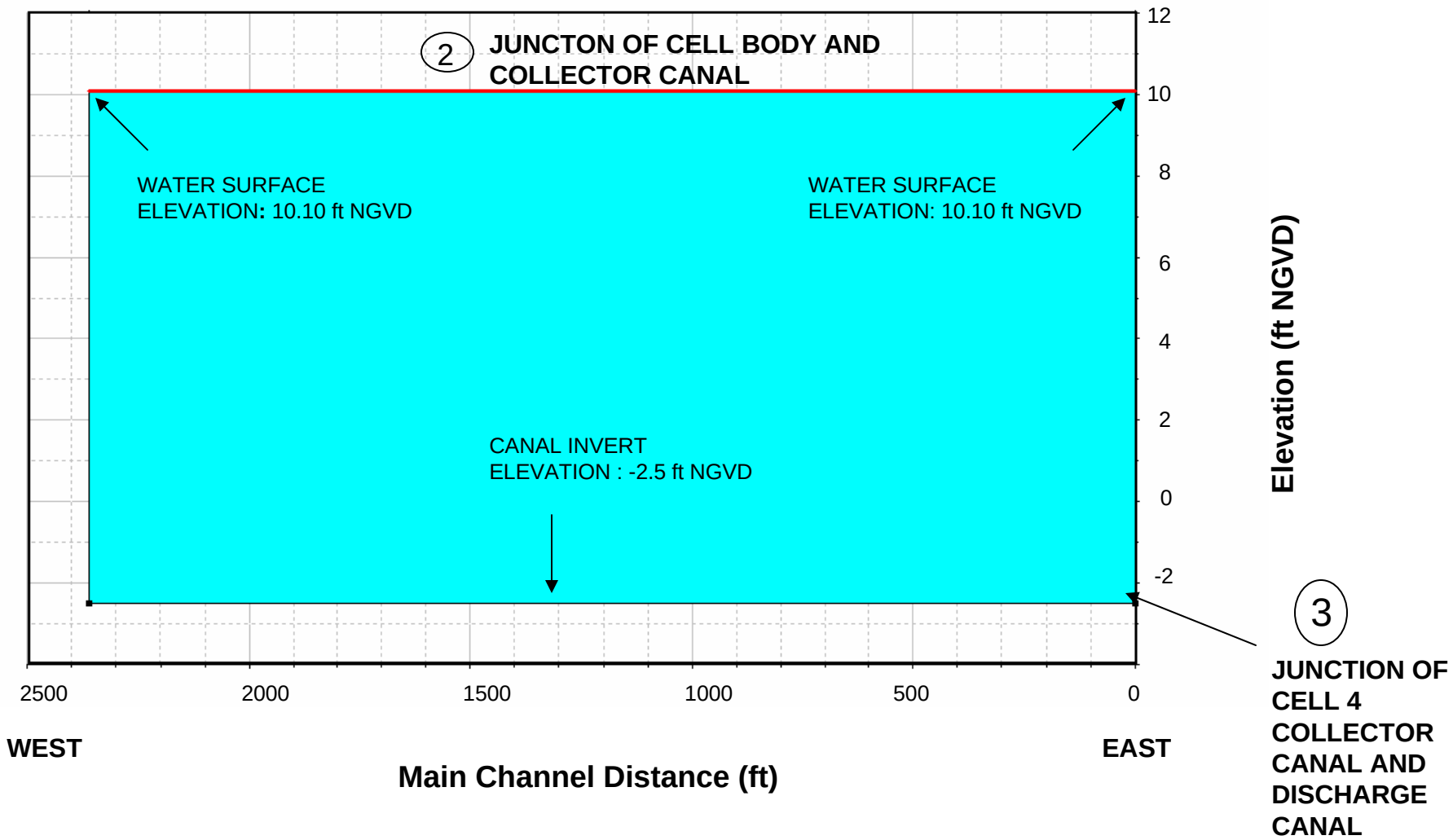
LOW FLOW SCENARIO- INFLOW CANAL
WATER SURFACE PROFILE



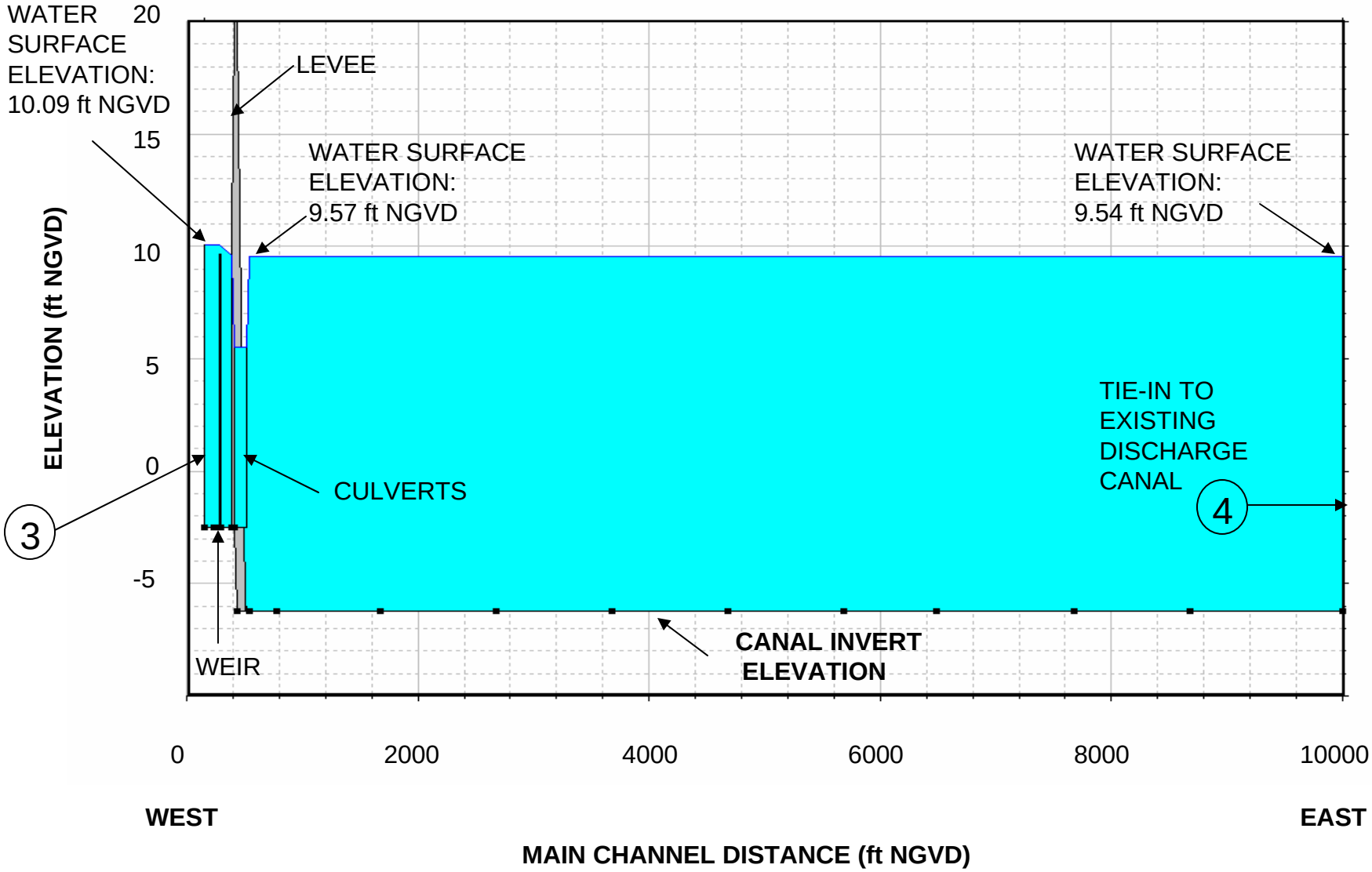
LOW FLOW SCENARIO-CELL BODY
WATER SURFACE PROFILE



LOW FLOW SCENARIO- CELL 4 COLLECTOR CANAL
WATER SURFACE PROFILE



LOW FLOW SCENARIO-DISCHARGE CANAL
WATER SURFACE PROFILE



HEC-RAS DESIGN FLOW MODEL OUTPUT

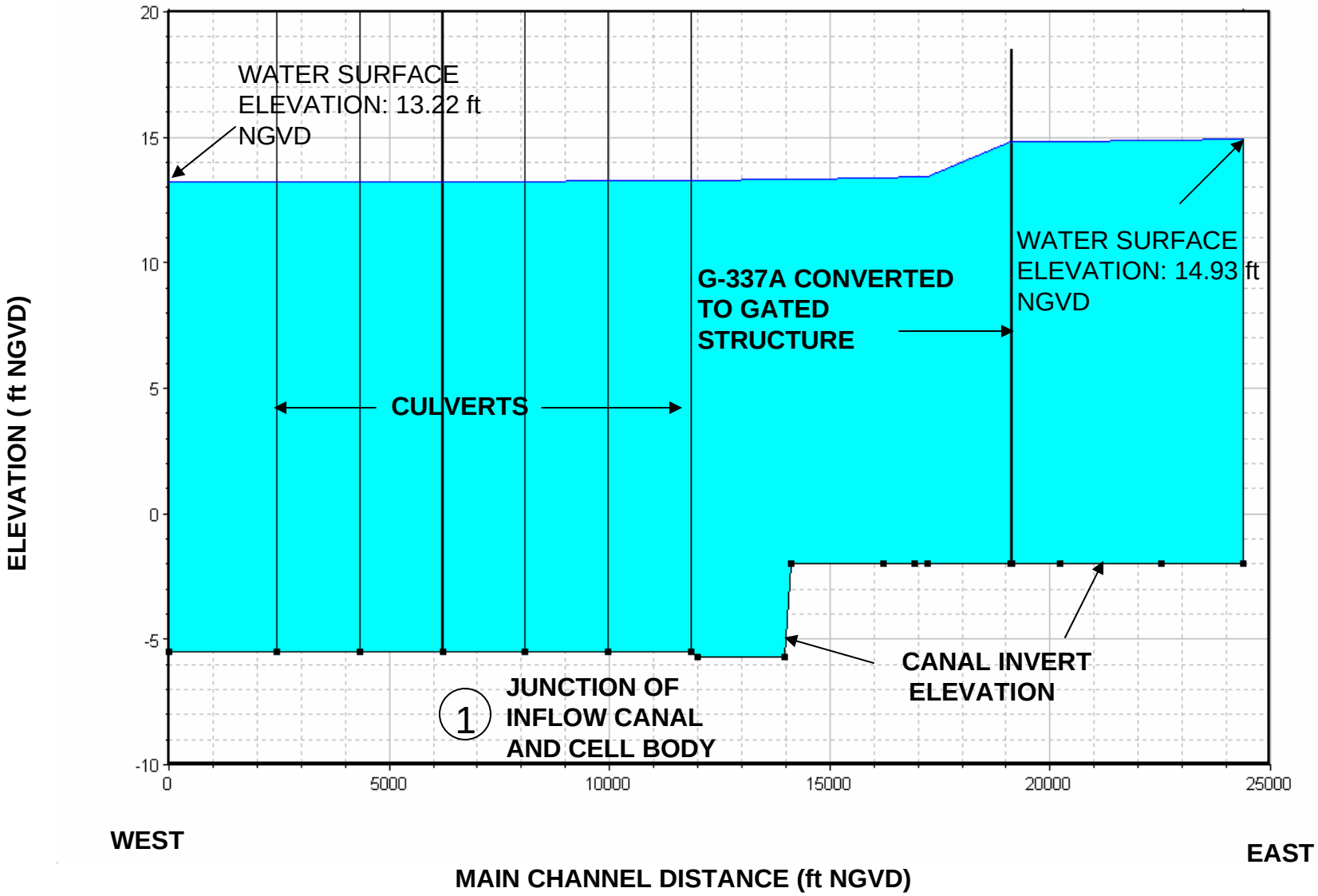
HECRAS OUTPUT PROFILE 2- DESIGN FLOW

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Inflow Canal	22560	PF 2	1011	-2	14.93		14.94	0.000025	0.88	1390.97	160.77	0.04
Inflow Canal	20690	PF 2	1011	-2	14.88		14.9	0.000026	0.88	1383.26	160.49	0.04
Inflow Canal	18380	PF 2	1011	-2	14.82	1.55	14.84	0.000026	0.88	1376.65	160.14	0.04
Inflow Canal	17300		Inl Struct									
Inflow Canal	17210	PF 2	1011	-2	13.44		13.46	0.00004	1.01	1161.2	152.09	0.05
Inflow Canal	16910	PF 2	1011	-2	13.43		13.45	0.000039	1	1165.43	152.02	0.05
Inflow Canal	16190	PF 2	1011	-2	13.40		13.42	0.000039	1	1161.14	151.86	0.05
Inflow Canal	14100	PF 2	1011	-2	13.32		13.33	0.000042	1.02	1139.22	151.36	0.06
Inflow Canal	13950	PF 2	1011	-5.7	13.32		13.33	0.000017	0.74	1599.22	170.97	0.04
Inflow Canal	12000	PF 2	1011	-5.7	13.29		13.3	0.000017	0.74	1593.66	170.77	0.04
Inflow Canal	11840	PF 2	1011	-5.5	13.28		13.29	0.00002	0.83	1450.02	155.7	0.04
Inflow Canal	11800		Lat Struct									
Inflow Canal	9960	PF 2	836.65	-5.5	13.25		13.26	0.000014	0.69	1445.38	155.52	0.03
Inflow Canal	9050		Lat Struct									
Inflow Canal	8080	PF 2	664.11	-5.5	13.23		13.24	0.000009	0.55	1442.36	155.4	0.03
Inflow Canal	8000		Lat Struct									
Inflow Canal	6200	PF 2	492.75	-5.5	13.22		13.22	0.000005	0.41	1440.61	155.33	0.02
Inflow Canal	6190		Lat Struct									
Inflow Canal	4320	PF 2	322.1	-5.5	13.22		13.22	0.000002	0.27	1439.78	155.3	0.01
Inflow Canal	4310		Lat Struct									
Inflow Canal	2440	PF 2	151.82	-5.5	13.22		13.22	0	0.13	1439.54	155.29	0.01
Inflow Canal	2430		Lat Struct									
Inflow Canal	0	PF 2	1.01	-5.5	13.22		13.22	0	0	1439.52	155.29	0
Inflow Canal	-10	PF 2	1.01	-5.5	13.22	-5.47	13.22	0	0	1439.52	155.29	0
Cell 4 Ext	10172.5	PF 2	1	2	11.55		11.55	0	0	112222.5	11791.6	0
Cell 4 Ext	10144	PF 2	1012	2	11.55		11.55	0	0.01	112222.5	11791.6	0
Cell 4 Ext	10088.5	PF 2	1012	2	11.55		11.55	0	0.01	112222.4	11791.6	0
Cell 4 Ext	10060	PF 2	1012	8	11.55		11.55	0.000008	0.03	35745.91	11718.78	0
Cell 4 Ext	10000	PF 2	1012	8	11.55		11.55	0.000008	0.03	35740.22	11718.77	0
Cell 4 Ext	9000	PF 2	1012	8	11.54		11.54	0.00001	0.03	33166.75	11008.72	0
Cell 4 Ext	7860	PF 2	1012	8	11.52		11.52	0.000038	0.05	21420.62	10128.61	0.01

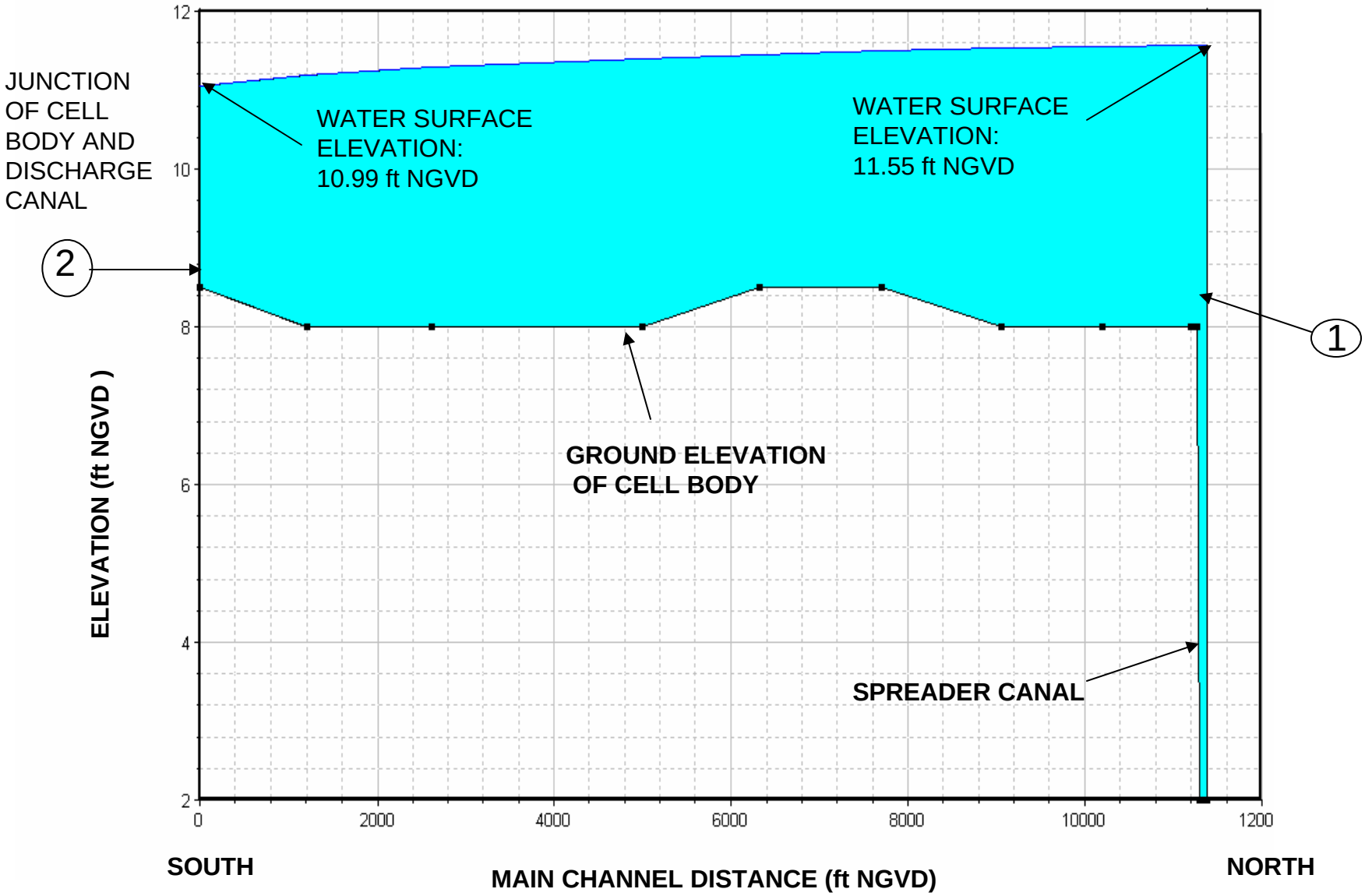
HECRAS OUTPUT PROFILE 2- DESIGN FLOW

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Cell 4 Ext	6500	PF 2	1012	8.5	11.47		11.47	0.000028	0.04	23010.44	9198.34	0
Cell 4 Ext	5120	PF 2	1012	8.5	11.43		11.43	0.000042	0.05	20136.92	8393.92	0.01
Cell 4 Ext	3800	PF 2	1012	8	11.38		11.38	0.000033	0.05	21127.35	7417.76	0.01
Cell 4 Ext	2620	PF 2	1012	8	11.27		11.27	0.000072	0.06	16562.8	6558.05	0.01
Cell 4 Ext	1200	PF 2	1012	8	11.15		11.15	0.000093	0.07	15038.54	5596.4	0.01
Cell 4 Ext	0	PF 2	1012	8.5	10.99		10.99	0.000201	0.09	11847.66	4775.45	0.01
Collect Canal Ex	13760	PF 2	1	-2.5	11.02		11.02	0	0	1298.68	187.66	0
Collect Canal Ex	13460	PF 2	1	-2.5	11.02		11.02	0	0	1298.68	187.66	0
Discharge Canal	8740	PF 2	1012	-2.5	10.96		10.98	0.000033	0.92	1299.31	196.12	0.05
Discharge Canal	8660	PF 2	1012	-2.5	10.97	-1.03	10.97	0.000013	0.61	1800.67	208.97	0.03
Discharge Canal	8610		Inl Struct									
Discharge Canal	8590	PF 2	1012	-2.5	10.75	-1.03	10.76	0.000014	0.62	1756.14	207.67	0.03
Discharge Canal	8561.5		Culvert									
Discharge Canal	8438.5	PF 2	1012	-6.25	10.35		10.35	0.000007	0.5	2149	228.12	0.02
Discharge Canal	8200	PF 2	1012	-6.25	10.33		10.35	0.000048	1.03	979.17	97.21	0.06
Discharge Canal	7300	PF 2	1012	-6.25	10.27		10.29	0.000071	1.18	860.98	95.82	0.07
Discharge Canal	6300	PF 2	1012	-6.25	10.21		10.23	0.000051	1.07	944.79	93.51	0.06
Discharge Canal	5300	PF 2	1012	-6.25	10.15		10.17	0.000066	1.16	870.29	91.71	0.07
Discharge Canal	4300	PF 2	1012	-6.25	10.09		10.11	0.000059	1.14	883.89	86.61	0.06
Discharge Canal	3300	PF 2	1012	-6.25	10.00		10.04	0.000097	1.44	703.16	68.03	0.08
Discharge Canal	2500	PF 2	1012	-6.25	9.91		9.95	0.000134	1.46	690.9	84.99	0.09
Discharge Canal	1300	PF 2	1012	-6.25	9.79		9.82	0.000082	1.31	775.02	92.48	0.07
Discharge Canal	300	PF 2	1012	-6.25	9.70		9.72	0.000113	1.36	746.19	108.68	0.08
Discharge Canal	-1020	PF 2	1012	-6.25	9.54	-2.31	9.57	0.000121	1.39	729.51	106.26	0.09

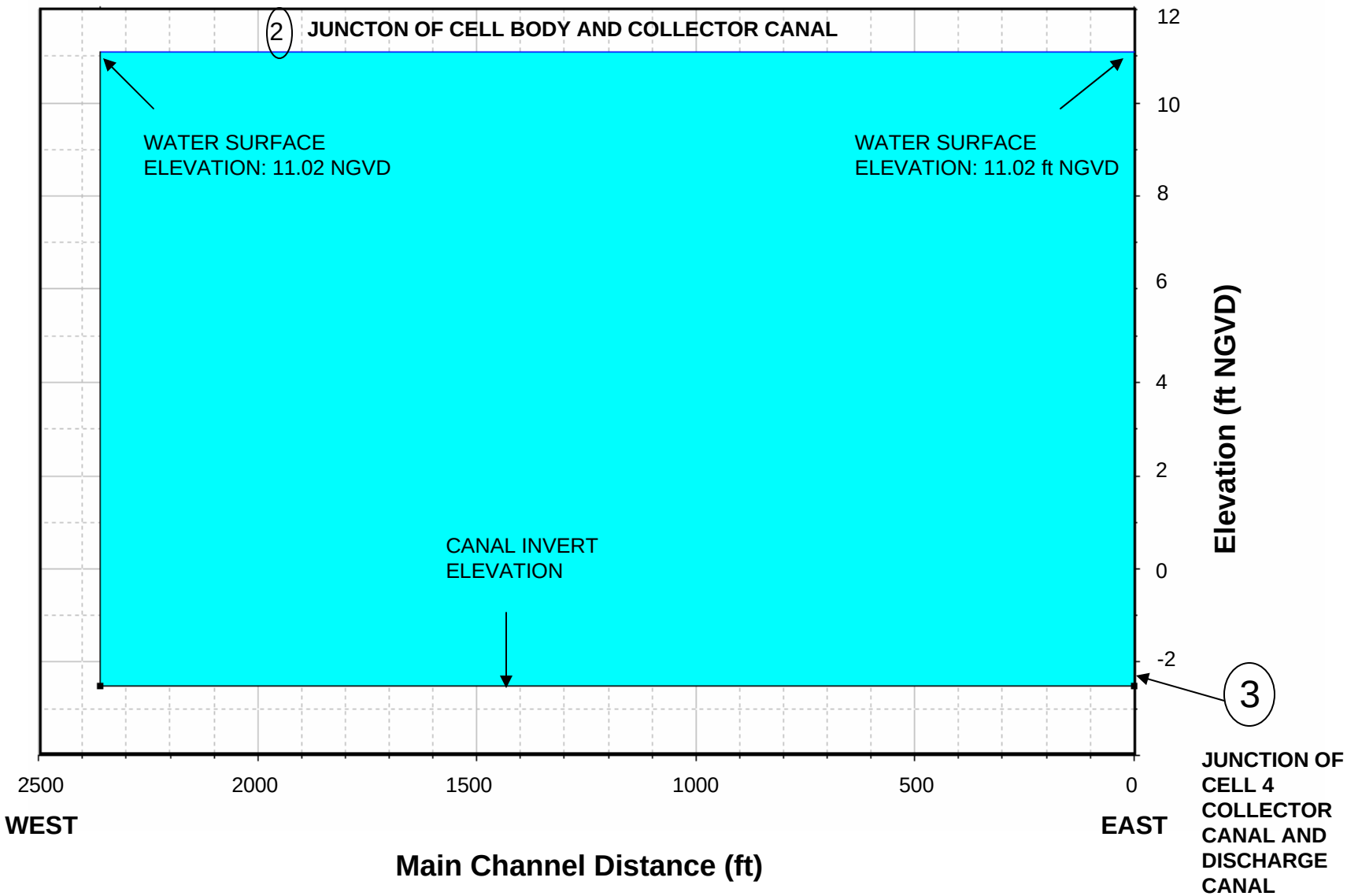
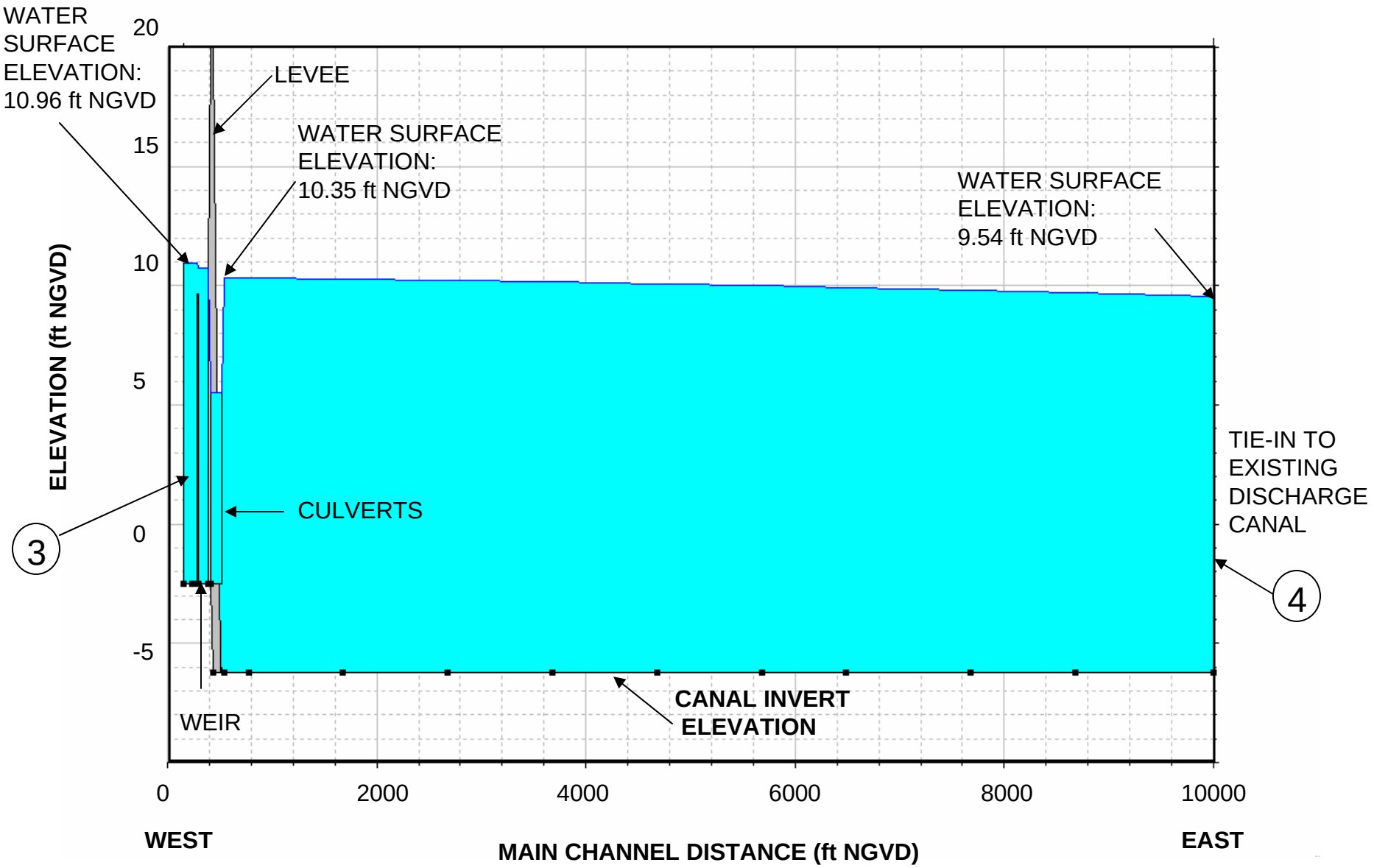
DESIGN FLOW SCENARIO- INFLOW CANAL
WATER SURFACE PROFILE



DESIGN FLOW SCENARIO-CELL BODY
WATER SURFACE PROFILE



DESIGN FLOW SCENARIO- CELL 4 COLLECTOR CANAL
WATER SURFACE PROFILE



DESIGN FLOW SCENARIO-DISCHARGE CANAL
WATER SURFACE PROFILE