GENERAL PROJECT NOTES

1. ALL ELEVATIONS ARE REFERENCED TO MEAN SEAL LEVEL 1912 (MSL 1912).
2. THE MAJORITY OF SUNFISH LAKE IS A STUMP FIELD. DUE CONSIDERATION MUST BE GIVEN TO THE DIFFICULTIES OF NAVIGATING AND DREDGING IN SUCH CONDITIONS.
3. WATER DEPTHS IN THE SUNFISH LAKE PROJECT AREA VARY FROM 0 - 2.5 METERS, AT FLAT POOL ELEVATION. THE AVERAGE DEPTH IS APPROXIMATELY 1 METER. FLOATING PLANT ACCESS TO THE PROJECT AREA MAY REQUIRE DREDGING.
4. SURVEY DATUM: ILLINOIS WEST NAD 83, METERS.
5. MUD LAKE SURVEYING BENCHMARKS SHOWN ON SHEET X4.

CHANNEL EXCAVATION NOTES (SUNFISH LAKE)

1. THE ESTIMATED CAPACITY OF THE CDF, ALLOWING FOR 1.6 METERS OF FREEBOARD, IS APPROXIMATELY 100,000 CUBIC METERS. THE ESTIMATED QUANTITY OF MATERIAL TO BE EXCAVATED FROM ALIGNMENTS D-M IS APPROXIMATELY 80,000 CUBIC METERS. THE CONTRACTOR'S CHANNEL EXCAVATION PLAN MUST ADDRESS HOW EFFLUENT WATER QUALITY STANDARDS WILL BE MET, GIVING CONSIDERATION TO THE CAPACITY OF THE DISPOSAL FACILITY AND THE AMOUNT OF MATERIAL TO BE DREDGED. IF NECESSARY, THE PLAN MAY INCLUDE, BUT NOT BE LIMITED TO: ALTERNATING PERIODS OF DREDGING AND DECANTING; ADDITION OF CHEMICAL FLOCCULANTS; BUCKET/AUGER DREDGING; AND/OR DE-WATERING OF SEDIMENTS.
2. THE CONTRACTOR MUST MAINTAIN AT LEAST 1 METER OF FREEBOARD ABOVE THE WATER SURFACE IN THE CDF AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER.

GOALS

THE GOALS OF THE POOL 11 ISLANDS HABITAT REHABILITATION AND ENHANCEMENT PROJECT (HREP) ARE TO:
1. RESTORE BACKWATER HABITAT BY REDUCING SEDIMENTATION, AND PROVIDING PROTECTION AGAINST WIND-INDUCED WAVE FORCES THAT CAUSE SEDIMENT RESUSPENSION.
2. CREATE DEEP WATER AQUATIC HABITAT.

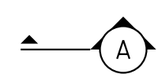
SUNFISH LAKE OBJECTIVES

THE OBJECTIVES OF THE PROJECT ARE TO:
1. CONSTRUCT A 1568-METER EMBANKMENT TO DEFLECT RIVER FLOWS AWAY FROM THE SUNFISH LAKE AREA BREAK UP WIND-INDUCED WAVES.
2. CONSTRUCT A 10-HECTARE SYSTEM OF DEEP-WATER CHANNELS FOR FISH HABITAT.

MUD LAKE OBJECTIVES

THE OBJECTIVES OF THE PROJECT ARE TO:
1. CONSTRUCT A 2965-METER EMBANKMENT TO DEFLECT RIVER FLOWS AWAY FROM THE MUD LAKE AREA BREAK UP WIND-INDUCED WAVES.
2. CONSTRUCT A 8.8-HECTARE SYSTEM OF DEEP-WATER CHANNELS FOR FISH HABITAT.

LEGEND



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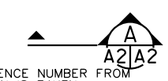
SECTION OR ELEVATION IDENTIFICATION
IF DRAWN ON SAME SHEET



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SHEET REFERENCE NUMBER FROM WHICH SECTION IS TAKEN
SHEET REFERENCE NUMBER ON WHICH SECTION IS DRAWN

INDICATES DETAIL
DETAIL IDENTIFICATION
IF DRAWN ON SAME SHEET

INDICATES DETAIL
DETAIL IDENTIFICATION
SHEET REFERENCE NUMBER FROM WHICH DETAIL IS TAKEN
SHEET REFERENCE NUMBER ON WHICH DETAIL IS DRAWN

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US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	2 JUL 04	RP/REH

Revisions

Designed By: RTN
Date: 21 SEP 2002
Drawn By: SDB
Scale: AS SHOWN
Checked By: MJA
Drawing Code: EP66
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Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

INDEX OF DRAWINGS & PROJECT DESCRIPTION

Sheet Reference Number:
X2
Sheet 2 of 25

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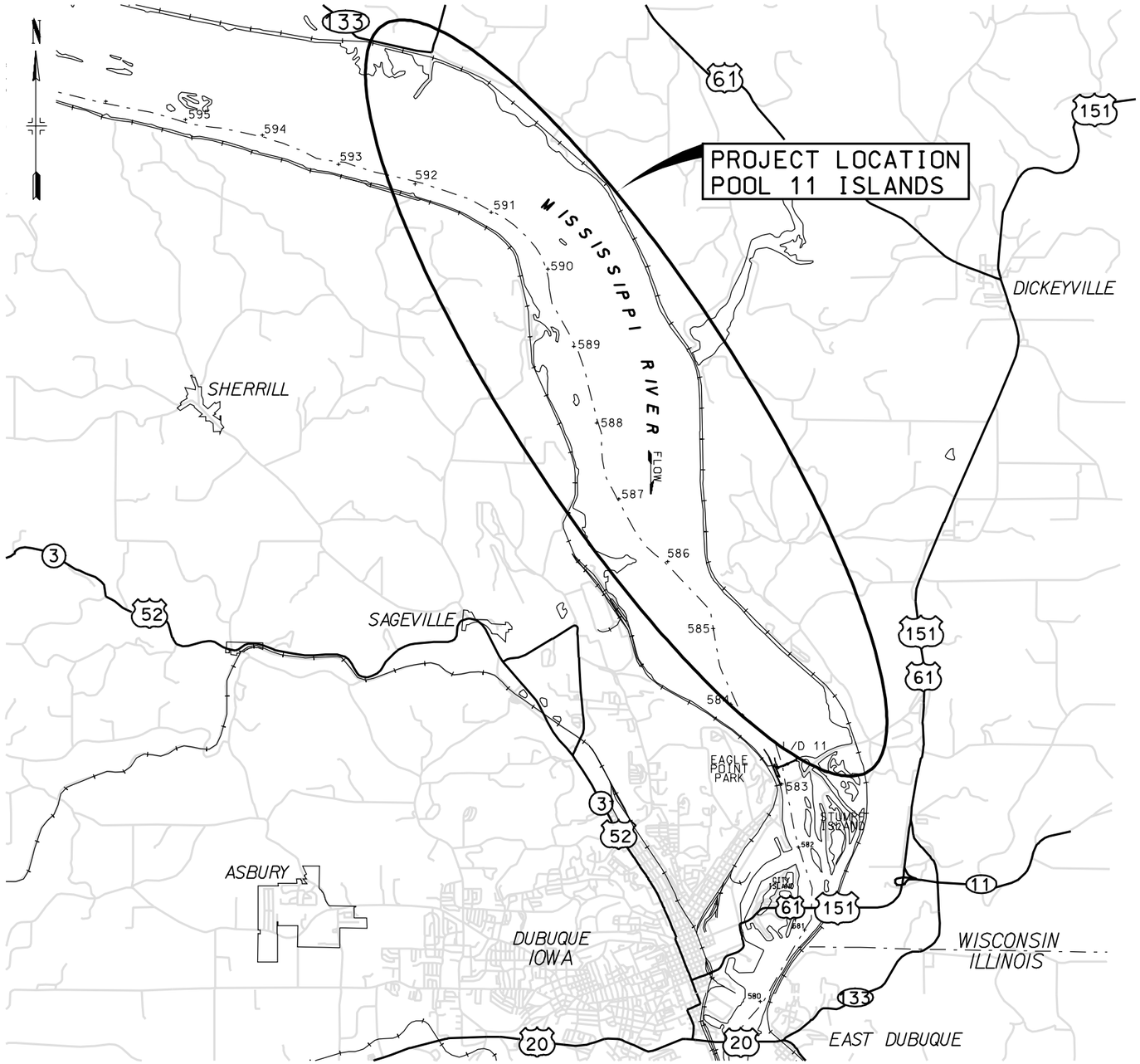

LOCATION PLAN

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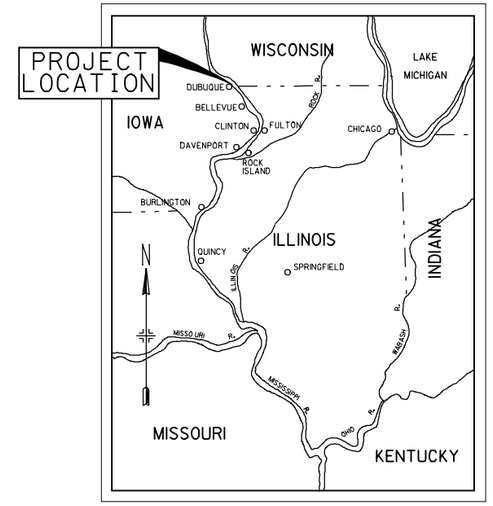
SCALE



VICINITY MAP

40 0 40 80 120
SCALE IN KILOMETERS

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US Army Corps of Engineers
Rock Island District

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	Revisions		

Designed By: RTN	Date: 16 SEP. 2001
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Reviewed By: DJH	Solicitation Number:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT
PROGRAM POOL 11,
RIVER MILES 583-594

LOCATION PLAN AND VICINITY MAP

PLATE 1
PLATE 2

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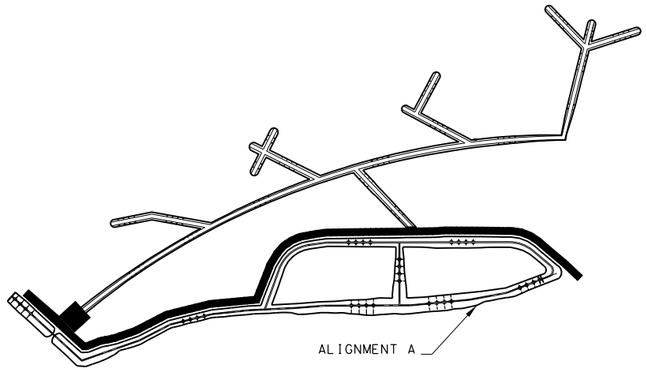
CONSTRUCTION FEATURES

THE FOLLOWING PROVIDES A BRIEF DESCRIPTION OF THE MAJOR PROJECT FEATURES. IT IS NOT NECESSARILY A CONSTRUCTION SEQUENCE.

FEATURE: DEFLECTION EMBANKMENT

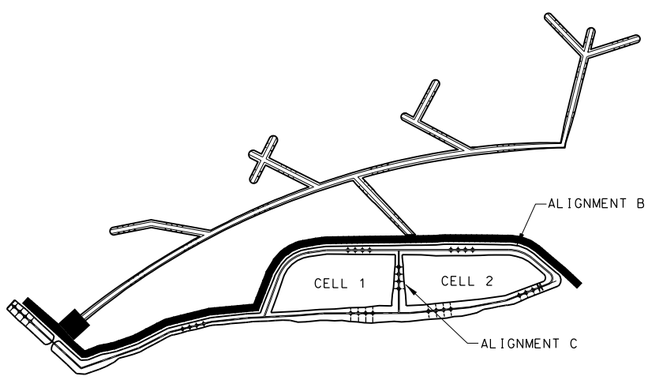
(ALIGNMENT A) CONSTRUCT DEFLECTION EMBANKMENT USING ADJACENT BORROW FROM RIVER BED.



BORINGS INDICATE THE RIVERBED CONSISTS PRIMARILY CLAYS. THE COMPOSITION OF THE MATERIAL REQUIRES THAT EXCAVATION AND PLACEMENT BE ACCOMPLISHED MECHANICALLY, USING A 3 CUBIC METER BUCKET (MINIMUM), TO MAINTAIN IN-SITU SOIL STRENGTH.

FEATURE: CONFINED DISPOSAL FACILITY

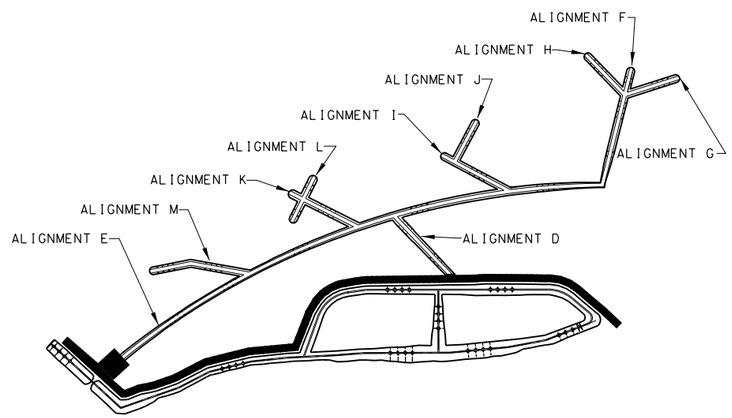
(ALIGNMENTS B & C) CONSTRUCT A TWO- CELL CONFINED DISPOSAL FACILITY (CDF) USING ADJACENT BORROW FROM THE RIVERBED.



EMBANKMENT FOR THE CDF MUST ALSO BE PLACED MECHANICALLY USING A 3 CUBIC METER BUCKET (MINIMUM).

FEATURE: DEEP WATER FISH HABITAT

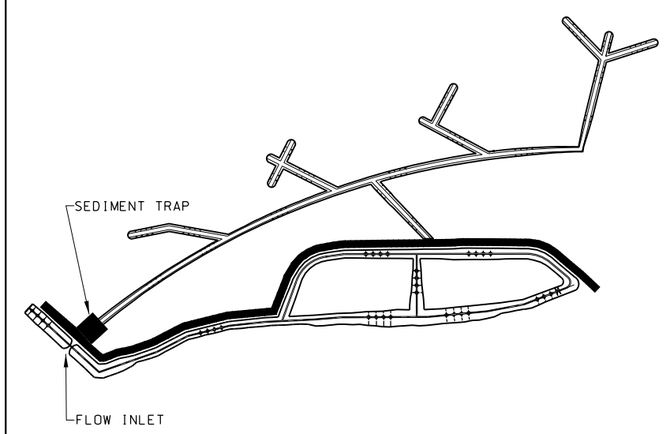
CONSTRUCT A SYSTEM OF DEEP-WATER CHANNELS FOR FISH HABITAT.



THE EXCAVATED CHANNEL RESULTING FROM EMBANKMENT BORROW OPERATIONS (ALIGNMENTS A & B) WILL PROVIDE APPROXIMATELY 3.8 HECTARES OF FISH HABITAT. THE REMAINING 6.2 HECTARES OF FISH HABITAT CHANNELS (ALIGNMENTS D-M) MAY BE EXCAVATED BY HYDRAULIC PIPELINE DREDGE, BUCKET/AUGER DREDGE, CLAMSHELL DREDGE, OR OTHER SUITABLE MEANS ACCEPTABLE TO THE GOVERNMENT. ALL EXCAVATED MATERIAL FROM CHANNELS D-M MUST BE PLACED IN THE CDF. SEE GENERAL NOTES FOR INFORMATION REGARDING CAPACITY OF CDF ON SHEET X2.

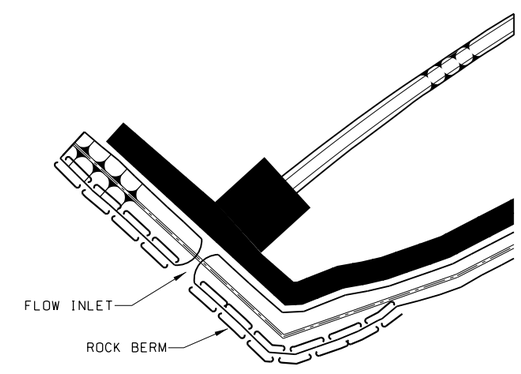
FEATURE: FLOW INLET AND SEDIMENT TRAP

CONSTRUCT A FLOW INLET IN THE DEFLECTION EMBANKMENT TO ALLOW NOMINAL FLOW THROUGH THE NEWLY EXCAVATED CHANNELS. PLACE RIPRAP TO PROTECT THE INLET FROM EROSION. FLOW INLET DETAILS MAY BE FOUND ON SHEET C19. DIRECTLY DOWNSTREAM OF THE FLOW INLET, EXCAVATE A SEDIMENT TRAP. SEDIMENT TRAP DETAILS MAY BE FOUND ON SHEET C19.



FEATURE: RIPRAP BERM

CONSTRUCT A ROCK BERM ALONG THE UPSTREAM TOE OF THE NEW EMBANKMENT, FROM STA 0+00 TO STA 3+50.



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US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	JRP/REH

Revisions

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Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CONSTRUCTION FEATURES

Sheet Reference Number: X4

Sheet 4 of 25

PLATE 3

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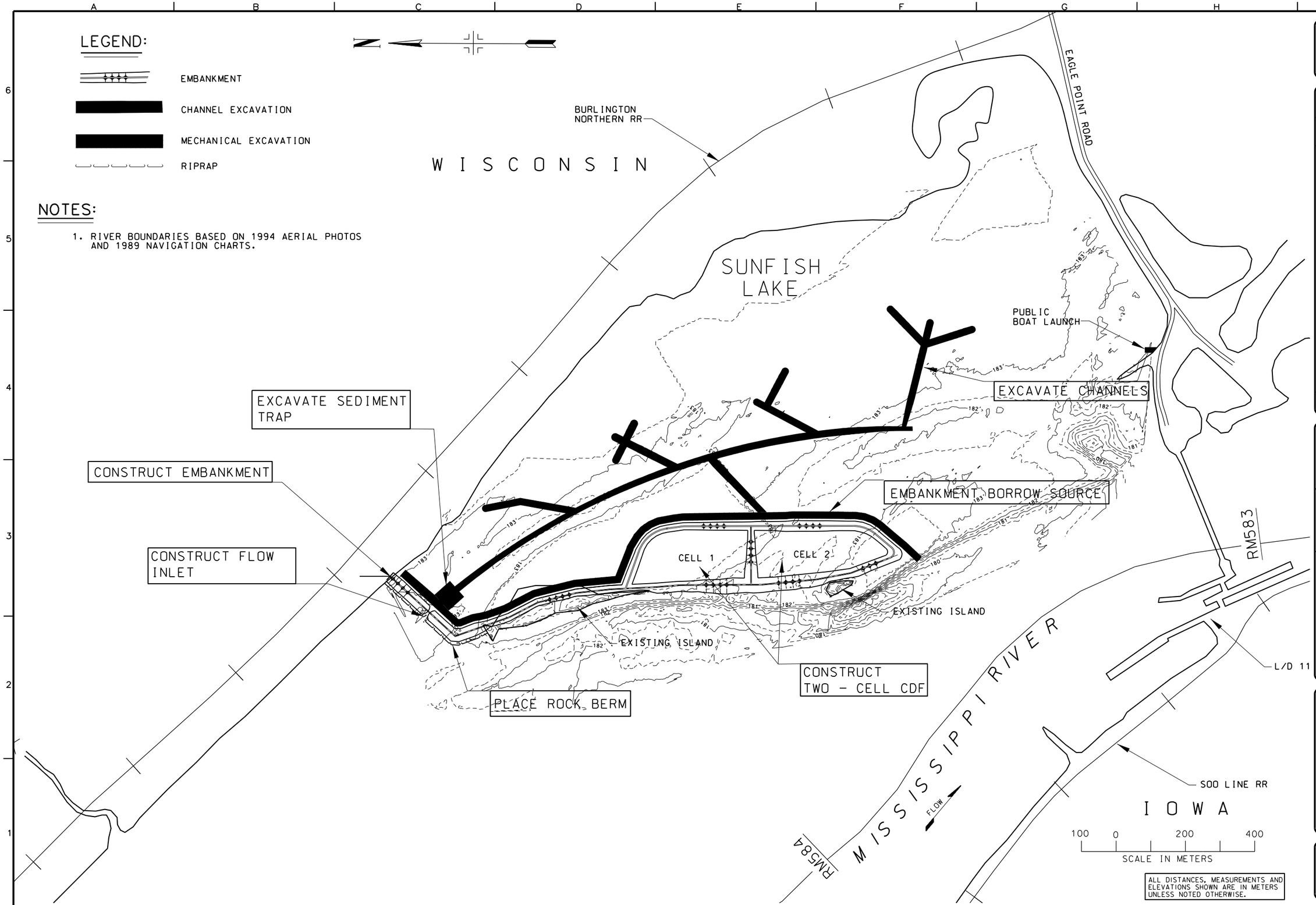

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Revisions

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

SITE PLAN

Sheet Reference Number:
C1
Sheet 5 of 25

PLATE 4

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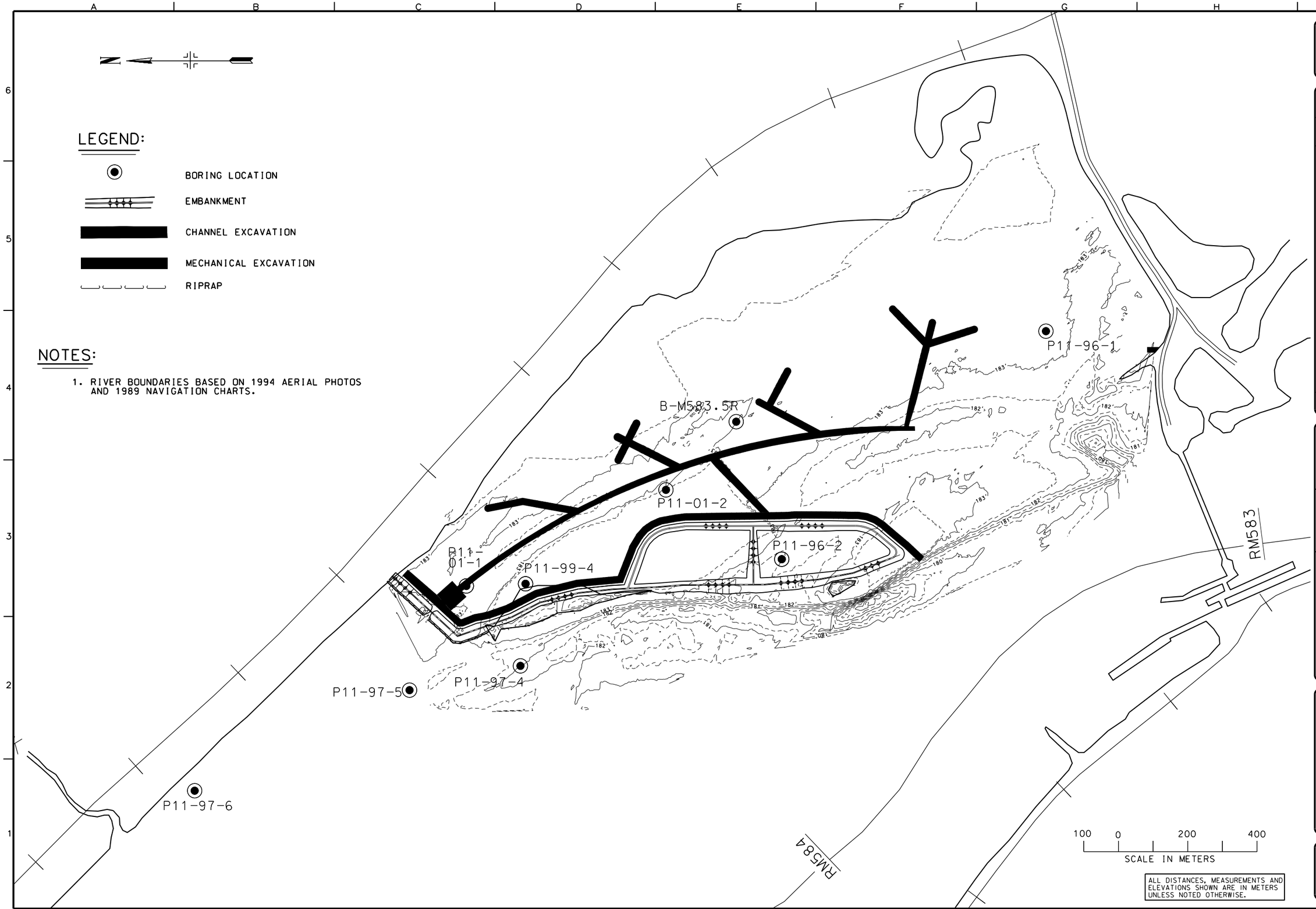
LEGEND:

- BORING LOCATION
- EMBANKMENT
- CHANNEL EXCAVATION
- MECHANICAL EXCAVATION
- RIPRAP

NOTES:

1. RIVER BOUNDARIES BASED ON 1994 AERIAL PHOTOS AND 1989 NAVIGATION CHARTS.



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Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	JRP/REH

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

BORING LOCATIONS

Sheet Reference Number:
C2
Sheet 6 of 25

PLATE 5

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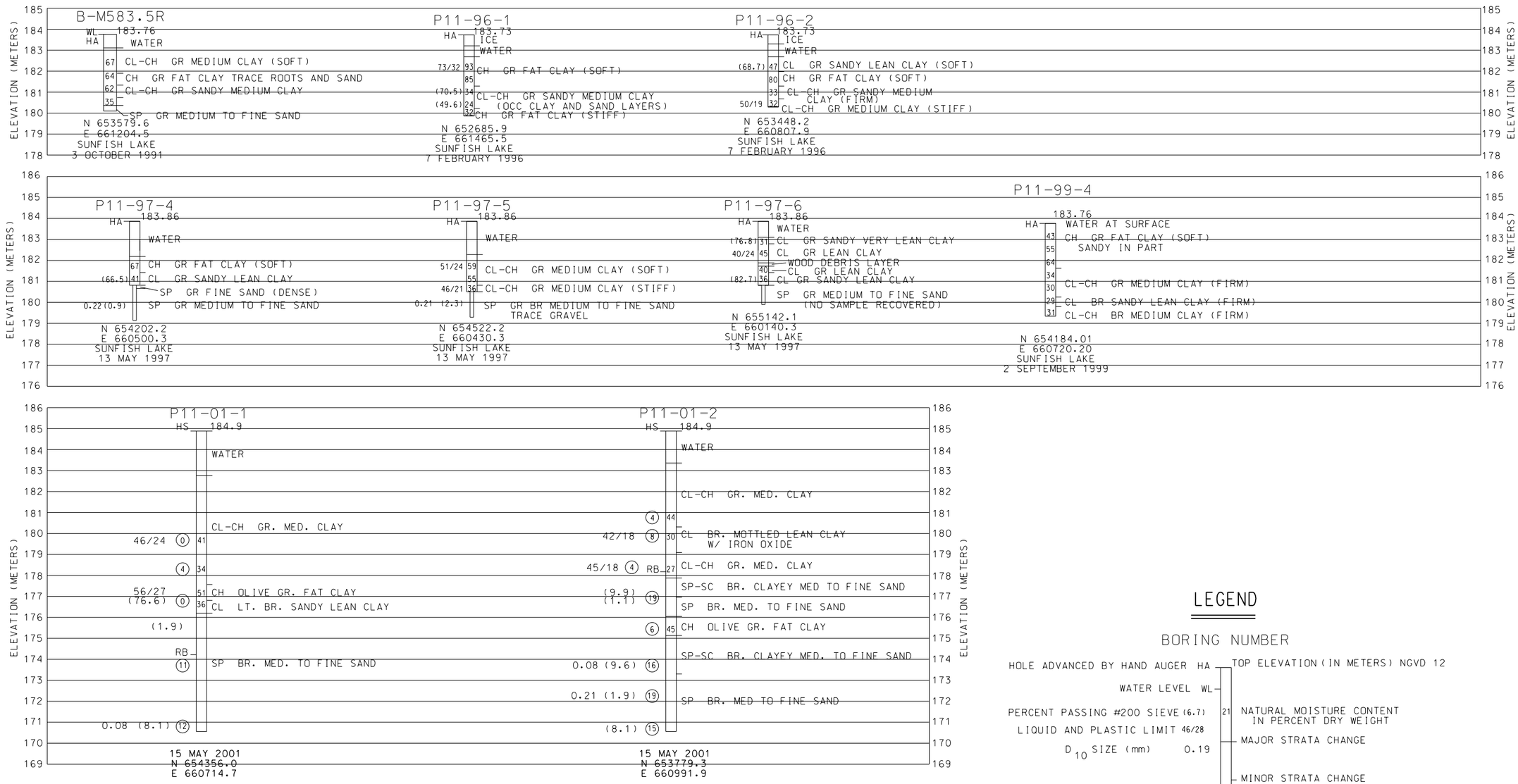

LEGEND

BORING NUMBER

HOLE ADVANCED BY HAND AUGER HA — TOP ELEVATION (IN METERS) NGVD 12

WATER LEVEL WL

PERCENT PASSING #200 SIEVE (6.7) — 21 NATURAL MOISTURE CONTENT IN PERCENT DRY WEIGHT

LIQUID AND PLASTIC LIMIT 46/28

D_{10} SIZE (mm) 0.19 — MAJOR STRATA CHANGE

MINOR STRATA CHANGE

HOLE EXTENDED BY DRIVING 50 mm PIPE

* PROBE OR SPLIT SPOON REFUSAL

LOCATION OF BORING 4 JULY 1976 — APPROXIMATE DATE OF DRILLING ALSO, DATE WATER LEVEL NOTED

LOCATIONS GIVEN IN ILLINOIS WEST ZONE STATE PLANE COORDINATES (NAD 83) IN METERS

NOTE:

FOR LOCATIONS OF BORINGS, SEE SHEET C2.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	RPZ/REH

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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS HABITAT REHABILITATION & ENHANCEMENT PROJECT STAGE I - SUNFISH LAKE

BORING LOGS

Sheet Reference Number: **C3**

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PLATE 6

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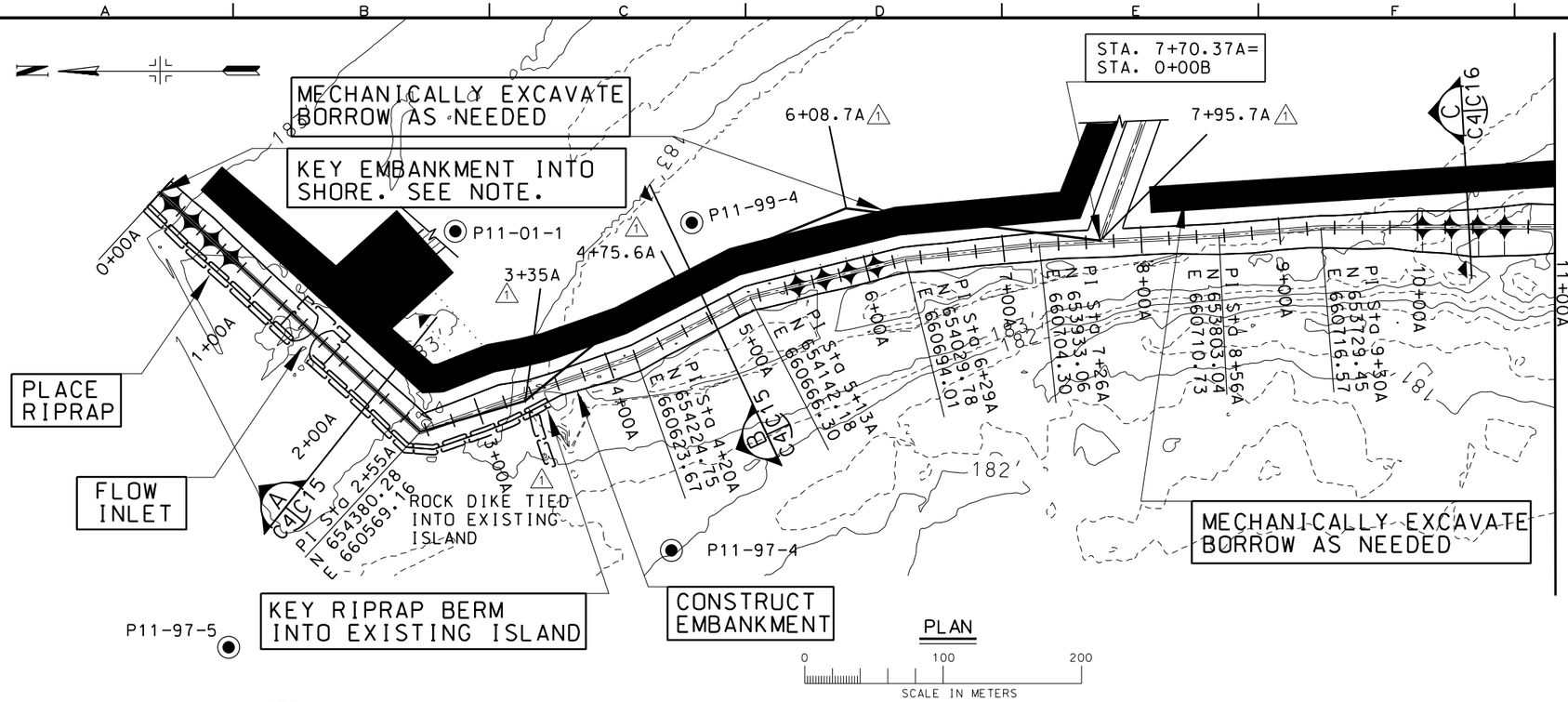

PLAN

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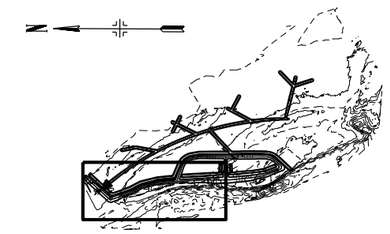


KEY PLAN

NOTE:

CLEAR AND GRUB SHORE AT TIE-IN POINT.
KEY NEW EMBANKMENT INTO SHORE TO A DEPTH OF 1 METER (MIN.)

STA.	NORTH	EAST
0+00	654,567.9	660,742.2
2+55	654,380.28	660,569.16
3+35	654,304.4	660,591.3
4+75.6	654,195.87	660,680.29
6+08.7	654,072.4	660,729.99
7+95.7	653,888.73	660,706.36

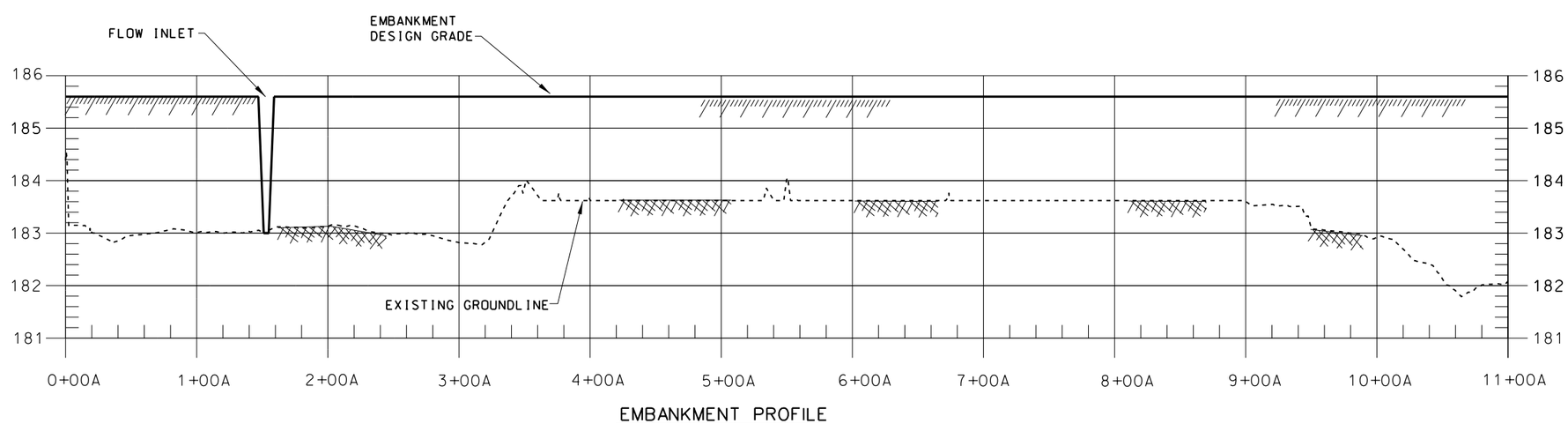
LEGEND

P11-99-1 BORING LOCATION

EMBANKMENT

MECHANICAL EXCAVATION

RIPRAP



EMBANKMENT PROFILE

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US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	REVISED AS CONSTRUCTED AMENDMENT #1 - SCALE BAR CHANGE	27JUL04	JRP/REH
		7JUN02	RTN/DJH

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

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Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
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POOL 11 ISLANDS
HABITAT REHABILITATION & ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

EMBANKMENT PLAN AND PROFILE STA. 0+00A TO 11+00A

Sheet Reference Number: C4

Sheet 8 of 25

PLATE 7

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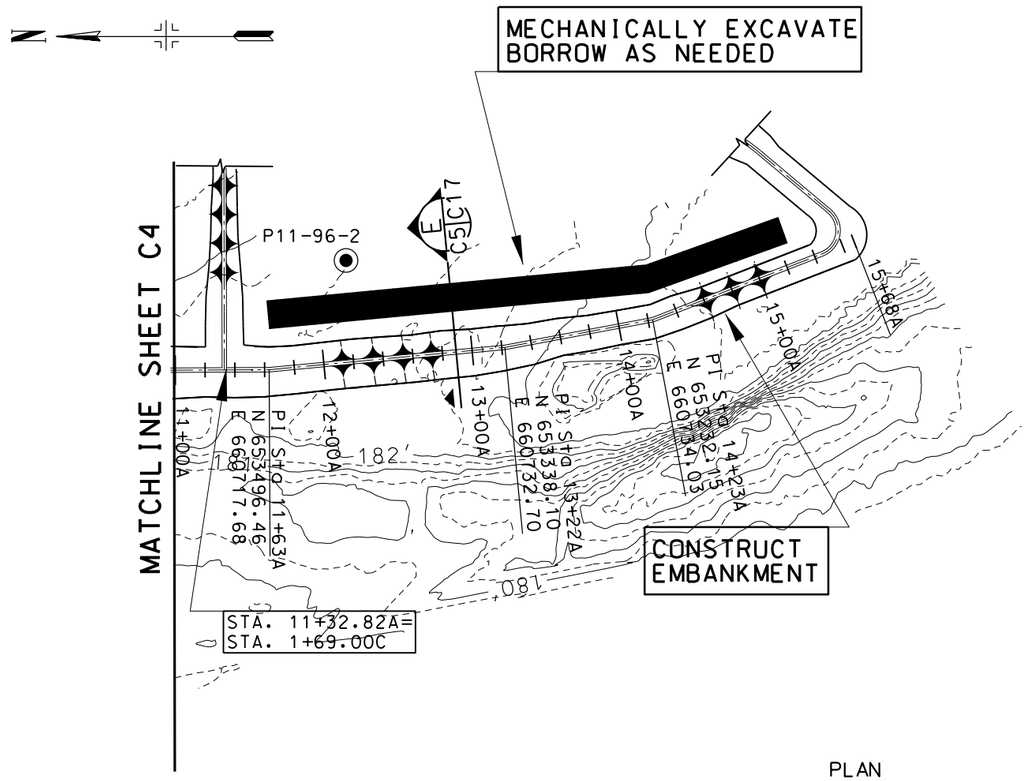

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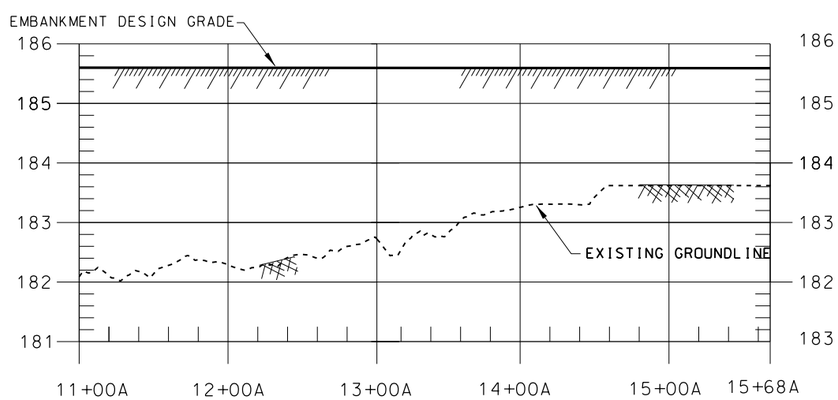

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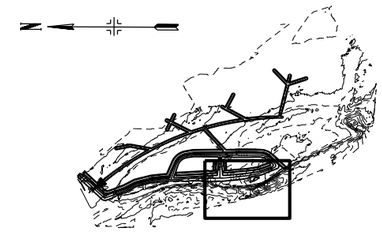

KEY PLAN

LEGEND

P11-99-1 BORING LOCATION

EMBANKMENT

MECHANICAL EXCAVATION

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US Army Corps of Engineers Rock Island District

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

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POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

EMBANKMENT
PLAN AND PROFILE
STA. 11+00A TO 15+68A

Sheet Reference Number:
C5
Sheet 9 of 25

PLATE 8

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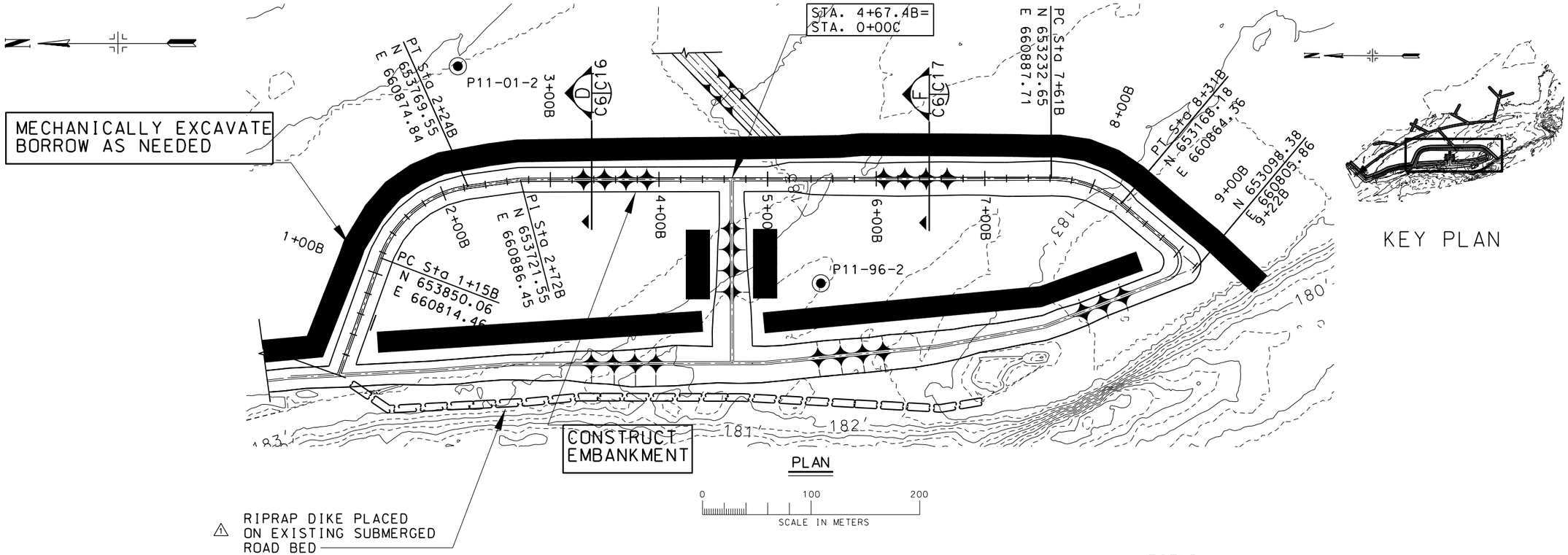


PLAN

KEY PLAN

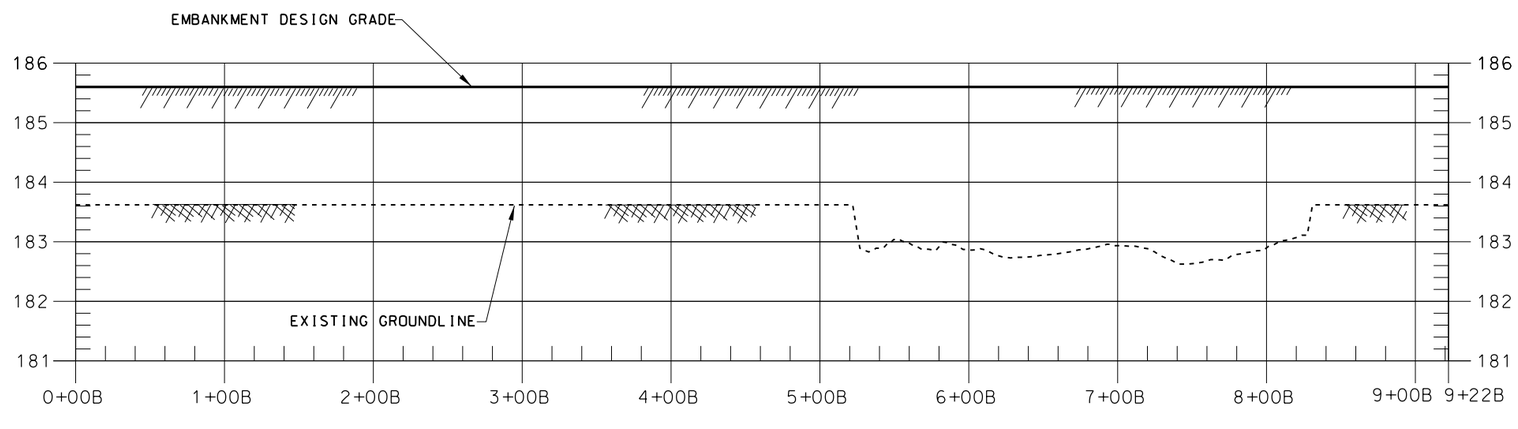
LEGEND

P11-99-1 BORING LOCATION

EMBANKMENT

MECHANICAL EXCAVATION

RIPRAP



EMBANKMENT PROFILE

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US Army Corps of Engineers Rock Island District

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Revisions

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POOL 11 ISLANDS HABITAT REHABILITATION & ENHANCEMENT PROJECT STAGE I - SUNFISH LAKE

EMBANKMENT PLAN AND PROFILE STA. 0+00B TO 9+22B

Sheet Reference Number: C6

Sheet 10 of 25

PLATE 9

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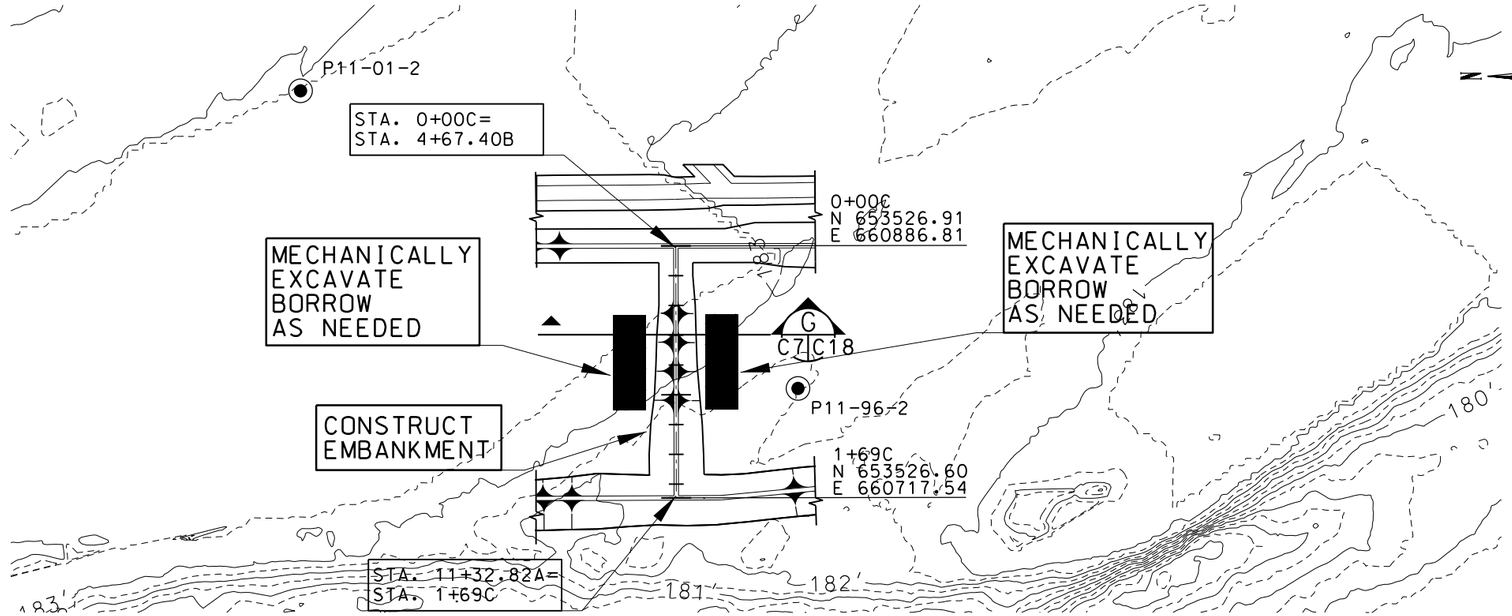
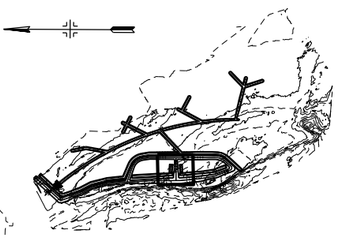


PLAN

0 100 200
SCALE IN METERS



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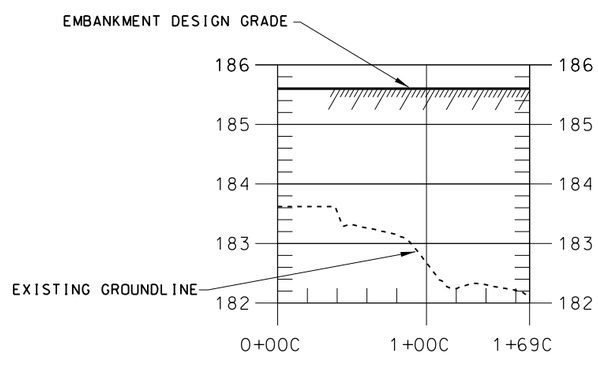

EMBANKMENT PROFILE

LEGEND

P11-99-1 BORING LOCATION

EMBANKMENT

MECHANICAL EXCAVATION

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

EMBANKMENT
PLAN AND PROFILE
STA. 0+00C TO 1+69C

Sheet Reference Number:
C7
Sheet 11 of 25

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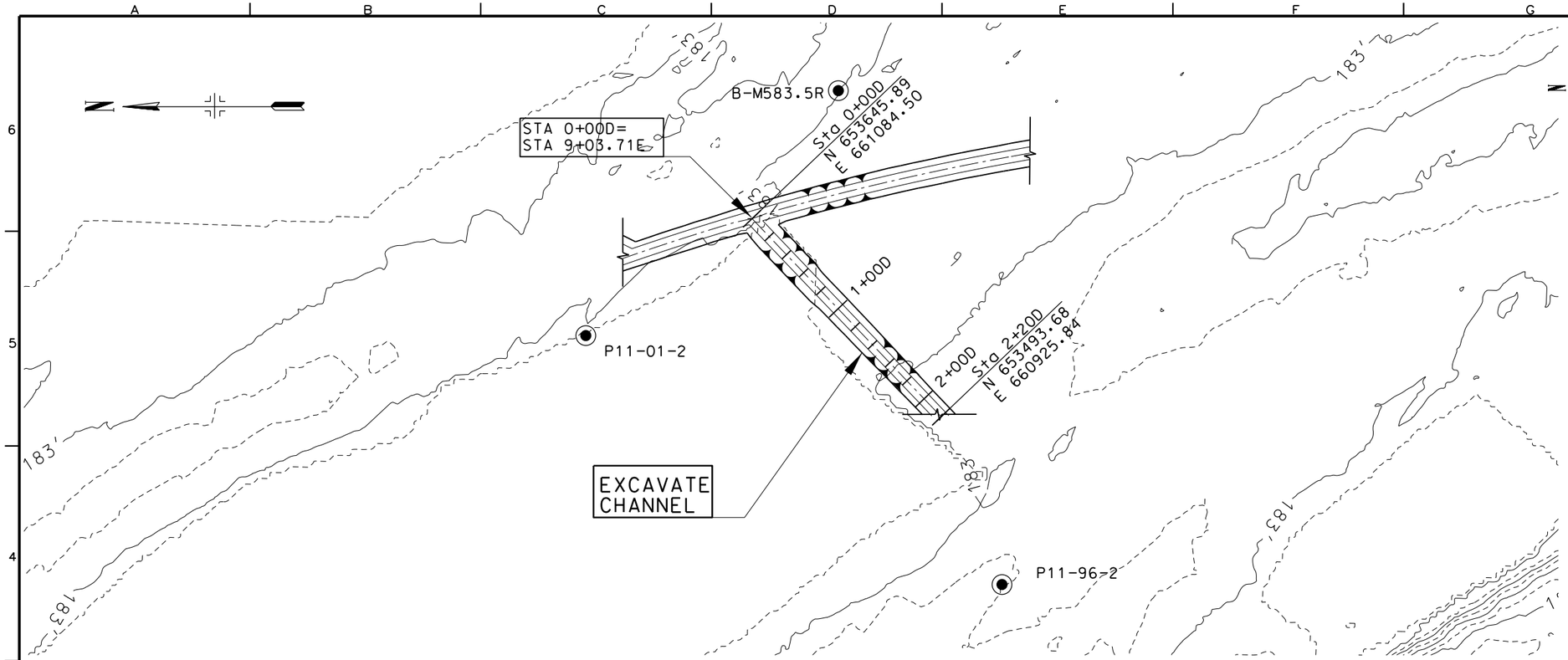
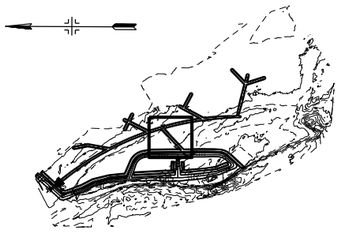
PLATE 10



PLAN

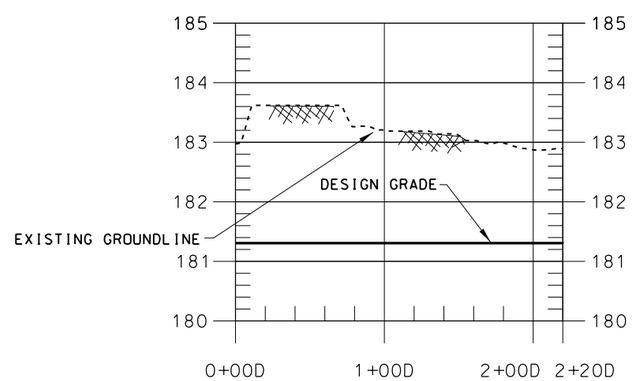
0 100 200
SCALE IN METERS



KEY PLAN

LEGEND

P11-99-1 BORING LOCATION



CHANNEL EXCAVATION PROFILE D

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED AMENDMENT #1 - SCALE BAR CHANGE	27JUL04	RP/BEH
		4JUN02	RTN/DJH

Revisions

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CHANNEL EXCAVATION PLAN AND PROFILE STA. 0+00D TO 2+20D

Sheet Reference Number:
C8
Sheet 12 of 25

PLATE 11

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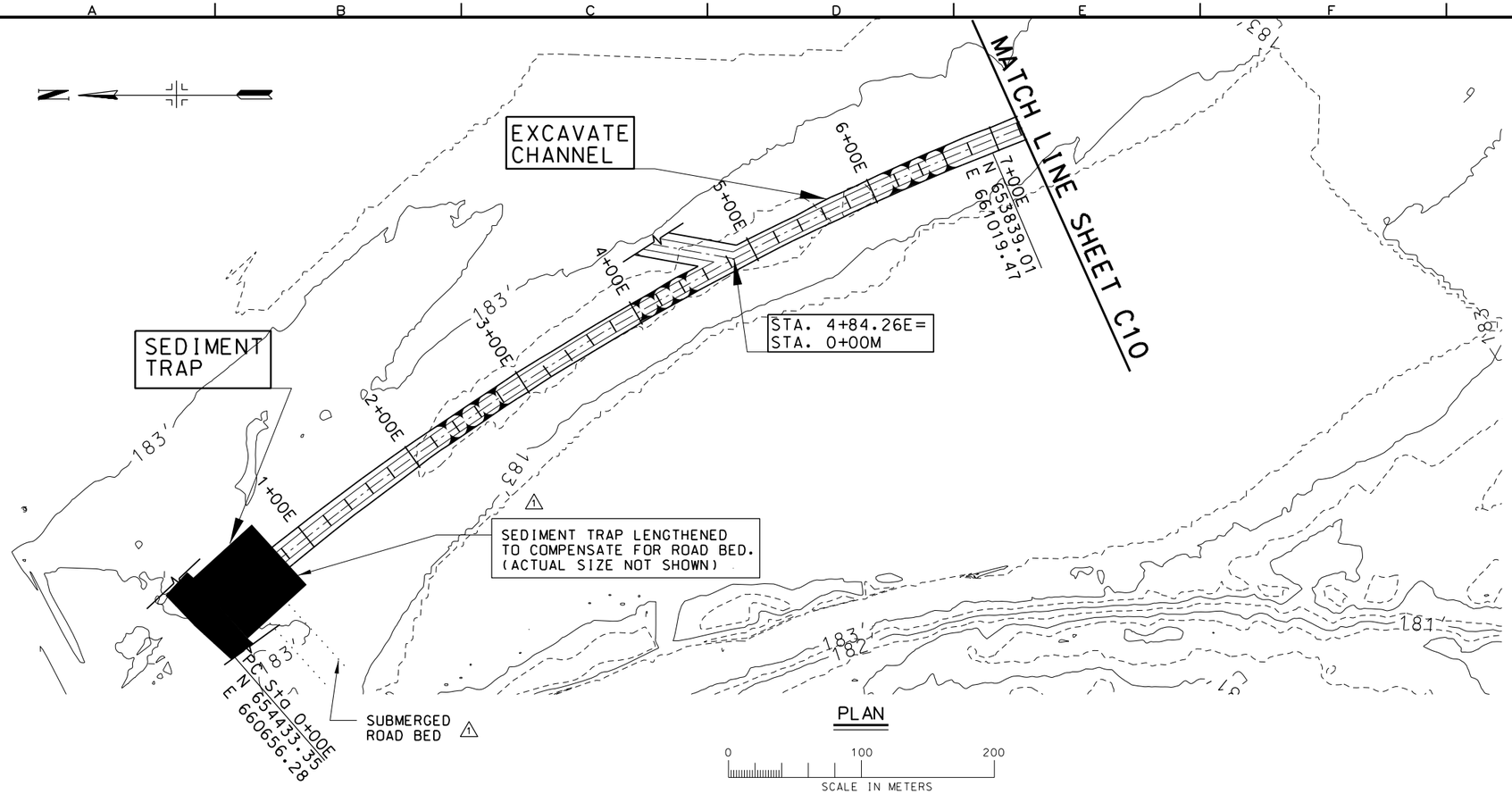

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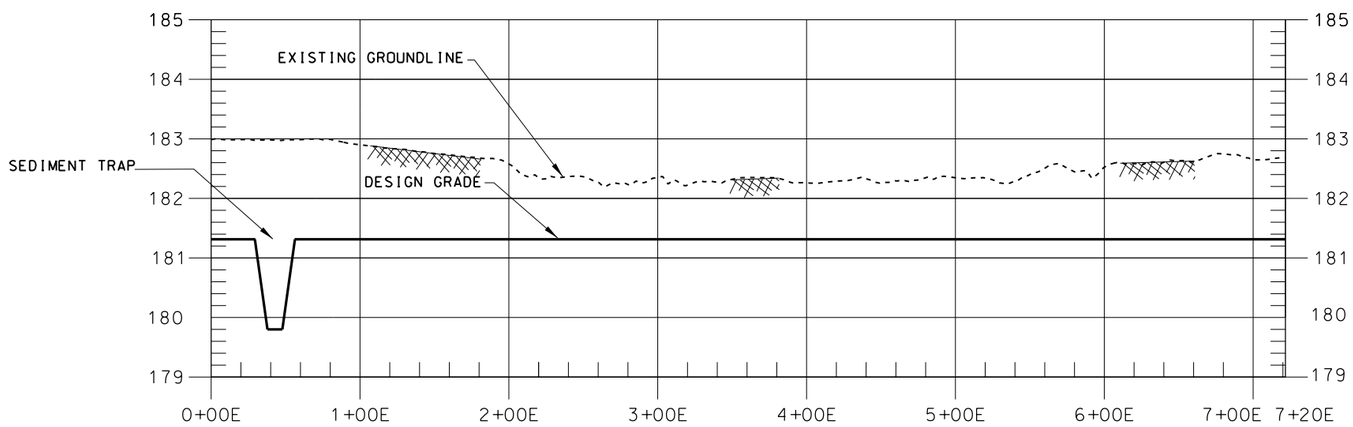
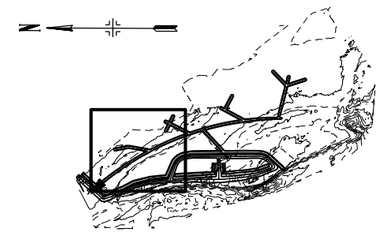


CHANNEL EXCAVATION PROFILE E



KEY PLAN

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	REVISED AS CONSTRUCTED AMENDMENT #1 - SCALE BAR CHANGE	27JUL04	RP/BEH
		1JUN02	RTN/DJH

Revisions

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CHANNEL EXCAVATION PLAN AND PROFILE STA. 0+00E TO 7+20E

Sheet Reference Number:
C9
Sheet 13 of 25

10:49:30 AM
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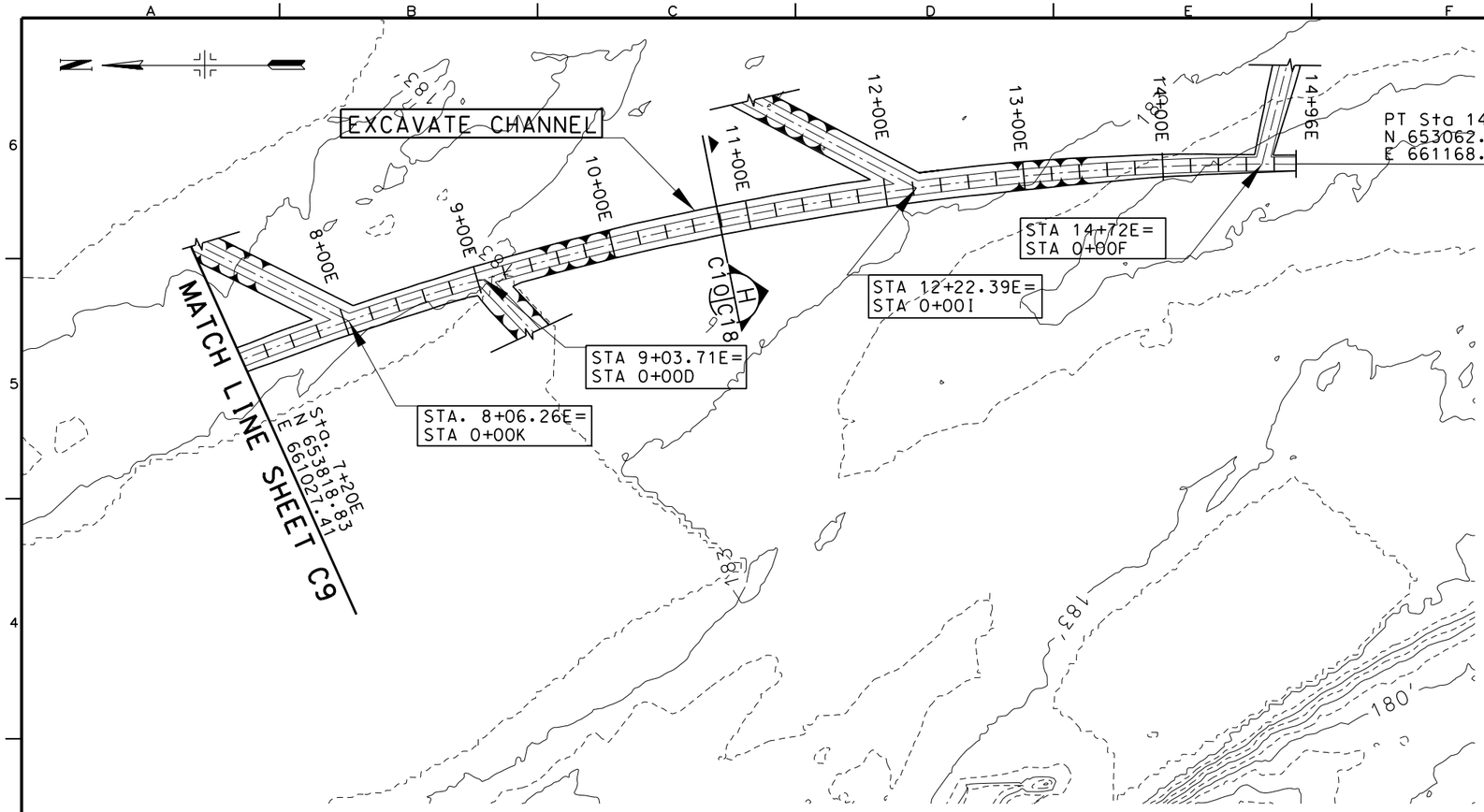
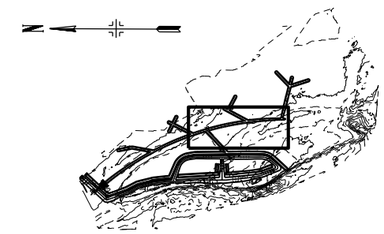
PLATE 12



PLAN

0 100 200
SCALE IN METERS



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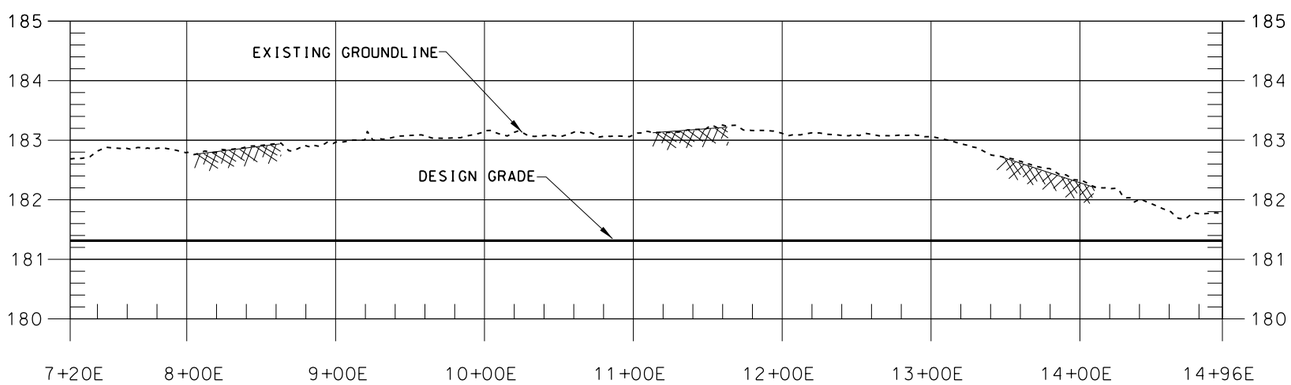

CHANNEL EXCAVATION PROFILE E

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	JRP/RCH
	AMENDMENT #1 - SCALE BAR CHANGE	7JUN02	RTN/DJH

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CHANNEL EXCAVATION PLAN AND PROFILE STA. 7+20E TO 14+96E

Sheet Reference Number:
C10
Sheet 14 of 25

PLATE 13

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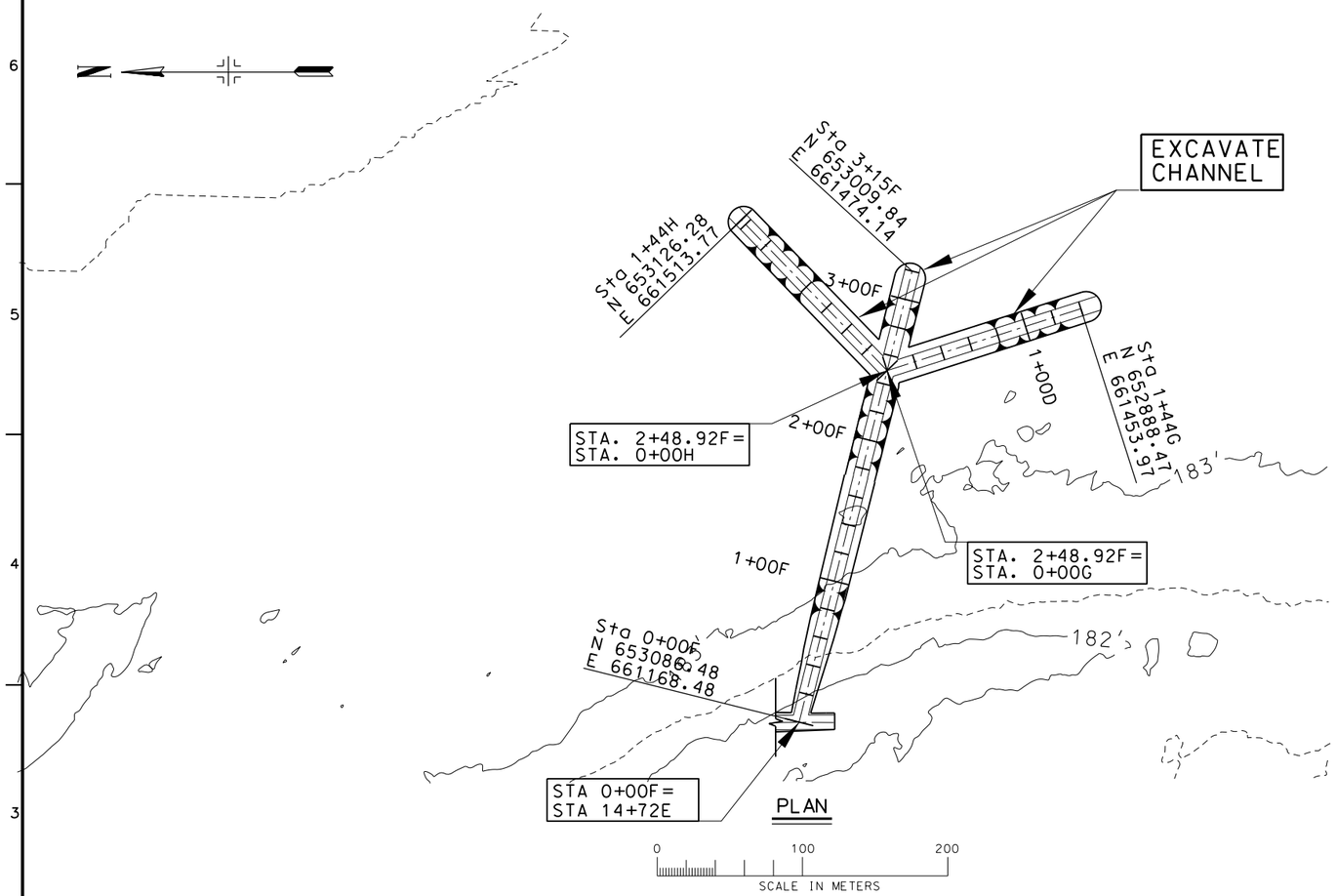

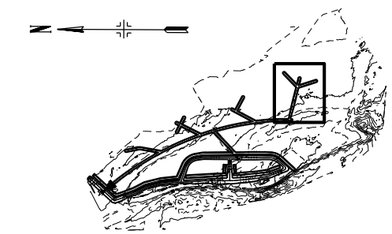

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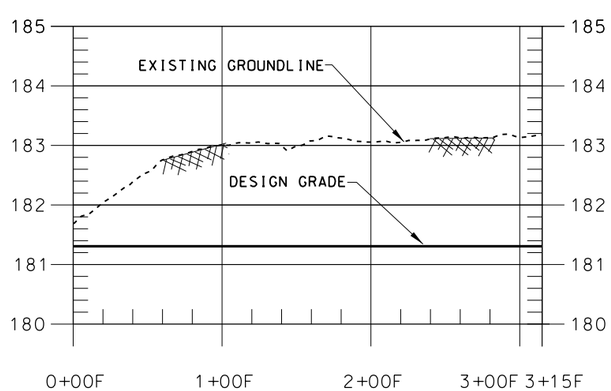
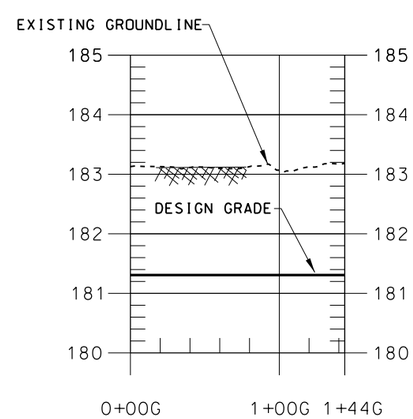
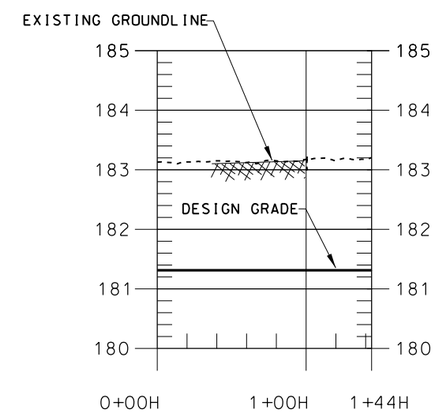


CHANNEL EXCAVATION PROFILE F



CHANNEL EXCAVATION PROFILE G



CHANNEL EXCAVATION PROFILE H

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED AMENDMENT #1 - SCALE BAR CHANGE	27JUL04	JRP/REH
		4JUN02	RTN/DJH

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CHANNEL EXCAVATION PLAN AND PROFILES F,G,H

Sheet Reference Number:
C11
Sheet 15 of 25

PLATE 14

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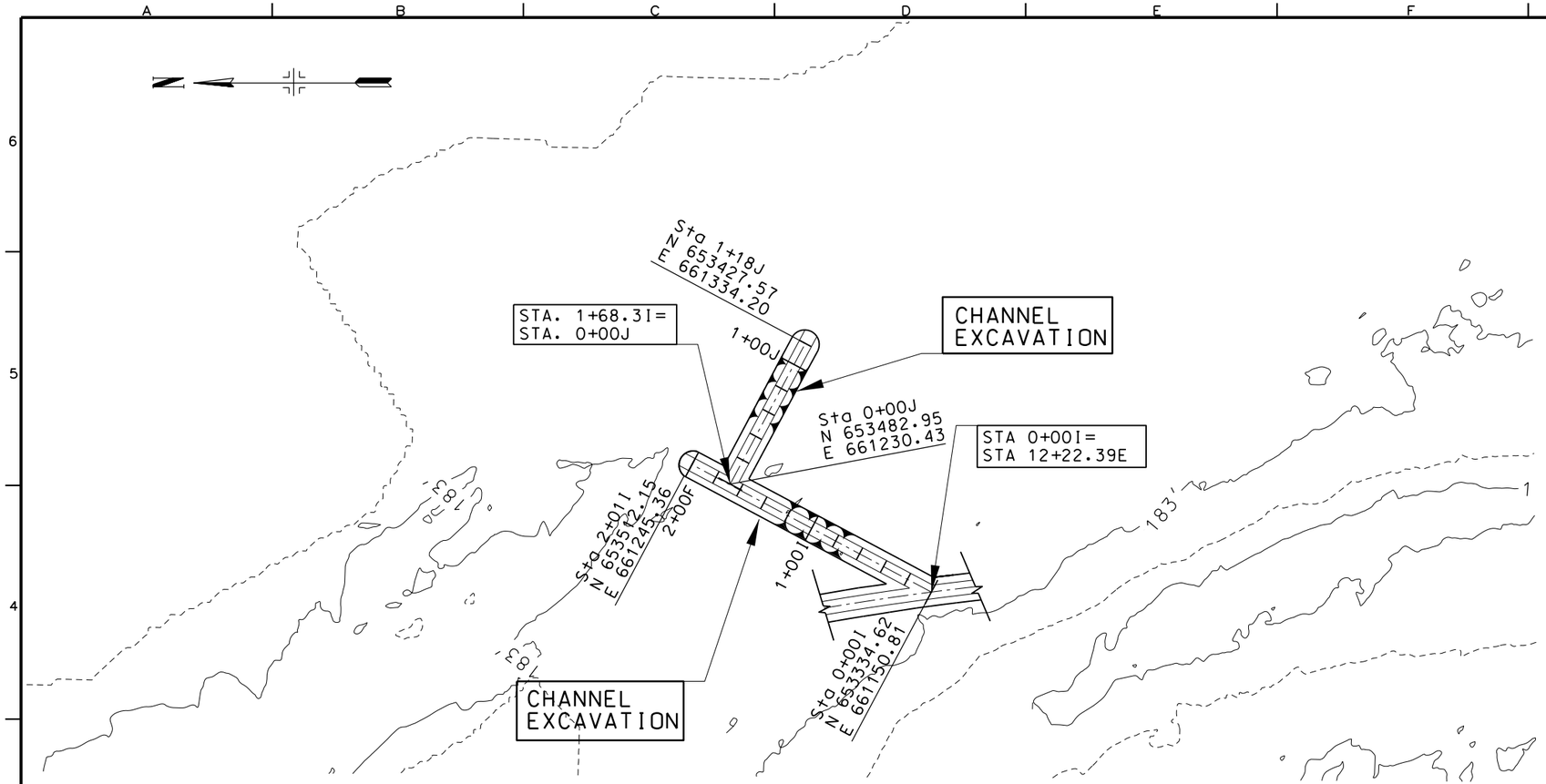
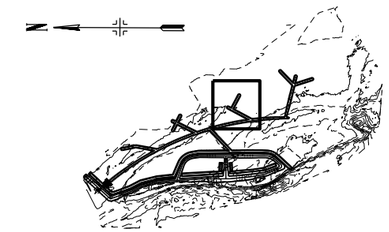
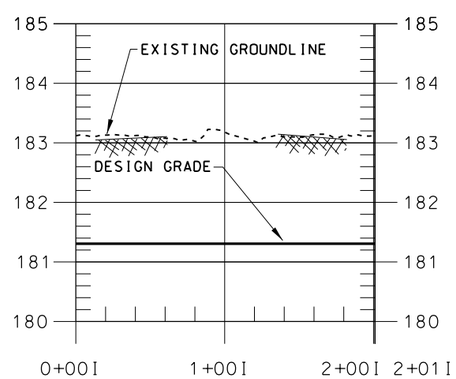


PLAN

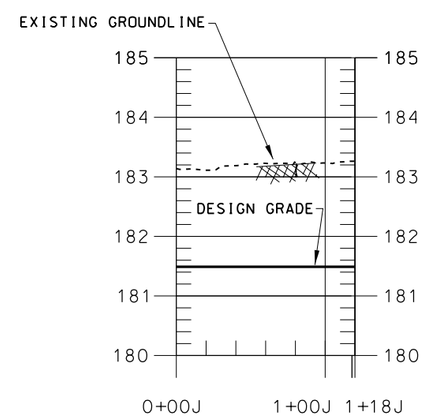
0 100 200
SCALE IN METERS



KEY PLAN



CHANNEL EXCAVATION PROFILE I



CHANNEL EXCAVATION PROFILE J

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED AMENDMENT #1 - SCALE BAR CHANGE	27JUL04	RP/BEH
		4JUN02	RTN/DJH

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CHANNEL EXCAVATION PLAN AND PROFILES I,J

Sheet Reference Number:
C12
Sheet 16 of 25

PLATE 15

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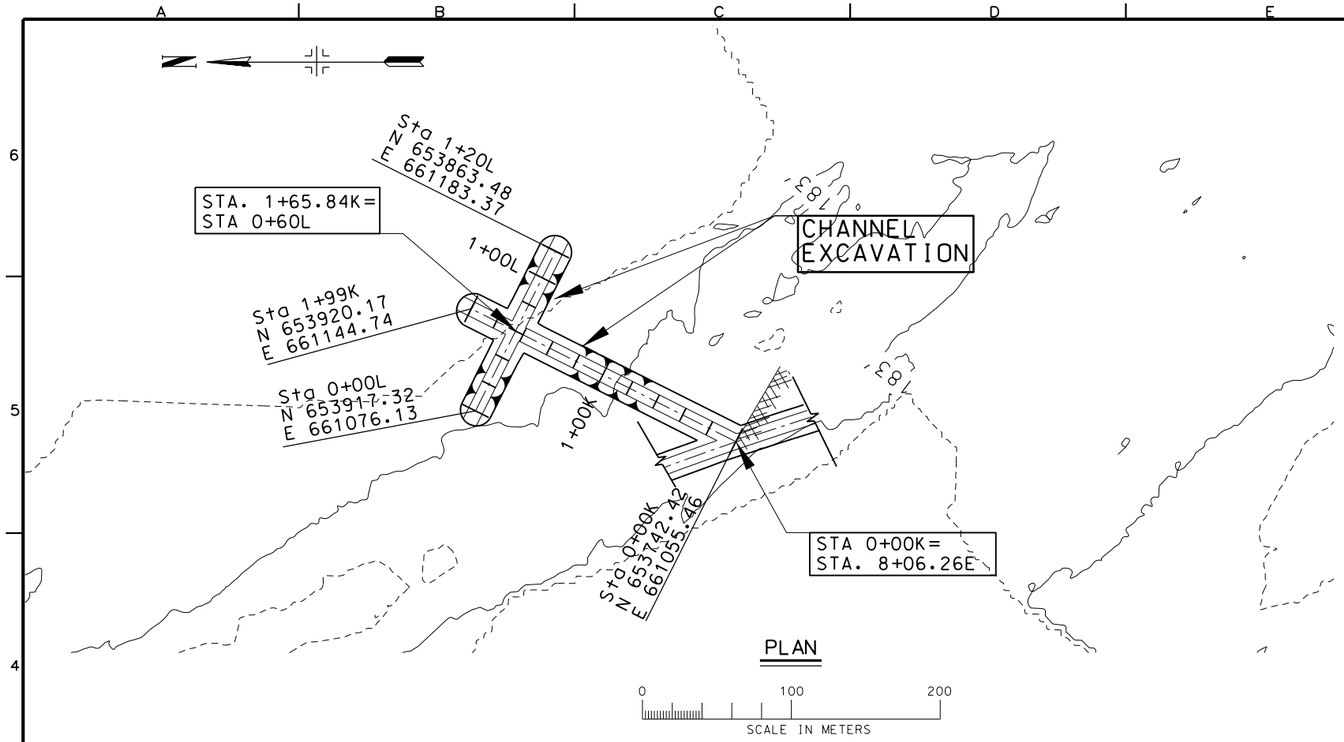

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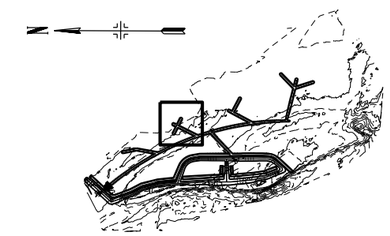

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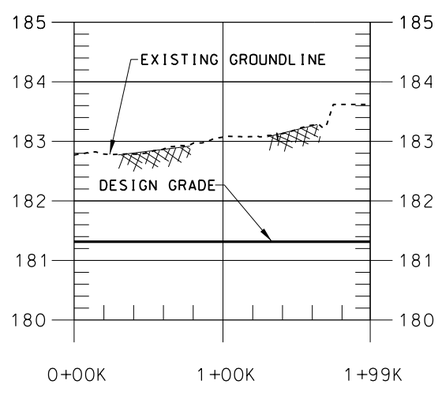

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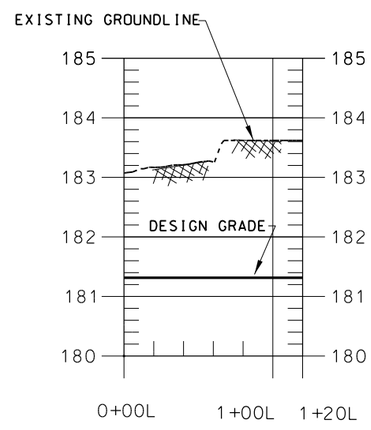

CHANNEL EXCAVATION PROFILE L

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED AMENDMENT #1 - SCALE BAR CHANGE	27JUL04	JRP/REH
		7JUN02	RTN/DJH

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CHANNEL EXCAVATION PLAN AND PROFILES K,L

Sheet Reference Number:
C13
Sheet 17 of 25

PLATE 16

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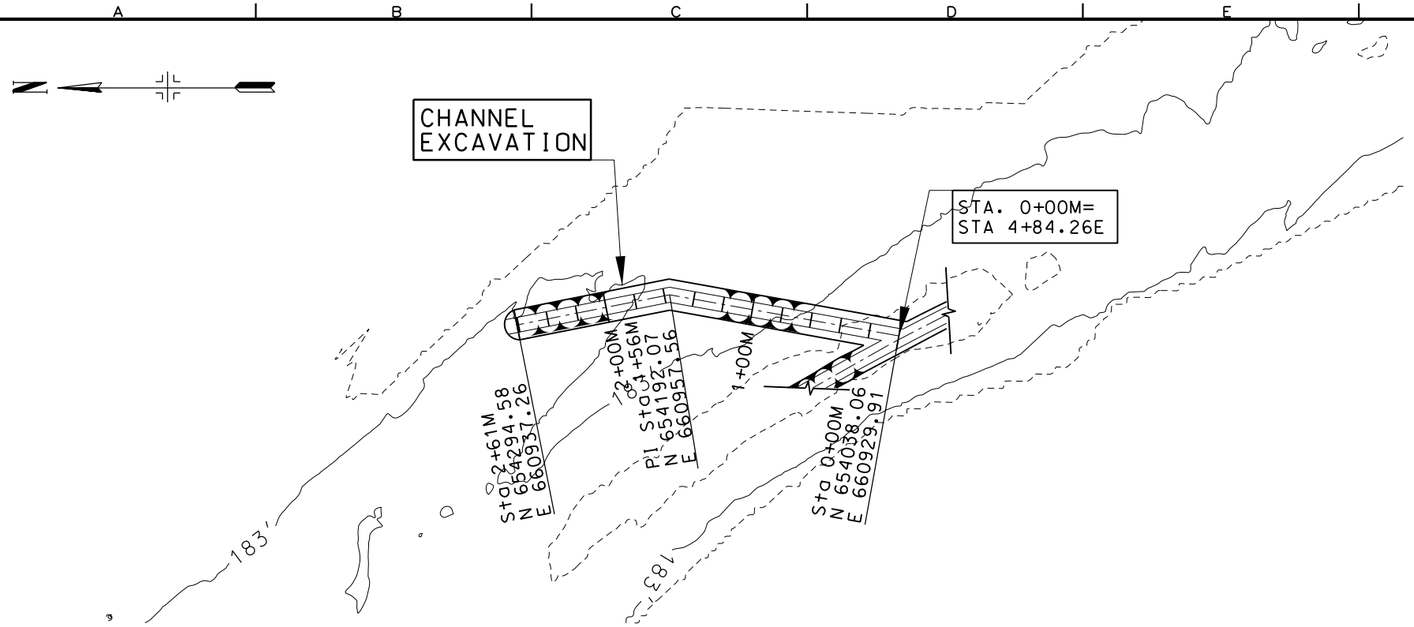
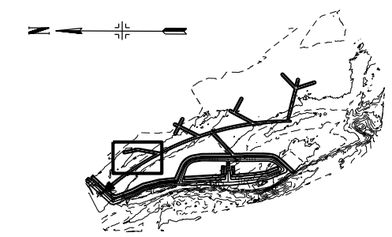


PLAN

0 100 200
SCALE IN METERS



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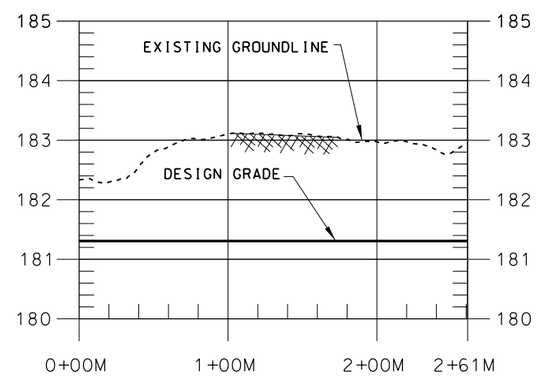

CHANNEL EXCAVATION PROFILE M

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED AMENDMENT #1 - SCALE BAR CHANGE	27JUL04	JRP/REH
		7JUN02	RTN/DJH

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

POOL 11 ISLANDS
HABITAT REHABILITATION & ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

CHANNEL EXCAVATION PLAN AND PROFILE M

Sheet Reference Number: **C14**

Sheet 18 of 25

PLATE 17

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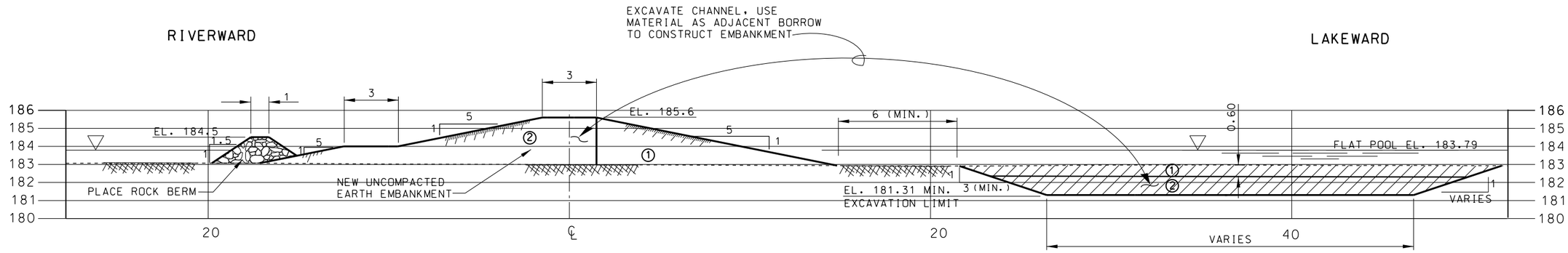


TYPICAL SECTION EMBANKMENT AND EXCAVATION

NO SCALE

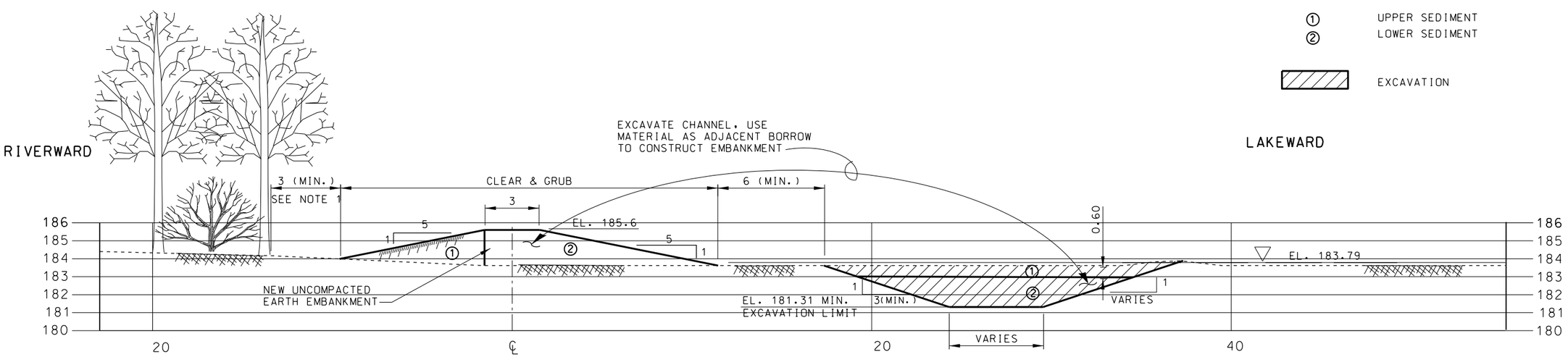
STA. 0+00A TO 3+50A

LEGEND

① UPPER SEDIMENT

② LOWER SEDIMENT

EXCAVATION



TYPICAL SECTION EMBANKMENT EXCAVATION

NO SCALE

ADJACENT TO EXISTING ISLAND

NOTES:

1. EMBANKMENT CENTERLINE MAY BE ADJUSTED AS NECESSARY TO MAINTAIN MINIMUM DISTANCE FROM TREE LINE. NO DAMAGE MAY BE CAUSED TO ANY TREE LARGER THAN 10 CENTIMETER DIAMETER.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	JRP/REH

Revisions

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION & ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

TYPICAL SECTIONS I

Sheet Reference Number: C15

Sheet 19 of 25

PLATE 18

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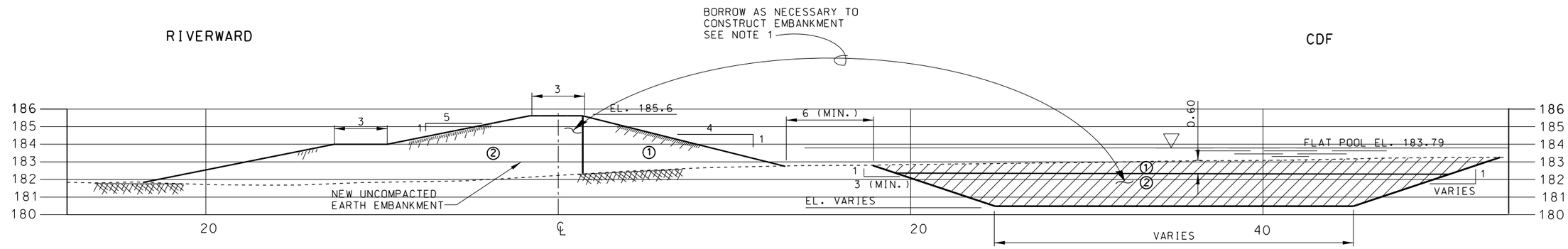


C
C4|C16

TYPICAL SECTION EMBANKMENT AND BORROW

NO SCALE

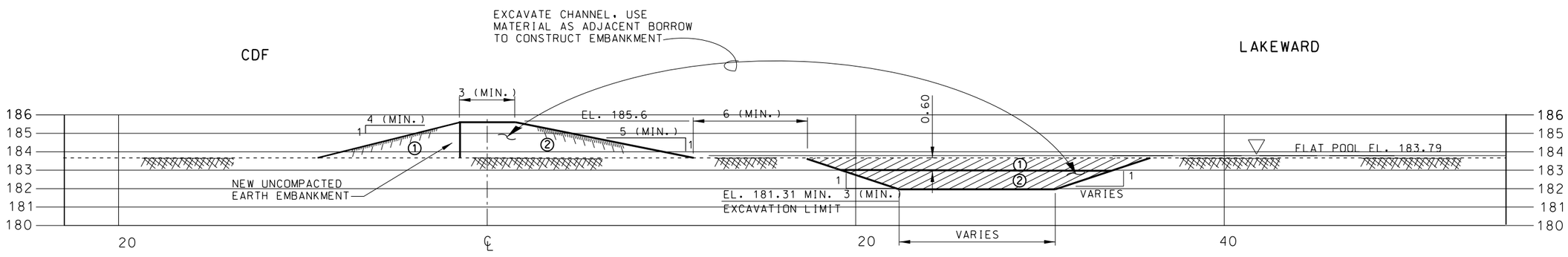
CDF CELL 1

LEGEND

① UPPER SEDIMENT

② LOWER SEDIMENT

EXCAVATION



D
C6|C16

TYPICAL SECTION EMBANKMENT AND EXCAVATION

NO SCALE

CDF CELL 1

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	JRP/REH

Revisions

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

TYPICAL SECTIONS II

Sheet Reference Number:
C16
Sheet 20 of 25

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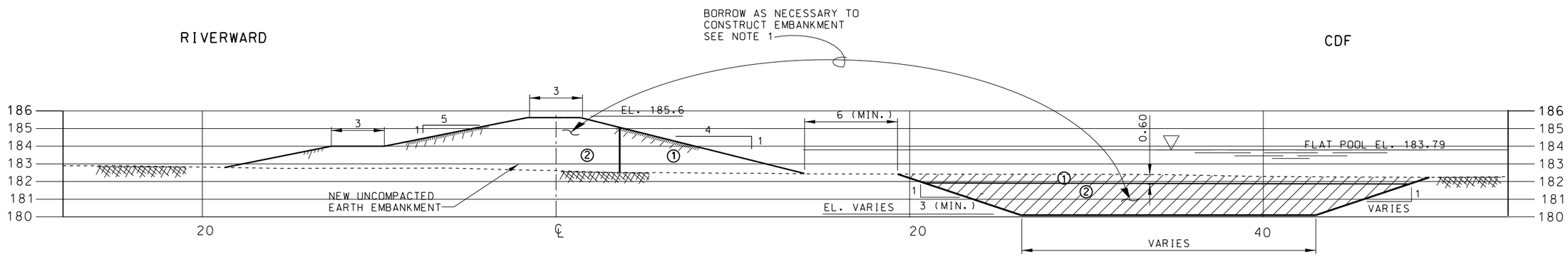
PLATE 19



E
C5 C17

TYPICAL SECTION EMBANKMENT AND BORROW

NO SCALE

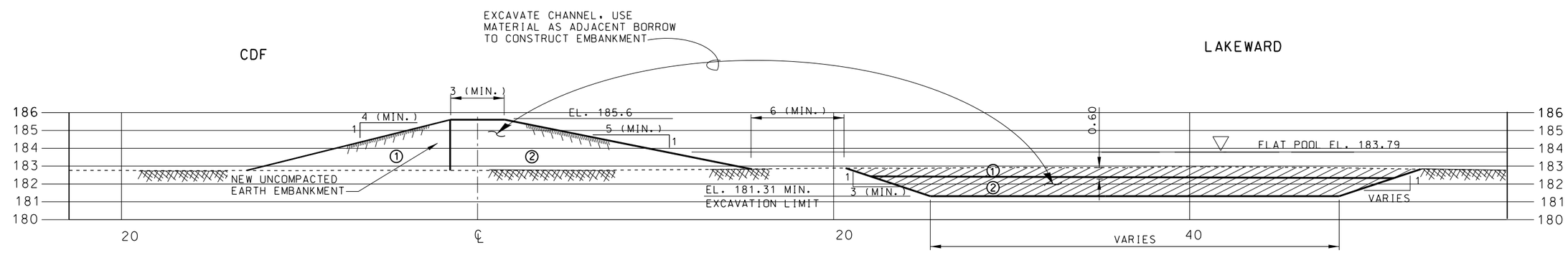
CDF CELL 2

LEGEND

① UPPER SEDIMENT

② LOWER SEDIMENT

EXCAVATION



F
C6 C17

TYPICAL SECTION EMBANKMENT AND EXCAVATION

NO SCALE

CDF CELL 2

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	JRP/REH

Revisions

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP 2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

TYPICAL SECTIONS III

Sheet Reference Number:
C17
Sheet 21 of 25

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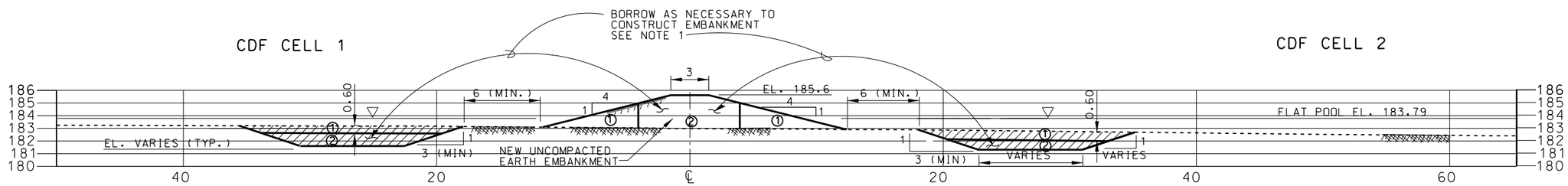
PLATE 20



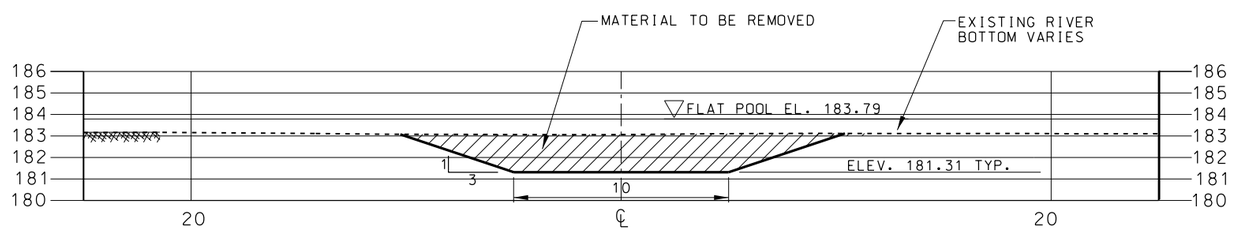
G C7 C18 TYPICAL SECTION EMBANKMENT AND BORROW
NO SCALE
BETWEEN CDF CELLS

LEGEND

① UPPER SEDIMENT

② LOWER SEDIMENT

EXCAVATION



H C9 C18 CHANNEL EXCAVATION TYPICAL SECTION
NO SCALE

NOTE:
SECTION H WAS MODIFIED PER VALUE EHGINEERING PROPOSAL, CONTRACT MODIFICATION #A0005 DATED AUGUST 8, 2003.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	REVISED AS CONSTRUCTED MOD. - EXCAVATION CHANGE CHANGE	27JUL04	RP/REH

Revisions

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP 2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS HABITAT REHABILITATION & ENHANCEMENT PROJECT STAGE I - SUNFISH LAKE

TYPICAL SECTIONS IV

Sheet Reference Number:
C18
Sheet 22 of 25

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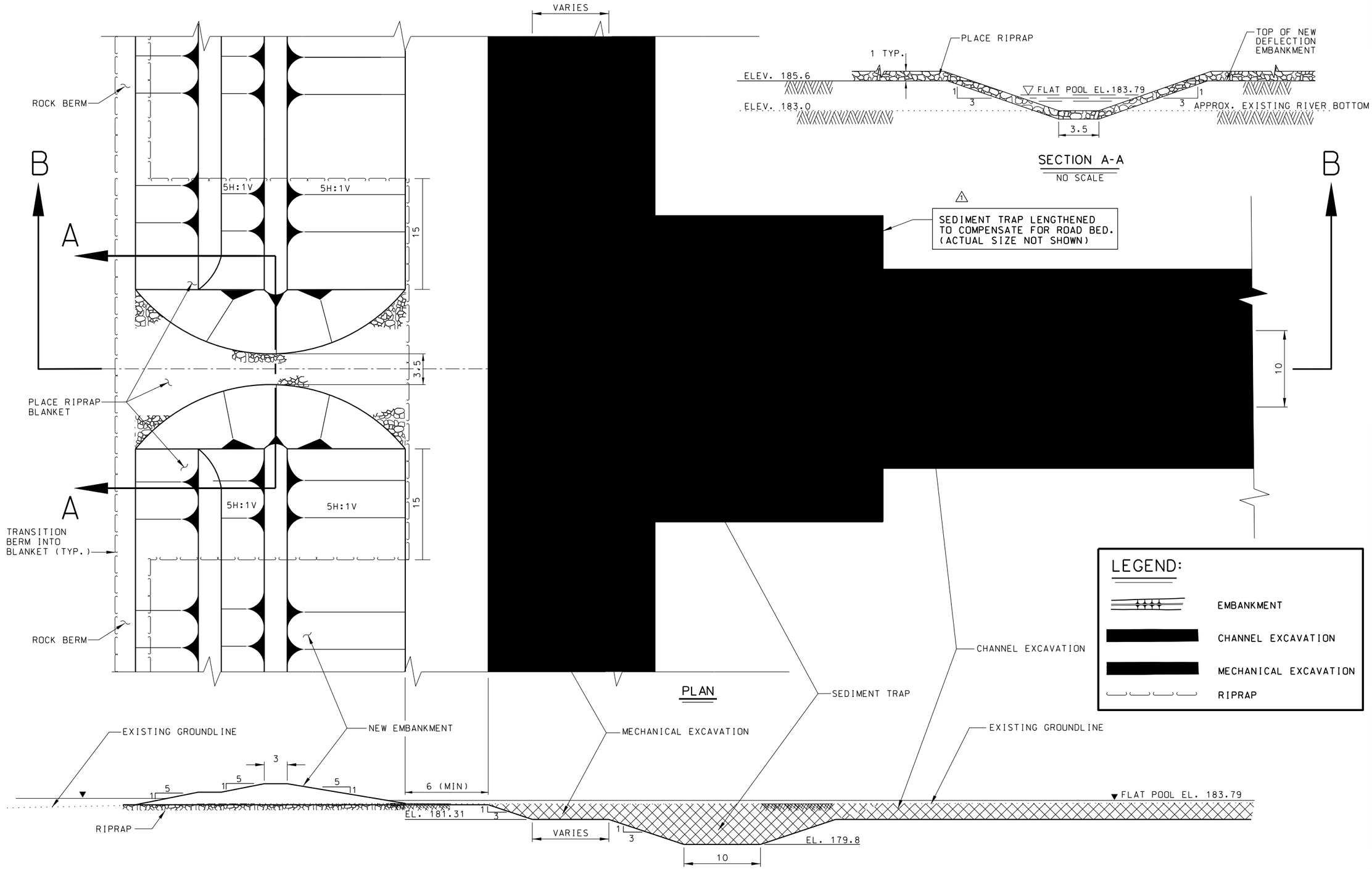

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	REVISED AS CONSTRUCTED	27JUL04	JRP/REH

Revisions

Designed By: RTN
Drawn By: SDB
Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
Scale: AS SHOWN
Drawing Code: EP66
Solicitation Number: DACW25-02-R-0008

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION & ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

FLOW INLET PLAN AND PROFILE

Sheet Reference Number:
C19
Sheet 23 of 25

PLATE 22

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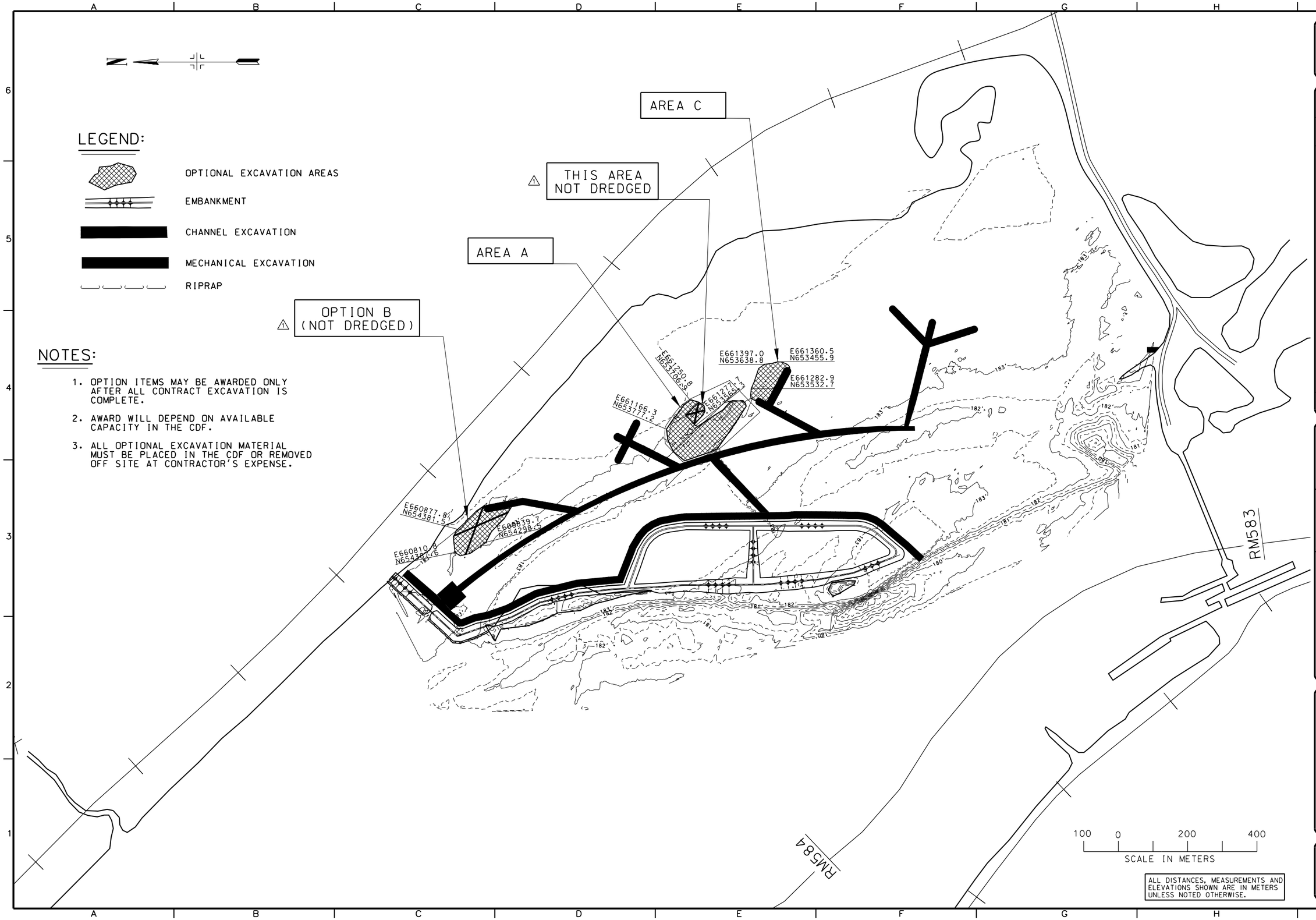

LEGEND:

- OPTIONAL EXCAVATION AREAS
- EMBANKMENT
- CHANNEL EXCAVATION
- MECHANICAL EXCAVATION
- RIPRAP

NOTES:

1. OPTION ITEMS MAY BE AWARDED ONLY AFTER ALL CONTRACT EXCAVATION IS COMPLETE.
2. AWARD WILL DEPEND ON AVAILABLE CAPACITY IN THE CDF.
3. ALL OPTIONAL EXCAVATION MATERIAL MUST BE PLACED IN THE CDF OR REMOVED OFF SITE AT CONTRACTOR'S EXPENSE.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	REVISED AS CONSTRUCTED	27JUL04	JRP/REH

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: RTN
Drawn By: SDB
Checked By: KNM
Reviewed By: DJH
Date: 21 SEP.2002
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POOL 11 ISLANDS
HABITAT REHABILITATION & ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

OPTION ITEMS PLAN VIEW

Sheet Reference Number: **C20**

Sheet 24 of 25

PLATE 23

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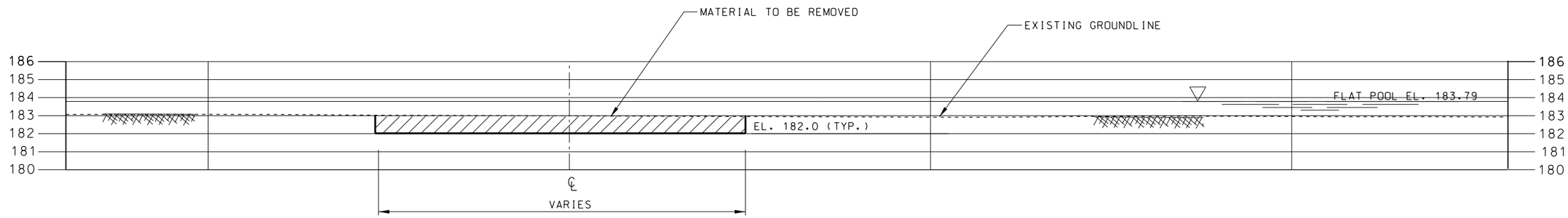

OPTIONAL EXCAVATION TYPICAL SECTION

NO SCALE

NOTE:

ALL OPTIONAL EXCAVATION SHALL BE TO ELEV. 182.0

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	27JUL04	JRP/REH

Revisions

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Checked By: MJA
Reviewed By: DJH
Date: 21 SEP.2002
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE I - SUNFISH LAKE

OPTION ITEMS TYPICAL SECTION

Sheet Reference Number:
C21
Sheet 19 of 25

PLATE 24

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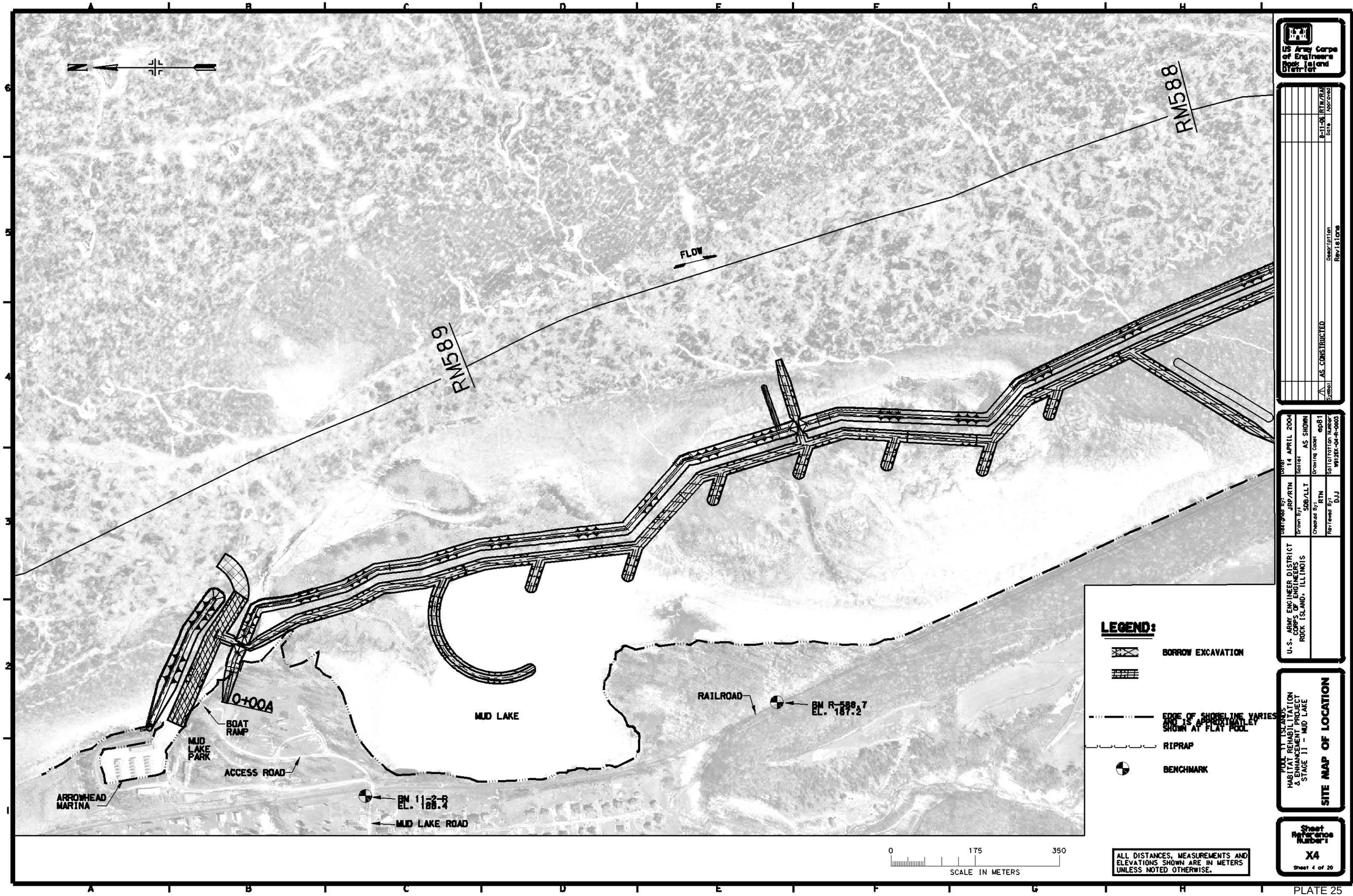


RM588
RM589
FLOW
0+00A
BOAT RAMP
MUD LAKE PARK
ACCESS ROAD
ARROWHEAD MARINA
MUD LAKE
RAILROAD
BM R-588.7
EL. 187.2
BM 11-2-R
EL. 188.4
MUD LAKE ROAD
LEGEND:
BORROW EXCAVATION
EDGE OF SHORELINE VARIES AND IS APPROXIMATLEY SHOWN AT FLAT POOL
RIPRAP
BENCHMARK
0
175
350
SCALE IN METERS
ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.
US Army Corps of Engineers Rock Island District
Symbol
Description
Date
Approved
AS CONSTRUCTED
Revisions
Date: 14 APRIL 2004
Scale: AS SHOWN
Drawing Code: ep81
Solicitation Number: W912EK-04-R-0003
Designed By: JRP/RTN
Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS
POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE
SITE MAP OF LOCATION
Sheet Reference Number:
X4
Sheet 4 of 20

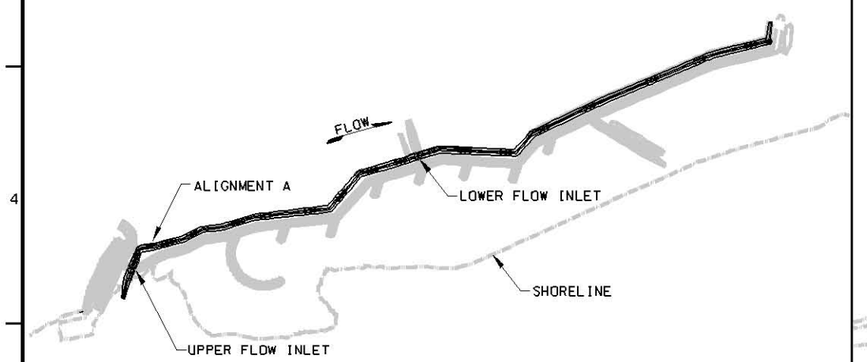
PLATE 25

CONSTRUCTION FEATURES

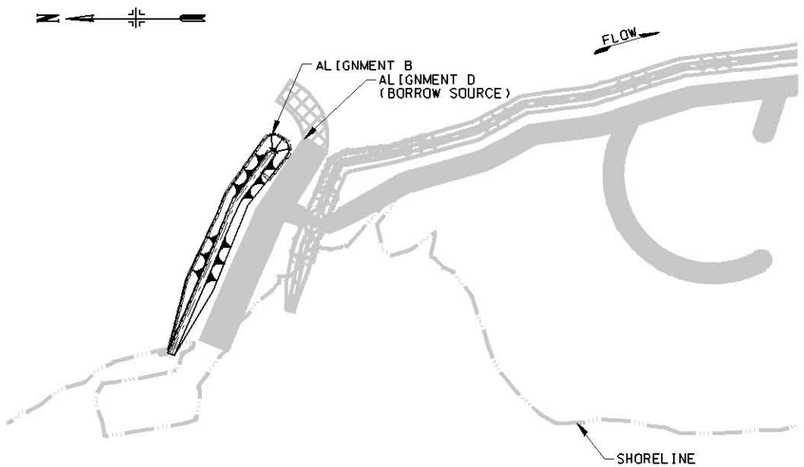
THE FOLLOWING PROVIDES A BRIEF DESCRIPTION OF THE MAJOR PROJECT FEATURES.
IT IS NOT NECESSARILY A CONSTRUCTION SEQUENCE.

FEATURE: DEFLECTION EMBANKMENT A

CONSTRUCT DEFLECTION EMBANKMENT USING ADJACENT BORROW FROM RIVER BED.

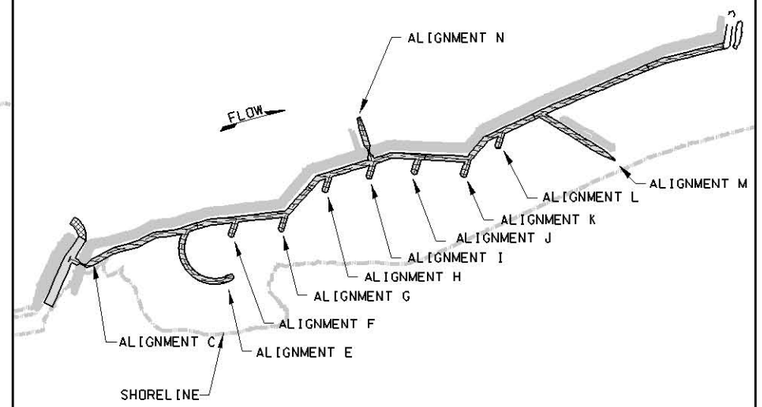


FEATURE: DEFLECTION EMBANKMENT B



FEATURE: DEEP WATER FISH HABITAT

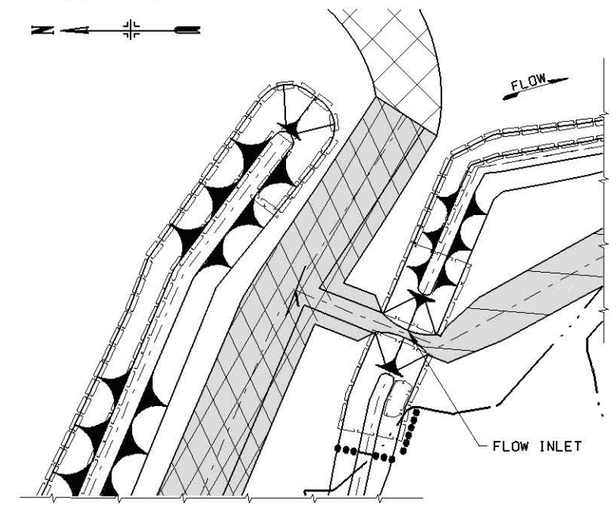
(ALIGNMENTS C, E-M) CONSTRUCT A SYSTEM OF DEEP-WATER CHANNELS FOR FISH HABITAT.



THE EXCAVATED CHANNELS WILL PROVIDE APPROXIMATELY 8.8 HECTARES OF FISH HABITAT, AS WELL AS A MATERIAL SOURCE FOR CONSTRUCTION OF EMBANKMENT (ALIGNMENT A).

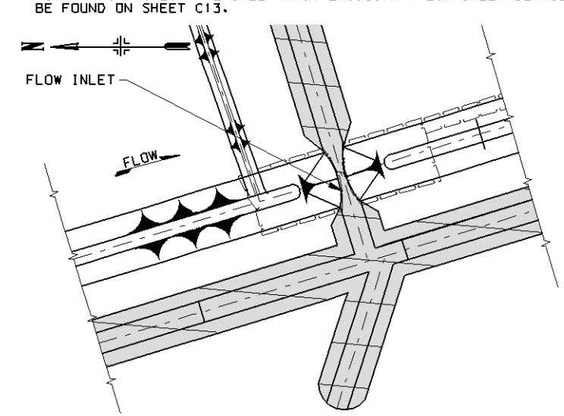
FEATURE: UPPER FLOW INLET

CONSTRUCT A FLOW INLET IN THE DEFLECTION EMBANKMENT TO ALLOW NOMINAL FLOW THROUGH THE NEWLY EXCAVATED CHANNELS. PLACE RIPRAP TO PROTECT THE INLET FROM EROSION. FLOW INLET DETAILS MAY BE FOUND ON SHEET C13.



FEATURE: LOWER FLOW INLET

CONSTRUCT A FLOW INLET IN THE DEFLECTION EMBANKMENT TO ALLOW NOMINAL FLOW THROUGH THE NEWLY EXCAVATED CHANNELS. PLACE RIPRAP TO PROTECT THE INLET FROM EROSION. FLOW INLET DETAILS MAY BE FOUND ON SHEET C13.



ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
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Revisions

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Drawing Code: ep81
Reviewed By: DJJ
Solicitation Number: W912EK-04-R-0003

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

CONSTRUCTION FEATURES

Sheet Reference Number:
X5
Sheet 6 of 20

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MISSISSIPPI RIVER

FLOW

DEFLECTION EMBANKMENT

UPPER FLOW INLET
STA. 1+25A

LOWER FLOW INLET
STA. 14+32A

EXISTING
VEGETATION BED

ALIGNMENT A
ALIGNMENT B
ALIGNMENT C
ALIGNMENT D
ALIGNMENT E
ALIGNMENT F
ALIGNMENT G
ALIGNMENT H
ALIGNMENT I
ALIGNMENT J
ALIGNMENT K
ALIGNMENT L
ALIGNMENT M
ALIGNMENT N

PI STA 0+90A
PI STA 2+10A
PI STA 2+24B
PI STA 2+86A
PI STA 3+98A
PI STA 4+71A
PI STA 5+63A
PI STA 6+91A
PI STA 9+99A
PI STA 11+85A
PI STA 15+20A
PI STA 16+10A
PI STA 18+30A
PI STA 19+30A
PI STA 22+29A
PI STA 27+29A
PI STA 25+62C
PI STA 17+90C
PI STA 16+75C
PI STA 13+68C
PI STA 10+57C
PI STA 8+61C
PI STA 5+41C
PI STA 4+12C
PI STA 3+27TC
PI STA 2+17TC
PI STA 1+35C
PI STA 0+17C
0+00BC
0+00A
0+00C
3+28B
5+56C
5+00A
5+00C
10+00A
10+00C
15+00A
15+00C
20+00A
20+00C
25+00A
25+00C
29+65A

MUD LAKE

MUDLAKE PARK LANDING

GATE LOCATION
PI: STA 0+65A

EXCAVATE CHANNELS

PLACE SIDE CAST BERMS

I O W A

LEGEND:

- BORROW EXCAVATION
- CHANNEL EXCAVATION
- EMBANKMENT
- EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL
- RIPRAP

GENERAL NOTES:

1. ALL RIVER MILES AND FEATURE LOCATIONS ARE APPROXIMATE.
2. RIVER BOUNDARIES BASED ON 1994 AERIAL PHOTOS AND 1989 NAVIGATION CHARTS.
3. FLAT POOL EL 183.79, 5 YR EL 184.89, 10 YR EL 185.47.
4. CONTOURS ARE ESTIMATED FROM VARIOUS SOURCES (1990 TO PRESENT).

0 50 100
SCALE IN METERS

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
2	REVISED AS CONSTRUCTED MOD. #1 - STATION DISTANCE CHANGE	8-11-06 2-25-04	RTN/RAP RTN/RAP

Revisions

Designed By: JRP/RTN
Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
Date: 14 APRIL 2004
Scale: AS SHOWN
Drawing Code: ep81
Solicitation Number: W912EK-04-R-0003

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

SITE PLAN

Sheet Reference Number:
C1
Sheet 6 of 20

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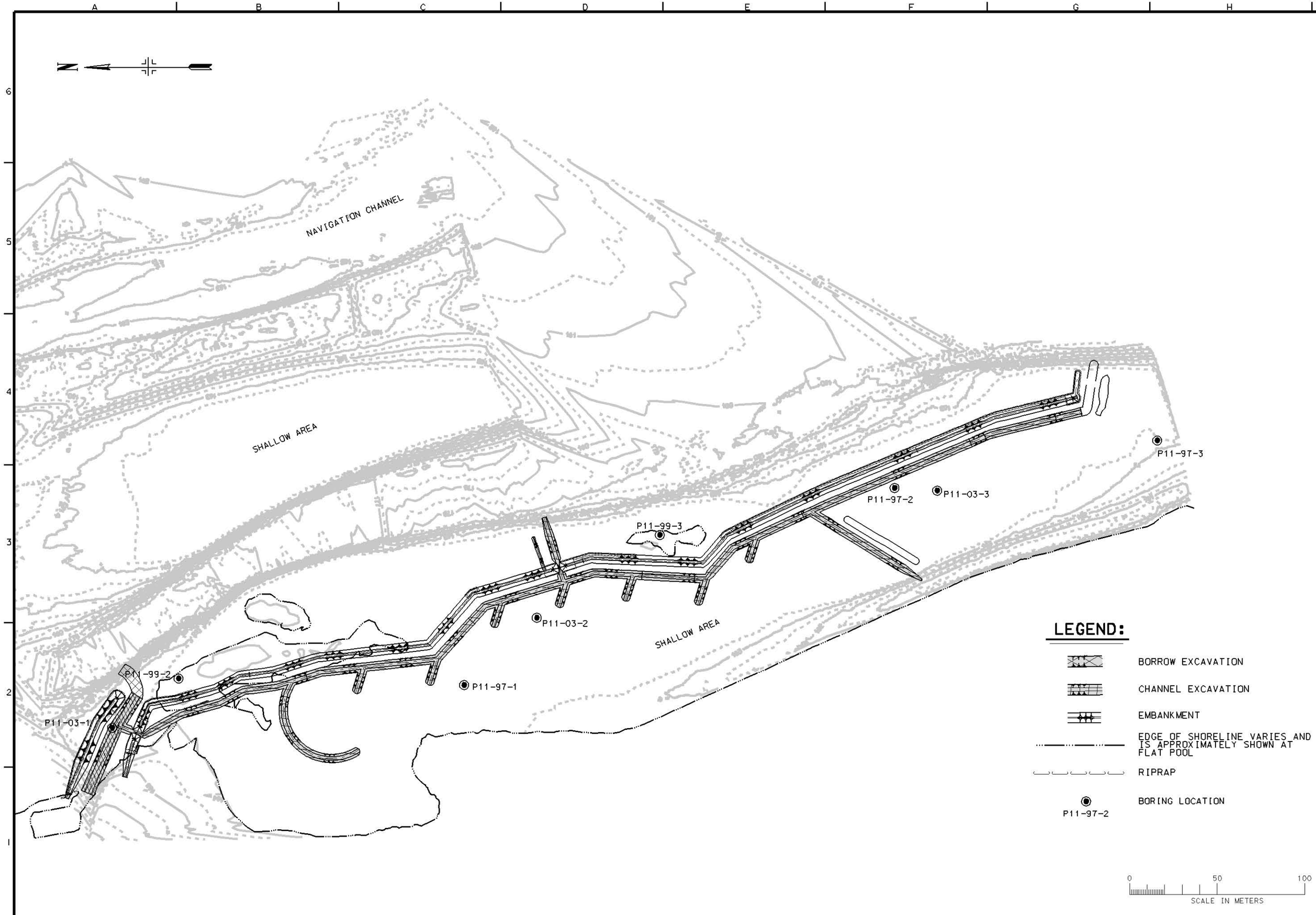

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
9	AS CONSTRUCTED	8-11-06	RTN/RAP

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: RSK
Drawn By: SDB/TPD/GBM
Checked By: RSK
Reviewed By: GJM
Date: 14 APRIL 2004
Scale: AS SHOWN
Drawing Code: ep81
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POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

BORING LOCATIONS

Sheet Reference Number:
C2
Sheet 7 of 20

03-MAR-2008 08:11
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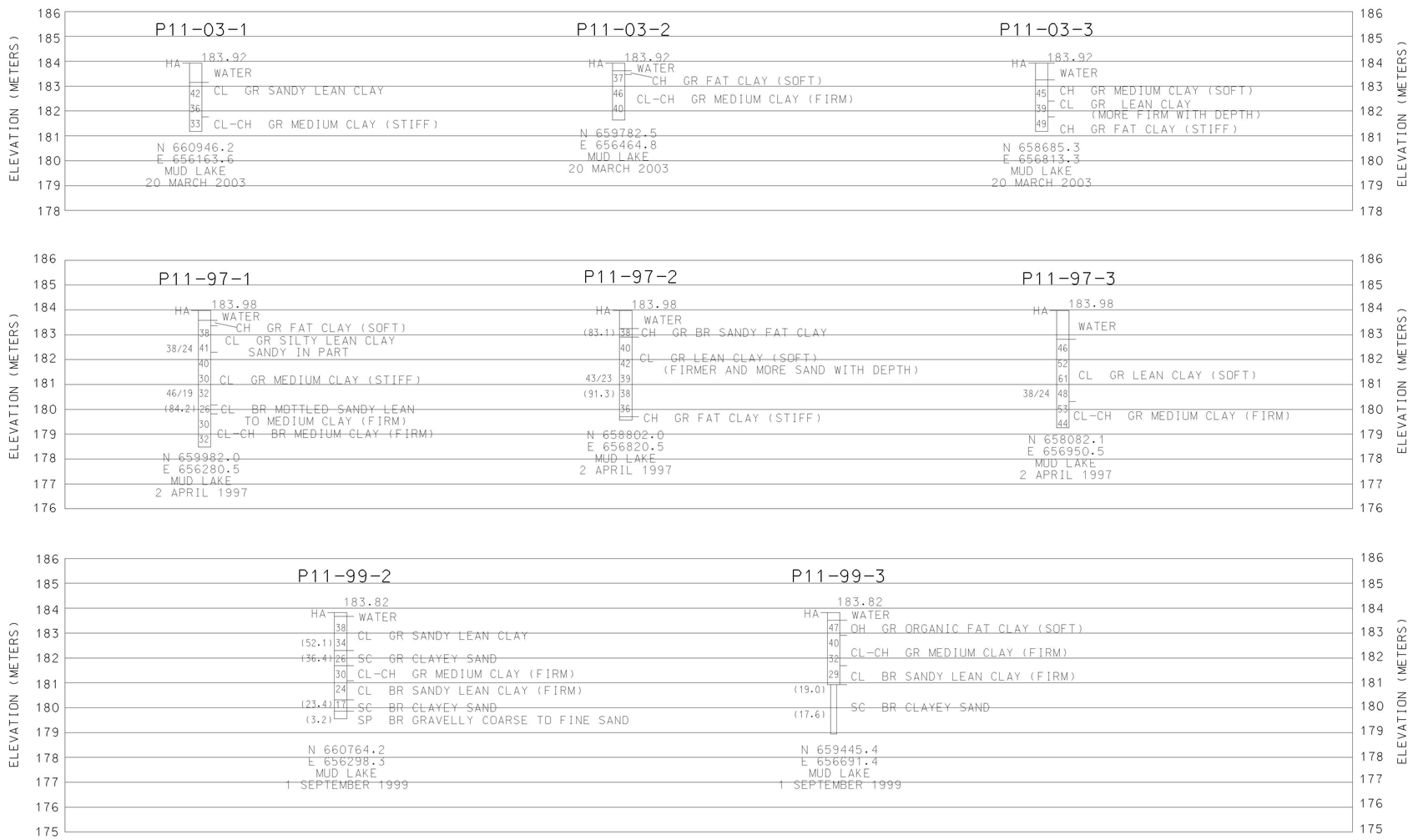

LEGEND

BORING NUMBER

HOLE ADVANCED BY HAND AUGER HA — TOP ELEVATION (IN METERS) NGVD 12

WATER LEVEL WL

PERCENT PASSING #200 SIEVE (6.7) — 21 NATURAL MOISTURE CONTENT IN PERCENT DRY WEIGHT

LIQUID AND PLASTIC LIMIT 46/28 — MAJOR STRATA CHANGE

D_{10} SIZE (mm) 0.19 — MINOR STRATA CHANGE

HOLE EXTENDED BY DRIVING 50 mm PIPE

* PROBE OR SPLIT SPOON REFUSAL

LOCATION OF BORING 4 JULY 1976 — APPROXIMATE DATE OF DRILLING ALSO, DATE WATER LEVEL NOTED

LOCATIONS GIVEN IN ILLINOIS WEST ZONE STATE PLANE COORDINATES (NAD 83) IN METERS

NOTE:

FOR LOCATIONS OF BORINGS, SEE SHEET C2.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
9	AS CONSTRUCTED	8-11-06	RTN/RAP

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Reviewed By: GJM
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

BORING LOGS

Sheet Reference Number:
C3
Sheet 8 of 20

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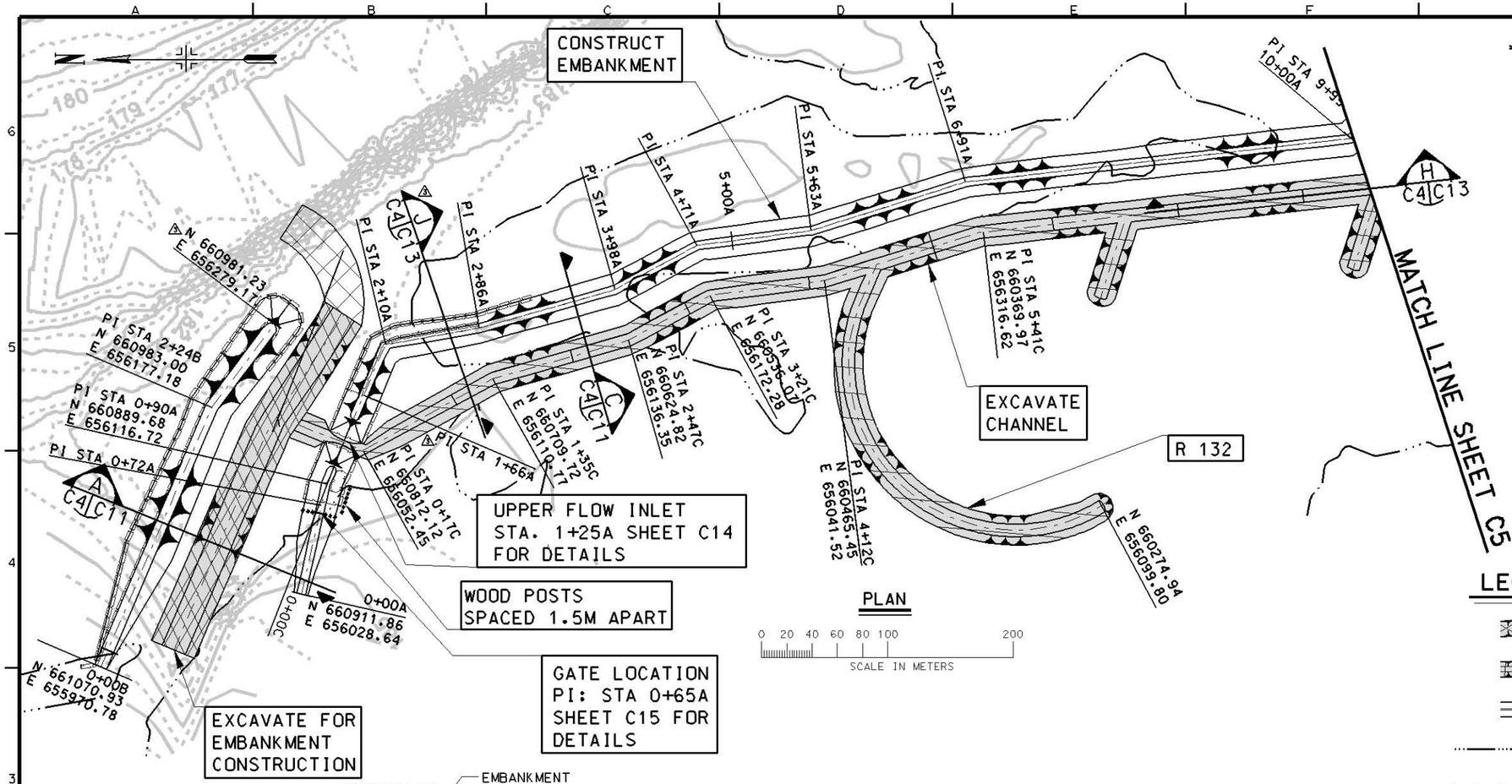
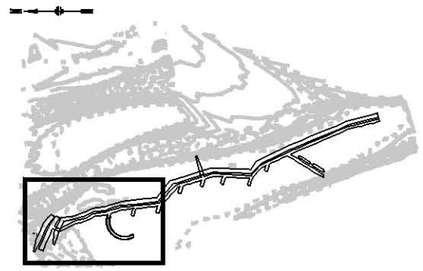
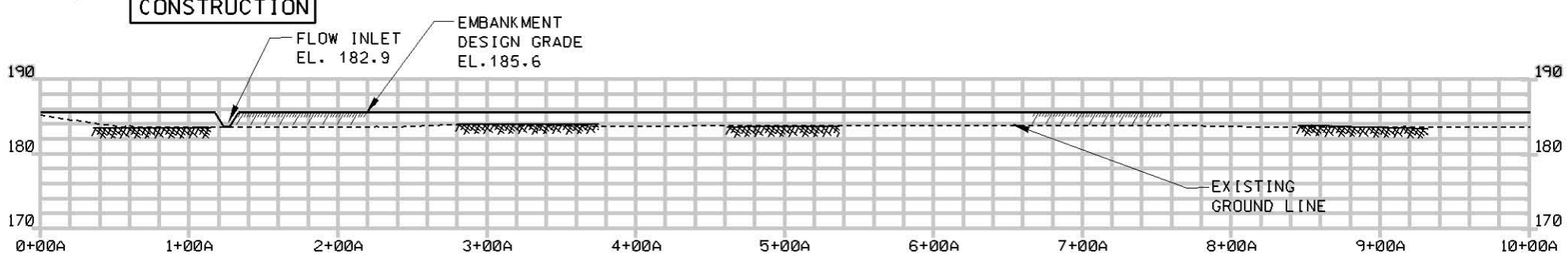
PLATE 29



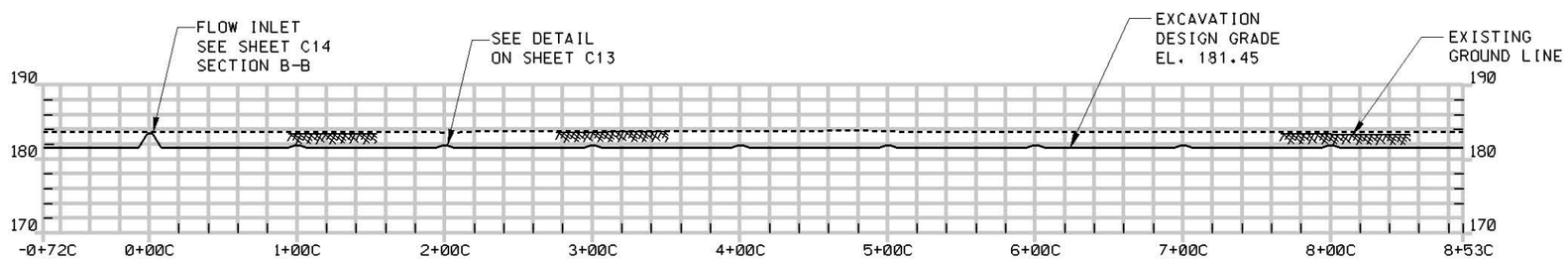


LEGEND:

- BORROW EXCAVATION
- CHANNEL EXCAVATION
- EMBANKMENT
- EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL
- RIPRAP



EMBANKMENT PROFILE A



EXCAVATION PROFILE C

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	8/11/08	RAW/DAW
2	AMD. #3-ADDED COORDINATE, CROSS SECTION SYMBOL AND STATION	6-2-04	JRP/DJJ

Revisions

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Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

EMBANKMENT A AND EXCAVATION C PLAN AND PROFILE STA. 0+00A TO 10+00A

Sheet Reference Number:
C4
Sheet 9 of 20

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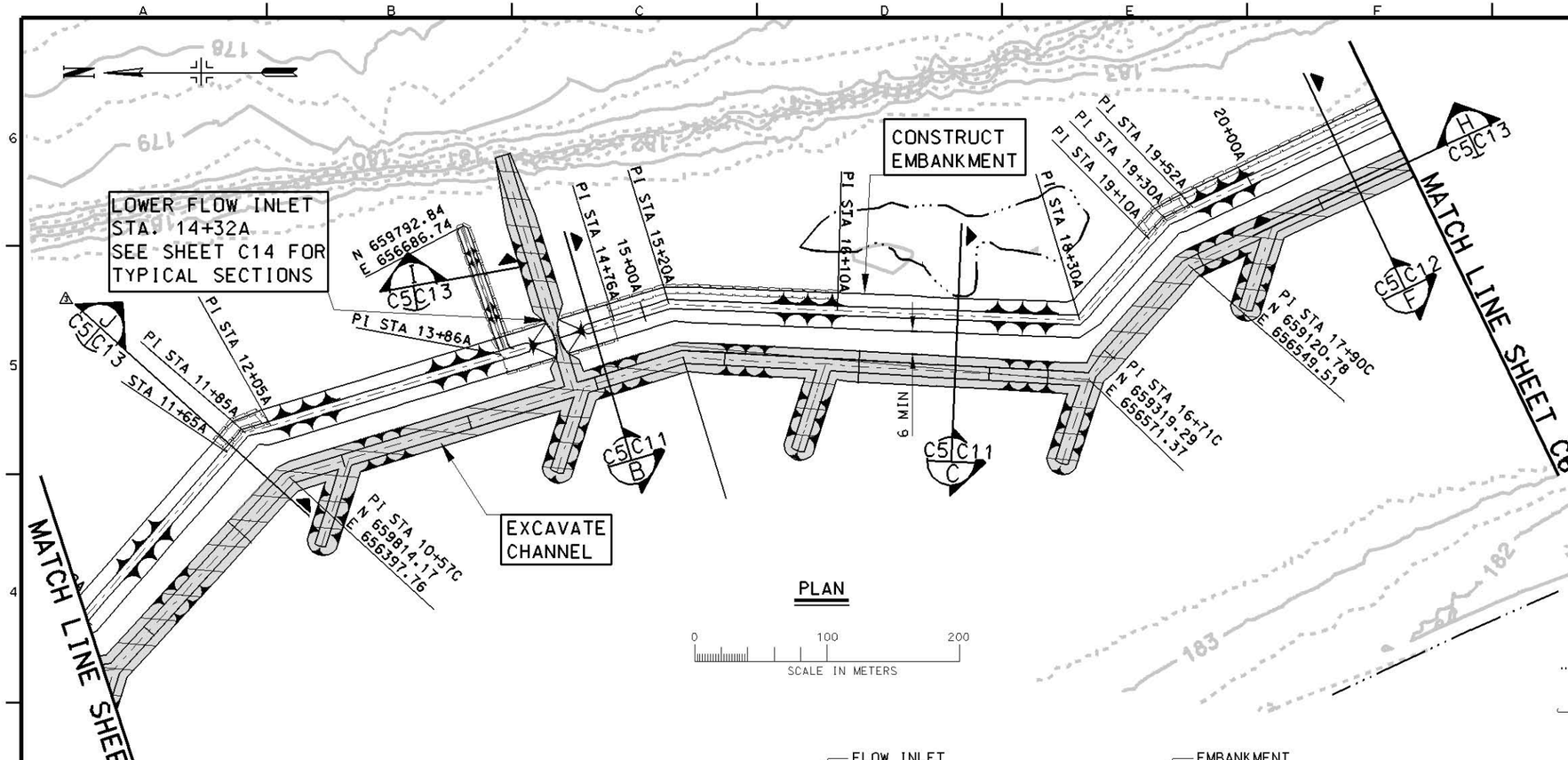
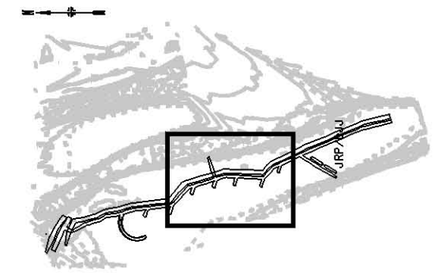
PLATE 30

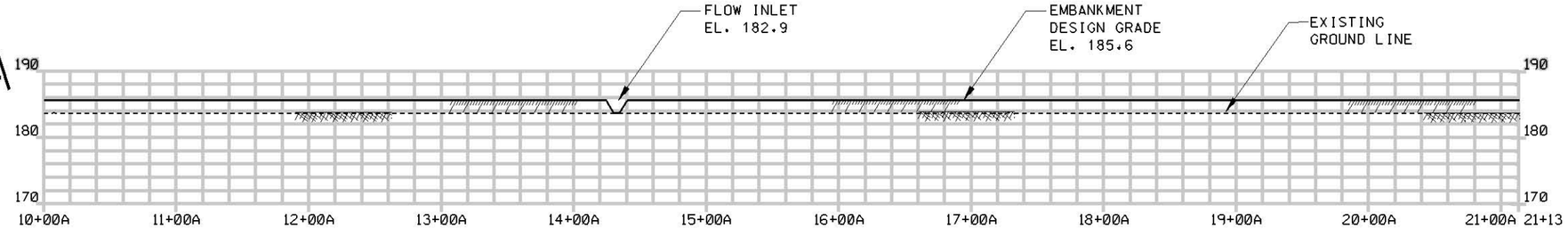




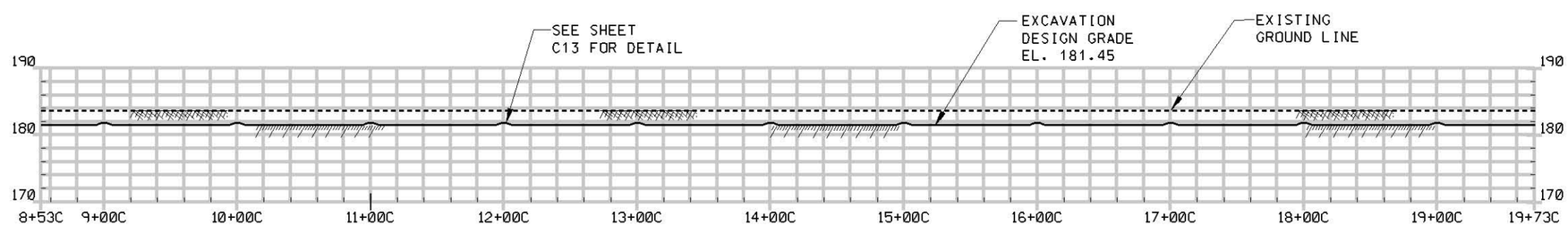
KEY PLAN

LEGEND:

- CHANNEL EXCAVATION
- EMBANKMENT
- EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL
- RIPRAP



ENBANKMENT PROFILE A



EXCAVATION PROFILE C

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	8/11/06	RTN/DJJ
2	AMD. #3-ADDED CROSS SECTION SYMBOL	6-2-04	JRP/DJJ

Revisions

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Drawn By: SDB/LLT
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

ENBANKMENT A AND EXCAVATION C PLAN AND PROFILE STA. 10+00A TO 21+13A

Sheet Reference Number:
C5
Sheet 10 of 20

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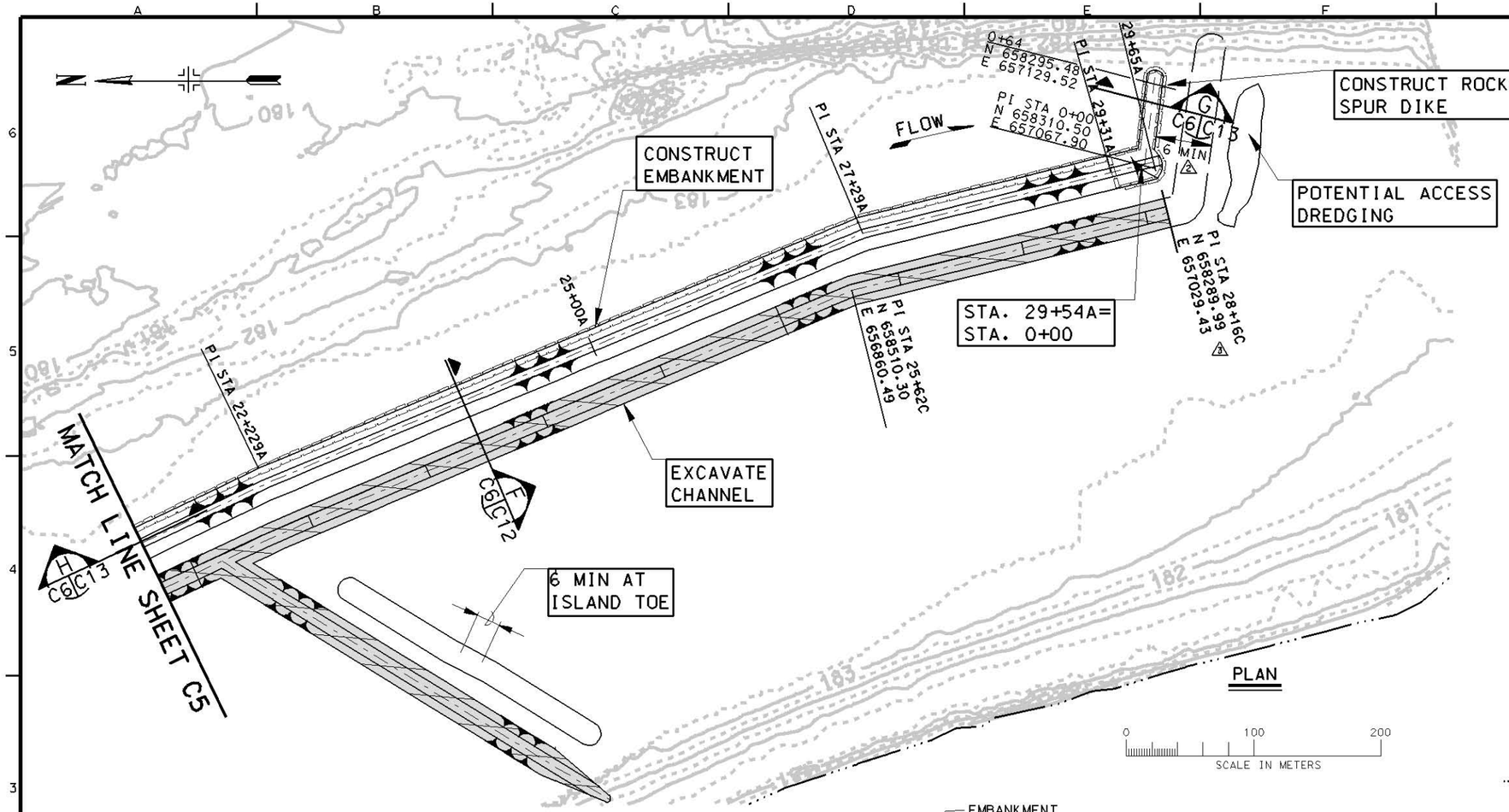
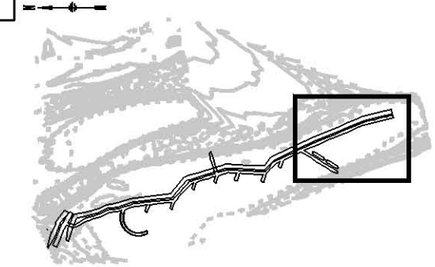
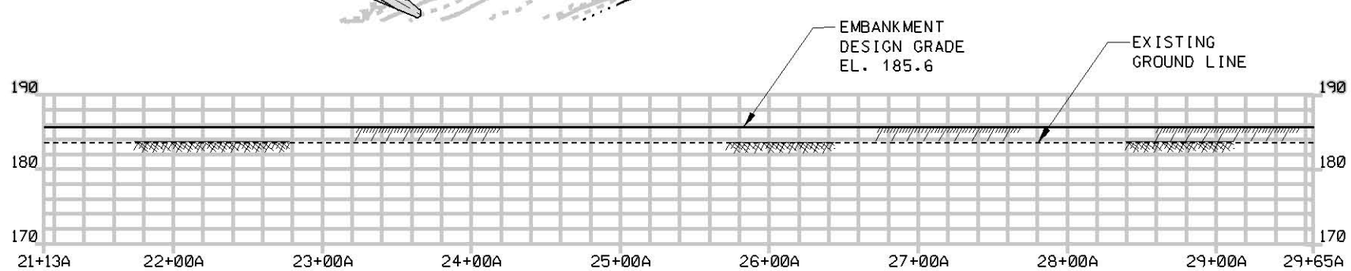




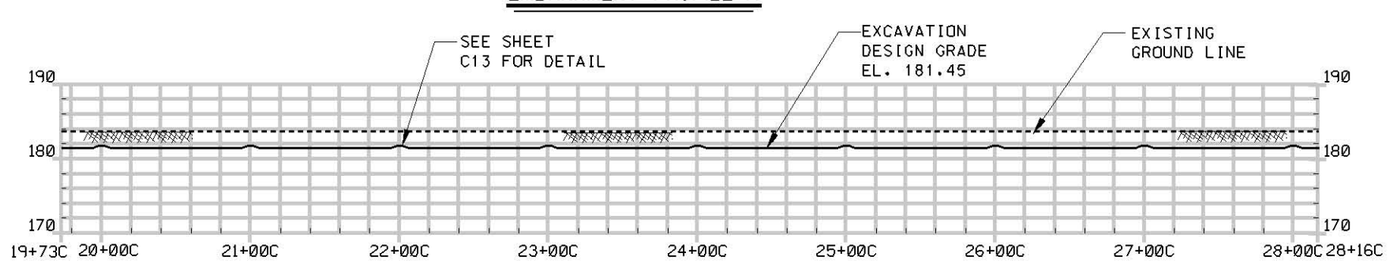
KEY PLAN

LEGEND:

- CHANNEL EXCAVATION
- EMBANKMENT
- EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL
- RIPRAP



EMBANKMENT PROFILE A



EXCAVATION PROFILE C

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
1	AS CONSTRUCTED	8/11/06	RTN/DOJ
2	AMD. #1-SPECIFICATION AMENDMENT	5-12-04	JRP/DJJ
3	AMD. #2-ADDED DIMENSION	5-18-04	JRP/DJJ
4	AMD. #3-ADDED NORTHING AND EASTING	6-2-04	JRP/DJJ

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Drawn By: SDB/LLT
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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS HABITAT REHABILITATION & ENHANCEMENT PROJECT STAGE II - MUD LAKE

EMBANKMENT A AND EXCAVATION C PLAN AND PROFILE STA. 21+13A TO 29+65A

Sheet Reference Number: C6

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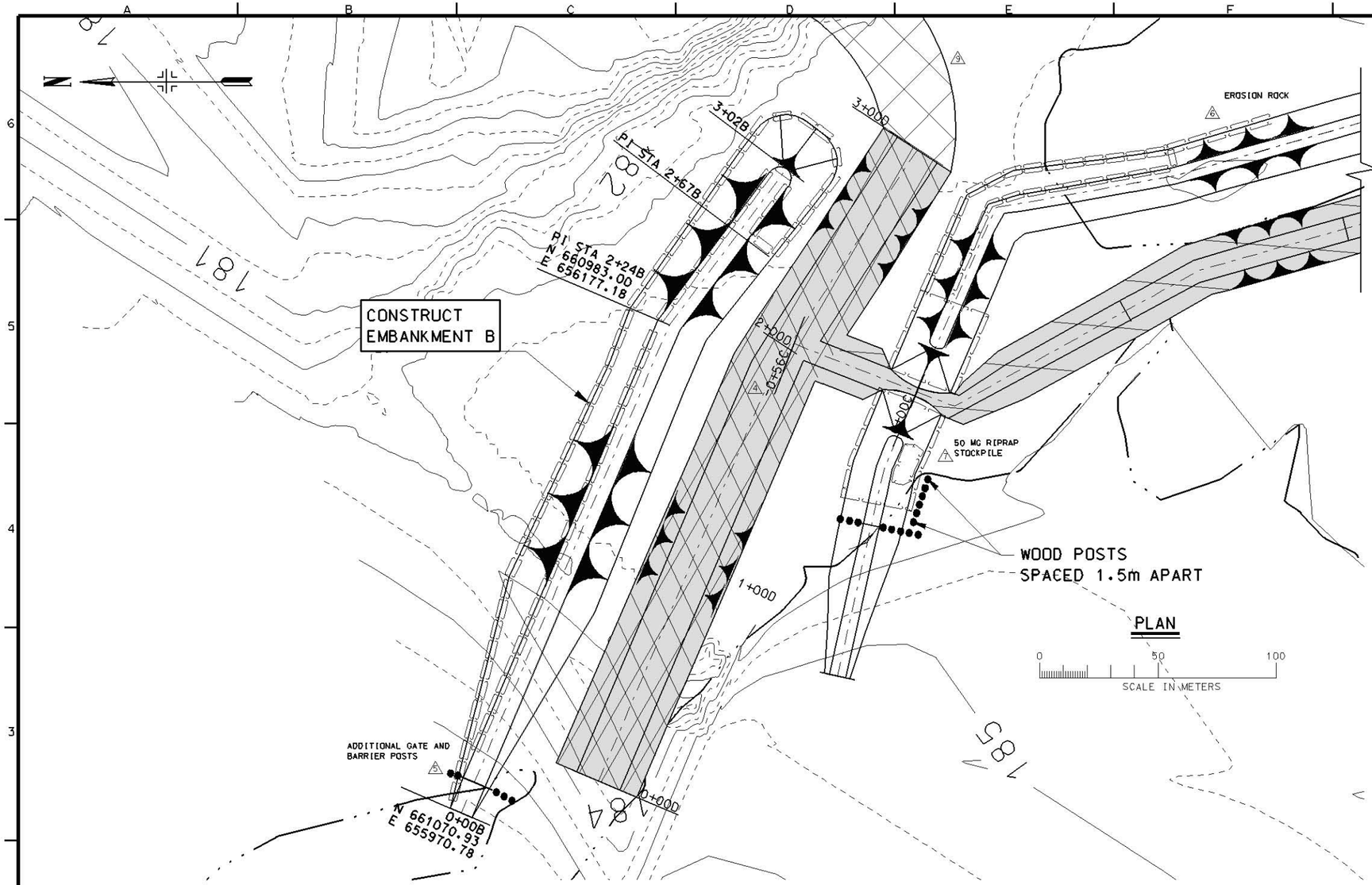

PLAN

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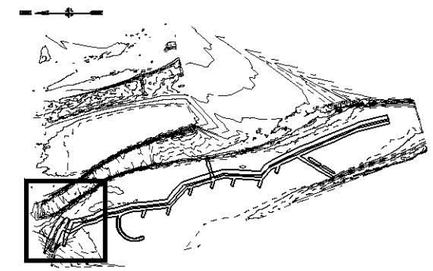
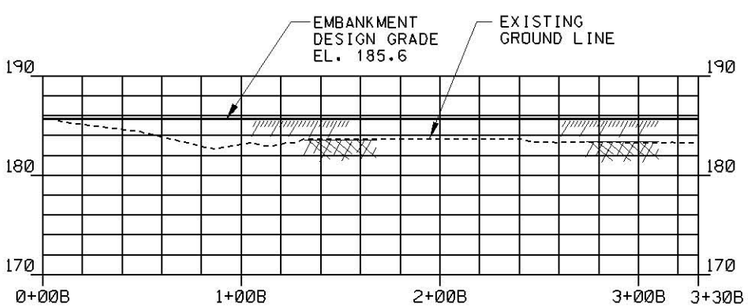


KEY PLAN

LEGEND:

- BORROW EXCAVATION
- CHANNEL EXCAVATION
- EMBANKMENT
- EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL
- RIPRAP



EMBANKMENT PROFILE B

NOTES:

INTERSECTION OF ALIGNMENT C AT -0.72C WITH ALIGNMENT D AT 2+00D SHALL BE CONTERMINOUS.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Revisions	Date	Approved
7	REVISED AS CONTRUCTED	8-11-06	RTN/RJP
6	MOD. # 7 - ROCK STOCKPILE	5-24-06	WBP/RJP
5	MOD. # 6 - EROSION ROCK	5-9-06	WBP/RJP
4	MOD. # 5 - ADDITIONAL GATE AND POSTS	11-23-05	WBP/RJP
3	MOD. # 1 - STATION DISTANCE CHANGE	2-23-05	RTN/RJP

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: JRP/RTN
Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
Date: 14 APRIL 2004
Scale: AS SHOWN
Drawing Code: ep81
Solicitation Number: W912ER-04-R-0003

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

EMBANKMENT B AND EXCAVATION D PLAN AND PROFILE

Sheet Reference Number:
C7
Sheet 12 of 20

05-MAR-2008 07:31
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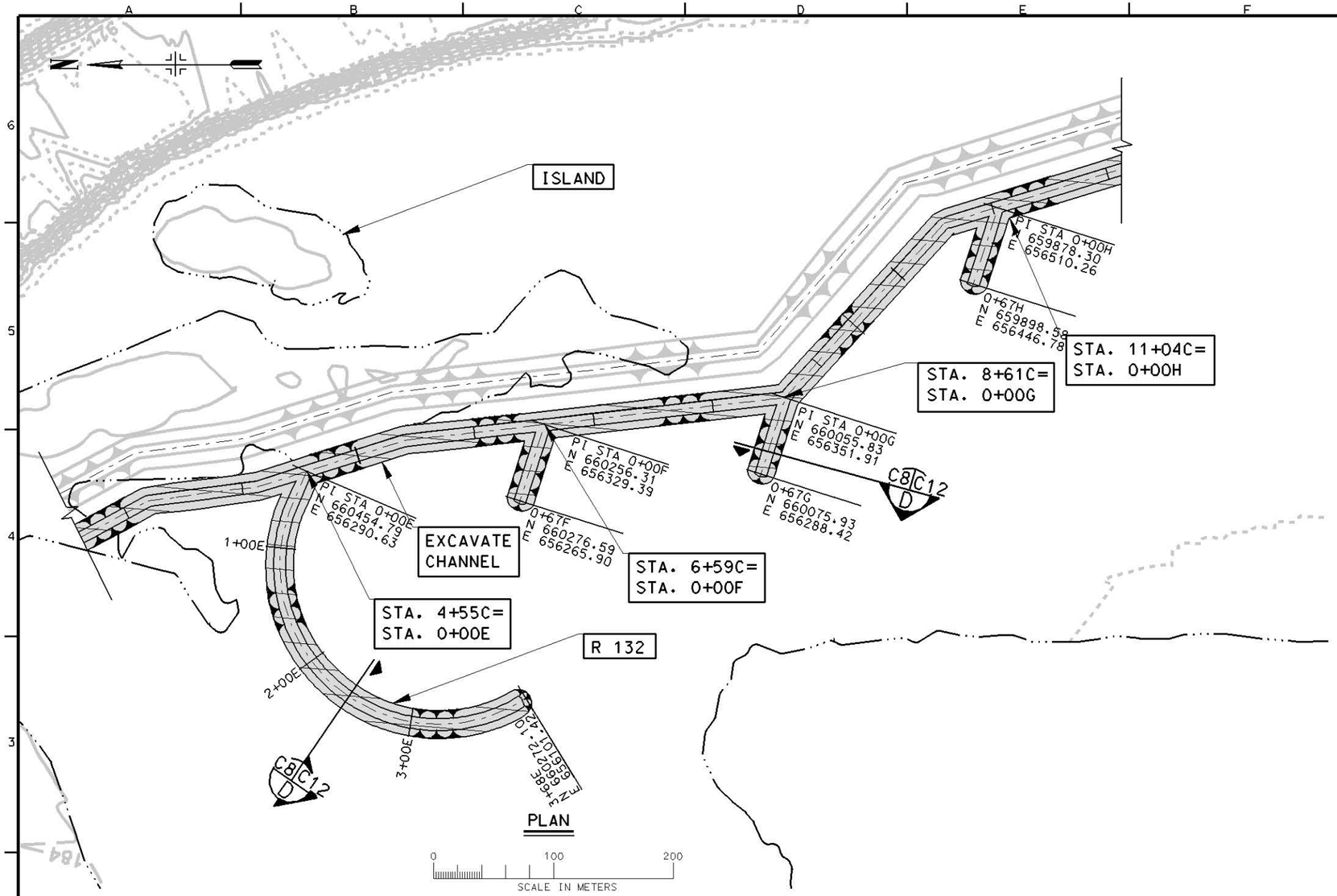
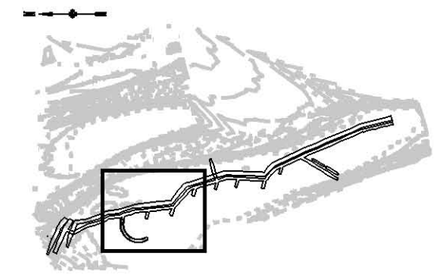




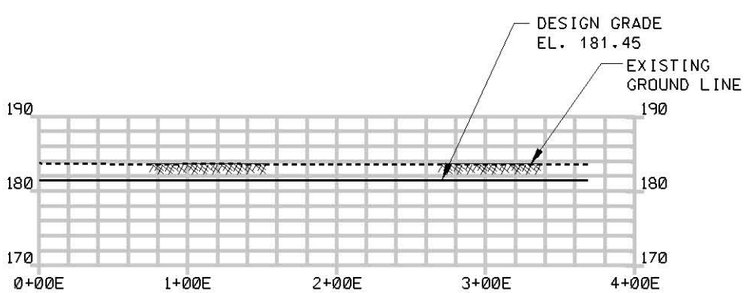
KEY PLAN

LEGEND:

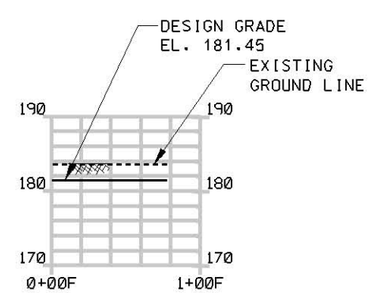
CHANNEL EXCAVATION

EMBANKMENT

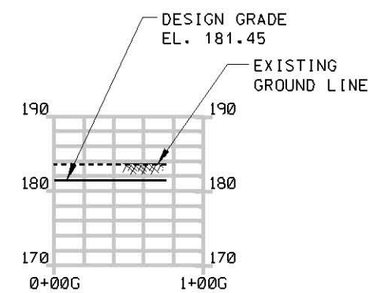
EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL



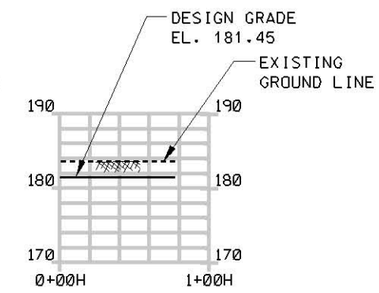
CHANNEL EXCAVATION PROFILE E



CHANNEL EXCAVATION PROFILE F



CHANNEL EXCAVATION PROFILE G



CHANNEL EXCAVATION PROFILE H

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
A	AS CONSTRUCTED	8-11-06	RTN/RAP

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: JRP/RTN
Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
Date: 14 APRIL 2004
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POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

CHANNEL EXCAVATION PLAN AND PROFILE E, F, G & H

Sheet Reference Number:
C8
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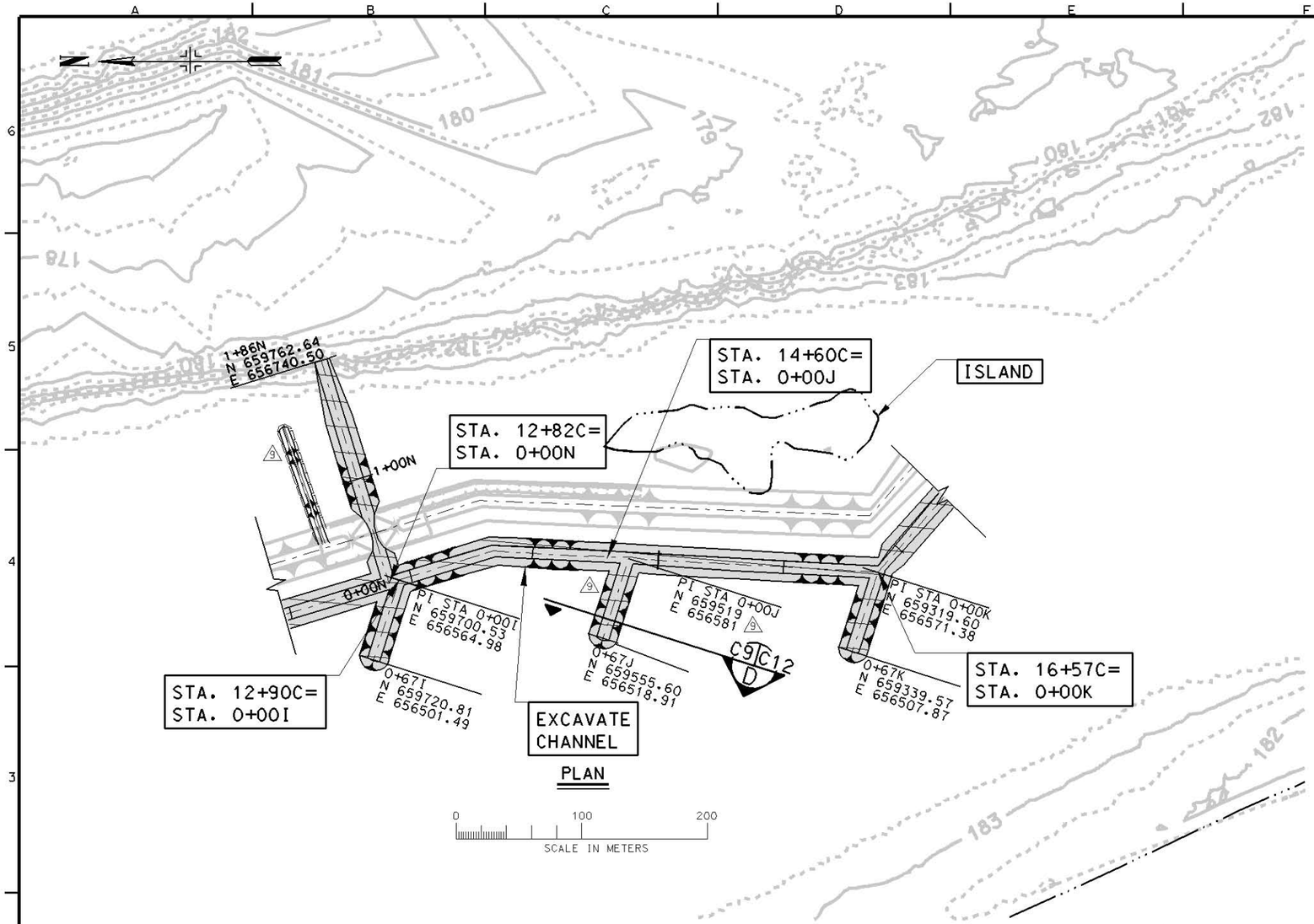
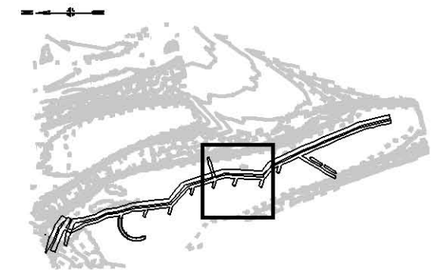


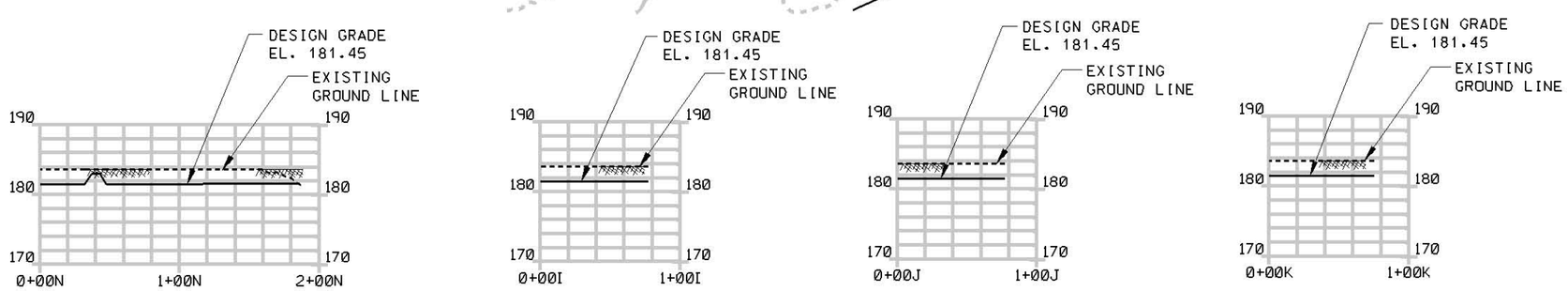
PLAN



KEY PLAN

LEGEND:

- CHANNEL EXCAVATION
- EMBANKMENT
- EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL
- RIPRAP



CHANNEL EXCAVATION PROFILE N

CHANNEL EXCAVATION PROFILE I

CHANNEL EXCAVATION PROFILE J

CHANNEL EXCAVATION PROFILE K

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
1	REVISED AS CONSTRUCTED	8-11-06	RTN/RAP

Revisions

Designed By: JRP/RTN
Date: 14 APRIL 2004
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Scale: AS SHOWN
Checked By: RTN
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

CHANNEL EXCAVATION PLAN AND PROFILE N, J & K

Sheet Reference Number:
C9
Sheet 14 of 20

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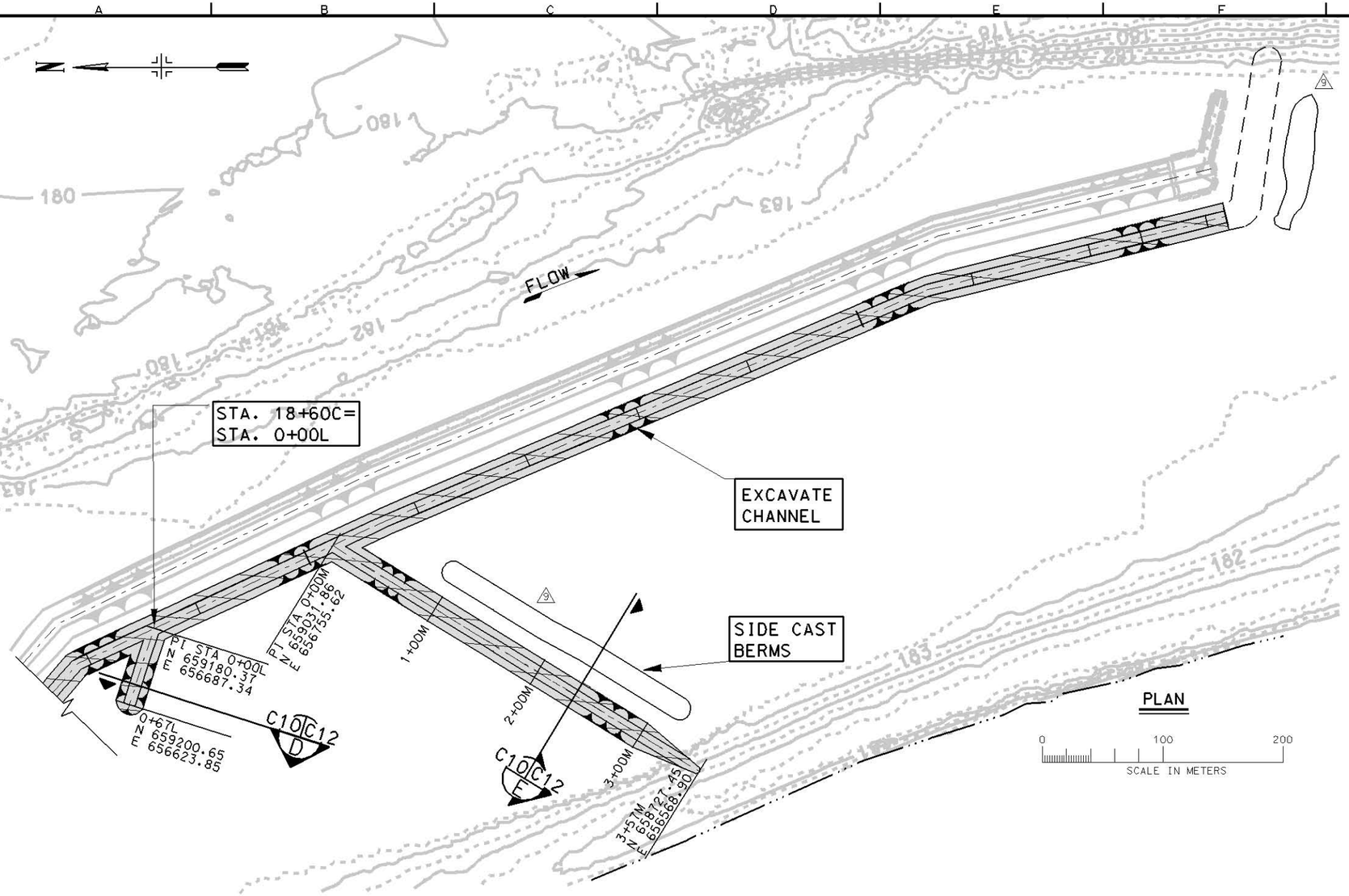

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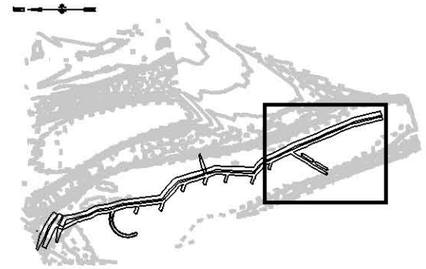

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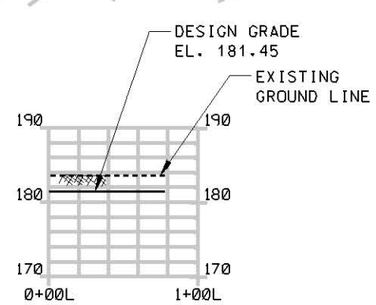
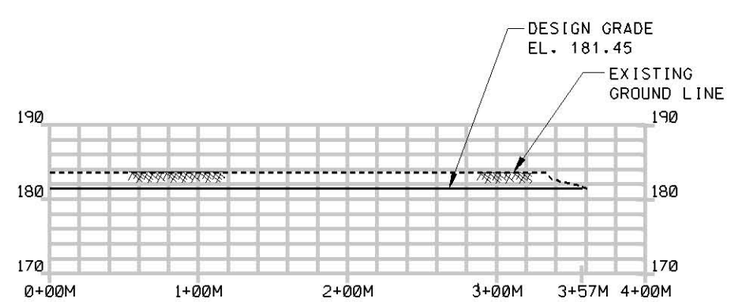


CHANNEL EXCAVATION PROFILE L



CHANNEL EXCAVATION PROFILE M

LEGEND:

- CHANNEL EXCAVATION
- EMBANKMENT
- EDGE OF SHORELINE VARIES AND IS APPROXIMATELY SHOWN AT FLAT POOL
- RIPRAP

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
9	REVISED AS CONSTRUCTED	8-11-06	RTN/RAP

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

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Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
Date: 14 APRIL 2004
Scale: AS SHOWN
Drawing Code: ep81
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POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

CHANNEL EXCAVATION PLAN AND PROFILE L & M

Sheet Reference Number:
C10
Sheet 15 of 20

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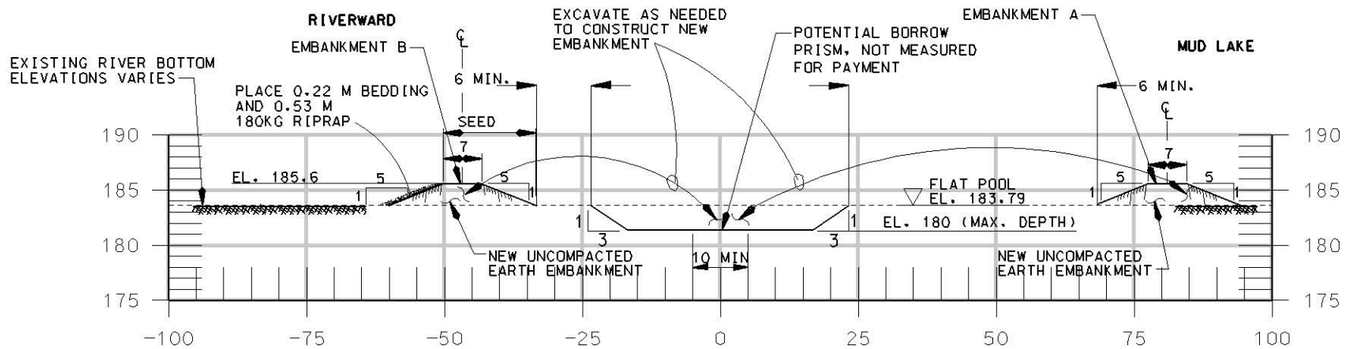

A C4 C11 TYPICAL SECTION - EMBANKMENT AND BORROW SOURCE

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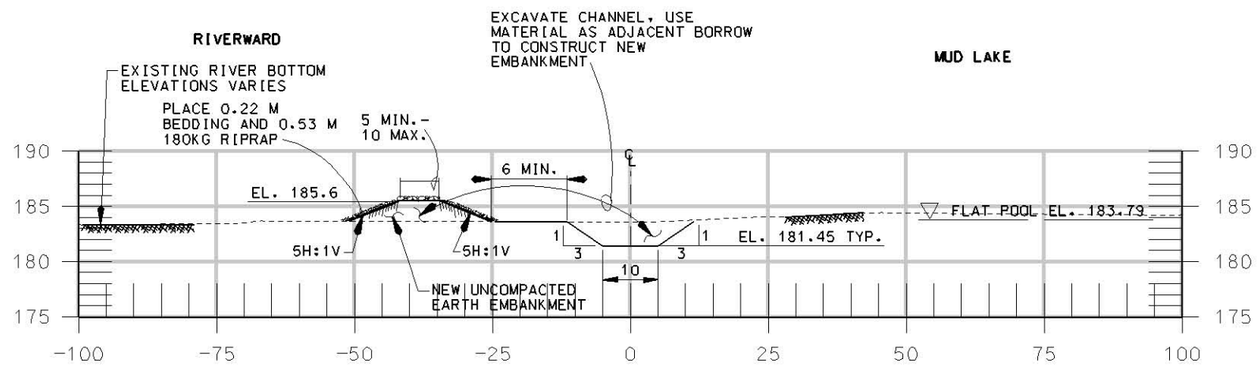
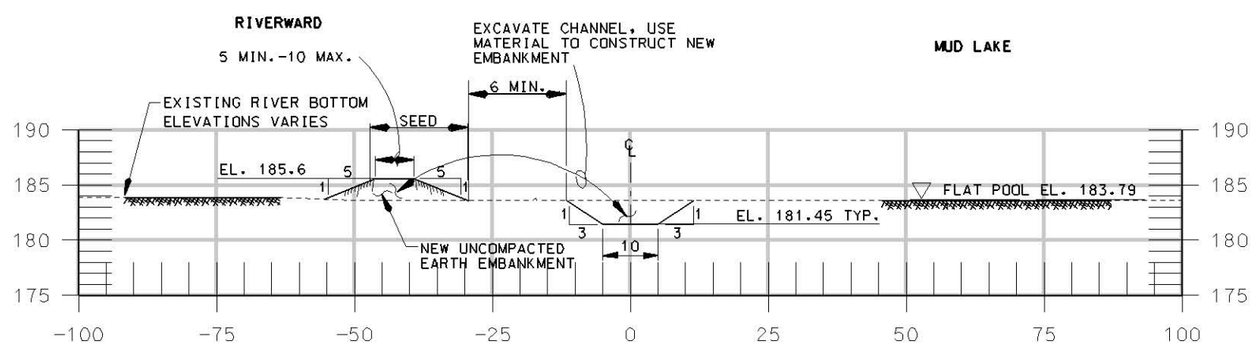


B C5 C11 TYPICAL SECTION - RIPRAP EMBANKMENT WITH EXCAVATED CHANNEL

STA 13+86A TO STA 14+09A
STA 14+53A TO STA 14+76A

NO SCALE



C C4, C5 C11 TYPICAL SECTION - EMBANKMENT WITH EXCAVATED CHANNEL

STA 2+86A TO STA 11+65A
STA 12+05A TO STA 13+86A
STA 16+10A TO STA 19+10A

NO SCALE

NOTES:

1. ALL SLOPES ON EMBANKMENTS SHALL BE 5 (MIN.) :1.
2. SEEDING SHALL EXTEND TO BOUNDARY OF RIPRAP OR NORMAL WATERLINE.
3. ABOVE ELEVATION 183.79 M, 0.53 M RIPRAP SHALL BE PLACED ON 0.22 M BEDDING STONE.
4. BELOW ELEVATION 183.79 M, 0.65 M RIPRAP SHALL BE PLACED ON 0.35 M BEDDING STONE.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
A	AS CONSTRUCTED	8-11-06	RTN/RAP

Revisions

Designed By: JRP/RTN
Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS HABITAT REHABILITATION & ENHANCEMENT PROJECT STAGE II - MUD LAKE

MUD LAKE TYPICAL SECTIONS A, B AND C

Sheet Reference Number: C11

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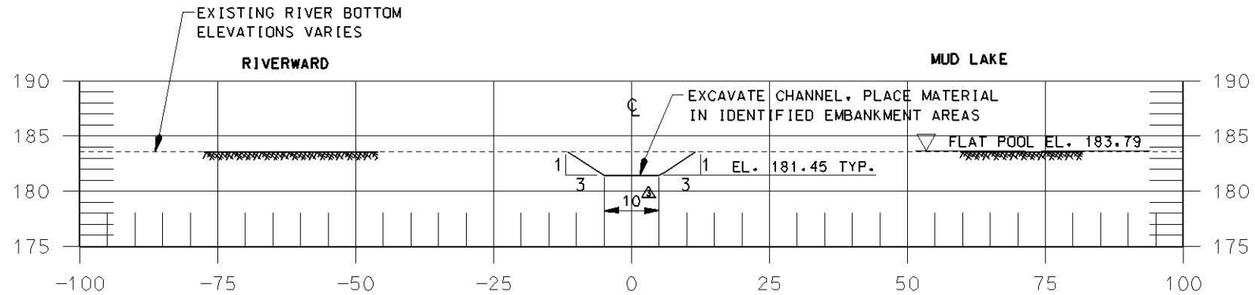
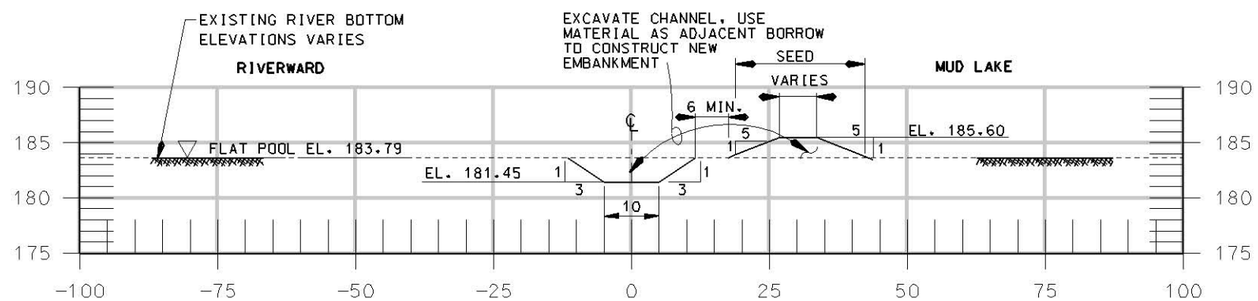


D
C8,C9,C10,C12

TYPICAL SECTION - EXCAVATED CHANNEL ALIGNMENTS E, F, G, H, I, J, K, AND L

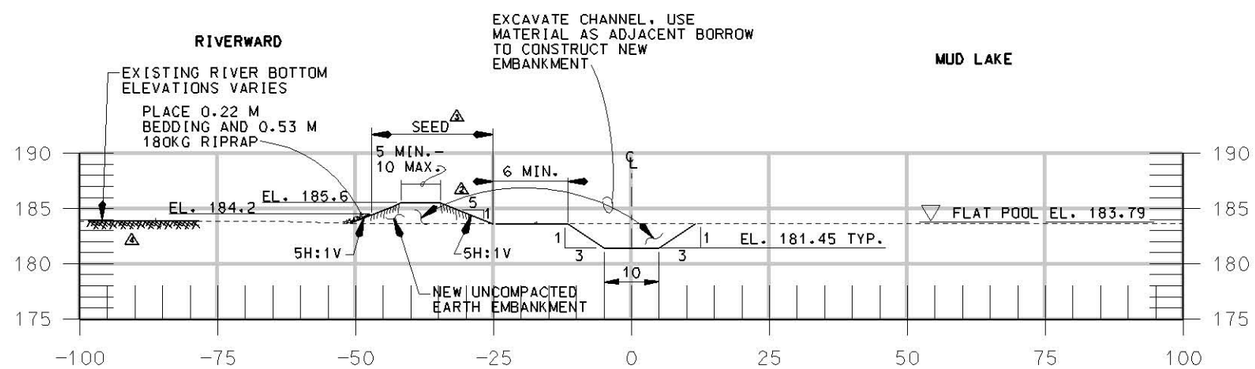
NO SCALE



E
C10,C12

TYPICAL SECTION - EXCAVATED CHANNEL WITH SIDE CAST BERM - ALIGNMENT M

NO SCALE



F
C5,C6,C12

RIPRAP BAND EROSION PROTECTION

STA 19+52A TO STA 29+31A

STA 14+76A TO STA 16+10A

NO SCALE

NOTES:

1. ALL SLOPES ON EMBANKMENTS SHALL BE 5 (MIN.) :1.
2. SEEDING SHALL EXTEND TO BOUNDARY OF RIPRAP OR NORMAL WATERLINE.
3. ABOVE ELEVATION 183.79 M, 0.53 M RIPRAP SHALL BE PLACED ON 0.22 M BEDDING STONE.
4. BELOW ELEVATION 183.79 M, 0.65 M RIPRAP SHALL BE PLACED ON 0.35 M BEDDING STONE.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
4	AS CONSTRUCTED	8-11-06	RTN/RAP
3	AMD. #1-SPECIFICATION AMENDMENT	5-12-04	JRP/DJJ
2	AMD. #2-SLOPE LABEL CORRECTION	5-18-04	JRP/DJJ
1	AMD. #3-DIMENSION AND SEEDING CORRECTION	5-2-04	JRP/DJJ
	MINOR REVISION	5-4-05	JRP/RTN

Revisions

Designed By: JRP/RTN
Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
Date: 14 APRIL 2004
Scale: AS SHOWN
Drawing Code: ep81
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

MUD LAKE
TYPICAL SECTIONS D, E AND F

Sheet Reference Number:
C12
Sheet 17 of 20

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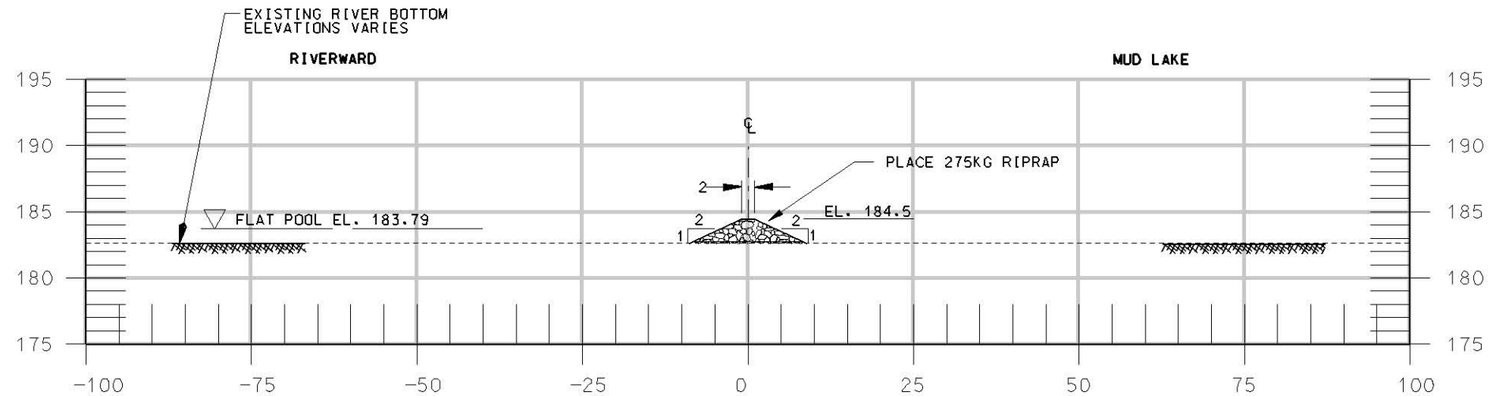

G C6 C13 ROCK SPUR DIKE SECTION

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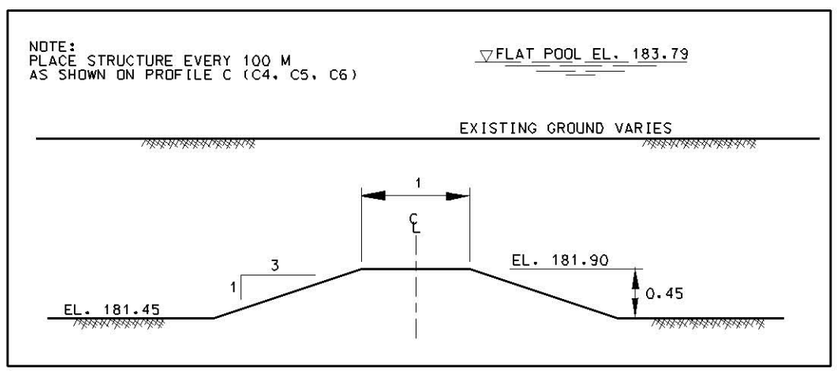

H C4.C5.C6 C13 TYPICAL SECTION - DEPTH DIVERSITY STRUCTURE

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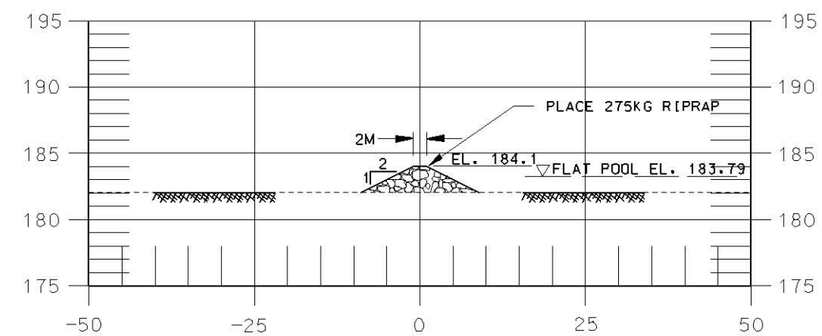

I C5 C13 TYPICAL SECTION - RIPRAP EMBANKMENT

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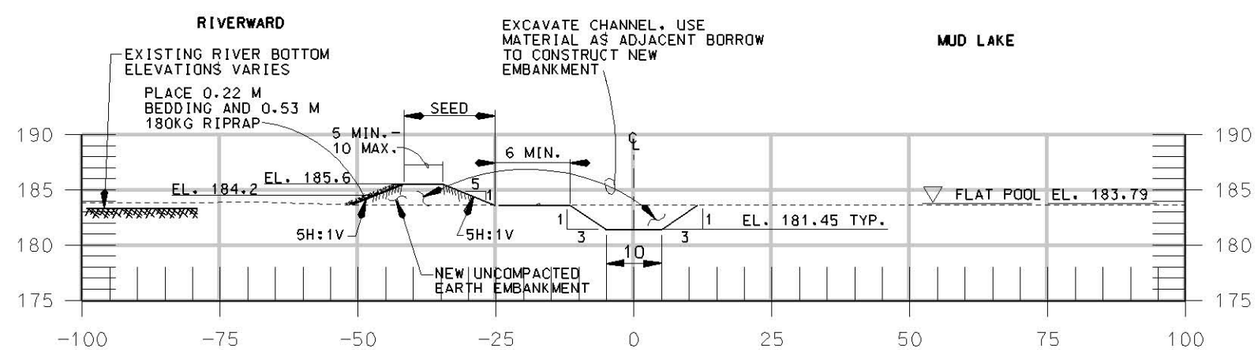

J C4.C5 C13 TYPICAL SECTION-RIPRAP EMBANKMENT

NO SCALE

NOTES: 3

1. ALL SLOPES ON EMBANKMENTS SHALL BE 5 (MIN.) :1.
2. SEEDING SHALL EXTEND TO BOUNDARY OF RIPRAP OR NORMAL WATERLINE.
3. ABOVE ELEVATION 183.79 M, 0.53 M RIPRAP SHALL BE PLACED ON 0.22 M BEDDING STONE.
4. BELOW ELEVATION 183.79 M, 0.65 M RIPRAP SHALL BE PLACED ON 0.35 M BEDDING STONE.

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US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
3	AS CONSTRUCTED	8-11-06	RTN/RAP
2	AMD. #3-MODIFIED TYPICAL SECTION J AND NOTES	6-24-04	JRP/DJJ

Revisions

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

Designed By: JRP/RTN
Drawn By: SDB/LLT
Checked By: RTN
Reviewed By: DJJ
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POOL 11 ISLANDS
HABITAT REHABILITATION
& ENHANCEMENT PROJECT
STAGE II - MUD LAKE

MUD LAKE
TYPICAL SECTIONS
G, H, I AND J

Sheet Reference Number:
C13
Sheet 18 of 20

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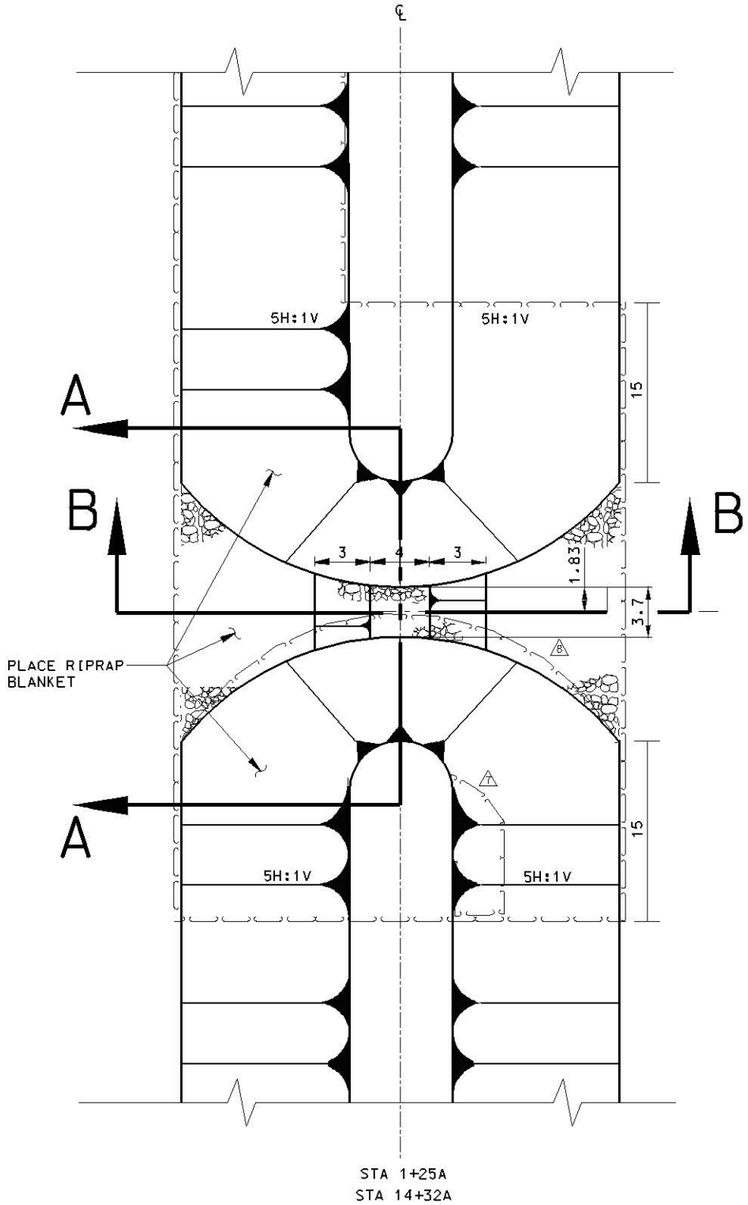

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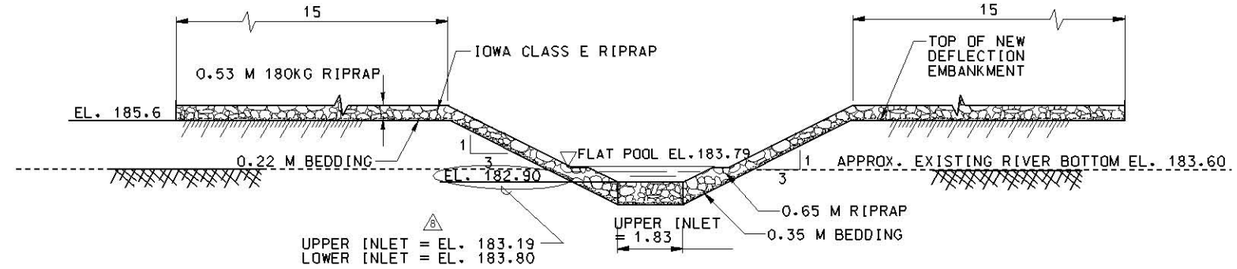

SECTION A-A FLOW INLET SECTION

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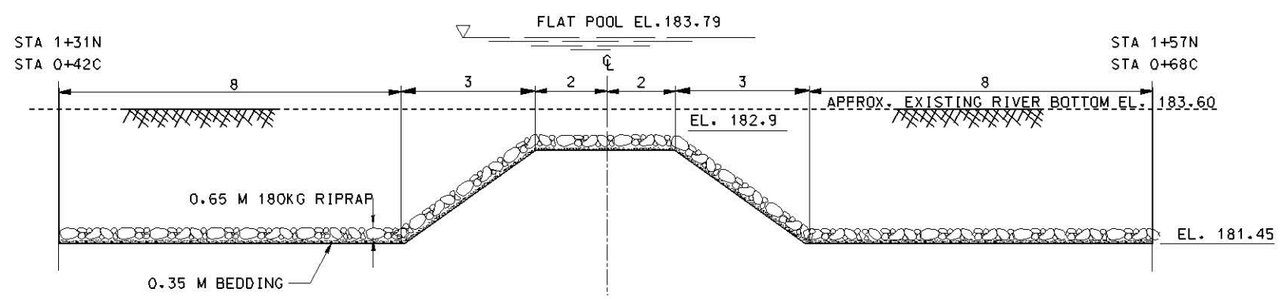

SECTION B-B FLOW INLET SECTION

NO SCALE

NOTES:

1. ABOVE ELEVATION 183.79 M. 0.53 M RIPRAP SHALL BE PLACED ON 0.22 M BEDDING STONE.
2. BELOW ELEVATION 183.79 M. 0.65 M RIPRAP SHALL BE PLACED ON 0.35 M BEDDING STONE.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
		8-11-06	RTN/RAP
		5-2-06	RTN/RAP
		15-2-06	RTN/RAP

Revisions

AS CONSTRUCTED
MODIFIED - ADDITIONAL RIPRAP
MODIFIED - RIPRAP STOCKPILE

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

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POOL 11 ISLANDS
HABITAT REHABILITATION & ENHANCEMENT PROJECT
STAGE II - MUD LAKE

TYPICAL FLOW INLET DETAILS

Sheet Reference Number:
C14
Sheet 19 of 20

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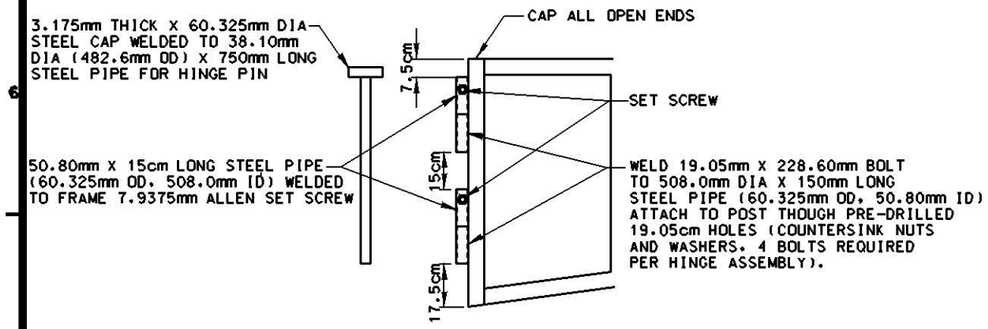

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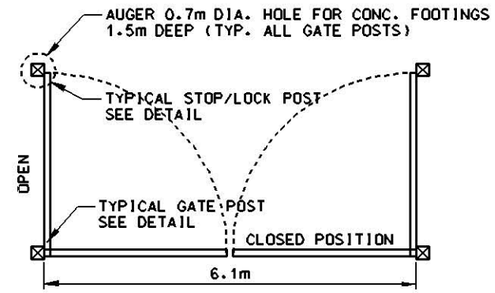
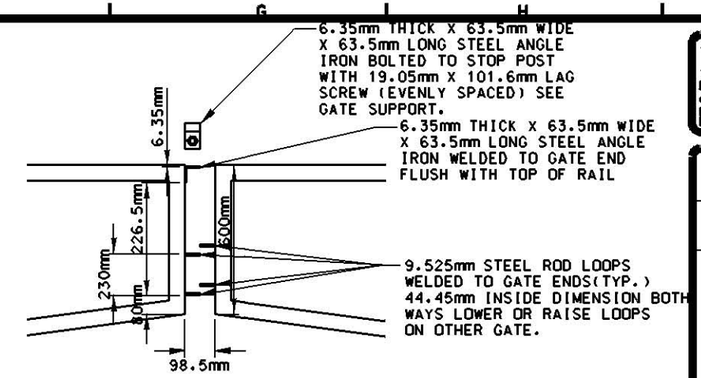


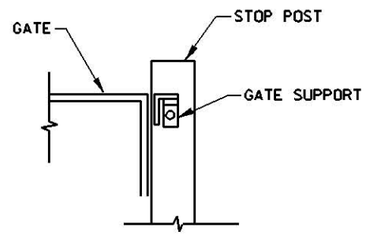
GATE LAYOUT

NO SCALE



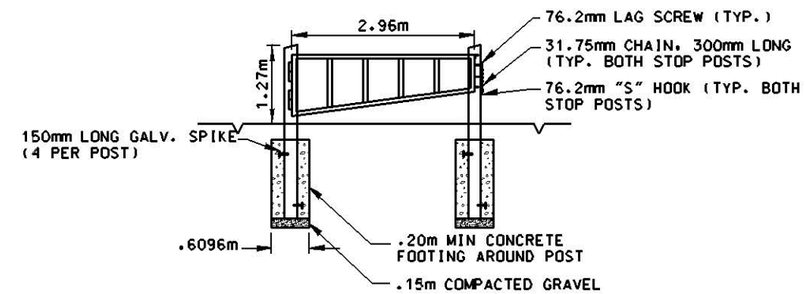
LOCK ASSEMBLY

NO SCALE



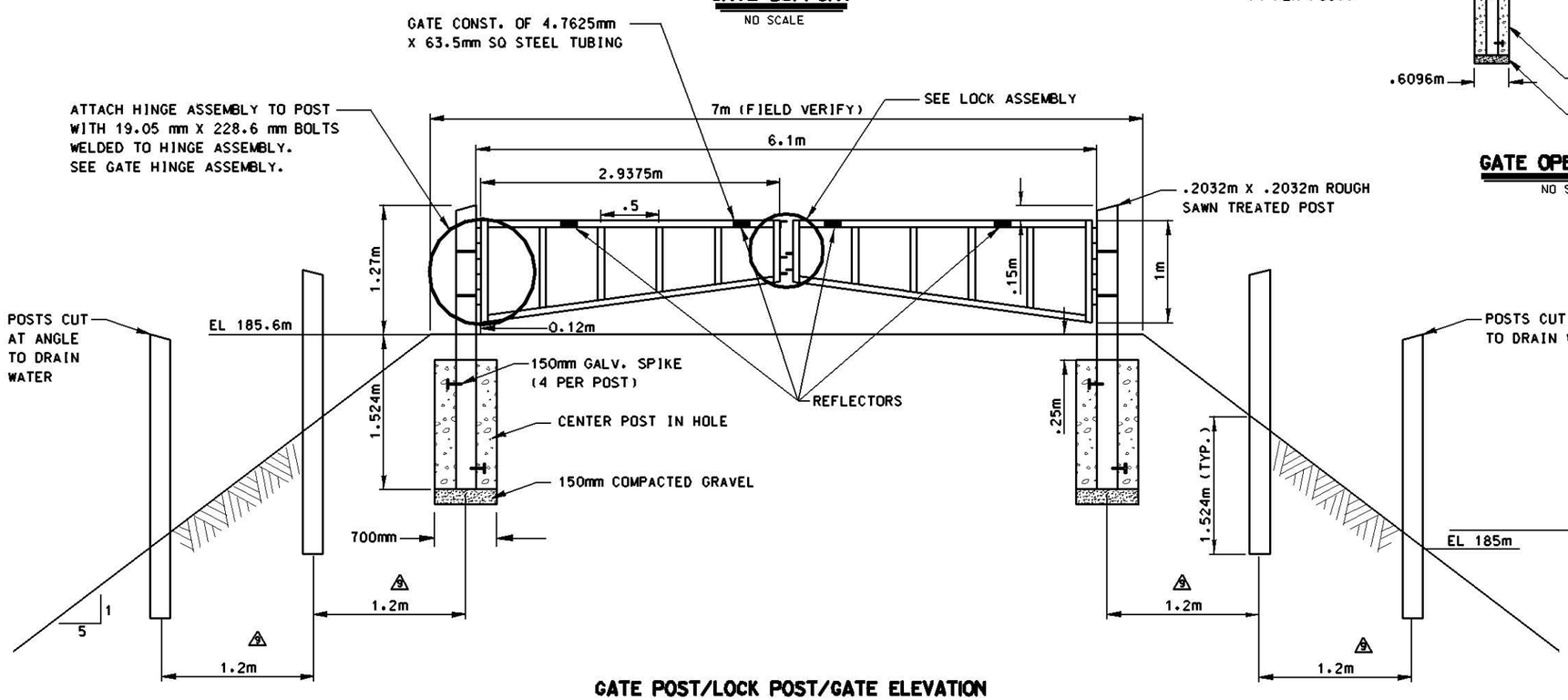
GATE SUPPORT

NO SCALE



GATE OPEN POSITION

NO SCALE



GATE POST/LOCK POST/GATE ELEVATION

NO SCALE

NOTES:

1. TIMBER POSTS: POSTS SHALL BE STAINED. POSTS SHALL BE CUT AT ANGLE TO DRAIN WATER. POSTS SHALL BE 0.2032 X 0.2032m ROUGH SAWN CCA LUMBER.
2. STEEL CONSTRUCTION: ALL WELDS SHALL BE GROUND SMOOTH AND EVEN. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
3. POST FURTHEST FROM THE CENTERLINE OF THE EMBANKMENT SHALL BE AT EL. 184.1.
4. POST NOT SET IN CONCRETE SHALL BE BACKFILLED AND COMPACTED.

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
A	REVISED AS CONSTRUCTED	8-11-06	RTN/RJB

Revisions

Date/Time: 14 APRIL 2004
Drawn By: JRP/RTN
Checked By: SDB/LLT
Reviewed By: RTN
Scale: AS SHOWN
Drawing Code: ep81
Solicitation Number: W912EK-04-B-0003

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

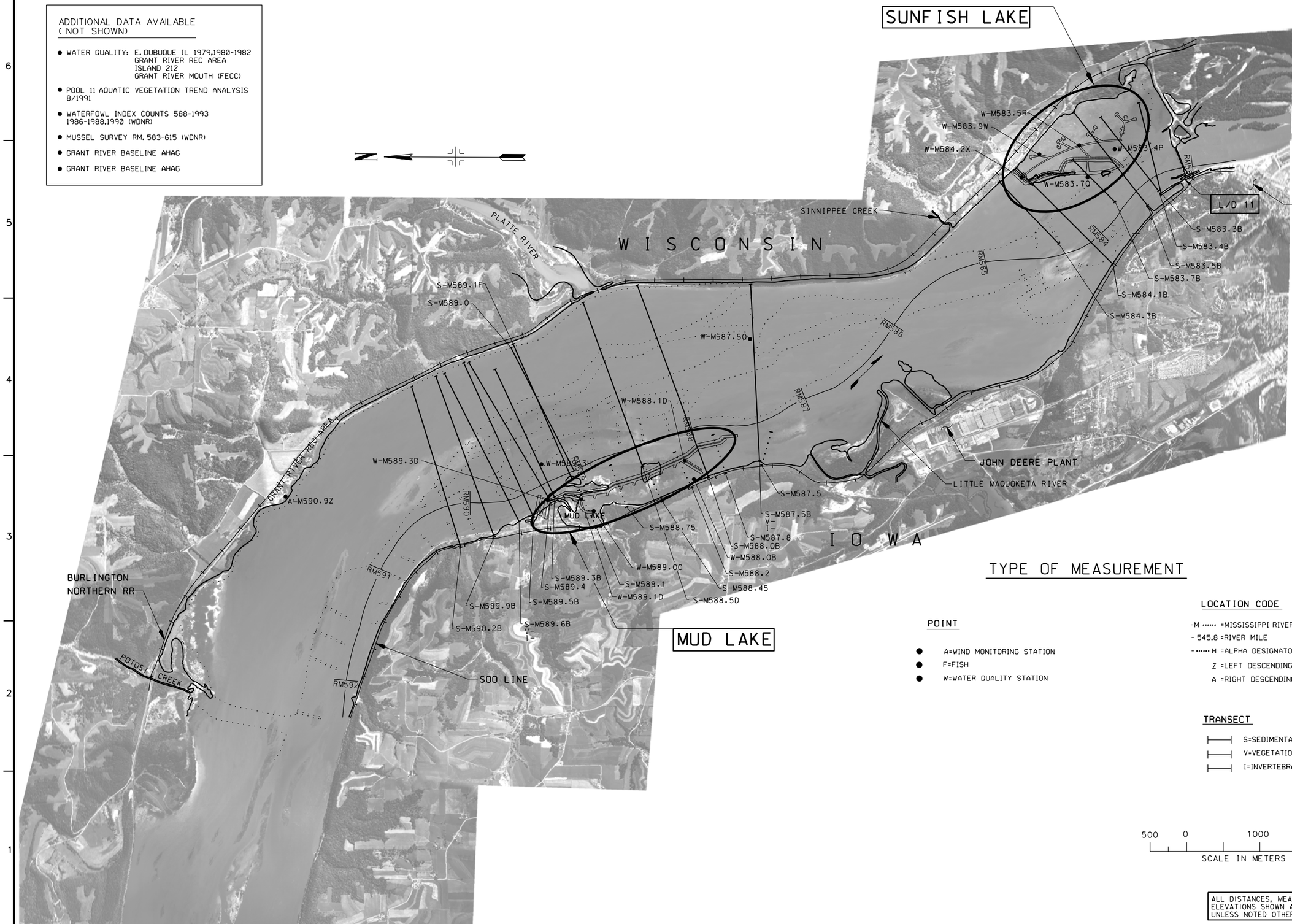
PUGH ILL ISLANDS
HABITAT REHABILITATION & ENHANCEMENT PROJECT
STAGE II - MUD LAKE

GATE DETAILS

Sheet Reference Number: C15
Sheet 20 of 20

ADDITIONAL DATA AVAILABLE
(NOT SHOWN)

- WATER QUALITY: E. DUBUQUE IL 1979,1980-1982
  GRANT RIVER REC AREA
  ISLAND 212
  GRANT RIVER MOUTH (FECC)
- POOL 11 AQUATIC VEGETATION TREND ANALYSIS 8/1991
- WATERFOWL INDEX COUNTS 588-1993
  1986-1988,1990 (WDNR)
- MUSSEL SURVEY RM. 583-615 (WDNR)
- GRANT RIVER BASELINE AHAG
- GRANT RIVER BASELINE AHAG



TYPE OF MEASUREMENT

POINT

- A=WIND MONITORING STATION
- F=FISH
- W=WATER QUALITY STATION

LOCATION CODE

-M ····· =MISSISSIPPI RIVER
- 545.8 =RIVER MILE
- ····· H =ALPHA DESIGNATOR
Z =LEFT DESCENDING BANK
A =RIGHT DESCENDING BANK

TRANSECT

S=SEDIMENTATION
V=VEGETATION
I=INVERTEBRATES

500 0 1000 2000
SCALE IN METERS

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers
Rock Island District

Symbol	Description	Date	Approved
	Revisions		

Designed By: RTN
Date: 16 SEP.2001
Drawn By: BLL/SDB/TPD
Scale: AS SHOWN
Checked By: KGB
Drawing Code:
Reviewed By: DJH
Solicitation Number:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT
PROGRAM POOL 11,
RIVER MILES 583-594

POST - CONSTRUCTION MONITORING PLAN

PLATE 17

9:03:46 AM
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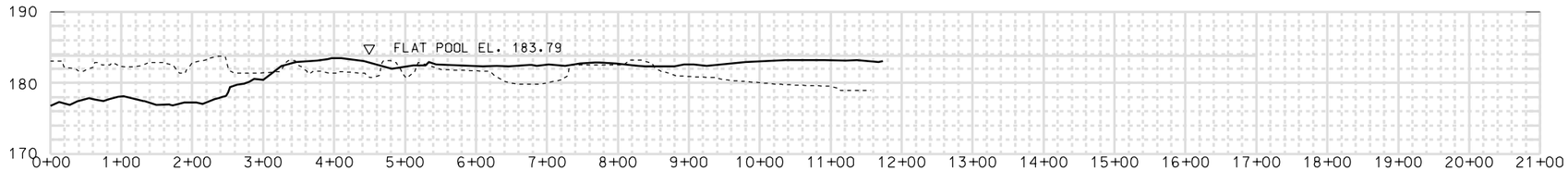

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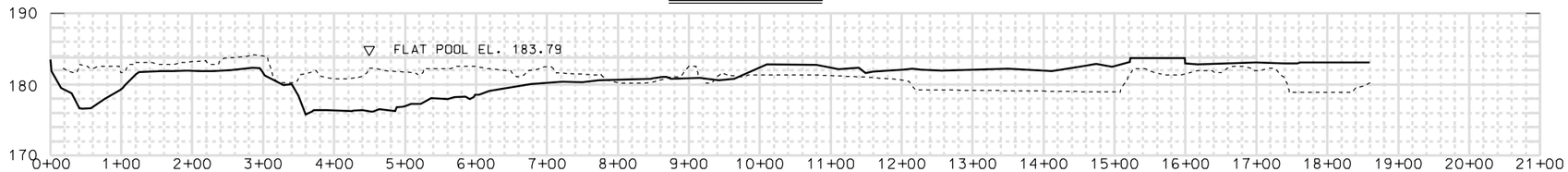

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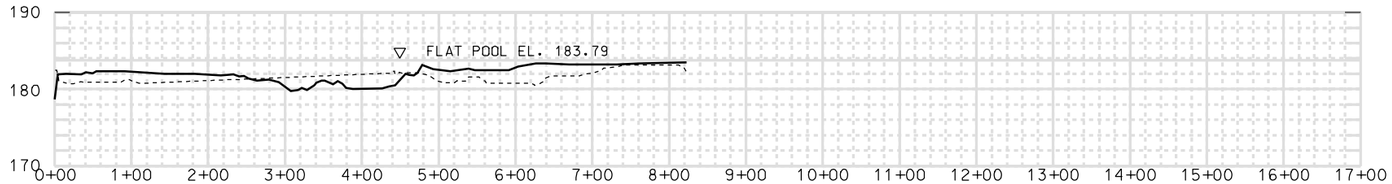

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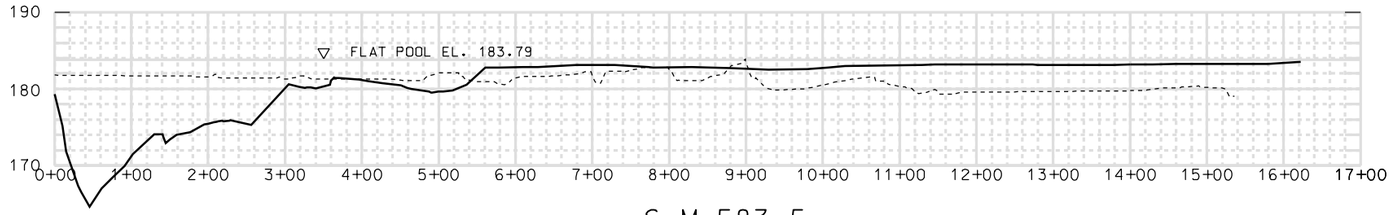

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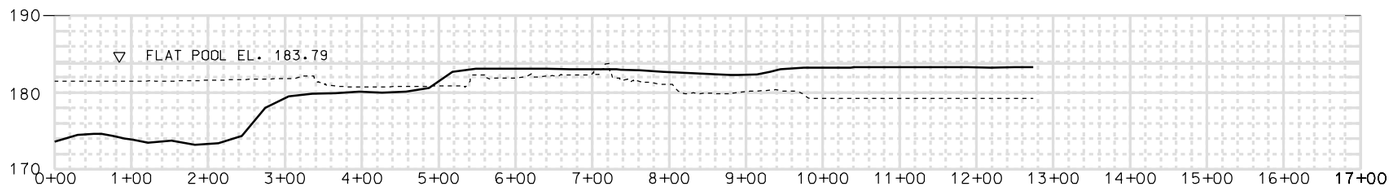

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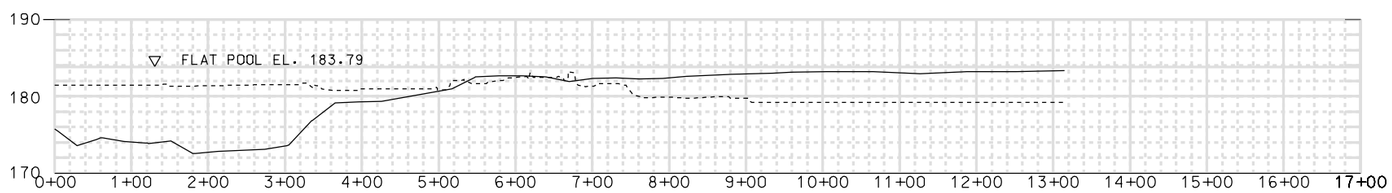

S-M 583.3

IOWA

WISCONSIN

LEGEND

GENERATED FROM 1990's DATA

GENERATED FROM 1938 DATA

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
	Revisions		

Designed By: RTN
Date: 16 SEP. 2001
Drawn By: SDB/TPD
Scale: AS SHOWN
Checked By: KGB
Drawing Code:
Reviewed By: DJH
Solicitation Number:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT
PROGRAM, PCOL 1
RIVER MILES 583-594

SUNFISH LAKE TRANSECTS

PLATE 18

PLATE 43

12-OCT-2001 08:51
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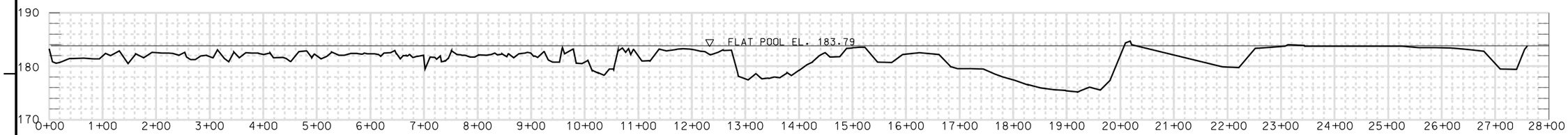

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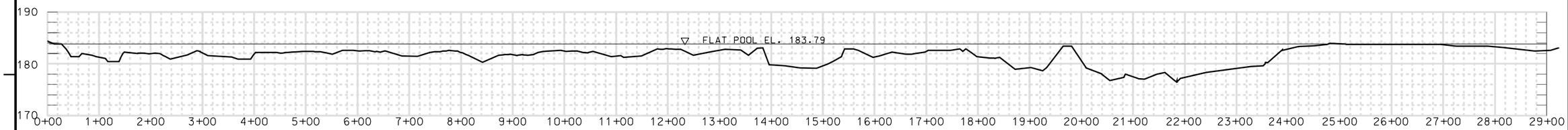

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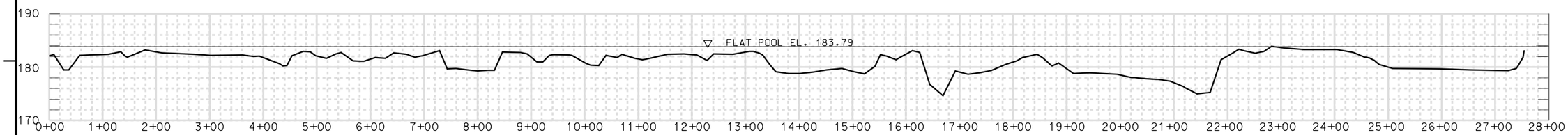

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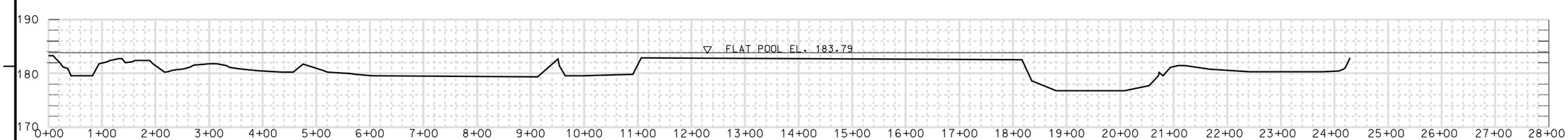

S-M 587.5

WISCONSIN

IOWA

LEGEND

GENERATED FROM 1990's DATA

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
	Revisions		

Designed By: RTN
Drawn By: SDB/TPD
Checked By: KGB
Reviewed By: DJH
Date: 16 SEP.2001
Scale: AS SHOWN
Drawing Code:
Solicitation Number:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT
PROGRAM POOL 11
RIVER MILES 583-594

MUD LAKE TRANSECTS

PLATE 19

PLATE 44

12-OCT-2001 08:52
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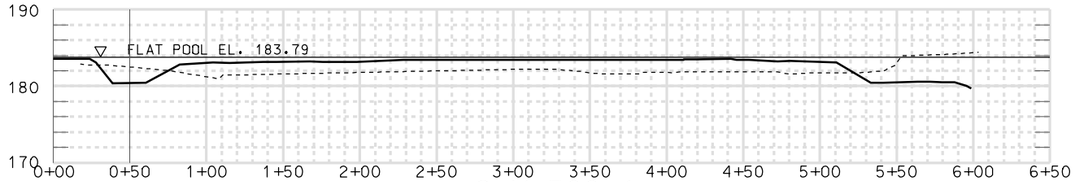

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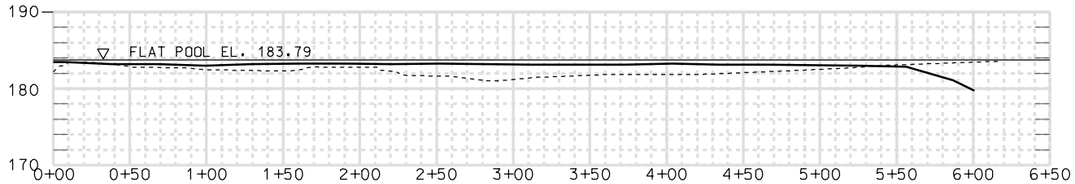

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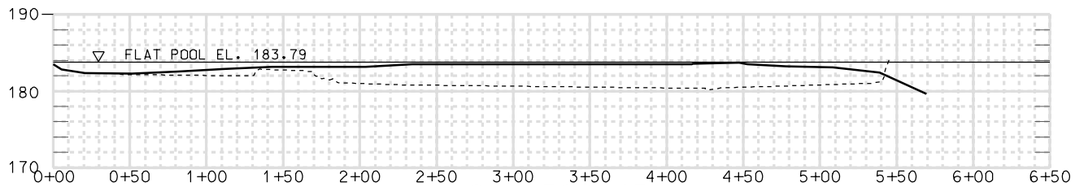

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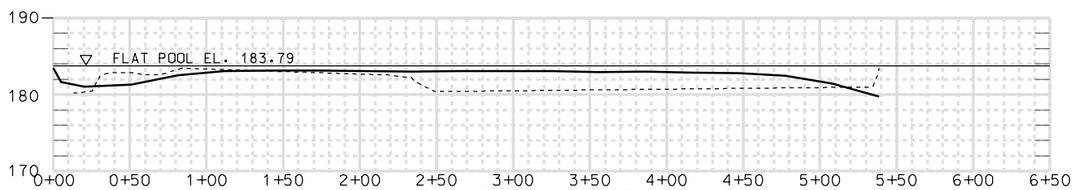

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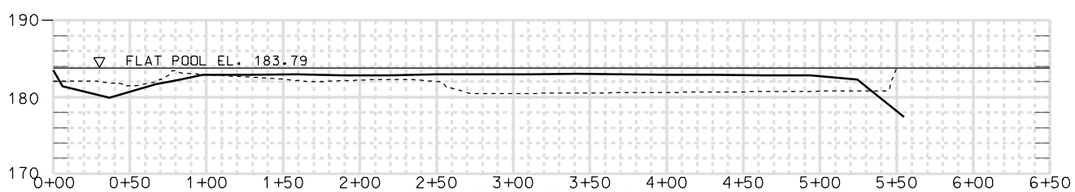
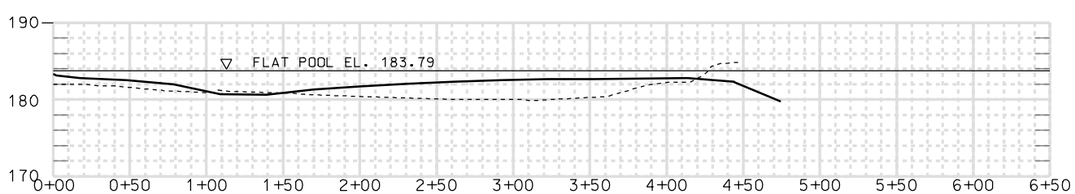


S-M 587.8



S-M 587.5

IOWA WISCONSIN

LEGEND

GENERATED FROM 1997 DATA

GENERATED FROM 1938 DATA

ALL DISTANCES, MEASUREMENTS AND ELEVATIONS SHOWN ARE IN METERS UNLESS NOTED OTHERWISE.

US Army Corps of Engineers Rock Island District

Symbol	Description	Date	Approved
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Designed By: RTN
Drawn By: TPD/SDB
Checked By: KNM
Reviewed By: DJH
Date: 16 SEP. 2001
Scale: AS SHOWN
Drawing Code:
Solicitation Number:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

UPPER MISSISSIPPI RIVER SYSTEM
ENVIRONMENTAL MANAGEMENT
PROGRAM POOL 11,
RIVER MILES 583-594

MUD LAKE TRANSECTS

PLATE 20

PLATE 45

12-OCT-2001 06:52
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