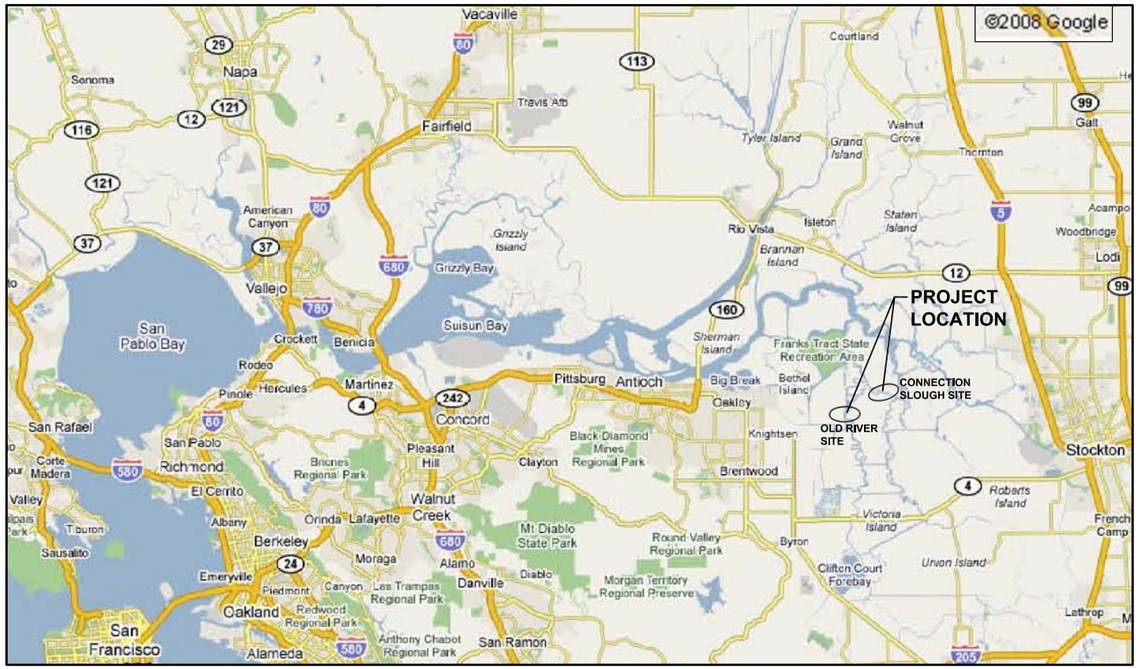
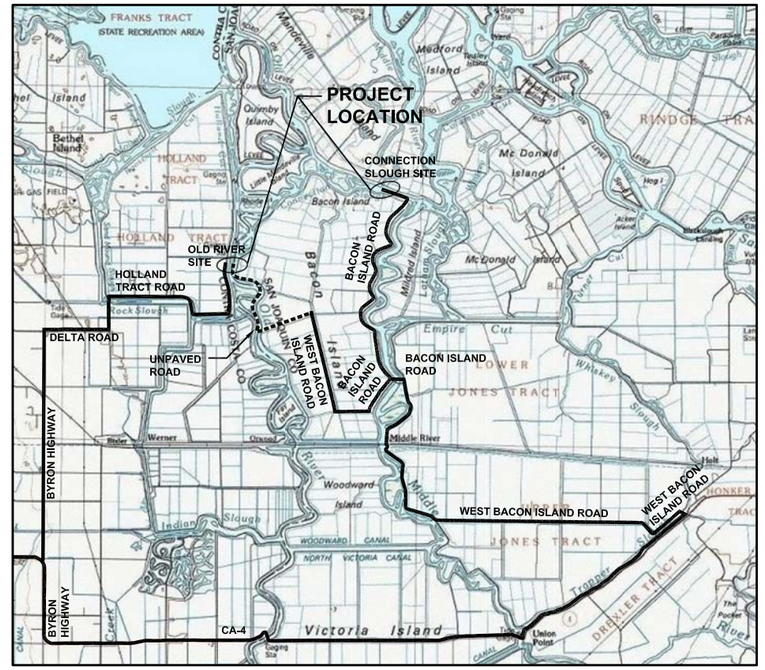
TWO GATE FISH PROTECTION PLAN

BACON ISLAND, CALIFORNIA



VICINITY MAP
NTS



LOCATION MAP
NTS

TECHNICAL REVIEWERS	
CIVIL _____ (INSERT NAME)	STRUCTURAL _____ (INSERT NAME)
ELECTRICAL _____ (INSERT NAME)	MECHANICAL _____ (INSERT NAME)

SWC STATE WATER CONTRACTORS FOUNDED IN 1952
1121 L Street, Suite 1050
Sacramento, California 95814–3944
(916) 447–7357 x203

APPROVED _____
DENNIS G. MAJORS

90% SUBMITTAL IF SHEET IS LESS THAN 22" x 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

REVISION	DESCRIPTION	BY	DATE

Moffatt & Nichol
2001 N. Main Street, Suite 360
Walnut Creek, California 94596
(925) 944–5411

DSGN	DR	CHK
TDB	AB	GTH
JOB NO.	SUBMITTED BY	TITLE
6097–03	RMR	

TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 1 OF 65

TITLE SHEET

G1

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GENERAL NOTES

BATHYMETRY SURVEYED BY ENVIRONMENTAL DATA SOLUTIONS ON JUNE 23, 2008 AND REPRESENTS CONDITIONS ON THAT DATE.

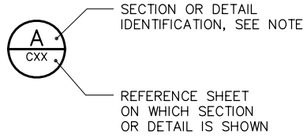
VERTICAL DATUM

PROJECT ELEVATIONS ARE BASED ON NAVD'88.

HORIZONTAL DATUM

PROJECT COORDINATES ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM NAD 1983, ZONE 3.

CROSS–REFERENCE LEGEND



NOTE: LETTER INDICATES SECTION; NUMBER INDICATES DETAIL. WHERE THERE IS NO REFERENCE SHEET INDICATED, IT MEANS THE DETAIL OR SECTION IS TAKEN AND SHOWN ON THE SAME SHEET.

LEGEND

EXISTING FEATURE

PROPOSED FEATURE

5 EXISTING CONTOUR

SLOPE

WORK POINT

ABBREVIATIONS

&	AND
#	NUMBER
%	PERCENT
APPROX	APPROXIMATE
ASTM	ASTM INTERNATIONAL
AWPA	AMERICAN WOOD PRESERVATION ASSOCIATION
℄	CENTER LINE
CIP	CAST–IN–PLACE
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
DIA, ø	DIAMETER
DWG	DRAWING
E	EAST
(E)	EXISTING
EL	ELEVATION
EJ	EXPANSION JOINT
FG	FINISH GRADE
H	HORIZONTAL
HD	HEAD
HDPE	HIGH DENSITY POLYETHYLENE
HW	HIGH WATER
ID	INSIDE DIAMETER
LW	LOW WATER
MAX	MAXIMUM
MIN	MINIMUM
MLLW	MEAN LOWER LOW WATER
N	NORTH
NAD	NORTH AMERICAN DATUM
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OG	ORIGINAL GROUND
OPP	OPPOSITE
REINF	REINFORCEMENT
SCH	SCHEDULE
SIM	SIMILAR
STD	STANDARD
SYMM	SYMMETRICAL
TYP	TYPICAL
UHMW	ULTRA HIGH MOLECULAR WEIGHT
UON	UNLESS OTHERWISE NOTED
V	VERTICAL
VC	VERTICAL CURVE
WP	WORK POINT
W/	WITH

INDEX OF DRAWINGS

SHEET NUMBER	DRAWING NUMBER	DESCRIPTION
		GENERAL
1	G1	TITLE SHEET
2	G2	INDEX OF DRAWINGS, ABBREVIATIONS, LEGEND AND GENERAL NOTES
3	G3	PROJECT GENERAL PLAN
		OLD RIVER
4	C1	OLD RIVER SITE PLAN
5	C2	OLD RIVER DREDGING PLAN & SECTION
6	C3	OLD RIVER BARGE PREPARED BED
7	C4	OLD RIVER APPROACH RAMP PLAN AND SECTIONS
8	C5	OLD RIVER SHEET PILE WALL ARRANGEMENT PLAN AND ELEVATION, SHEET 1
9	C6	OLD RIVER SHEET PILE WALL ARRANGEMENT PLAN AND ELEVATION, SHEET 2
10	C7	OLD RIVER BOAT RAMP PLAN AND SECTIONS, SHEET 1
11	C8	OLD RIVER BOAT RAMP PLAN AND SECTIONS, SHEET 2
12	C9	OLD RIVER BOAT RAMP PLAN AND SECTIONS, SHEET 3
13	C10	OLD RIVER BOAT RAMP PLAN AND SECTIONS, SHEET 4
14	C11	OLD RIVER CATWALK PLAN AND ELEVATION, SHEET 1
15	C12	OLD RIVER CATWALK PLAN AND ELEVATION, SHEET 2
16	C13	OLD RIVER ELECTRICAL SITE PLAN
17	C14	OLD RIVER BARGE GENERAL ARRANGEMENT PLAN
18	C15	OLD RIVER BARGE GENERAL ARRANGEMENT ELEVATION
19	C16	OLD RIVER GATE SCANTLINGS
20	C17	OLD RIVER GATE FRAMING LAYOUT
21	C18	OLD RIVER END WALL SCANTLINGS
22	C19	OLD RIVER AIDS TO NAVIGATION PLAN
23	C20	OLD RIVER TEMPORARY REMOVAL PLAN
24	C21	OLD RIVER PERMANENT REMOVAL PLAN
		CONNECTION SLOUGH
25	C31	CONNECTION SLOUGH SITE PLAN
26	C32	CONNECTION SLOUGH DREDGING – PLAN & SECTION
27	C33	CONNECTION SLOUGH BARGE PREPARED BED
28	C34	CONNECTION SLOUGH APPROACH RAMP PLAN AND SECTIONS
29	C35	CONNECTION SLOUGH SHEET PILE WALL ARRANGEMENT PLAN AND ELEVATION
30	C36	CONNECTION SLOUGH BOAT RAMP PLAN AND SECTIONS, SHEET 1
31	C37	CONNECTION SLOUGH BOAT RAMP PLAN AND SECTIONS, SHEET 2
32	C38	CONNECTION SLOUGH BOAT RAMP PLAN AND SECTIONS, SHEET 3
33	C39	CONNECTION SLOUGH BOAT RAMP PLAN AND SECTIONS, SHEET 4
34	C40	CONNECTION SLOUGH CATWALK – PLAN AND ELEVATION

SHEET NUMBER	DRAWING NUMBER	DESCRIPTION
35	C41	CONNECTION SLOUGH ELECTRICAL SITE PLAN
36	C42	CONNECTION SLOUGH BARGE GENERAL ARRANGEMENT PLAN
37	C43	CONNECTION SLOUGH BARGE GENERAL ARRANGEMENT ELEVATION
38	C44	CONNECTION SLOUGH GATE SCANTLINGS
39	C45	CONNECTION SLOUGH GATE FRAMING LAYOUT
40	C46	CONNECTION SLOUGH END WALL SCANTLINGS
41	C47	CONNECTION SLOUGH AIDS TO NAVIGATION PLAN
42	C48	CONNECTION SLOUGH TEMPORARY REMOVAL PLAN
43	C49	CONNECTION SLOUGH PERMANENT REMOVAL PLAN
		COMMON DETAILS
44	C61	GATE STRUCTURAL DETAILS, SHEET 1
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46	C63	SHEET PILE WALL DETAILS, SHEET 1
47	C64	SHEET PILE WALL DETAILS, SHEET 2
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50	C67	BOARDING FLOAT PLAN & ELEVATION
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55	C72	CATWALK DETAILS, SHEET 4
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62	C79	ELECTRICAL SYSTEM DIAGRAM
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64	C81	DREDGED MATERIAL DISPOSAL SITE
65	C82	MISCELLANEOUS DETAILS

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TDB	AB	GTH
JOB NO.	SUBMITTED BY	TITLE
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TWO GATE FISH PROTECTION PLAN

INDEX OF DRAWINGS ABBREVIATIONS, LEGEND AND GENERAL NOTES

DATE 12/09/08

SHEET 2 OF 65

G2

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PROJECT GENERAL PLAN
SCALE: 1"= 1000'

1000' 0' 1000' 2000'
SCALE: 1"=1000'

90% SUBMITTAL

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 3 OF 65

PROJECT GENERAL PLAN

G3

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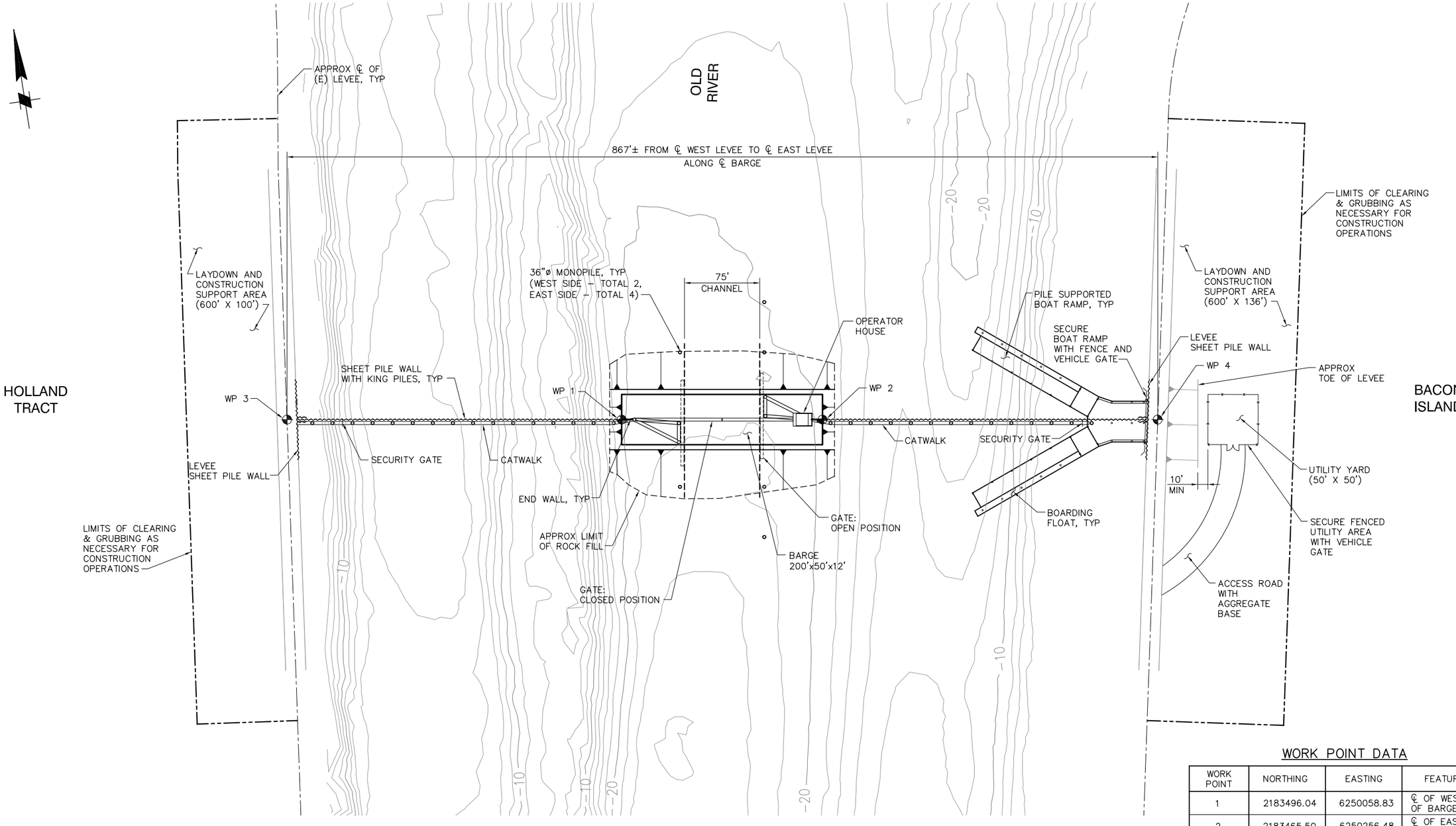

SITE PLAN

SCALE: 1"= 50'

50' 0' 50' 100'

SCALE: 1"=50'

WORK POINT DATA

WORK POINT	NORTHING	EASTING	FEATURE
1	2183496.04	6250058.83	℄ OF WEST SIDE OF BARGE
2	2183465.50	6250256.48	℄ OF EAST SIDE OF BARGE
3	2183546.94	6249729.50	℄ OF WEST LEVEE AND GATE
4	2183414.53	6250586.33	℄ OF EAST LEVEE AND GATE

90% SUBMITTAL

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JOB NO.	SUBMITTED BY	TITLE
6097–03	RMR	

TWO GATE FISH PROTECTION PLAN

OLD RIVER SITE PLAN

DATE 12/09/08

SHEET 4 OF 65

C1

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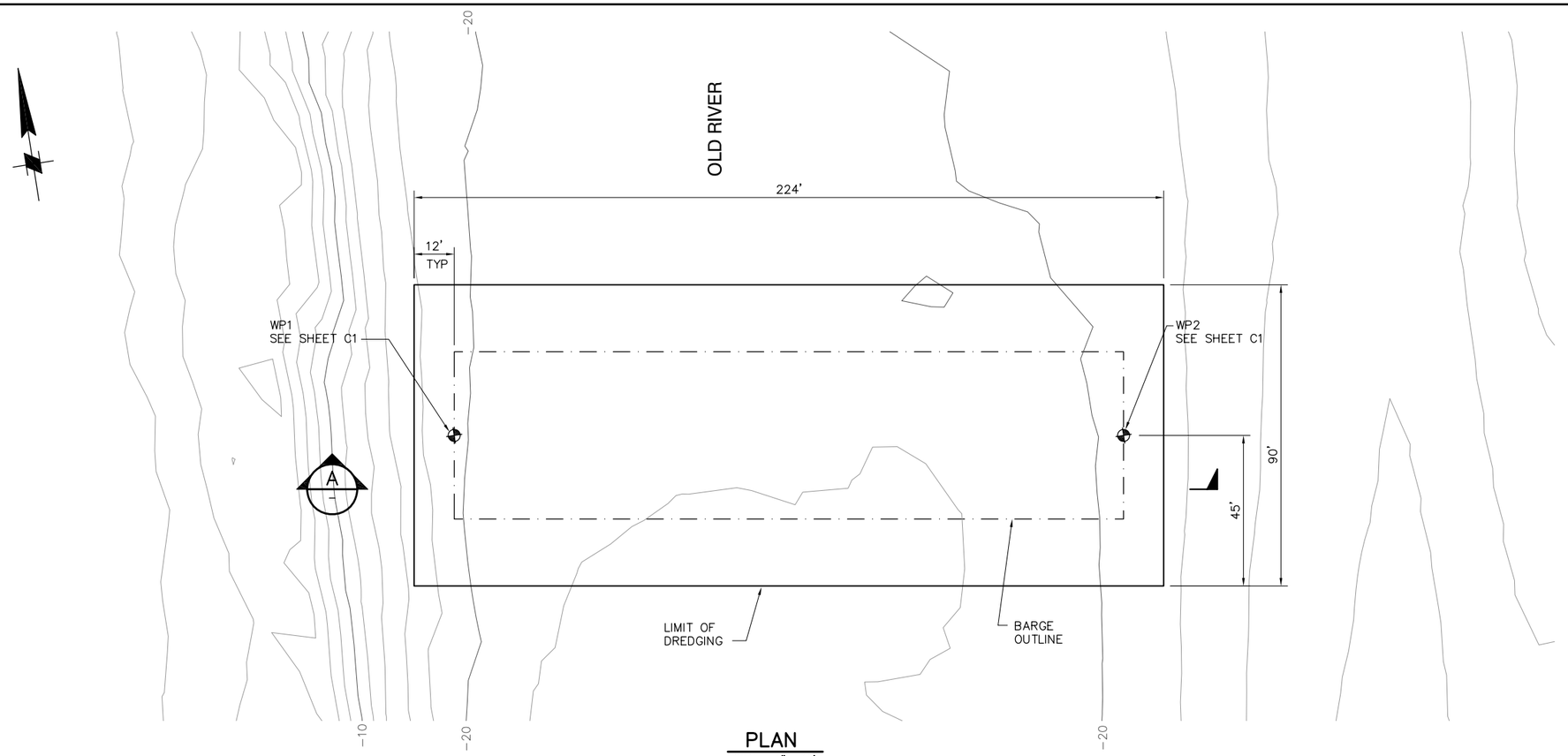
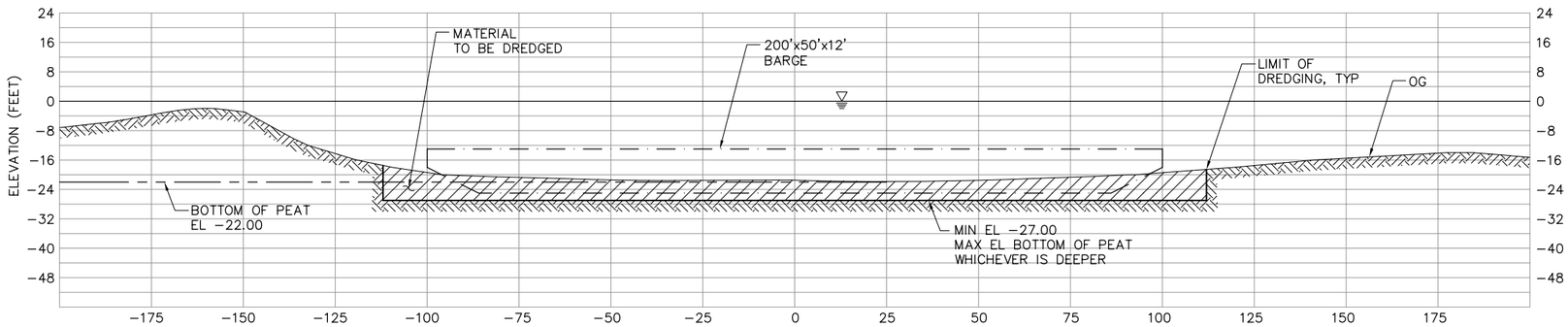


PLAN
SCALE: 1"= 20'



A SECTION
SCALE: 1"=20'

20' 0' 20' 40'

SCALE: 1"=20'

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 5 OF 65

OLD RIVER
DREDGING PLAN AND SECTION

C2

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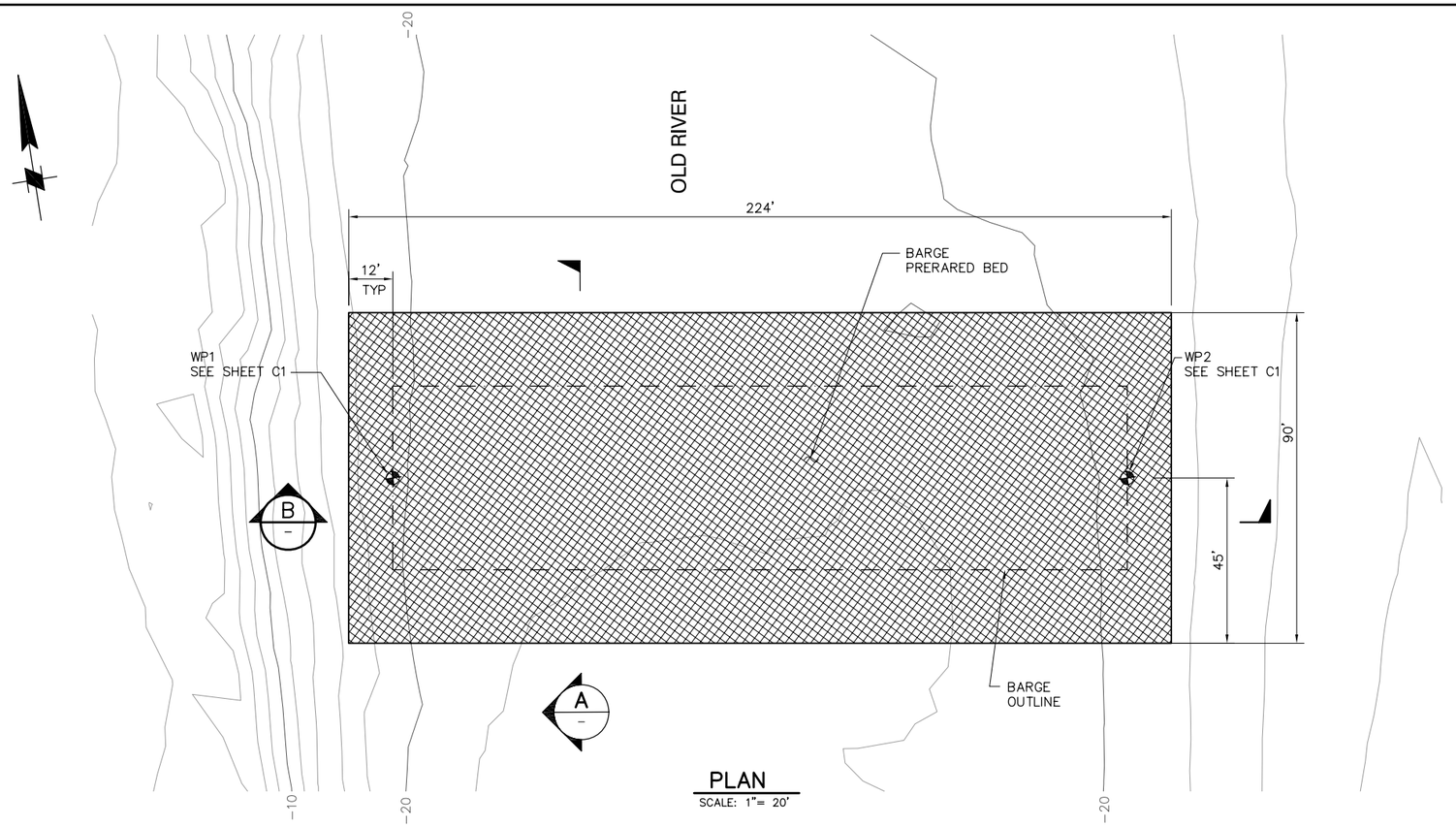
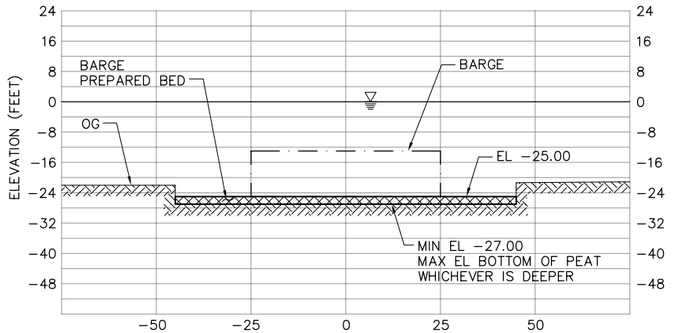
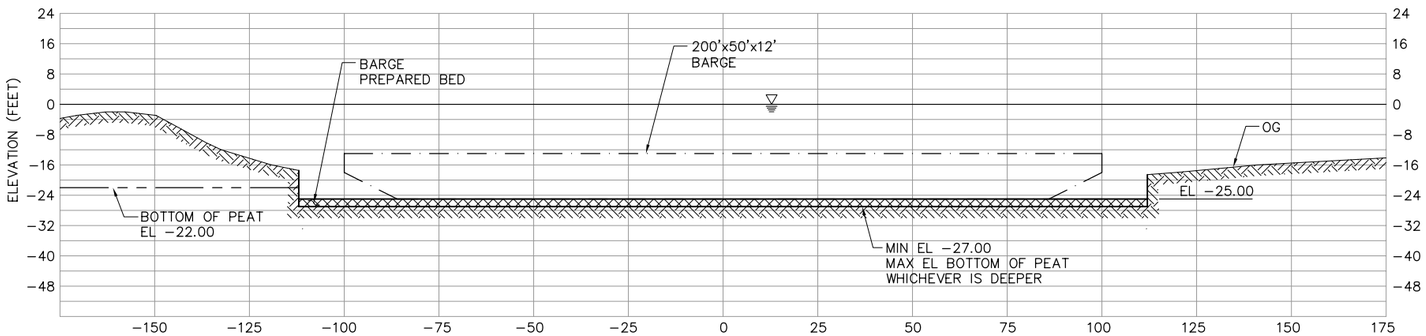


PLAN
SCALE: 1"= 20'



A SECTION
SCALE: 1"=20'



B SECTION
SCALE: 1"=20'

20' 0' 20' 40'
SCALE: 1"=20'

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TWO GATE FISH PROTECTION PLAN

OLD RIVER
BARGE PREPARED BED

DATE 12/09/08

SHEET 6 OF 65

C3

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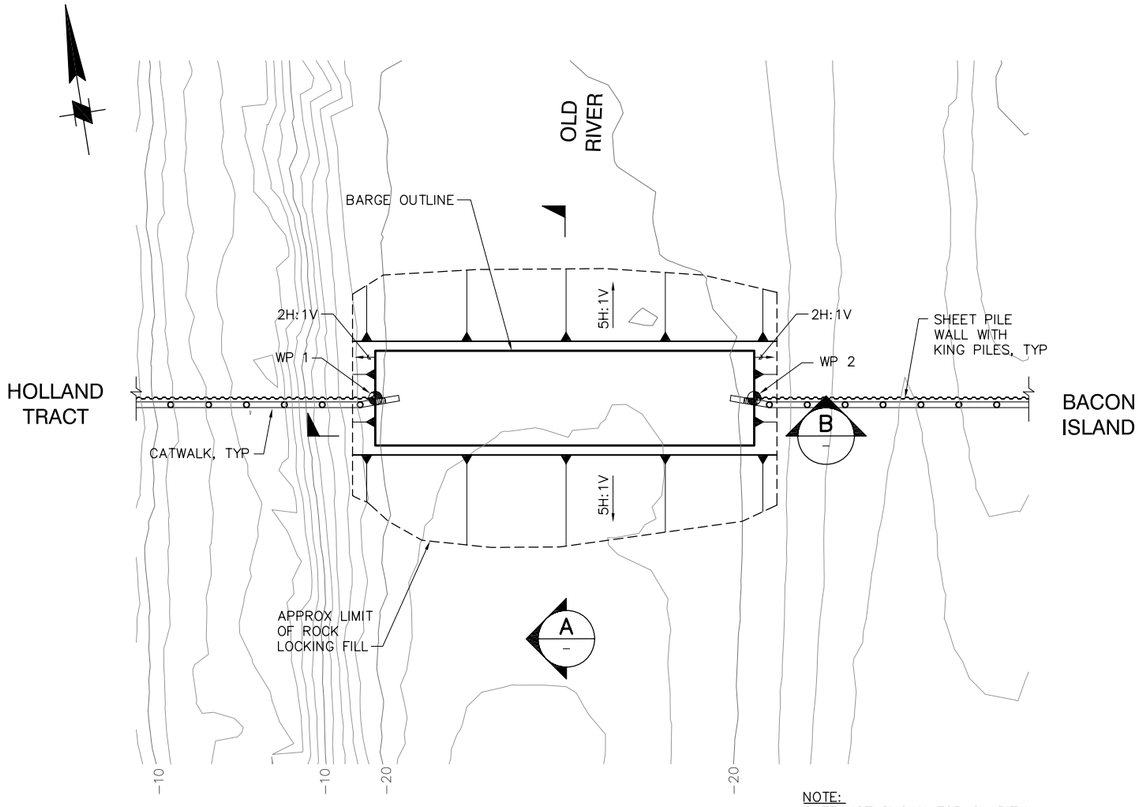
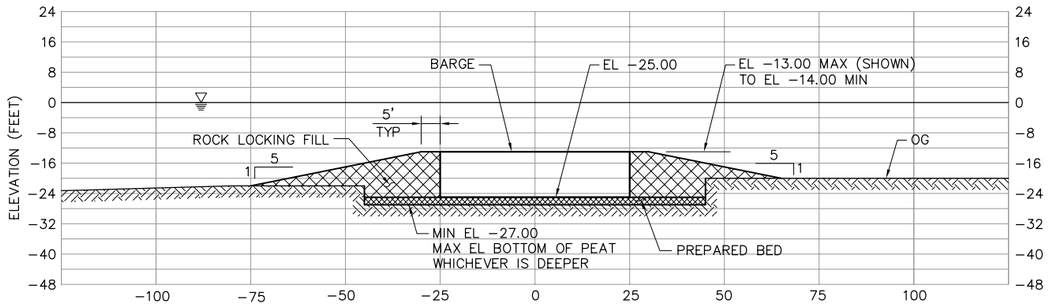
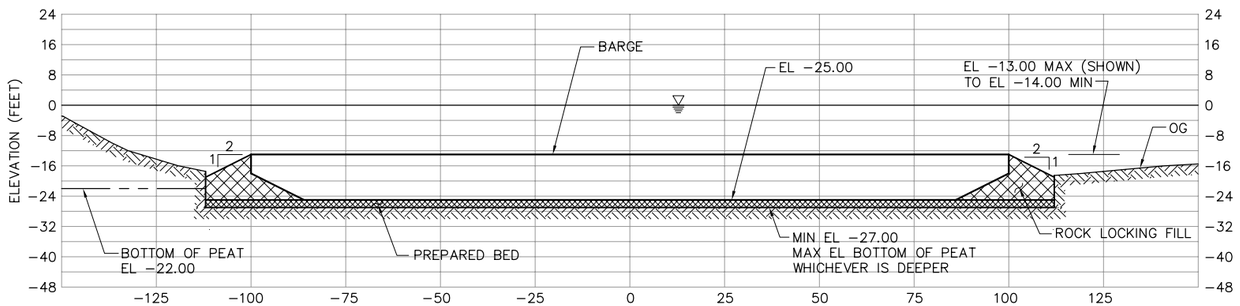


PLAN
SCALE: 1" = 40'

NOTE:
GATE NOT SHOWN FOR CLARITY.



A SECTION
SCALE: 1"=20'



B SECTION
SCALE: 1"=20'

NOTE:
KING PILES AND SHEET PILES NEAR BARGE
SHALL BE PLACED BEFORE ROCK LOCKING FILL.

40' 0' 40' 80'
SCALE: 1"=40'

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08
SHEET 7 OF 65

OLD RIVER APPROACH RAMP PLAN AND SECTIONS

C4

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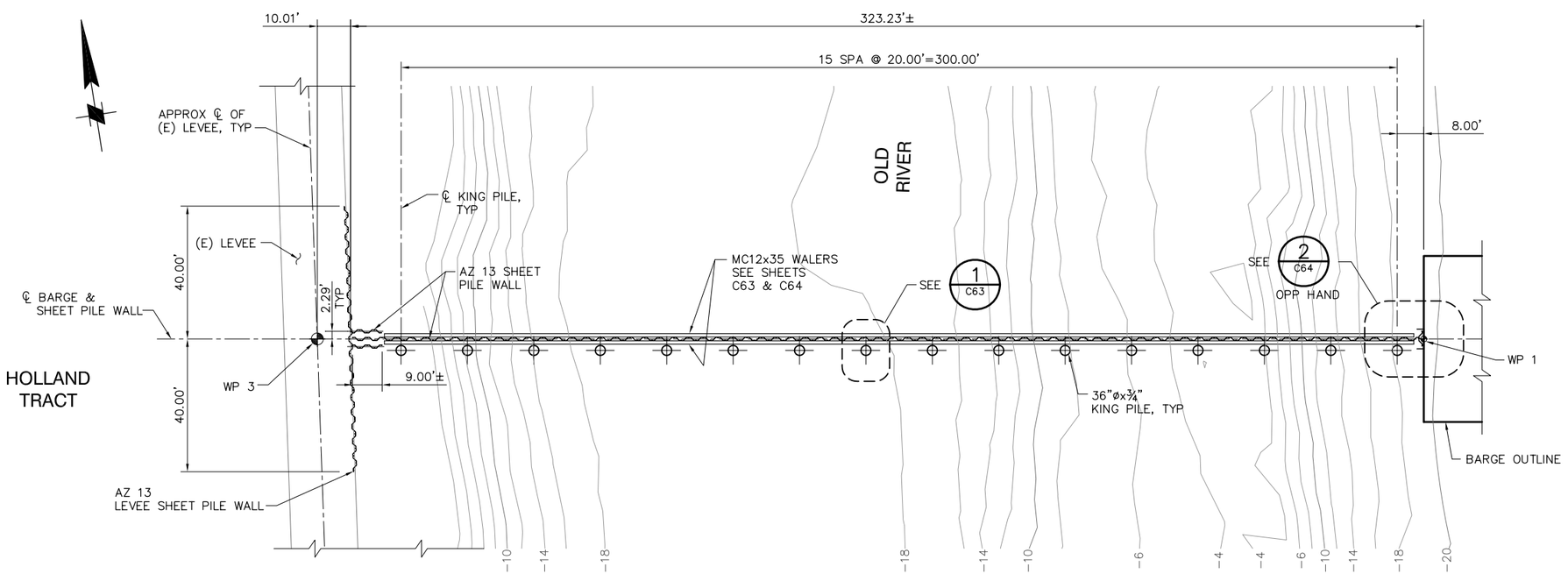
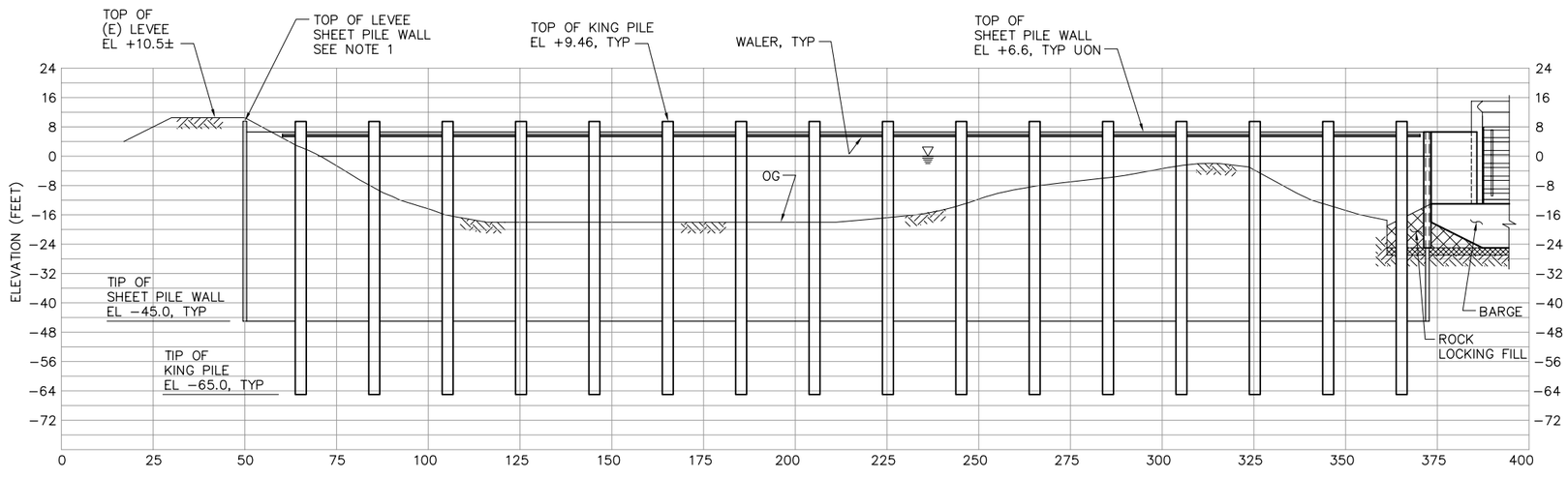


PLAN
SCALE: 1"= 20'

NOTE:
CATWALK NOT SHOWN FOR CLARITY.



NOTE:
CATWALK NOT SHOWN FOR CLARITY.

ELEVATION
SCALE: 1"= 20'

NOTES:

1. TOP OF LEVEE SHEET PILE WALL SHALL BE 6" BELOW TOP OF (E) LEVEE.

20' 0' 20' 40'
SCALE: 1"=20'

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 8 OF 65

OLD RIVER
SHEET PILE WALL ARRANGEMENT
PLAN AND ELEVATION, SHEET 1

C5

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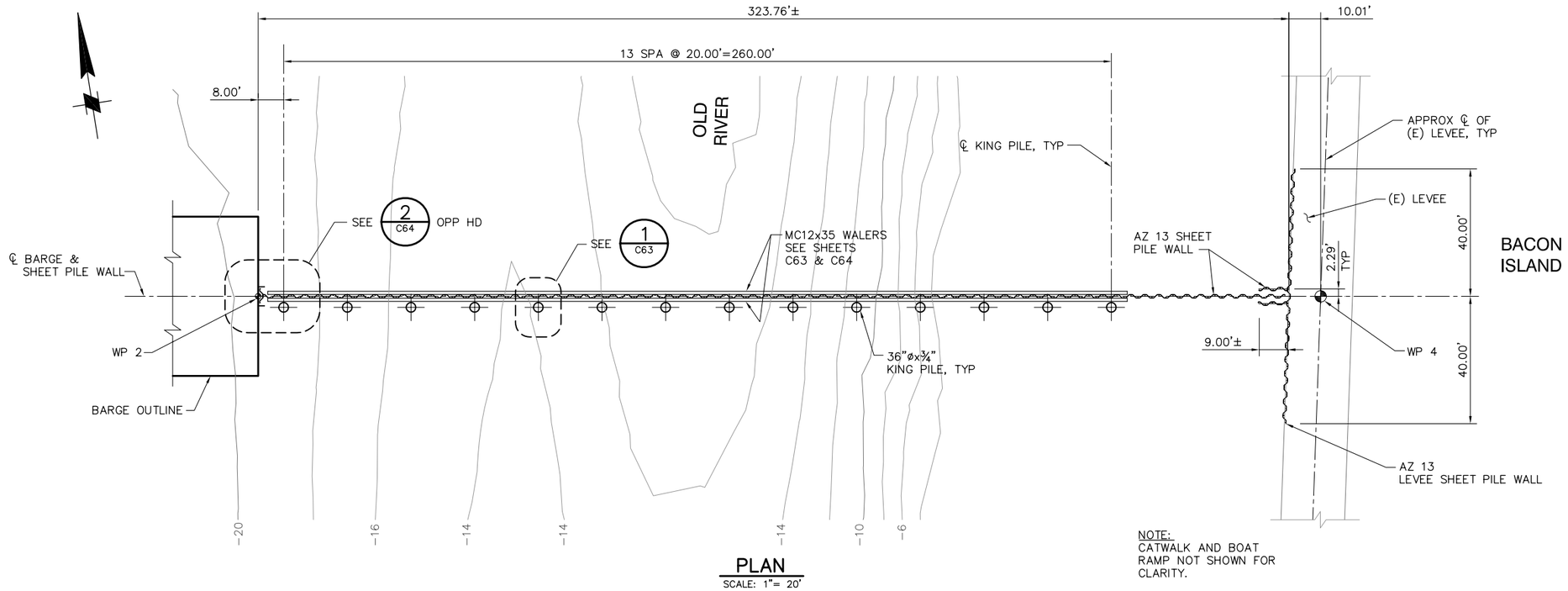
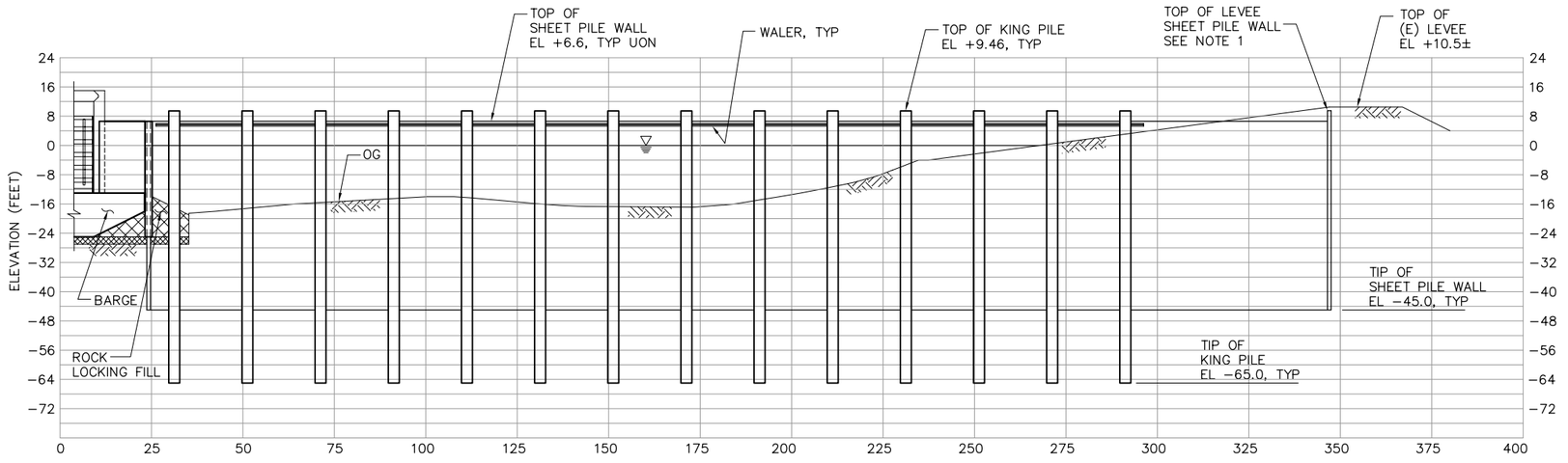


PLAN
SCALE: 1"= 20'

NOTE:
CATWALK AND BOAT RAMP NOT SHOWN FOR CLARITY.



ELEVATION
SCALE: 1"= 20'

NOTE:
CATWALK AND BOAT RAMP NOT SHOWN FOR CLARITY.

NOTES:

1. TOP OF LEVEE SHEET PILE WALL SHALL BE 6" BELOW TOP OF (E) LEVEE.

20' 0' 20' 40'
SCALE: 1"=20'

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 9 OF 65

OLD RIVER
SHEET PILE WALL ARRANGEMENT
PLAN AND ELEVATION, SHEET 2

C6

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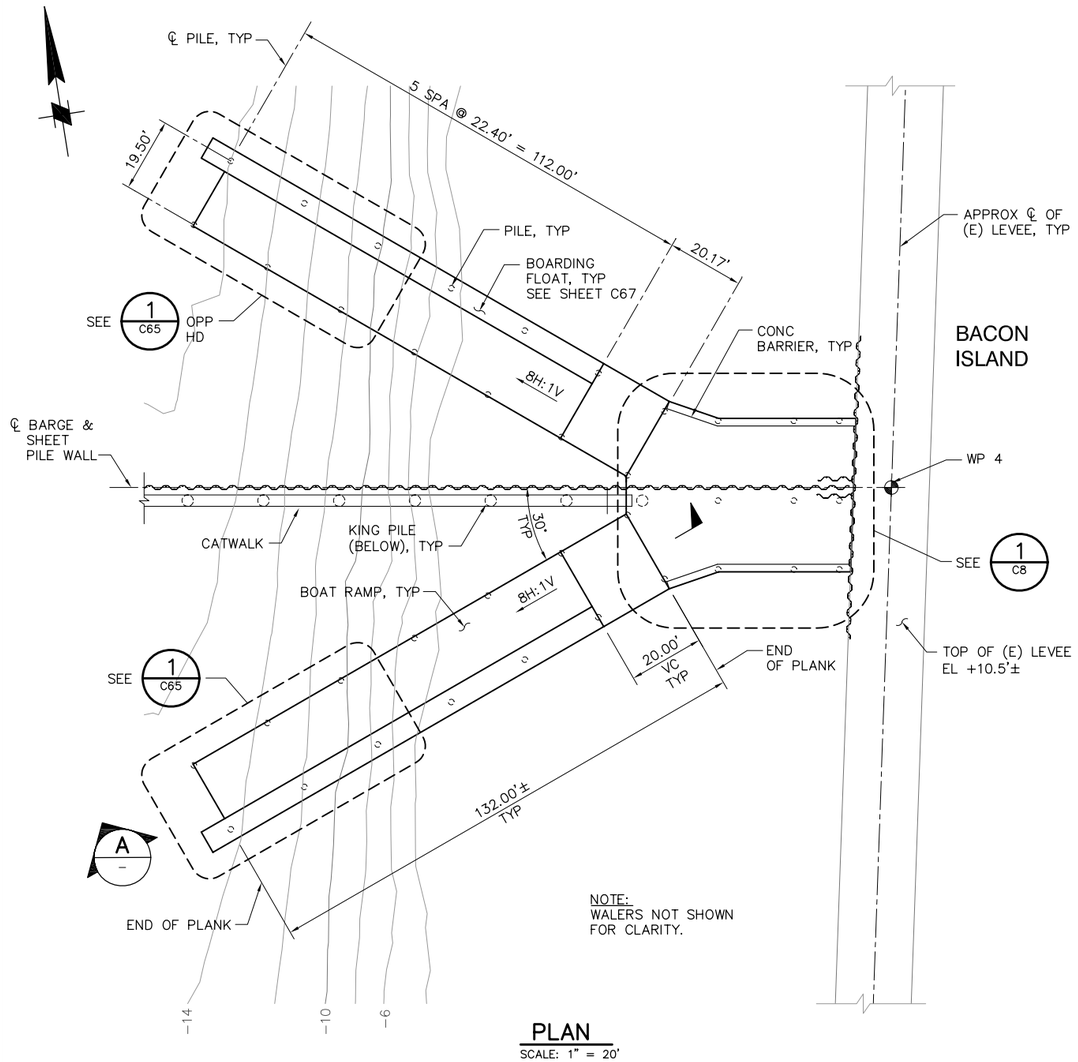
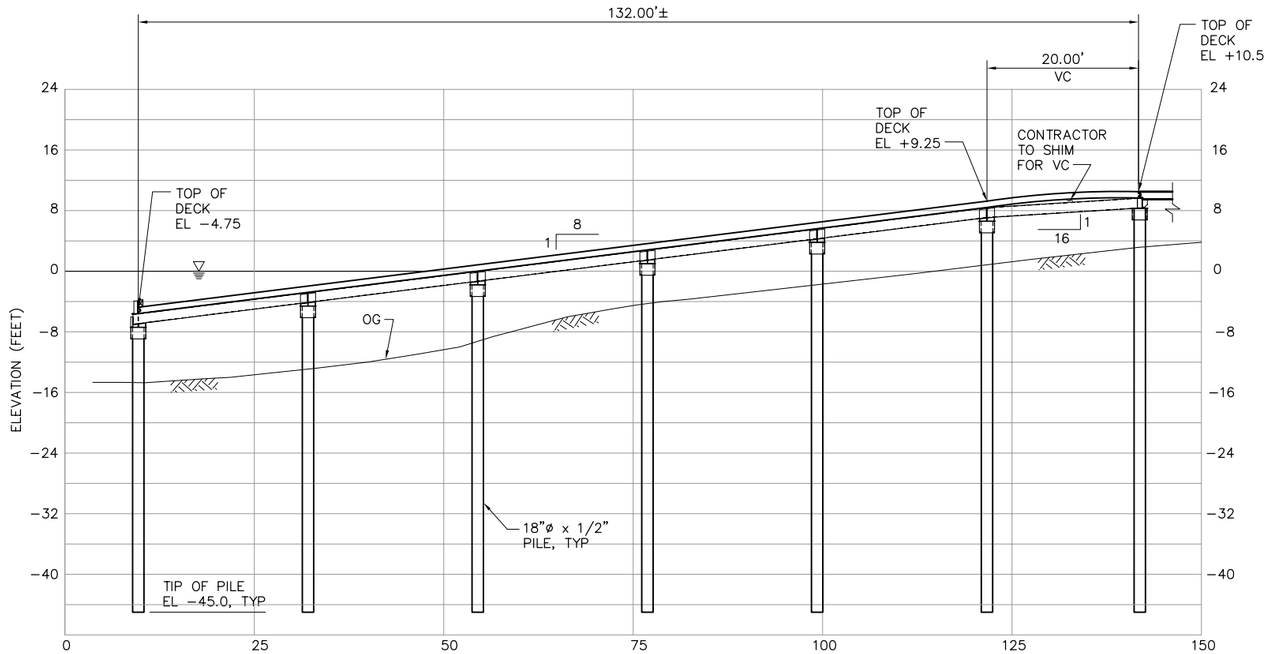


PLAN
SCALE: 1" = 20'



A — SECTION
SCALE: 1"=10'

NOTE:
CATWALK AND SHEET PILE WALL NOT SHOWN FOR CLARITY.

20' 0' 20' 40'
SCALE: 1"=20'

90% SUBMITTAL

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TWO GATE FISH PROTECTION PLAN

OLD RIVER
BOAT RAMP PLAN AND SECTIONS
SHEET 1

DATE 12/09/08

SHEET 10 OF 65

C7

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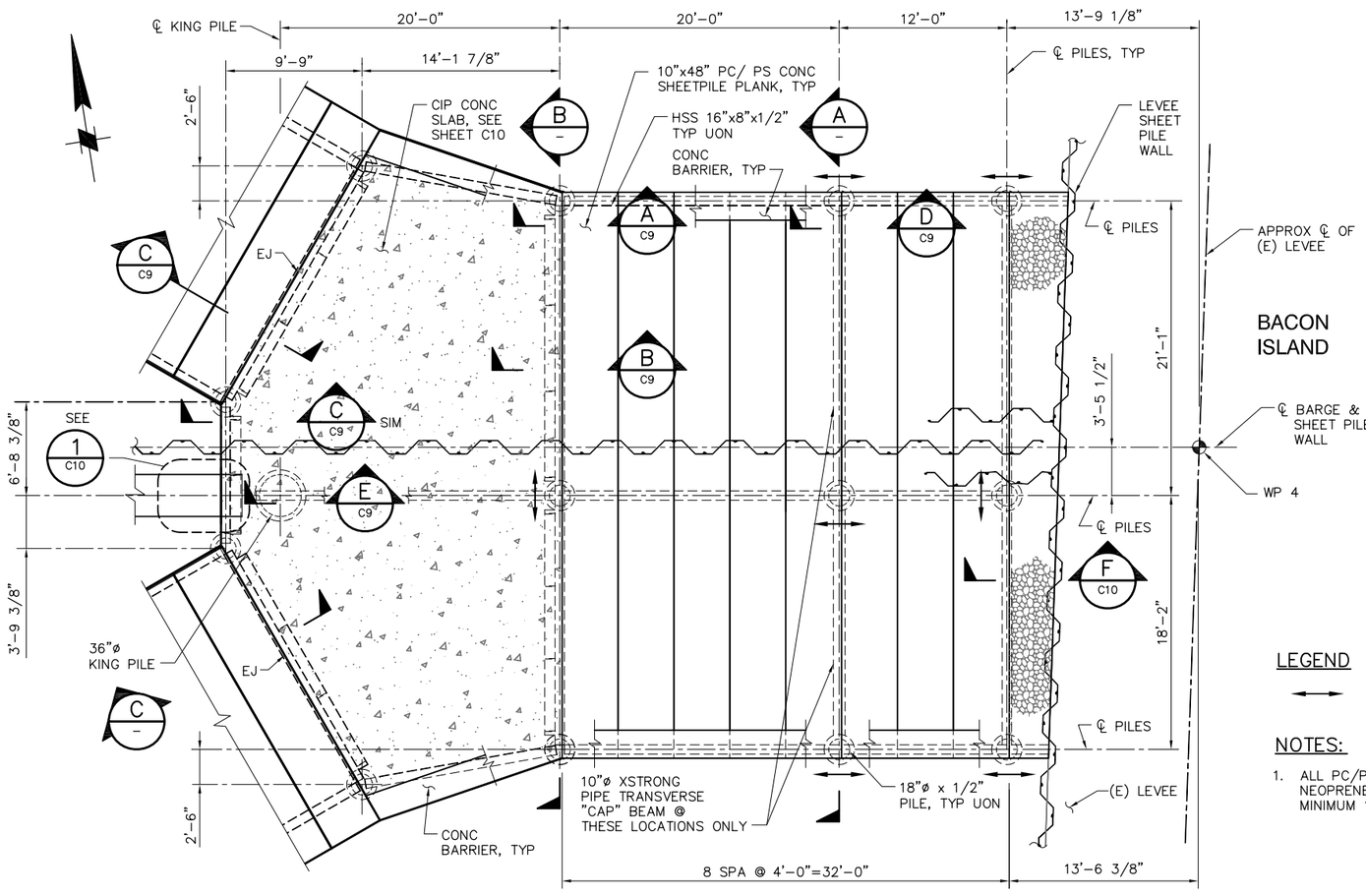
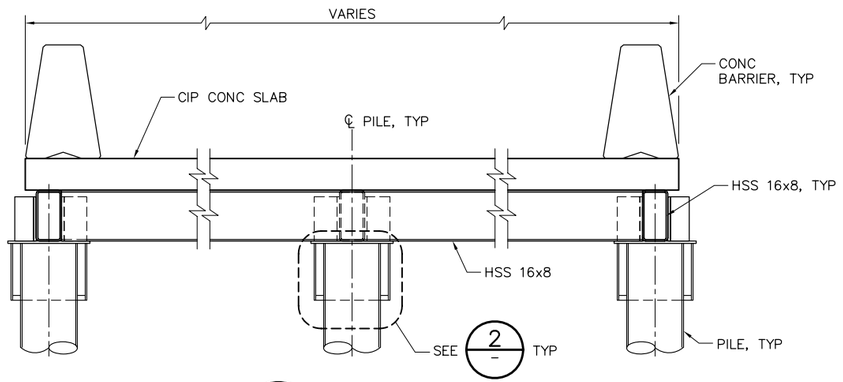
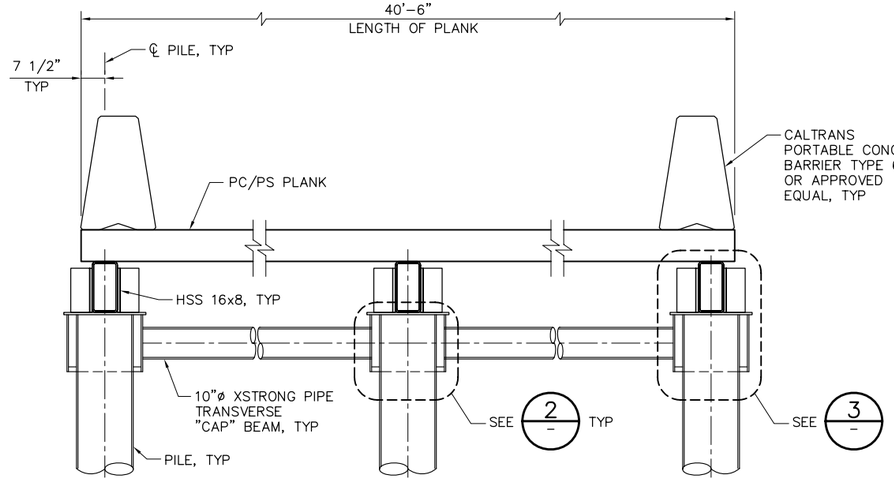


1 C7 **DETAIL**
SCALE: 3/16" = 1'–0"



B **SECTION**
SCALE: 1/2"=1'–0"



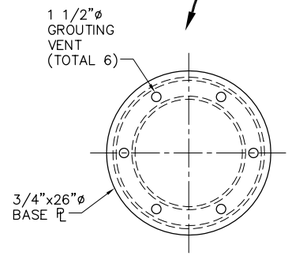
A **SECTION**
SCALE: 1/2"=1'–0"

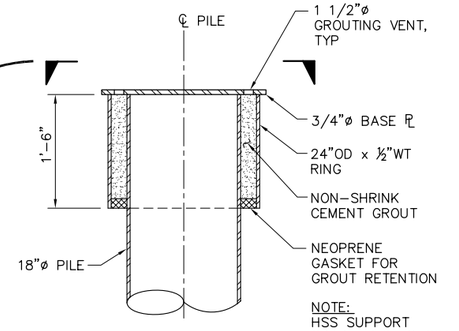
LEGEND

HSS 16x8x1/2 CONTINUOUS THRU SUPPORT

NOTES:

1. ALL PC/PS PLANKS SHALL BEAR ON/AGAINST NEOPRENE "UNDERLAYMENT" BEARING STRIP WITH A MINIMUM 1/8" THICKNESS.

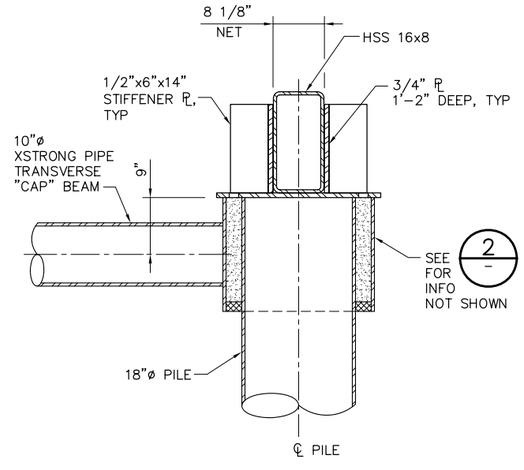




NOTE:
HSS SUPPORT CRADLE NOT SHOWN.

TYPICAL PILE CAP FOR 18"ø PILE UON

2 **DETAIL**
SCALE: 1" = 1'–0"



3 **DETAIL**
SCALE: 1" = 1'–0"

1'–0" 0'–0" 1'–0" 2'–0"
SCALE: 1"=1'–0"

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JMB	EP	TDB
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6097–03	RMR	

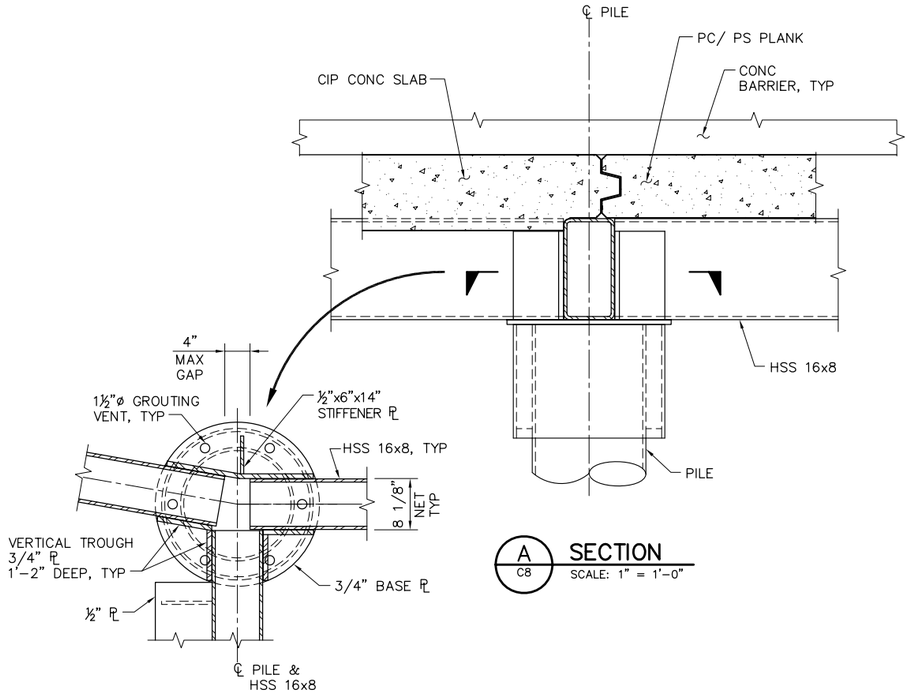
TWO GATE FISH PROTECTION PLAN

DATE 12/09/08
SHEET 11 OF 65

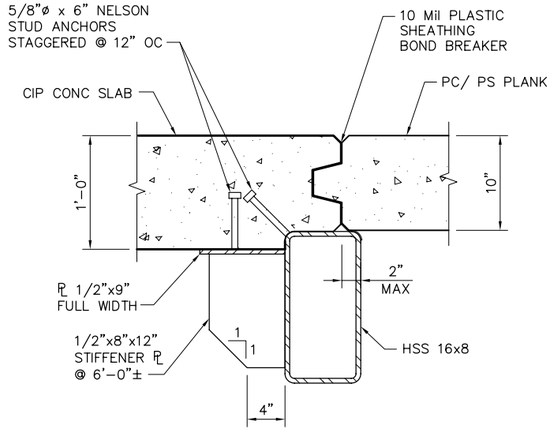
OLD RIVER
BOAT RAMP PLAN AND SECTIONS
SHEET 2

C8

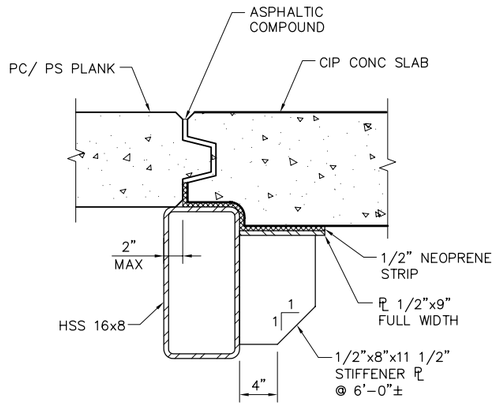
P:\6097–03 SWC GATE DESIGN\CADD\DWG\609703–C8–C10.DWG 12/8/2008 1:24 PM



A C8 **SECTION**
SCALE: 1" = 1'-0"

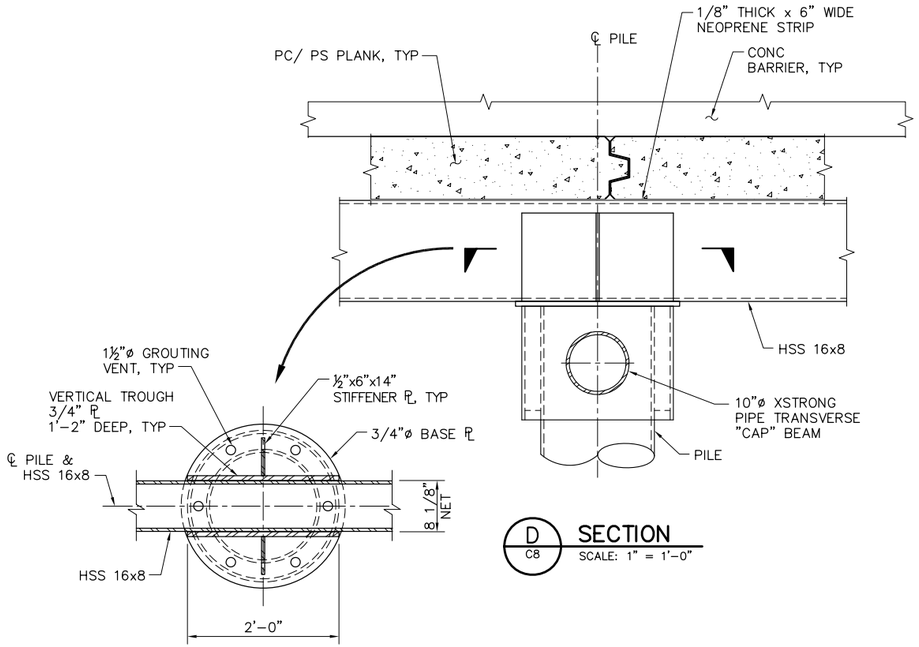


B C8 **SECTION**
SCALE: 1 1/2" = 1'-0"

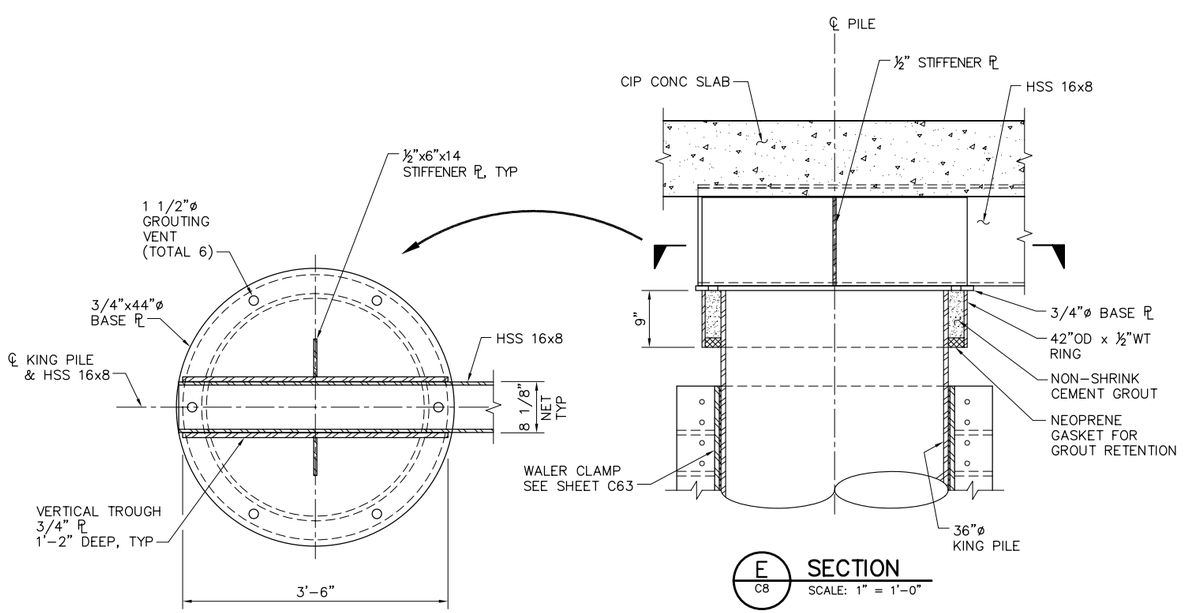


SECTION @ EXPANSION JOINT

C C8 **SECTION**
SCALE: 1 1/2" = 1'-0"



D C8 **SECTION**
SCALE: 1" = 1'-0"



E C8 **SECTION**
SCALE: 1" = 1'-0"

1'-0" 0'-0" 1'-0" 2'-0"
SCALE: 1"=1'-0"

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TWO GATE FISH PROTECTION PLAN

OLD RIVER
BOAT RAMP PLAN AND SECTIONS
SHEET 3

DATE 12/09/08

SHEET 12 OF 65

C9

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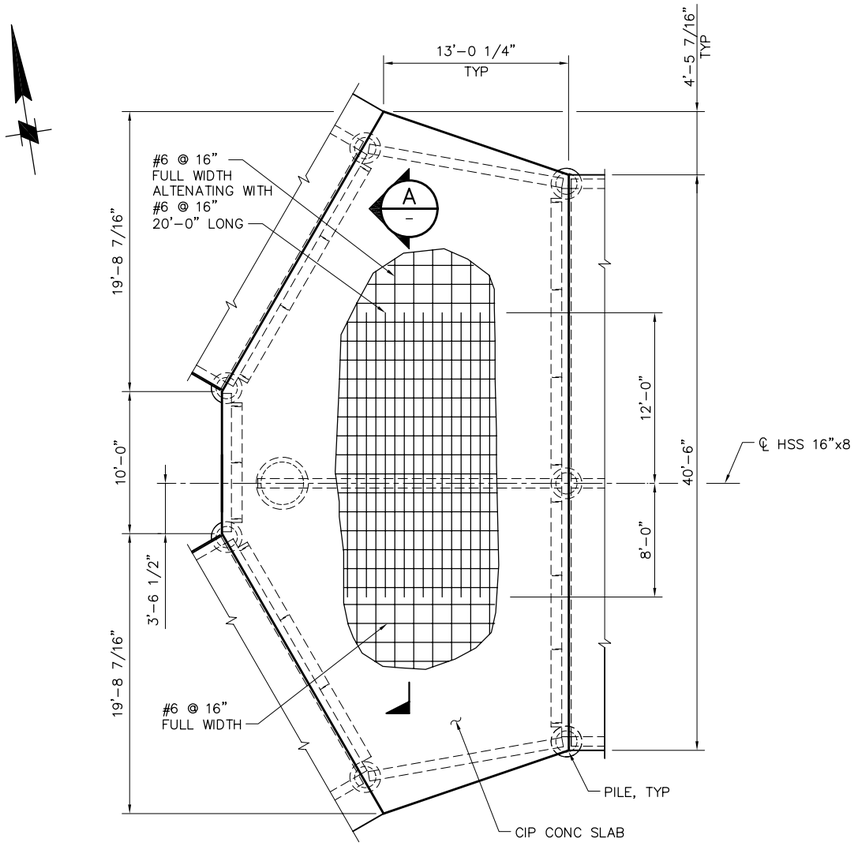
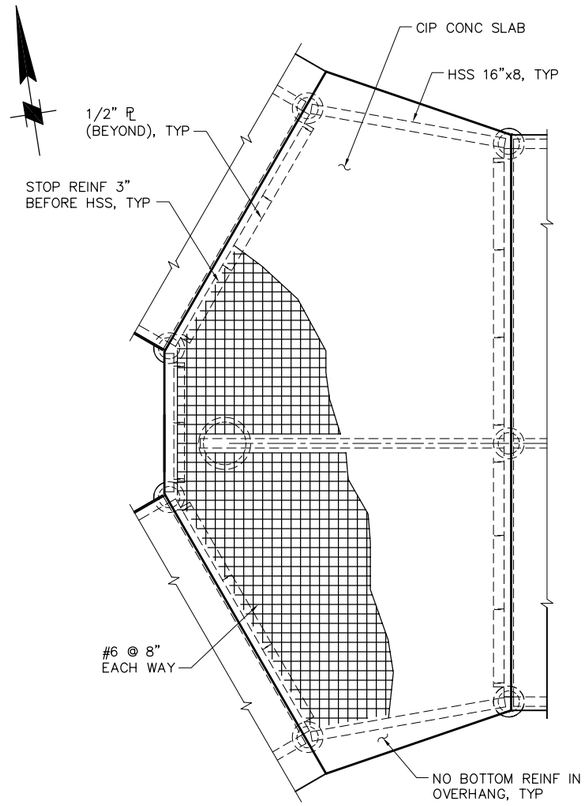


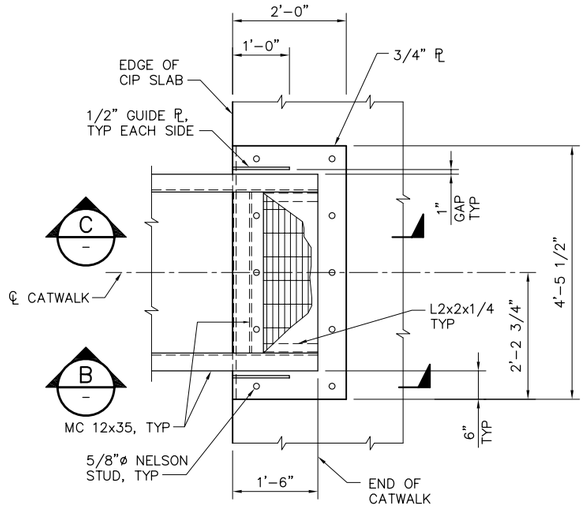
TOP SLAB REINFORCEMENT

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



BOTTOM SLAB REINFORCEMENT

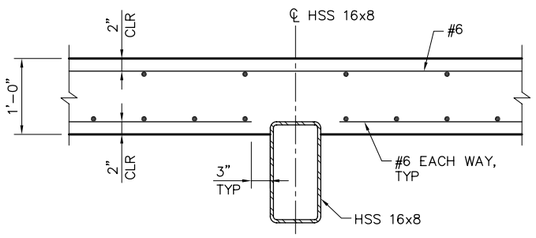
SCALE: 3/16"= 1'-0"



PLAN AT END OF CATWALK

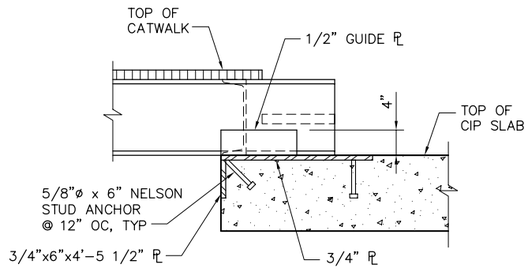
1 / C8 DETAIL

SCALE: 3/4" = 1'-0"



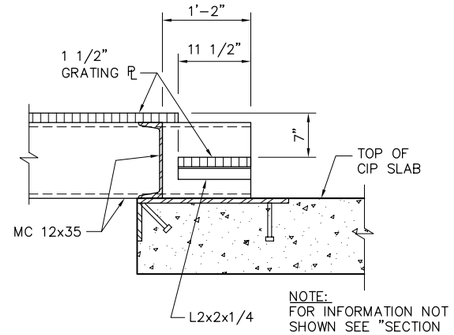
A / – SECTION

SCALE: 1" = 1'-0"



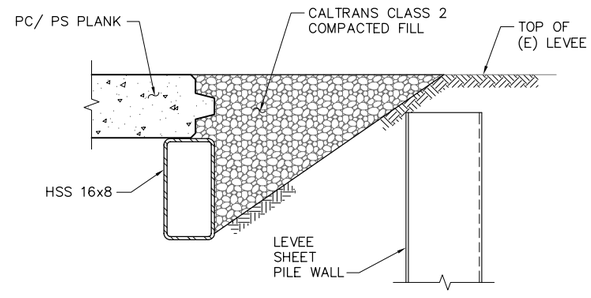
B / – SECTION

SCALE: 1" = 1'-0"



C / – SECTION

SCALE: 1" = 1'-0"



F / C8 SECTION

SCALE: 1" = 1'-0"

1'-0" 0'-0" 1'-0" 2'-0"

SCALE: 1"=1'-0"

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 13 OF 65

OLD RIVER
BOAT RAMP PLAN AND SECTIONS
SHEET 4

C10

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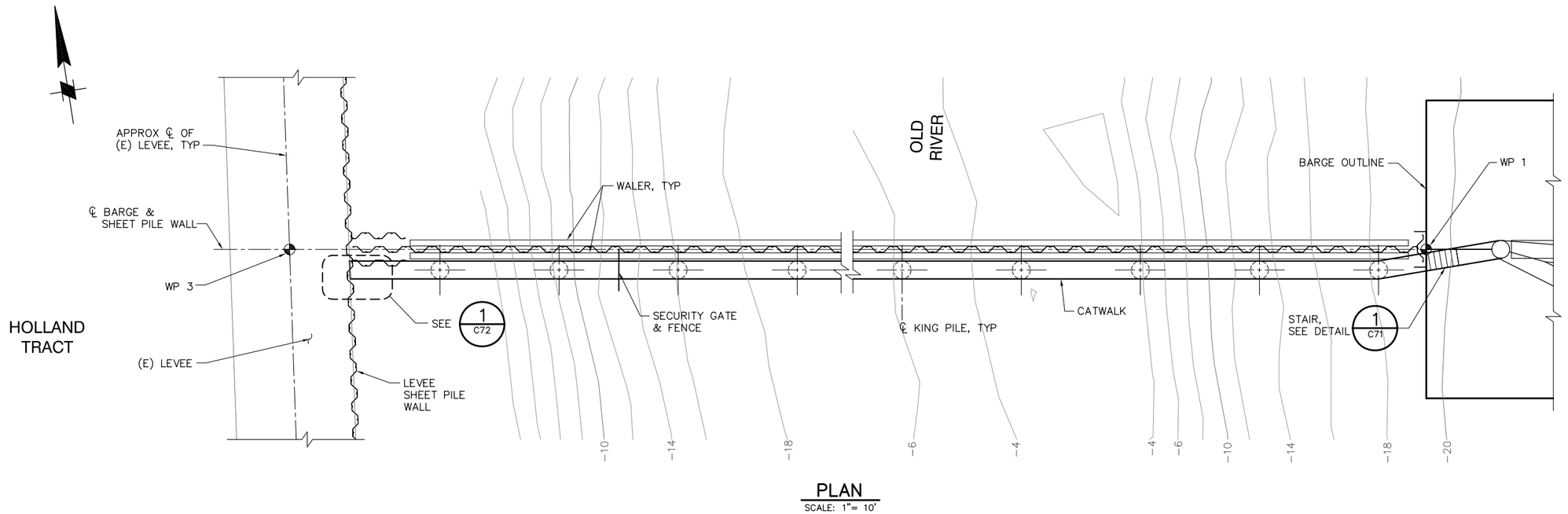
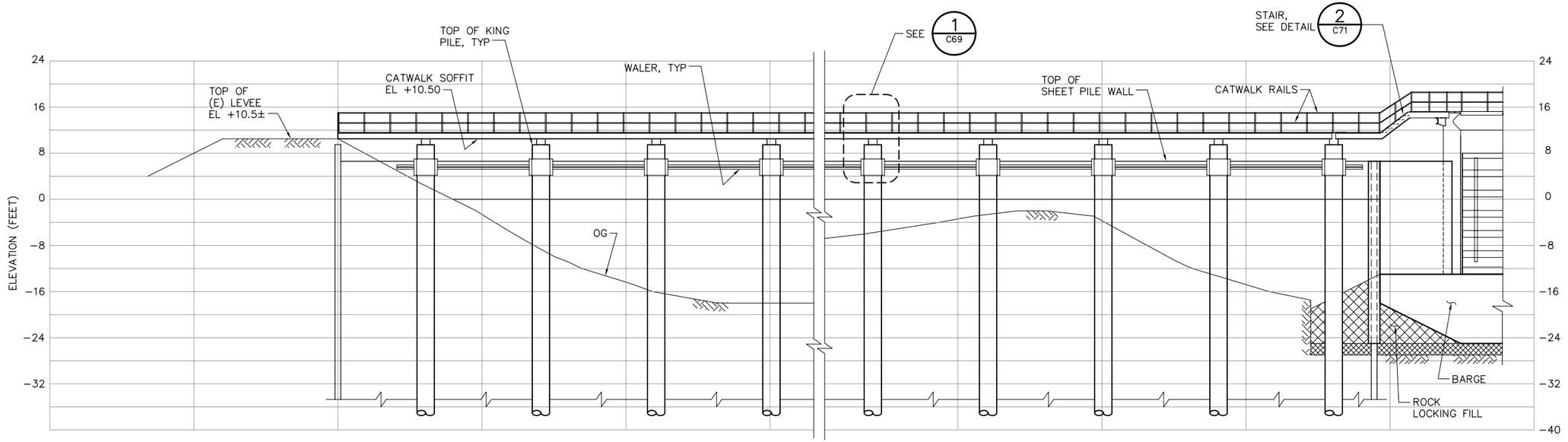


PLAN
SCALE: 1"= 10'



ELEVATION
SCALE: 1"= 10'

10' 0' 10' 20'
SCALE: 1"=10'

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 14 OF 65

OLD RIVER
CATWALK
PLAN AND ELEVATION, SHEET 1

C11

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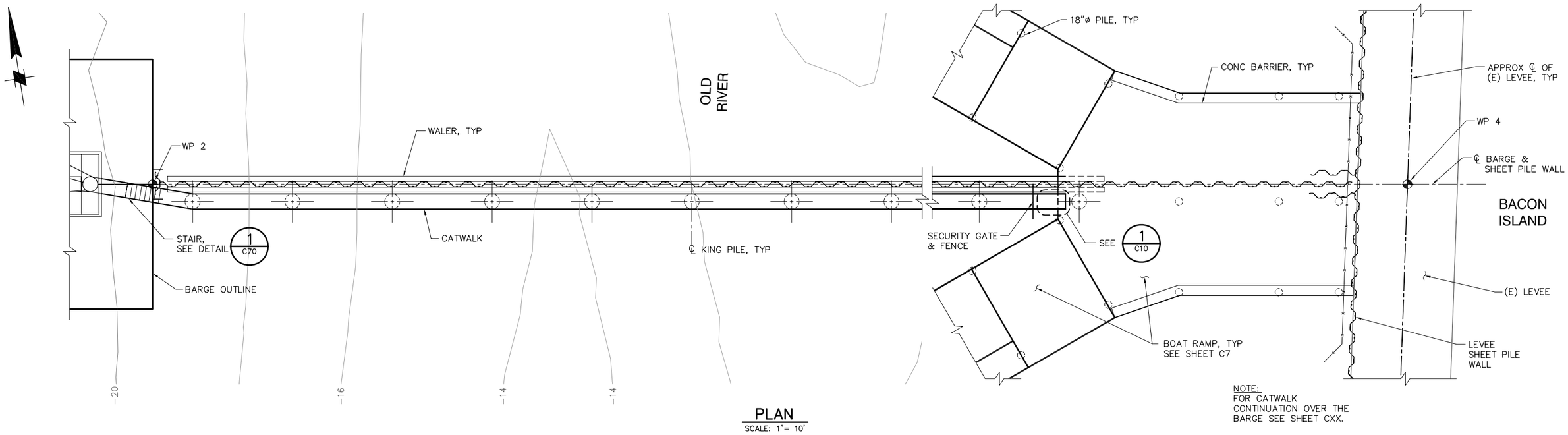
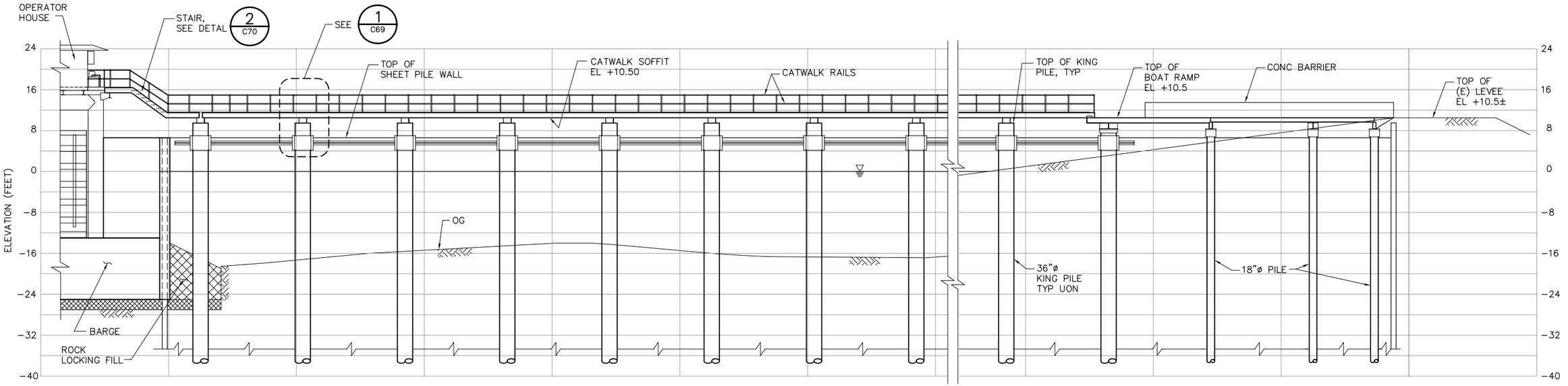


PLAN
SCALE: 1"= 10'



ELEVATION
SCALE: 1"= 10'

10' 0' 10' 20'
SCALE: 1"=10'

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 15 OF 65

OLD RIVER
CATWALK
PLAN AND ELEVATION, SHEET 2

C12

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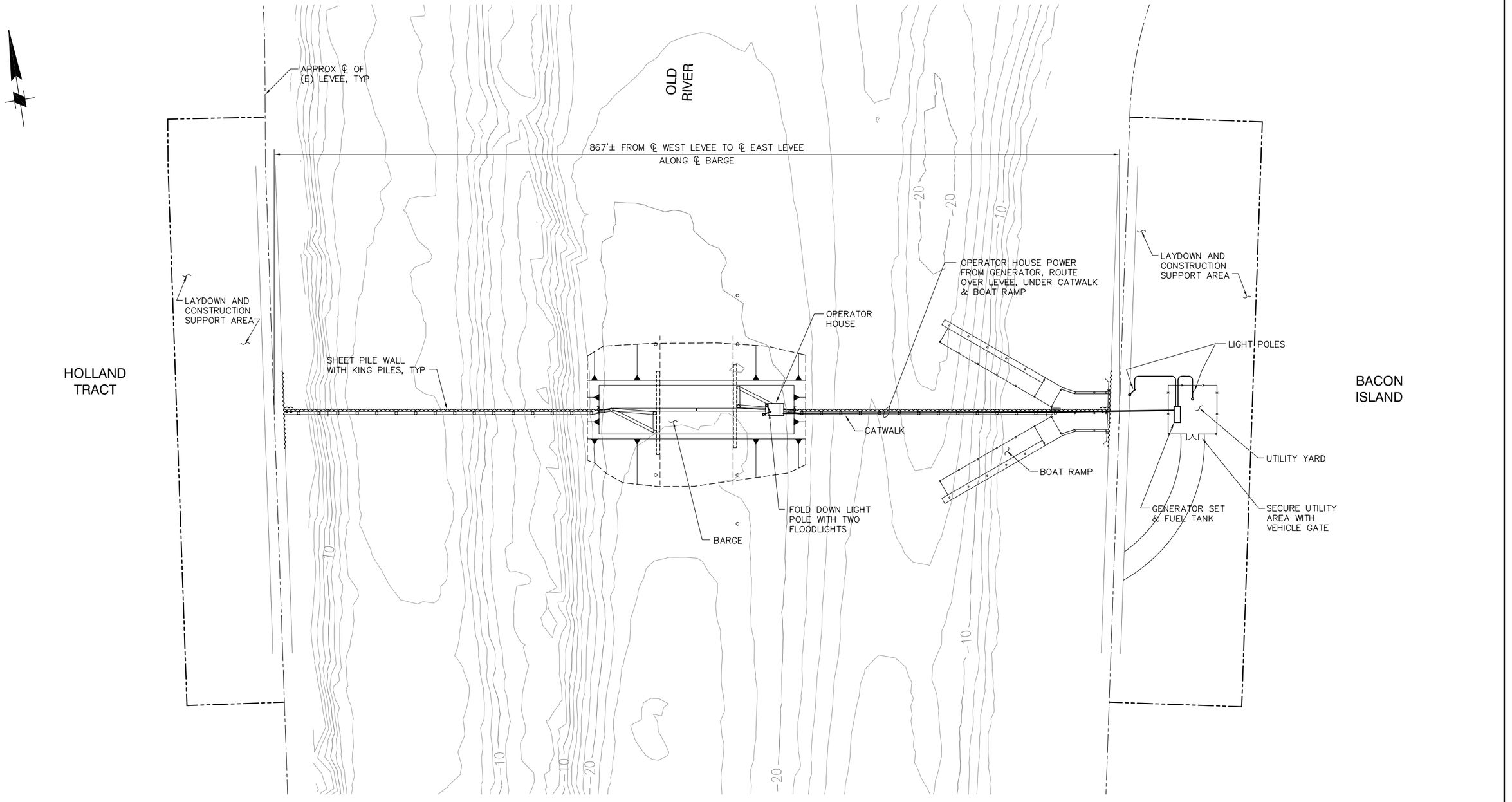

ELECTRICAL SITE PLAN

SCALE: 1"= 50'

50' 0' 50' 100'

SCALE: 1"=50'

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 16 OF 65

OLD RIVER
ELECTRICAL SITE PLAN

C13

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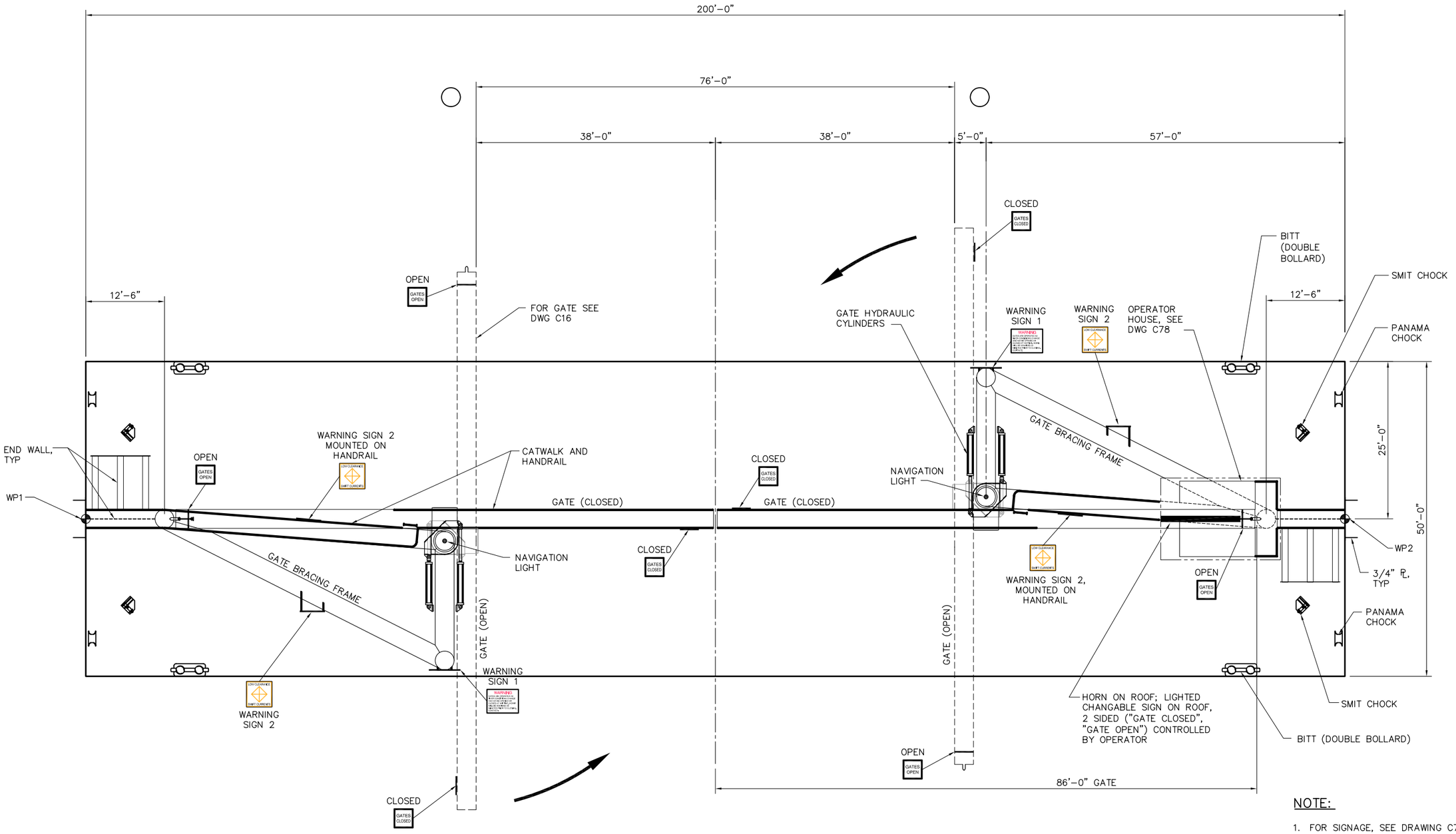

BARGE PLAN

SCALE: 1/8"= 1'-0"

8'-0" 0'-0" 8'-0" 16'-0"

SCALE: 1/8"=1'-0"

NOTE:

1. FOR SIGNAGE, SEE DRAWING C75.
2. FOR SIGNAGE MOUNTING SEE DRAWING C76.

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TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 17 OF 65

OLD RIVER
BARGE GENERAL ARRANGEMENT PLAN

C14

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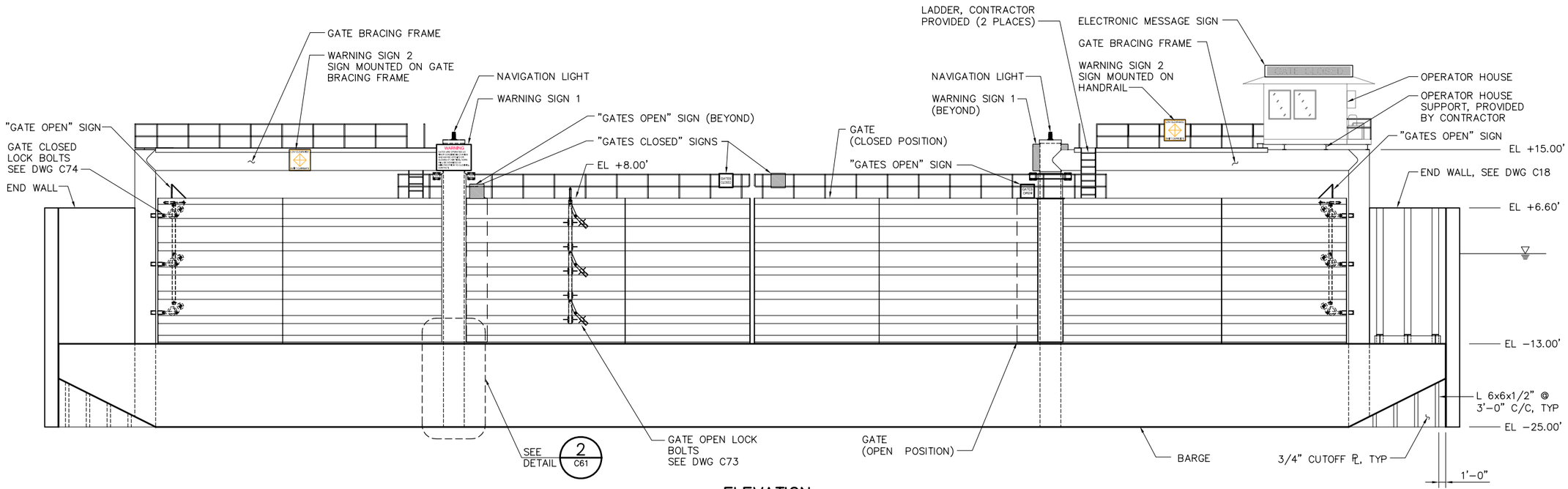

ELEVATION

SCALE: 1/8"= 1'-0"

NOTES:

1. FOR SIGNAGE, SEE DRAWING C75.
2. FOR SIGNAGE MOUNTING SEE DRAWING C76.

8'-0" 0'-0" 8'-0" 16'-0"

SCALE: 1/8"=1'-0"

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TWO GATE FISH PROTECTION PLAN

OLD RIVER
BARGE GENERAL ARRANGEMENT
ELEVATION

DATE 12/09/08

SHEET 18 OF 65

C15

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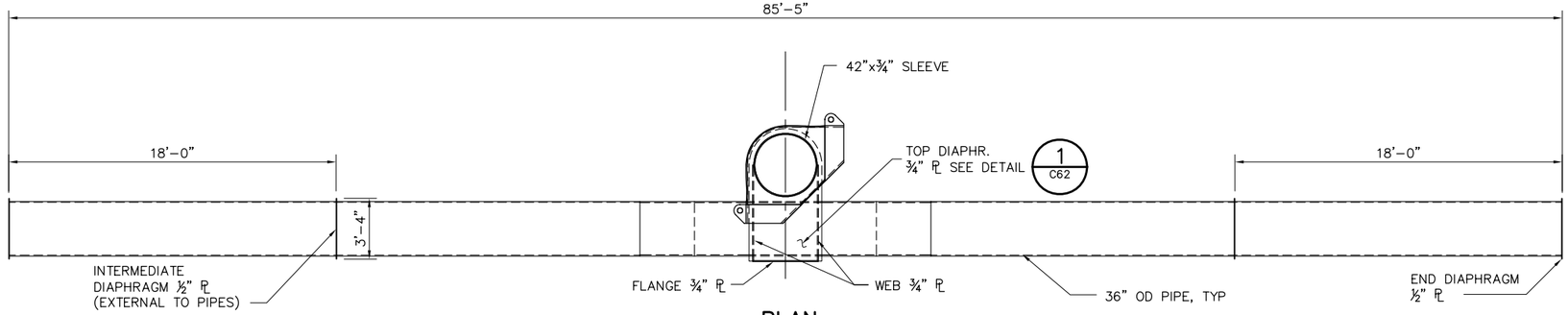
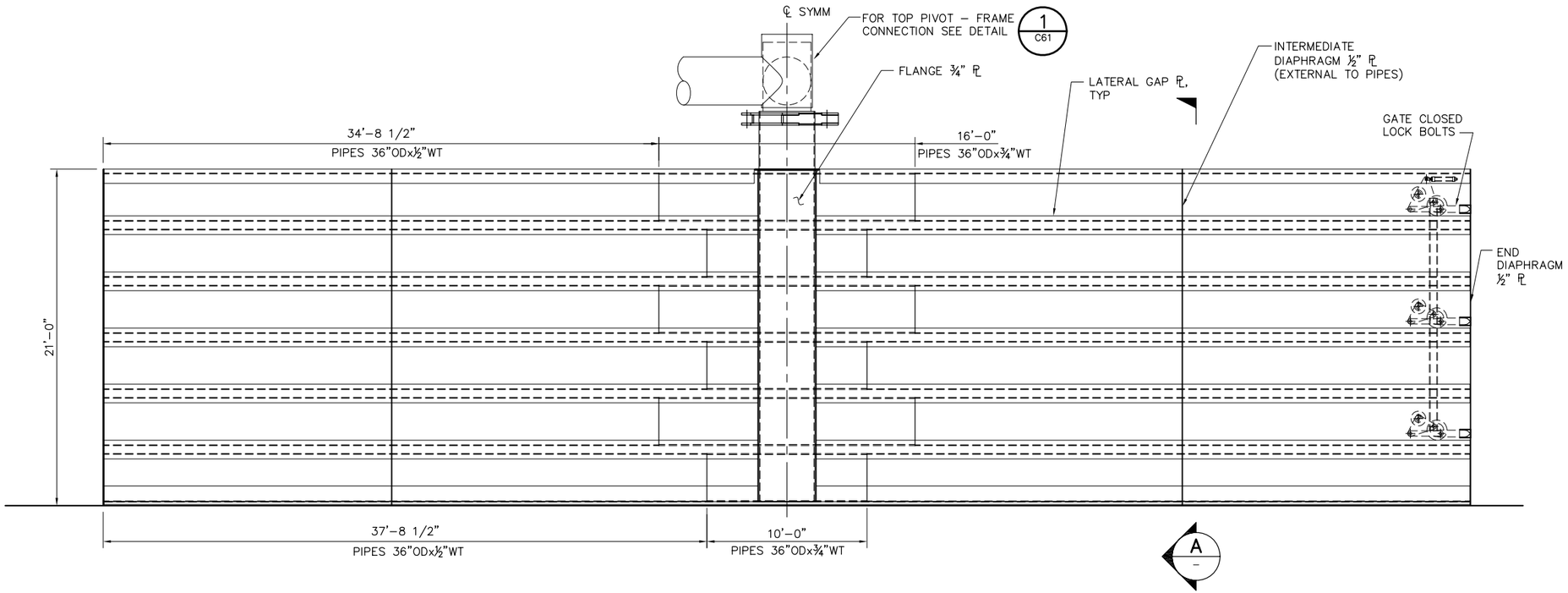


PLAN
SCALE: 1/4"= 1'–0"
(GATE AT OPEN POSITION SHOWN)

NOTE:
VERTICAL PIVOT NOT SHOWN FOR CLARITY.

NOTE:

BOTTOM GATE PIPE (36"ø) SHALL NOT BE BUOYANT. ONLY UPPER FIVE GATE PIPES SHALL BE BUOYANT.



ELEVATION
SCALE: 1/4"= 1'–0"

SECTION
SCALE: 1/4"=1'–0"

4'–0" 0'–0" 4'–0" 8'–0"
SCALE: 1/4"=1'–0"

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TWO GATE FISH PROTECTION PLAN

OLD RIVER
GATE SCANTLINGS

DATE 12/09/08

SHEET 19 OF 65

C16

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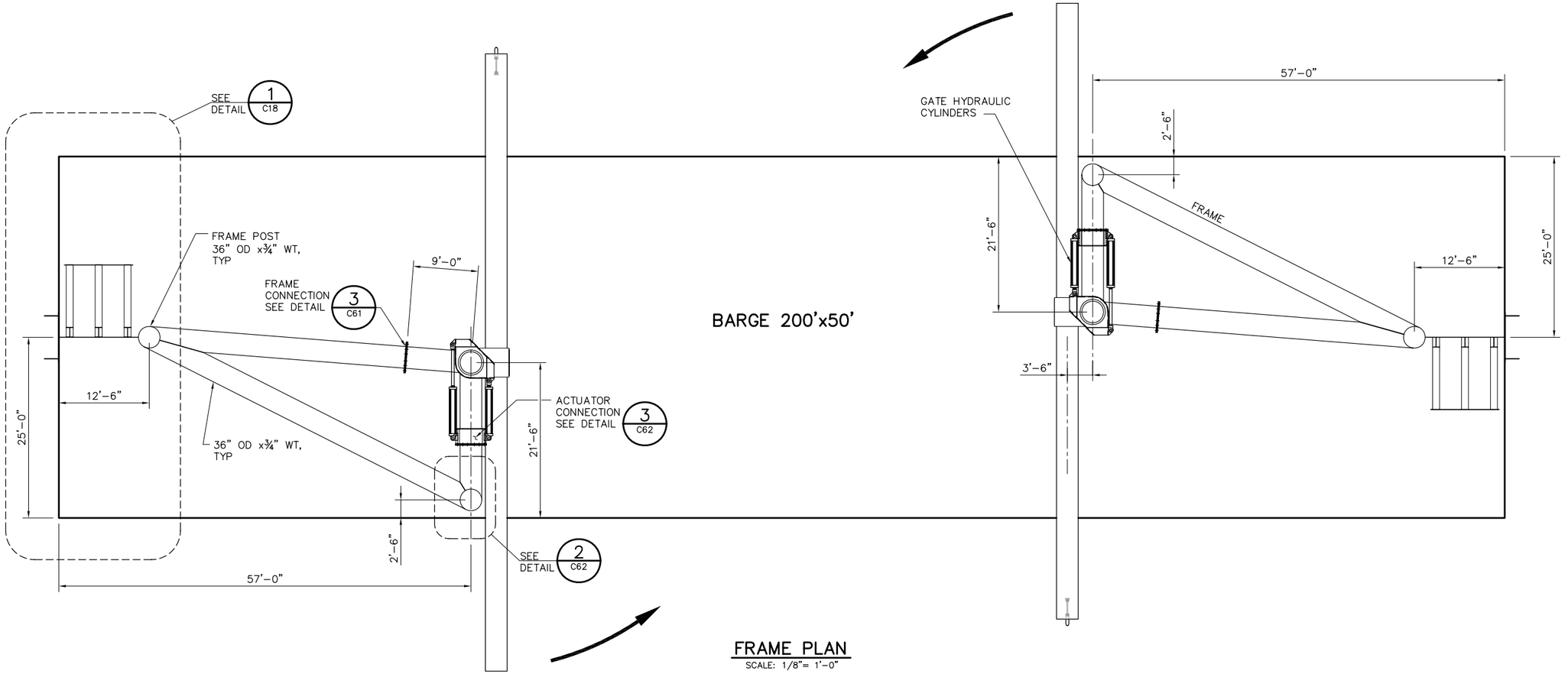

FRAME PLAN
SCALE: 1/8"= 1'-0"

8'-0" 0'-0" 8'-0" 16'-0"

SCALE: 1/8"=1'-0"

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TWO GATE FISH PROTECTION PLAN

OLD RIVER
GATE FRAMING LAYOUT

DATE 12/09/08

SHEET 20 OF 65

C17

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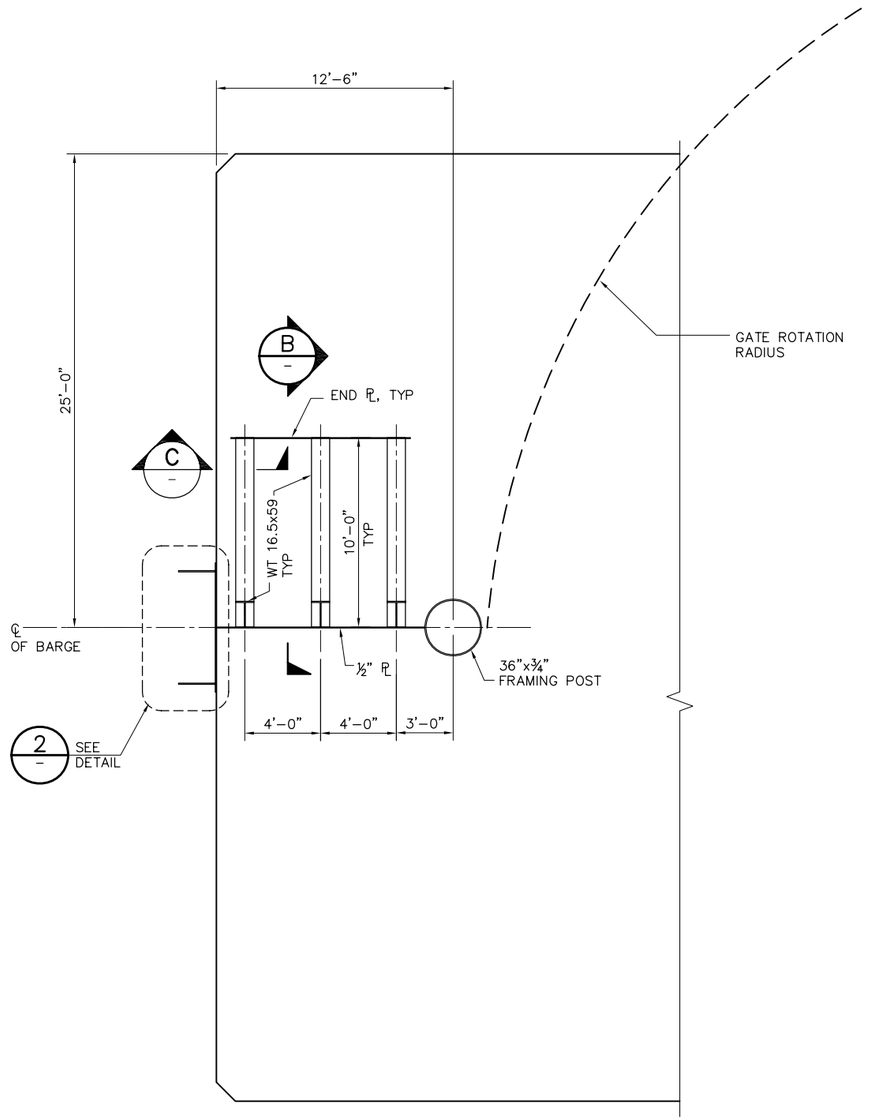
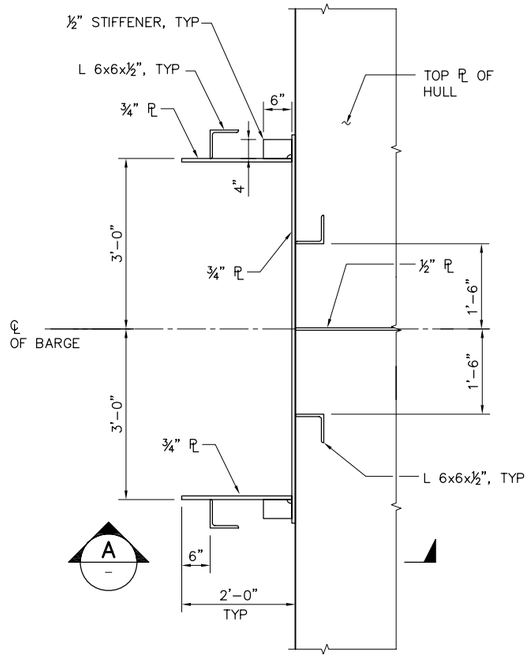
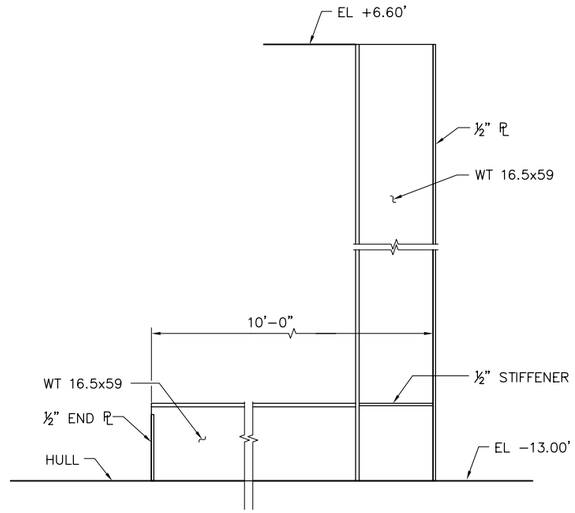


PLAN

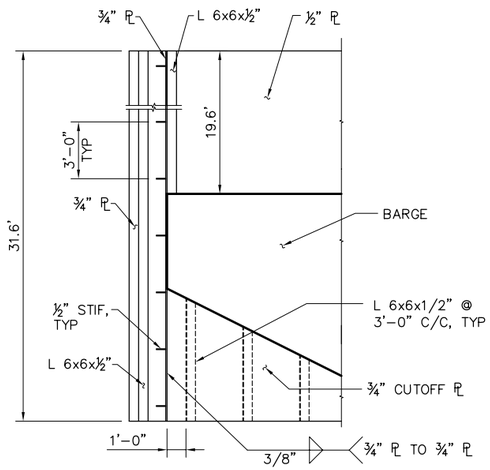
1 / C17 **DETAIL**
SCALE: 1/4" = 1'–0"



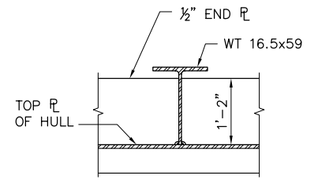
2 / – **DETAIL**
SCALE: 3/4" = 1'–0"



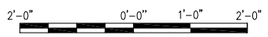
B / – **SECTION**
SCALE: 3/4"=1'–0"



A / – **SECTION**
SCALE: 1/4" = 1'–0"



C / – **SECTION**
SCALE: 3/4"=1'–0"



SCALE: 3/4"=1'–0"

SCALE: 1/4"=1'–0"

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TWO GATE FISH PROTECTION PLAN

OLD RIVER
END WALL SCANTLINGS

DATE 12/09/08

SHEET 21 OF 65

C18

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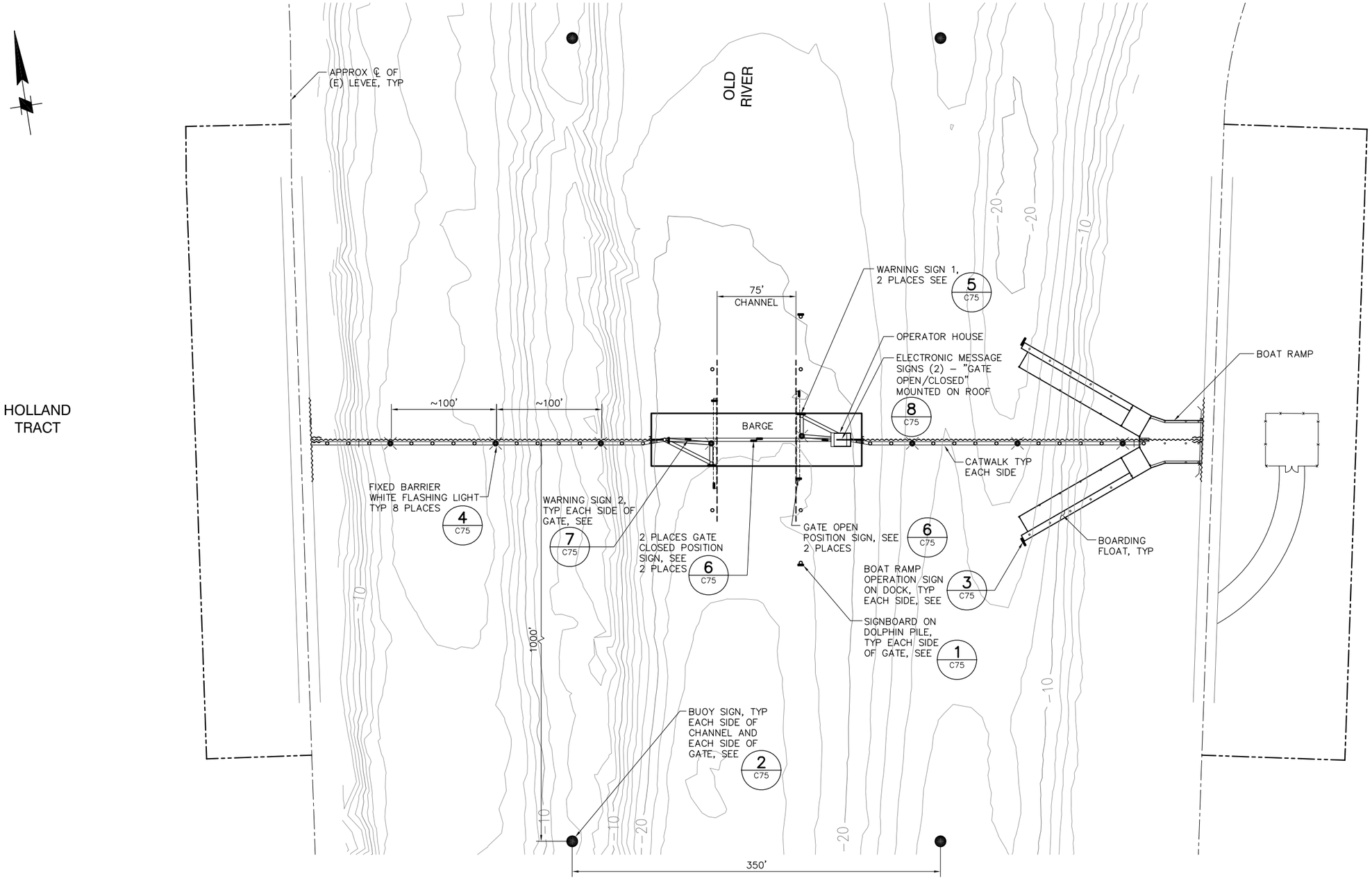

SITE PLAN

SCALE: 1"= 50'

50' 0' 50' 100'

SCALE: 1"=50'

90% SUBMITTAL IF SHEET IS LESS THAN 22" x 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

REVISION	DESCRIPTION	BY	DATE

Moffatt & Nichol
2001 N. Main Street, Suite 360
Walnut Creek, California 94596
(925) 944-5411

DSGN	DR	CHK
RBD	TAE	TDB
JOB NO.	SUBMITTED BY	TITLE
6097-03	RMR	

TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 22 OF 65

OLD RIVER
AIDS TO NAVIGATION PLAN

C19

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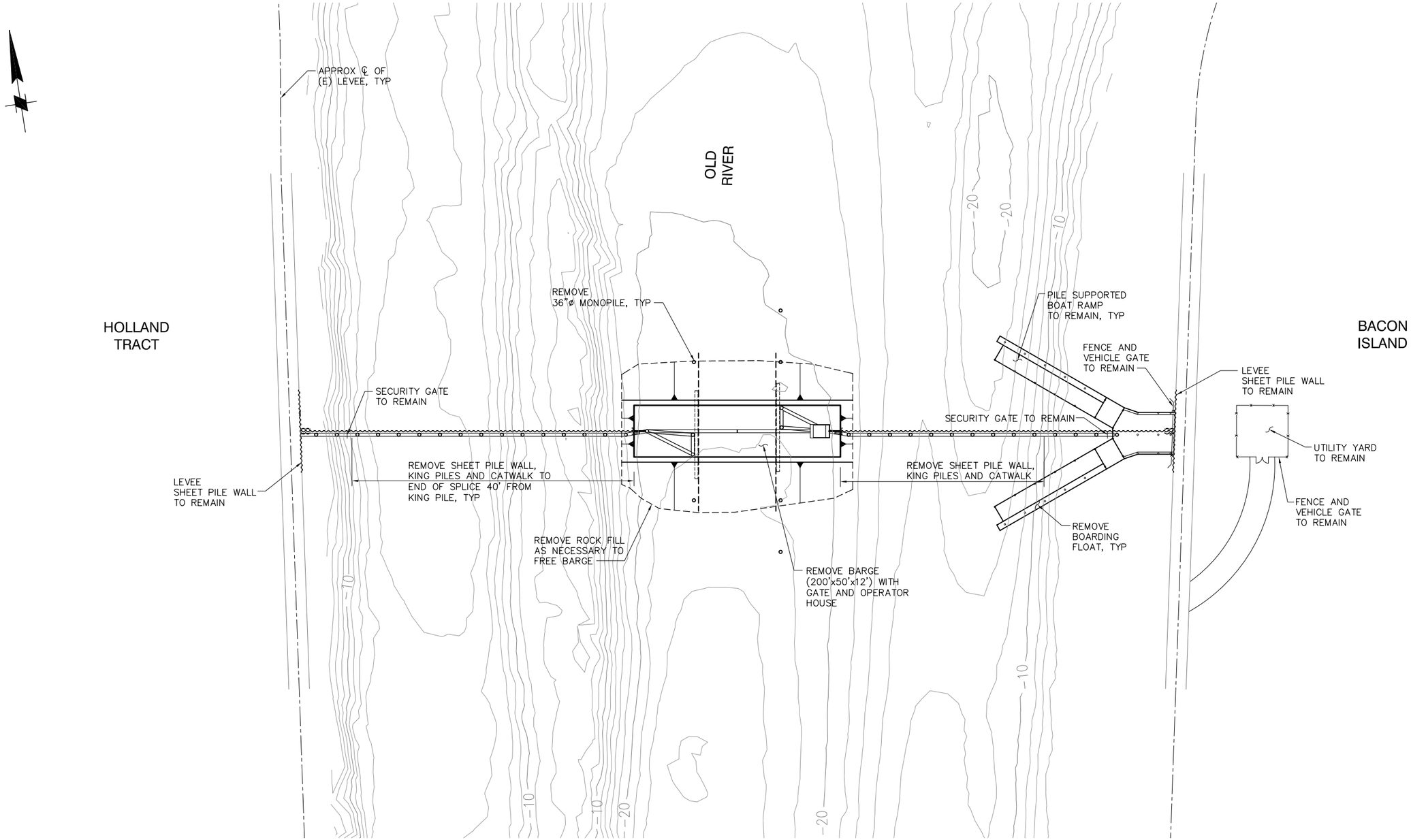

TEMPORARY REMOVAL PLAN

SCALE: 1"= 50'

50' 0' 50' 100'

SCALE: 1"=50'

90% SUBMITTAL IF SHEET IS LESS THAN 22" x 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

REVISION	DESCRIPTION	BY	DATE

Moffatt & Nichol
2001 N. Main Street, Suite 360
Walnut Creek, California 94596
(925) 944-5411

DSGN	DR	CHK
TDB	EP	GTH

JOB NO.	SUBMITTED BY	TITLE
6097-03	RMR	

TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 23 OF 65

OLD RIVER
TEMPORARY REMOVAL PLAN

C20

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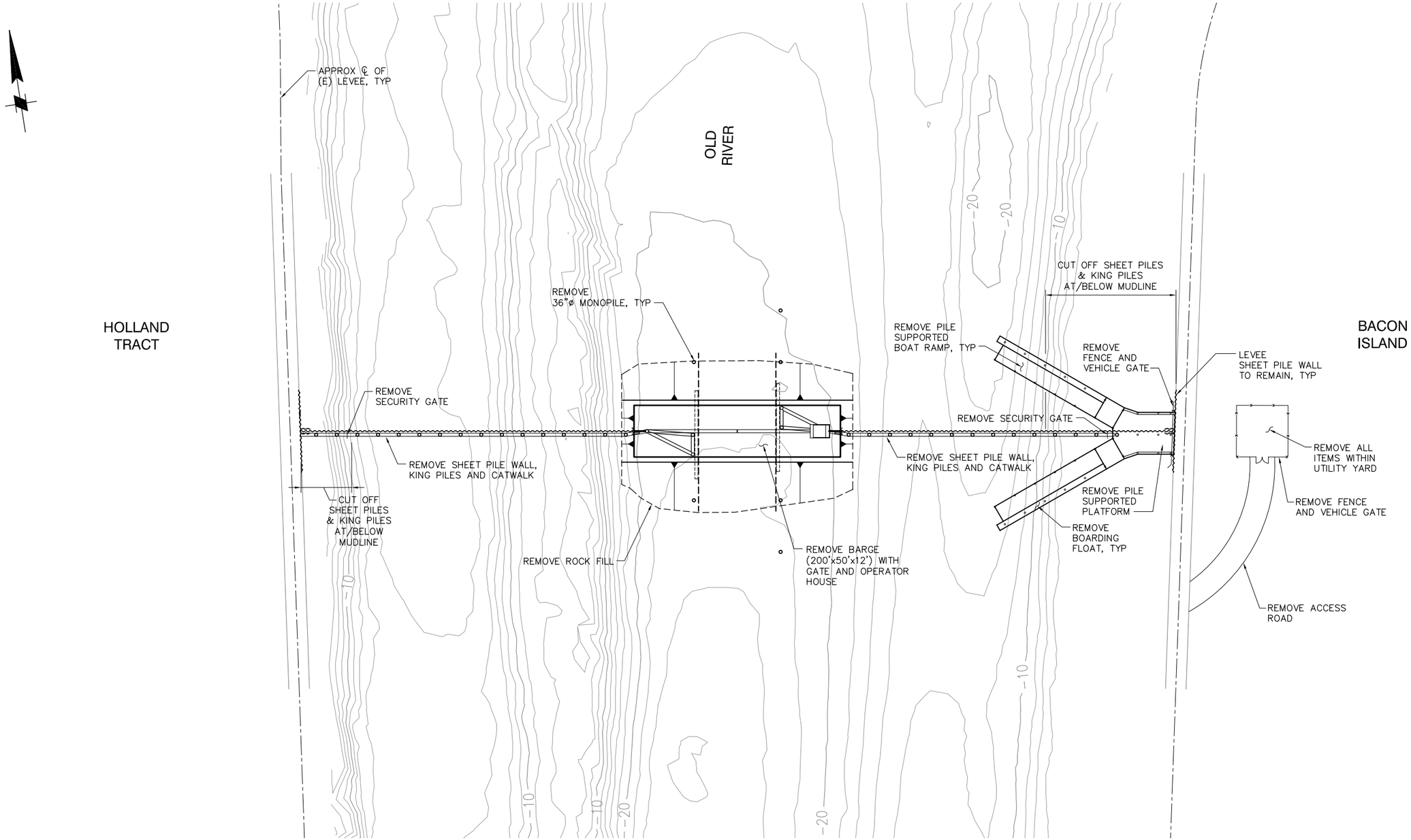

PERMANENT REMOVAL PLAN

SCALE: 1"= 50'

50' 0' 50' 100'

SCALE: 1"=50'

90% SUBMITTAL IF SHEET IS LESS THAN 22" x 34" IT IS A REDUCED PRINT – SCALE REDUCED ACCORDINGLY.

REVISION	DESCRIPTION	BY	DATE

Moffatt & Nichol
2001 N. Main Street, Suite 360
Walnut Creek, California 94596
(925) 944-5411

DSGN	DR	CHK
TDB	EP	GTH

JOB NO.	SUBMITTED BY	TITLE
6097-03	RMR	

TWO GATE FISH PROTECTION PLAN

DATE 12/09/08

SHEET 24 OF 65

OLD RIVER
PERMANENT REMOVAL PLAN

C21

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