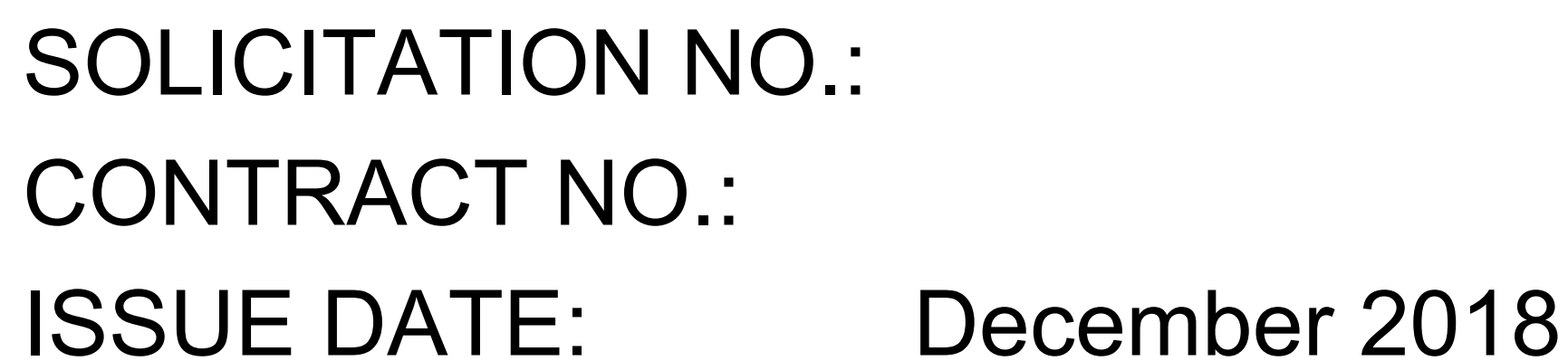


Attachment A

Detailed Plans and Cross Sections
for the Proposed Action



MISSISSIPPI RIVER LEVEE - CONSTRUCTION
RENA LARA SEEPAGE REMEDIATION
YAZOO-MS DELTA LEVEE BOARD
COAHOMA COUNTY, MISSISSIPPI



CHIEF	ENGR & CONST	DIVISION
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INDEX OF DRAWINGS	
Sheet Number	Sheet Title
G-001	COVER SHEET
G-002	LOCATION MAP, LEGEND & GENERAL NOTES
B-001	BORING LEGEND
B-002	BORING LOGS
C-100	EXISTING CONDITIONS
C-101	OVERALL PLAN
C-102	DITCH 1 PLAN & PROFILE
C-300	DITCH 1 CROSS SECTIONS
C-500	TYPICAL DETAILS
C-501	RELIEF WELL DETAILS

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MEMPHIS DISTRICT MEMPHIS, TN	DRAWN BY: G. HOLT CHECKED BY: J. GIANNINI SUBMITTED BY: DONALD S. CALLAHAN SIZE: ANSI D	SOLICITATION NO.: CONTRACT NO.:
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RENA LARA SEEPAGE REMEDIATION
YAZOO-MS DELTA LEVEE BOARD
COAHOMA COUNTY, MISSISSIPPI

COVER STORY

SHEET ID

G-001



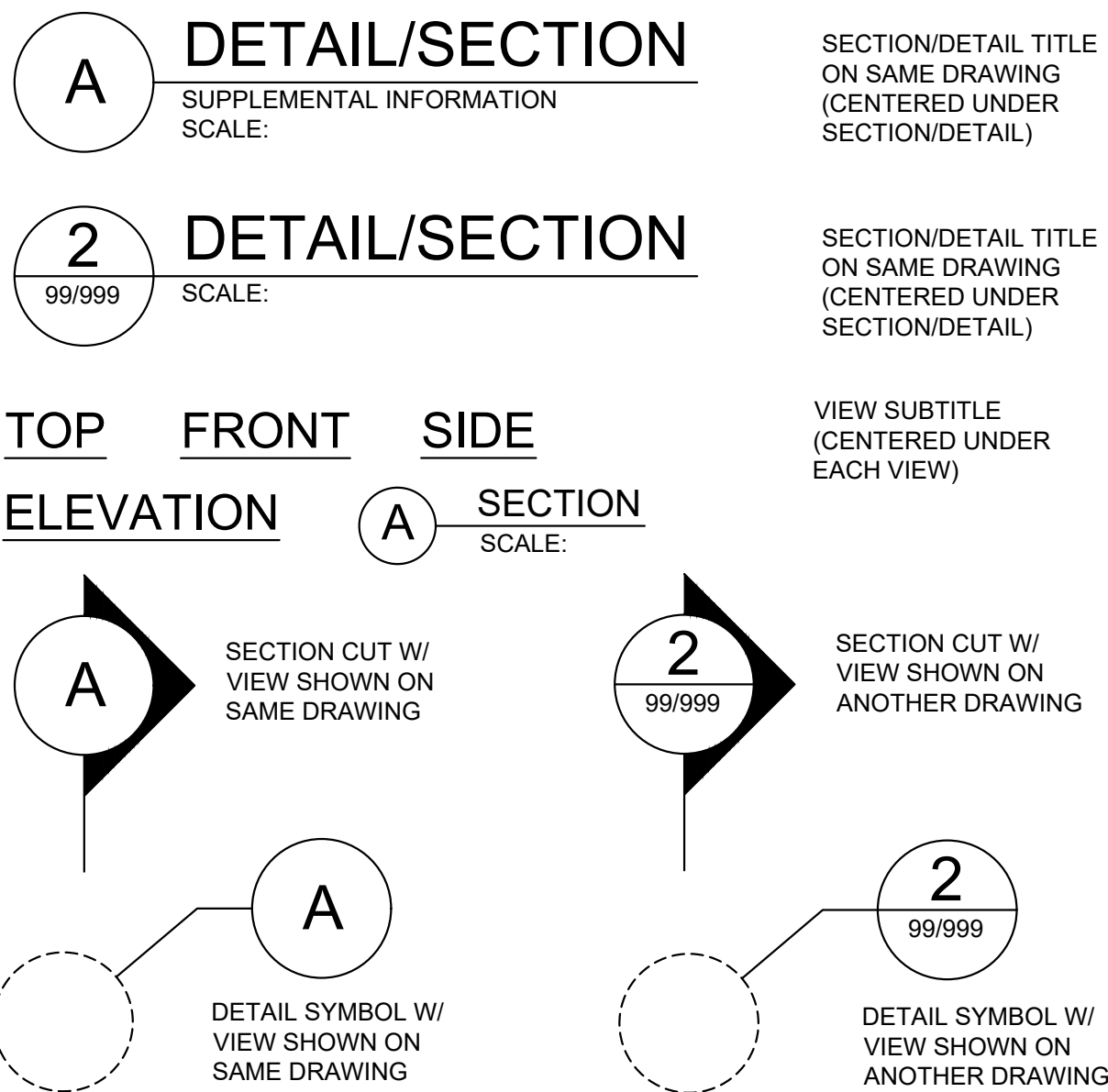
LOCATION MAP
SCALE: 1"=1000'

TABULATION OF BENCHMARKS: VERTICAL CONTROL		
RENA LARA SEEPAGE REMEDIATION		
BENCHMARKS	ELEVATION	DESCRIPTION
E346 1983	194.23 NAVD 88 GEOID12A	FROM THE INTERSECTION OF HIGHWAY 1 AND DESOTO TRAIL ROAD IN RENA LARA, MISSISSIPPI, CONTINUE NORTHWEST ON DESOTO TRAIL ROAD FOR 0.4 MILES, TURN RIGHT ONTO LEVEE ROAD AND CONTINUE FOR 1.3 MILES. THE MARK IS LOCATED 6.6 FEET NORTH-NORTHEAST FROM LEVEE MILE POST 90/91 AND 17 FEET NORTHEAST FROM THE CENTERLINE OF THE LEVEE. THE MARK IS A STAINLESS STEEL DEEP ROD IN A PROTECTIVE LOGO CASE, STAMPED "E346 1983".
RENA 2 NO3 1964	190.95 NAVD 88 GEOID12A	RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992 4.0 KILOMETERS (2.50 MILES) SOUTHWESTERLY ALONG STATE HIGHWAY 1 FROM THE JUNCTION OF STATE HIGHWAY 322 IN SHERARD, MISSISSIPPI, THENCE 0.3 KILOMETERS (0.20 MILES) SOUTHWESTERLY ALONG A GRAVELED ROAD, THENCE 6.8 KILOMETERS (4.20 MILES) SOUTHWESTERLY ALONG A GRAVELED ROAD ON TOP OF A LEVEE, 17.1 METERS (56.1 FEET) SOUTHWEST OF THE CENTERLINE OF DESOTO TRAIL, 10.4 METERS (34.1 FEET) NORTH OF THE CENTER OF A CATTLE GUARD, 5.5 METERS (18.0 FEET) NORTHWEST OF THE CENTER OF THE ROAD, 0.5 METERS (1.6 FEET) SOUTHEAST OF A FENCE, 0.6 METERS (2.0 FEET) BELOW THE LEVEL OF THE ROAD, 0.3 METERS (1.0 FEET) SOUTHWEST OF A WITNESS POST. THE MARK IS A BRASS NGS DISK IN GOOD CONDITION.
Z345 1983	198.26 NAVD 88 GEOID12A	TO REACH FROM THE JUNCTION OF STATE HIGHWAYS 1 AND 322 IN SHERARD, GO NORTHWEST ON HIGHWAY 1 FOR 0.67 KM (0.4 MI) TO A ROUGH PAVED ROAD LEFT AT THE BUILDINGS OF THE SIGMON PLANTING COMPANY. TURN LEFT, NORTHWEST, FOR 1.93 KILOMETERS (1.2 MILES) TO THE LEVEE ROAD. TURN SHARP RIGHT ON THE LEVEE ROAD 0.09 KILOMETERS (0.05 MILES) TO MILEPOST 84/85 AND THE STATION ON THE RIGHT BETWEEN TWO STEEL GRADER BLADES. THE MARK IS A NGS ROD MARK IN A LOGO COVER. RECOVERED IN GOOD CONDITION.

GENERAL NOTES:

1. HORIZONTAL DATA WAS COMPUTED USING NORTH AMERICAN DATUM OF 1983 (NAD83) AND UNIVERSAL TRANSVERSE MERCATOR ZONE 15N IN U.S. SURVEY FEET. VERTICAL DATA WAS COMPUTED USING N.A.V.D. 88 IN U.S. SURVEY FEET. STATIONING IS BASED ON GROUND DISTANCE, WHERE GRID DISTANCE = GROUND DISTANCE X COMBINED GRID FACTOR; COMBINED GRID FACTOR = 1.00047
2. DO NOT BLOCK OR REDIRECT EXISTING DRAINAGE WITH EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED BY THE CONTRACTING OFFICER, PLANS OR SPECIFICATIONS.
3. ABOVE GROUND AND UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE APPROXIMATE ONLY, AND THOSE INDICATED ARE NOT NECESSARILY ALL WHICH MAY EXIST ON THE PROJECT SITE. THE CONTRACTOR SHALL DETERMINE THE ACTUAL LOCATION OF ALL UTILITIES ON THE PROJECT SITE. ALL UTILITIES LOCATED AT THE SITE ARE TO REMAIN IN PLACE AND OPERATIVE DURING THE CONSTRUCTION. AT LEAST 10 DAYS BEFORE BEGINNING WORK IN THE VICINITY OF A UTILITY, THE CONTRACTOR SHALL CALL THE APPROPRIATE "CALL BEFORE YOU DIG" NUMBER LISTED IN THE SPECIFICATIONS. THE CONTRACTOR SHALL EXERCISE SPECIAL CARE WHEN WORKING IN THE VICINITY OF UTILITIES TO PREVENT DAMAGE THERETO OR INJURY TO THE CONTRACTOR'S EMPLOYEES OR OTHERS. ANY DAMAGE TO THE UTILITIES OR INTERRUPTION OF SERVICE OCCASIONED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AND THE SERVICE RESTORED PROMPTLY AT HIS EXPENSE.
4. DESIGN FOR THIS PROJECT WAS DEVELOPED BASED ON 2017 SURVEY JMA16027. EXISTING CONTOURS SHOWN ON SHEETS MAY NOT REFLECT SITE CONDITIONS AT TIME OF CONSTRUCTION.
5. ANY AERIAL PHOTOGRAPHY SHOWN ON SHEETS IS FOR REFERENCE ONLY AND SHOULD NOT BE USED TO DETERMINE OR ANTICIPATE SITE CONDITIONS AT THE TIME OF CONSTRUCTION.
6. BE ADVISED THAT STATIONING BASED ON LEVEE MILE MARKERS INDICATED BY "MX/XX+XX", MAY HAVE MORE OR LESS THAN 5280 FEET PER MILE.
7. GATES AND/OR FENCES ARE NOT TO BE DISTURBED, UNLESS OTHERWISE NOTED. ALL GATES AND FENCES DISTURBED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. APPROVAL FROM THE CONTRACTING OFFICER IS REQUIRED BEFORE ANY GATES OR FENCES ARE TO BE DISTURBED.
8. HAUL ROUTES TO TRANSPORT ANY NECESSARY BORROW MATERIAL TO THE CONSTRUCTION AREA SHALL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER PRIOR TO USE.
9. MULCH OR SEEDING (TEMPORARY OR PERMANENT) WILL BE APPLIED TO ALL EARTH DENuded OF VEGETATION DUE TO CONSTRUCTION ACTIVITIES AS SPECIFIED WITH 14 DAYS OF EITHER CONSTRUCTION ACTIVITY COMPLETION OR A TEMPORARY CEASE LONGER OF 21 DAYS. CONTRACTOR MAY USE A ROLLER TO PRESS STRAW OR MULCH INTO THE EXISTING GROUND IN ORDER TO MINIMIZE DAMAGE OR REMOVAL BY WIND OR WATER.
10. FIELD ADJUSTMENTS OF EROSION CONTROL MEASURES ARE ALLOWED AS NECESSARY TO ENSURE PROPER PLACEMENT AND FUNCTION.
11. UPON CONSTRUCTION COMPLETION AND PRIOR TO FINAL ACCEPTANCE, REMOVE ALL EROSION CONTROL FEATURES.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ADHERENCE TO ALL FEDERAL, STATE, AND LOCAL SAFETY REGULATIONS THAT ARE APPLICABLE TO THE WORK ASSOCIATED WITH THIS CONSTRUCTION PROJECT.
13. CLEARING AND GRUBBING SHALL BE PERFORMED WITHIN THE LIMITS INDICATED EXCEPT AS NECESSARY FOR CONSTRUCTION ACTIVITIES WITHIN THE ROW LIMITS. NO WORK SHALL BE PERFORMED OUTSIDE OF THE ROW. TREES DESIGNATED 'DO NOT DISTURB' SHALL BE PROTECTED DURING CONSTRUCTION.

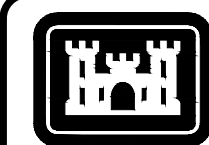
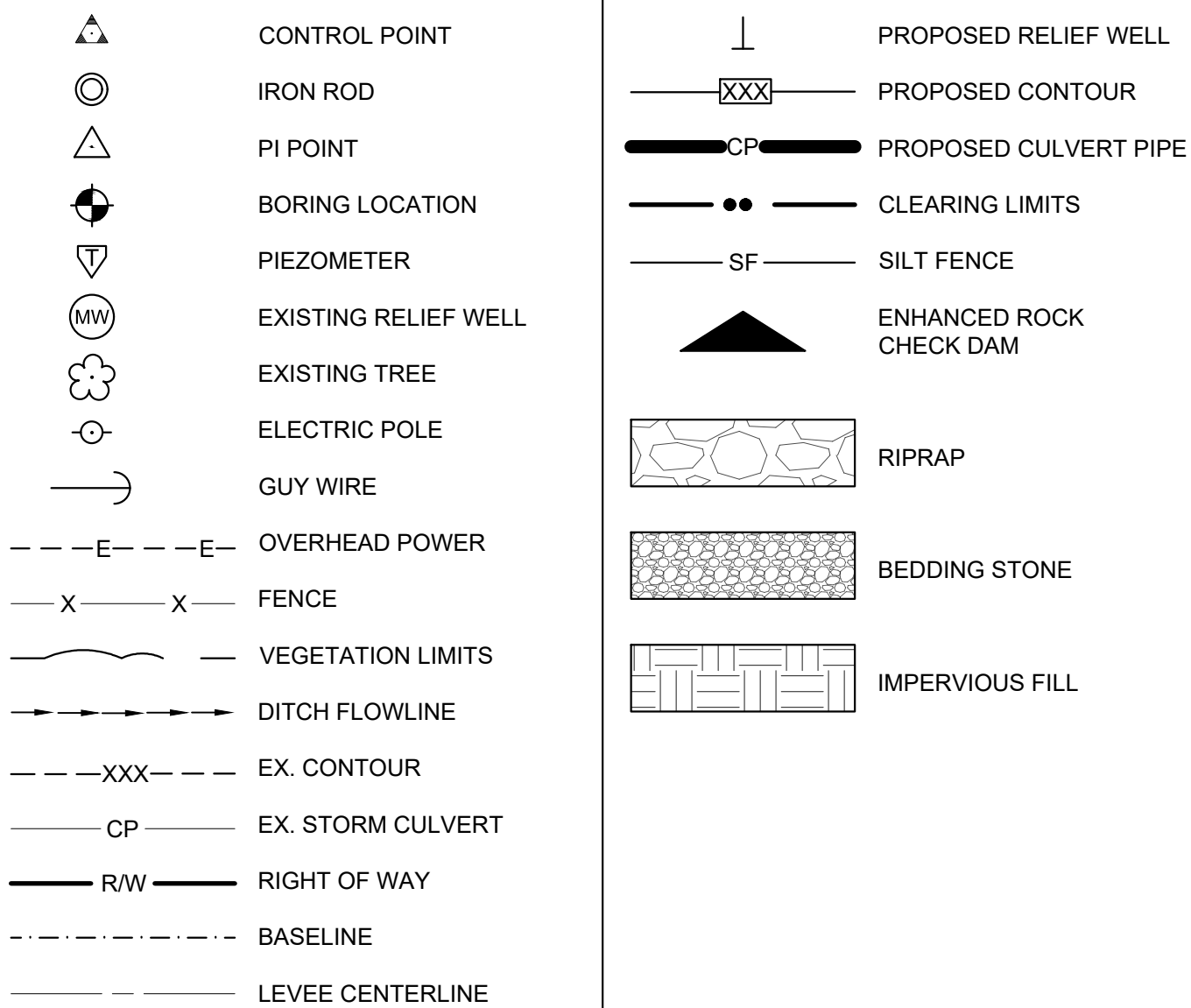
GENERAL CROSS-REFERENCING SYMBOLS



ABBREVIATIONS

APPROX	APPROXIMATE	OF	OUTSIDE FACE
ALT W/	ALTERNATE WITH	PP	POLYPROPYLENE PIPE
ALUM	ALUMINUM	PC	POINT OF CURVE
BITUM	BITUMINOUS	PCC	POINT OF COMPOUND CURVE
BOT	BOTTOM	PI	POINT OF INTERSECTION
B/T	BETWEEN	POB	POINT OF BEGINNING
CL or C/L	CENTER LINE	POE	POINT OF ENDING
CMP	CORRUGATED METAL PIPE	PRC	POINT OF REVERSE CURVE
CONC	CONCRETE	PT	POINT OF TANGENCY
CPP	CORRUGATED PLASTIC PIPE	RTB	RIGHT TOP BANK
DIA	DIAMETER	RC	PREINFORCED CONCRETE PIPE
DS	DOWNSTREAM	SAN	SANITARY
DWG	DRAWING	SDR	STANDARD
EJ	EXPANSION JOINT	SPEC	SPECIFICATIONS
EL	ELEVATION	SST	STAINLESS STEEL
EME	EXCAVATED MATERIAL EMBANKMENT	SHT	SHEET
EW	EACH WAY	TC	TOP OF CONCRETE
EX	EXISTING	Typ	TYPICAL
FES	FLARED END SECTION	UNO	UNLESS NOTED OTHERWISE
FF	FACE	UNDG	UNDERGROUND
FL	FLOW LINE	US	UPSTREAM
HT	HEIGHT	W	WIDTH
INV	INVERT	WM	WATER MAIN
LG	LONG		
L/W	LANDWARD		
LTB	LEFT TOP BANK		
MAX	MAXIMUM		
MIN	MINIMUM		
MIRR	MIRRORED		
MISC	MISCELLANEOUS		
NF	NEAR FACE		
NO	NUMBER		
NST	NO STEEPER THAN		
OC	ON CENTER		

GENERAL LEGEND



**US Army Corps
of Engineers®**

[illegible]

U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DESIGNED BY:	ISSUE DATE:
	DRAWN BY:	December 1978
	CHECKED BY:	SOLICITATION NO.:
	J. GIANNINI	CONTRACT NO.:
	SUBMITTED BY:	
	DONALD S. CALLAHAN	
ANSL'D		

MISSISSIPPI RIVER LEVEE - CONSTRUCTION
RENA LARA SEEPAGE REMEDIATION
YAZOO-MS DELTA LEVEE BOARD
COAHOMA COUNTY, MISSISSIPPI

LOCATION MAP

SHEET ID

G-002

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISION		TYPE	LETTER SYMBOL	SYMB	TYPICAL NAMES
COARSE GRAINED SOILS More than half of material (by weight) is larger than No. 200 sieve size	GRAVEL More than half of coarse fraction is larger than No. 4 sieve size	CLEAN GRAVEL (Little or No Fines)	GW		GRAVEL, Well Graded, gravel-sand mixtures, little or no fines
			GP		GRAVEL, Poorly Graded, gravel-sand mixtures, little or no fines
		GRAVEL W/ FINES (Appreciable Amount of Fines)	GM		SILTY GRAVEL, gravel-sand-silt mixtures
			GC		CLAYEY GRAVEL, gravel-sand-clay mixtures
	SAND More than half of coarse fraction is smaller than No. 4 sieve size	CLEAN SAND (Little or No Fines)	SW		SAND, Well Graded, gravelly sands
			SP		SAND, Poorly Graded, gravelly sands
		SAND W/ FINES (Appreciable Amount of Fines)	SM		SILTY SAND, sand-silt mixtures
			SC		CLAYEY SAND, sand-clay mixtures
FINE GRAINED SOILS More than half of material (by weight) is smaller than No. 200 sieve size	SILTS & CLAYS (Liquid Limit < 50)	ML		SILT & very fine sand, silty or clayey fine sand or clayey silt with slight plasticity	
		CL		LEAN CLAY; Sandy Clay; Silty Clay; of low to medium plasticity	
		OL		ORGANIC SILTS, and organic silty clays of low plasticity	
	SILTS & CLAYS (Liquid Limit > 50)	MH		SILT, fine sandy or silty soil with high plasticity	
		CH		FAT CLAY, inorganic clay of high plasticity	
		OH		ORGANIC CLAYS of medium to high plasticity, organic silts	
		HIGHLY ORGANIC SOILS		Pt	
WOOD		Wd		WOOD	
MIXED SAMPLE		VM		Variable mixed silts, clays and sands	
NO SAMPLE		NS			

NOTE:

- Less than 5% passing No. 200 sieve - GW, GP, SW, SP
- 5% to 12% passing No. 200 sieve - Dual classification (e.g. SP-SM)
- More than 12% passing No. 200 sieve - GM, GC, SM, SC

DESCRIPTIVE SYMBOLS

COLOR DESCRIPTORS	
COLOR	SYMBOL
TAN	T
YELLOW	Y
RED	R
BLACK	BK
GRAY	Gr
LIGHT GRAY	lGr
DARK GRAY	dGr
BROWN	Br
LIGHT BROWN	lBr
DARK BROWN	dBr
BROWNISH - GRAY	brGr
GRAYISH - BROWN	grBr
GREENISH - GRAY	gnGr
GRAYISH - GREEN	grGn
GREEN	Gn
BLUE	Bl
BLUE - GREEN	BlGn
WHITE	Wh
MOTTLED	Mot

CONSISTENCY FOR COHESIVE SOILS		
CONSISTENCY	COHESION IN LBS./SQ. FT. FROM UNCONFINED COMPRESSION TEST	SYMBOL
VERY SOFT	< 250	vSo
SOFT	250 - 500	So
MEDIUM STIFF	500 - 1000	mSt
STIFF	1000 - 2000	St
VERY STIFF	2000 - 4000	vSt
HARD	> 4000	H

MODIFICATIONS	
MODIFICATION	SYMBOL
Traces	Tr -
Fine	F
Medium	M
Coarse	C
Concretions	cc
Rootlets	rt
Lignite fragments	lg
Shale fragments	sh
Sandstone fragments	sds
Shell fragments	slf
Organic matter	O
Clay strata or lenses	CS
Silt strata or lenses	SIS
Sand strata or lenses	SS
Sandy	S
Gravelly	G
Boulders	B
Slickensides	SL
Wood	Wd
Oxidized	Ox
Saturated	Sat
Lumps of Clay	Clp

PLASTICITY CHART
For Classification of Fine-Grained Soils

NOTES

FIGURES TO THE LEFT OF BORING UNDER COLUMN "K"	
Are laboratory permeability in centimeters per second of undisturbed sample**	
Where underlined with a solid line denotes laboratory permeability in centimeters per second of sample remoulded to the estimated natural void ratio**	
FIGURES TO THE LEFT OF BORING UNDER COLUMNS "LL" AND "PL"	
Are liquid and plastic limits, respectively	
FIGURES TO THE LEFT OF BORING UNDER COLUMN "(W) OR D10"	
When in parenthesis denotes natural water contents in percent dry weight	
Denotes D- size in mm *	
FIGURES TO THE LEFT OF BORING UNDER COLUMN "C (PSF)"	
Are values of cohesion in lbs/sq. ft. from unconfined compression or triaxial tests**	
FIGURES TO THE LEFT OF BORING UNDER COLUMN "N-VALUE"	
Are driving resistances in blows per foot determined with a standard split spoon sampler (1 - 3/8 " I.D. 2" O.D.) and a 140 lb. driving hammer with a 30" drop	
SYMBOLS TO THE LEFT OF BORING	
	Ground water surface at time of drilling
	Ground water surface 24 hours after drilling
	Denotes location of consolidation test * *
	Denotes location of consolidated - drained direct shear test * *
	Denotes location of consolidated - undrained triaxial compression test * *
	Denotes location of unconsolidated - undrained triaxial compression test * *
	Denotes location of sample subjected to consolidation test and each of the above three types of shear tests * *
FW	Denotes free water encountered in boring or sample
	Denotes channel grade
FIGURES TO THE RIGHT OF BORING	
Are descriptive symbols***	
BORING TYPE	
SS - Split Spoon Sampler AUG - Auger TUBE - 3" or 5" Thin Wall Tube	

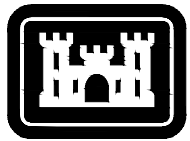
* THE D_{10} SIZE OF A SOIL IS THE GRAIN DIAMETER IN MILLIMETERS OF WHICH 10% OF THE SOIL IS FINER, AND 90% COARSER THAN SIZE D_{10} .

** RESULTS OF THESE TESTS ARE AVAILABLE FOR INSPECTION IN THE U.S. ARMY ENGINEER DISTRICT OFFICE IF THESE SYMBOLS APPEAR BESIDE THE BORING LOGS ON THE DRAWINGS.

*** BORING LOGS ARE AVAILABLE FOR INSPECTION UPON REQUEST SUBMITTED TO CONTRACTING OFFICER'S REPRESENTATIVE

GENERAL NOTES:

1. WHILE THE BORINGS ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT THEIR RESPECTIVE LOCATIONS AND FOR THEIR RESPECTIVE VERTICAL REACHES, LOCAL VARIATIONS CHARACTERISTIC OF SUBSURFACE MATERIALS OF THE REGION ARE ANTICIPATED AND, IF ENCOUNTERED, SUCH VARIATIONS WILL NOT BE CONSIDERED AS DIFFERING MATERIALLY WITHIN THE PURVIEW OF THE CONTRACT CLAUSE ENTITLED, "DIFFERING SITE CONDITIONS".
2. GROUND WATER ELEVATIONS SHOWN ON THE BORING LOGS REPRESENT GROUND WATER SURFACES ENCOUNTERED IN SUCH BORINGS ON THE DATES SHOWN. ABSENCE OF GROUND WATER SURFACE DATE ON ALL OR CERTAIN BORINGS INDICATES THAT NO GROUND WATER DATA IS AVAILABLE FROM THE BORING OR THAT NO GROUND WATER SURFACE WAS RECORDED, AND THE ABSENCE OF SUCH DATA IS NOT A REPRESENTATION THAT GROUND WATER WILL NOT BE ENCOUNTERED AT THE LOCATION OR WITHIN THE VERTICAL REACH OF THE BORING. THE GROUNDWATER TABLE IS EXPECTED TO FLUCTUATE DEPENDING ON WATER LEVELS OF NEARBY BODIES OF WATER, SEASONAL VARIATIONS, AND WEATHER CONDITIONS.
3. CONSISTENCY OF COHESIVE SOILS SHOWN ON THE BORING LOGS IS BASED ON DRILLER'S LOG AND VISUAL EXAMINATION AND IS APPROXIMATE, EXCEPT WITHIN THOSE VERTICAL REACHES OF THE BORINGS WHERE SHEAR STRENGTHS FROM UNCONFINED COMPRESSION TESTS ARE SHOWN.
4. ADDITIONAL SUBSURFACE DATA MAY BE AVAILABLE FOR INSPECTION UPON REQUEST. REQUESTS FOR ADDITIONAL SUBSURFACE BORING DATA AND PILOT HOLE DATA SHALL BE SUBMITTED TO THE CONTRACTING OFFICER'S REPRESENTATIVE.



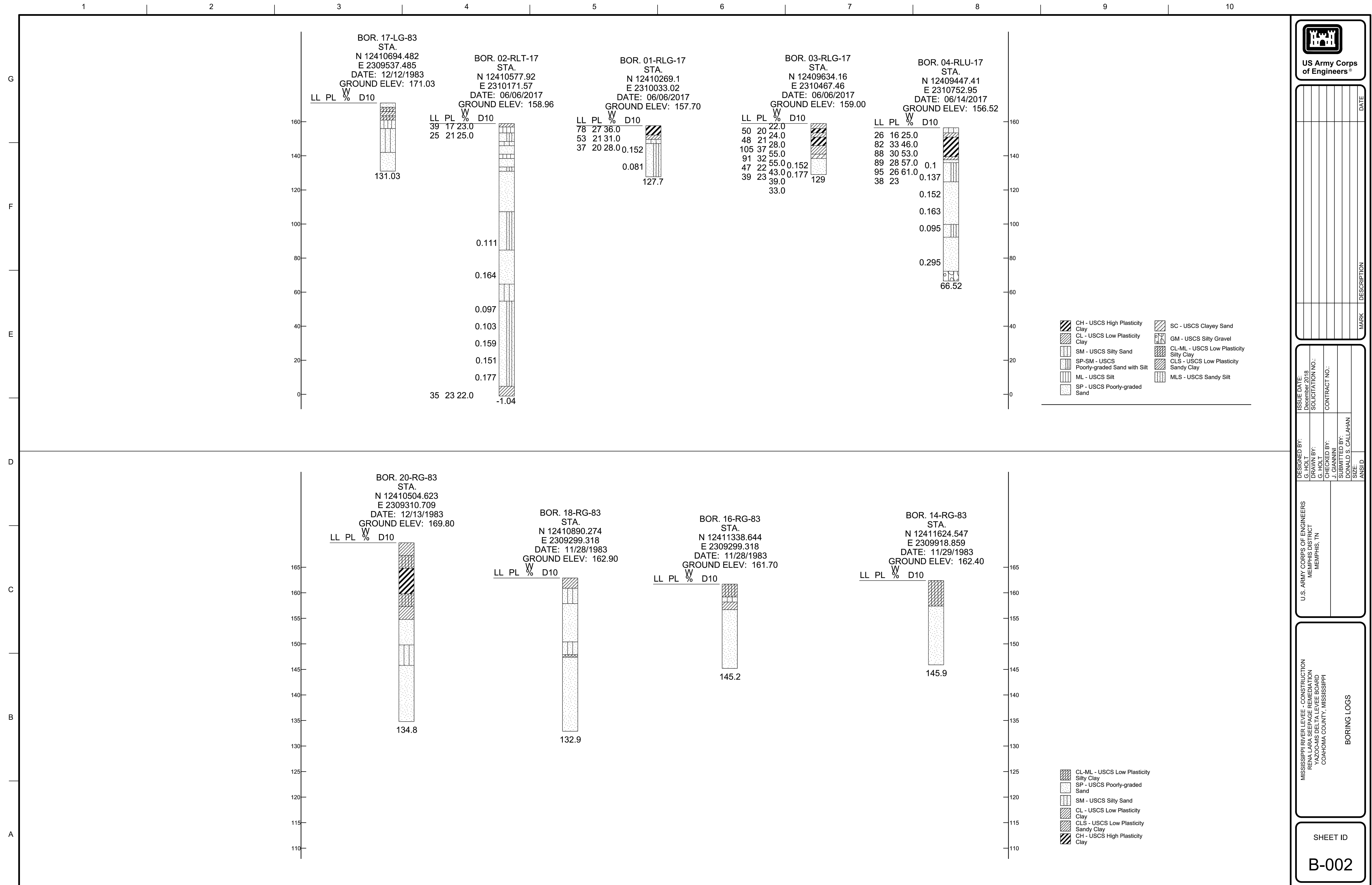
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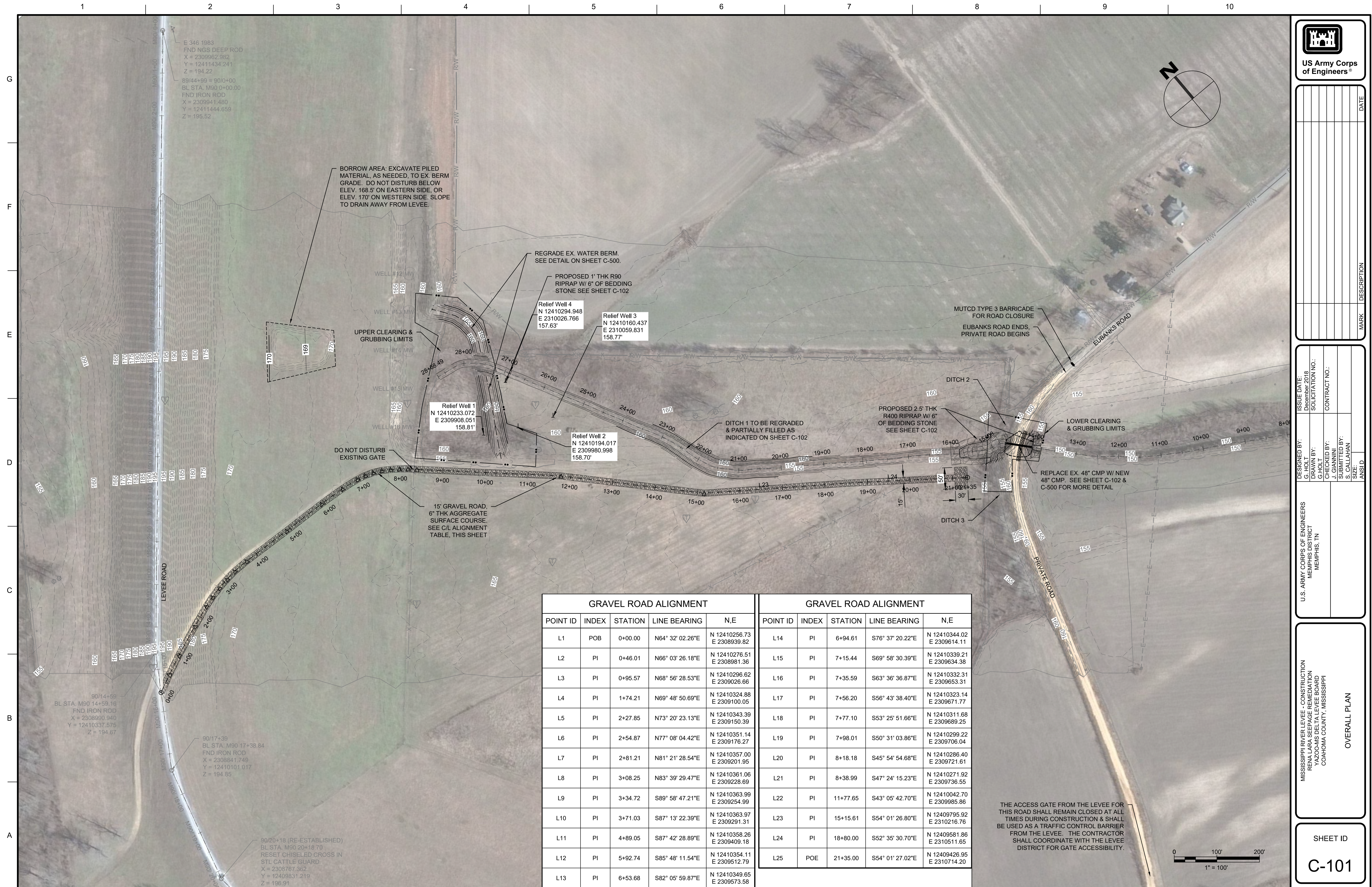
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U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DESIGNED BY:	ISSUE DATE:
	G. HOLT	December 2018
	CHECKED BY:	SOLICITATION NO.:
	G. HOLT	
	CHECKED BY:	CONTRACT NO.:
	J. GIANNINI	
SUBMITTED BY:		
DR. WALTER S. CALLAHAN		
SCALE:		
ANSI D		

MISSISSIPPI RIVER LEVEE - CONSTRUCTION
RENA LARA SEEPAGE REMEDIATION
YAZOO&S DELTA LEVEE BOARD
COAHOMA COUNTY, MISSISSIPPI

SHEET ID
B-001



[illegible]

MEMPHIS, TN	DRAWN BY:	SOLICITATION NO.:
	CHECKED BY:	CONTRACT NO.:
	J. GUANNI	
	SUBMITTED BY:	
	S. CALLAHAN	
	SIZE:	
	ANSI D	

OVERALL PLAN

SHEET ID
C-101

G

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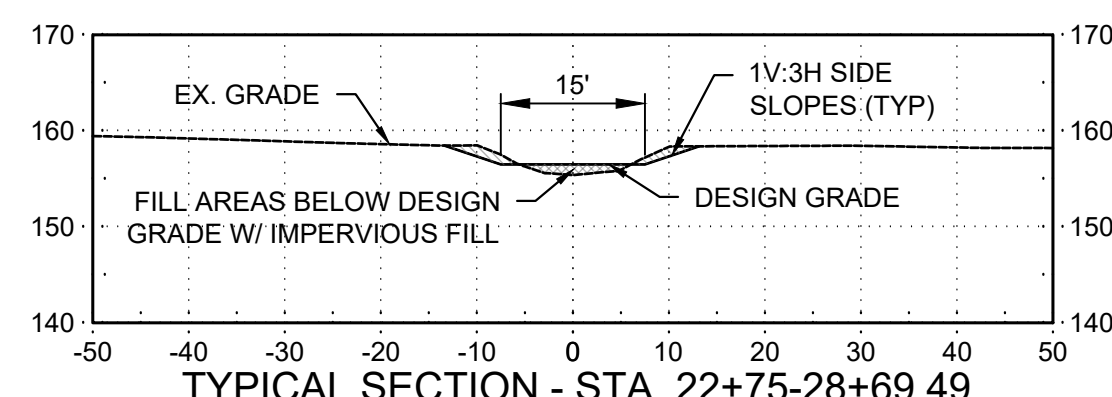
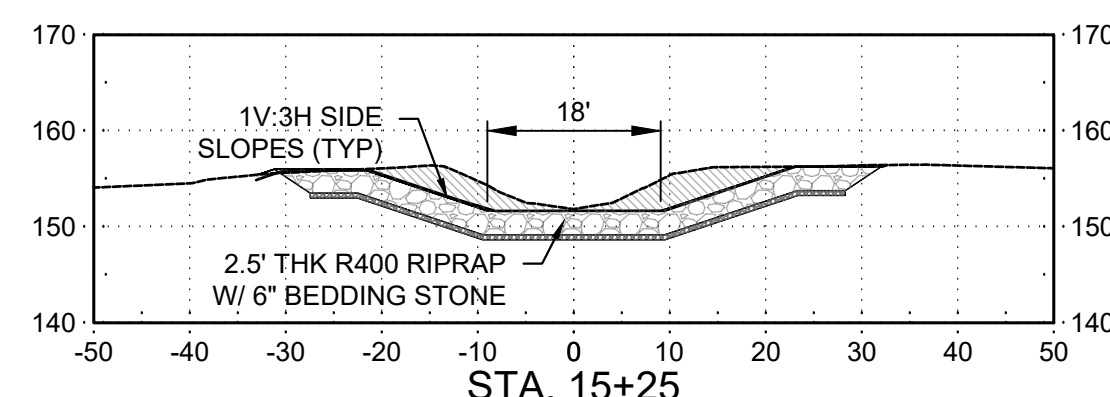
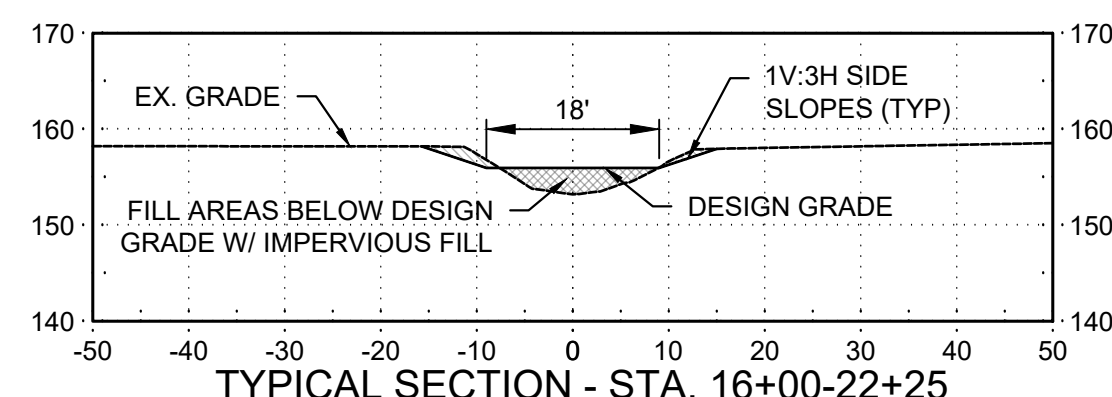
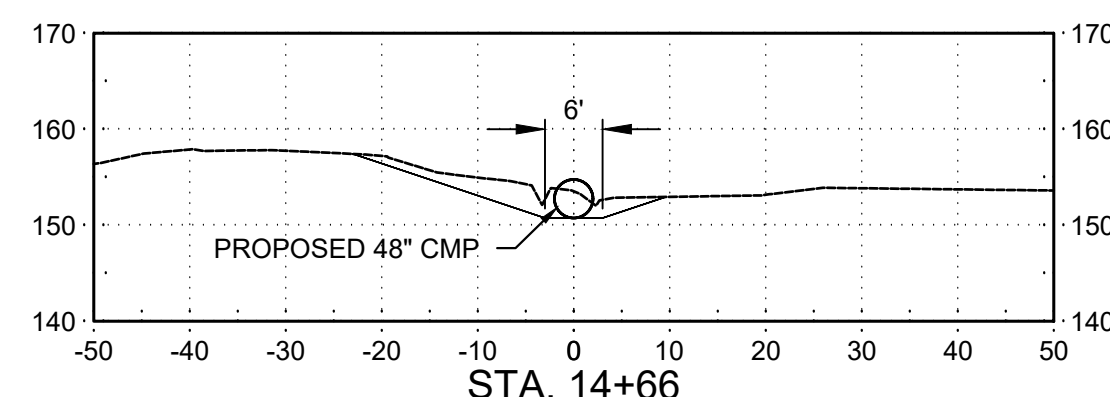
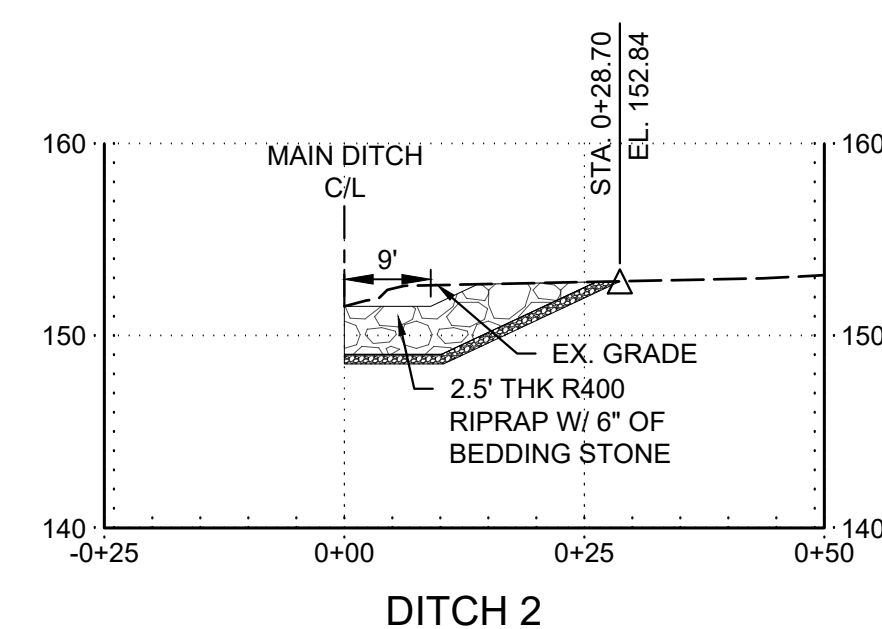
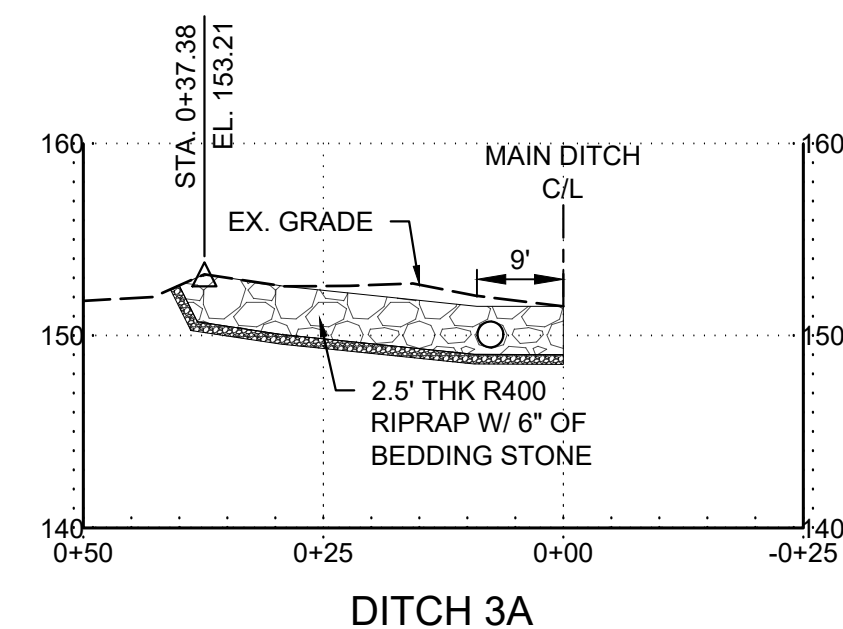
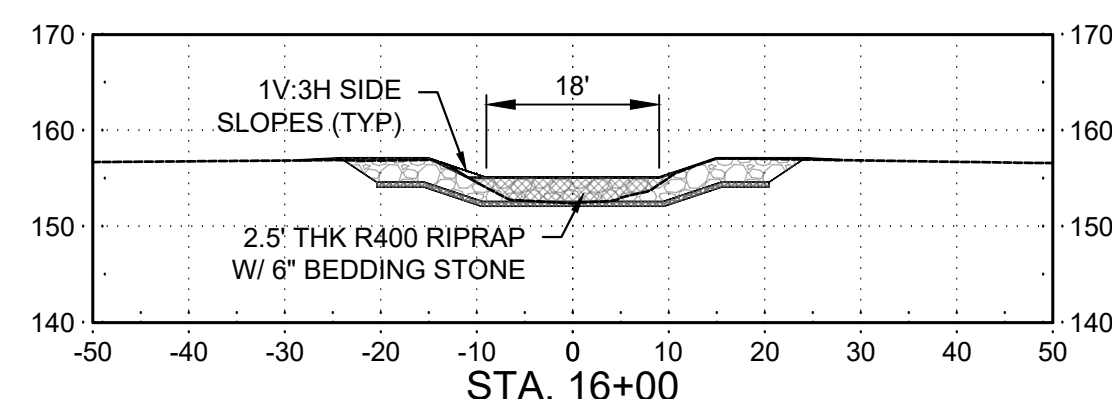
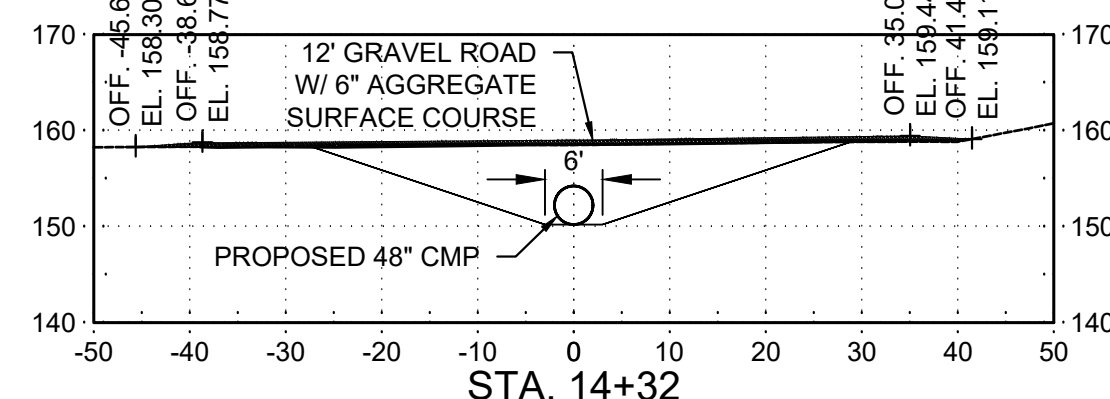
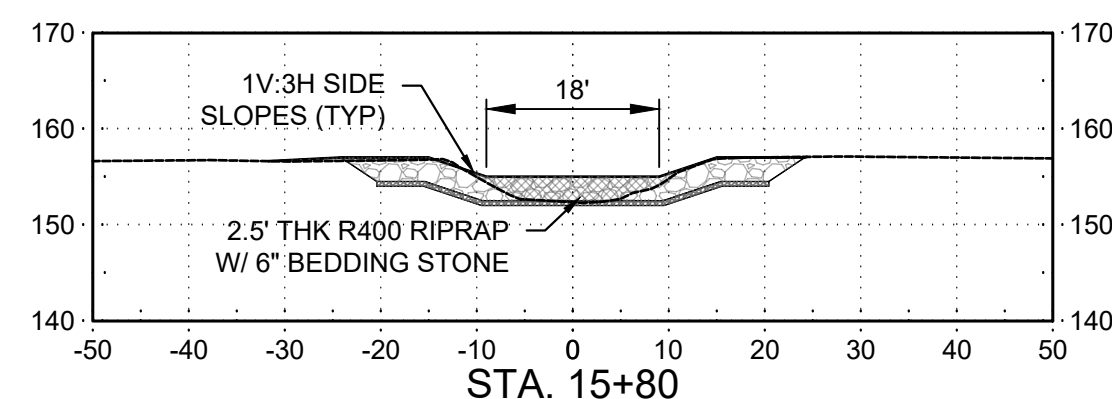
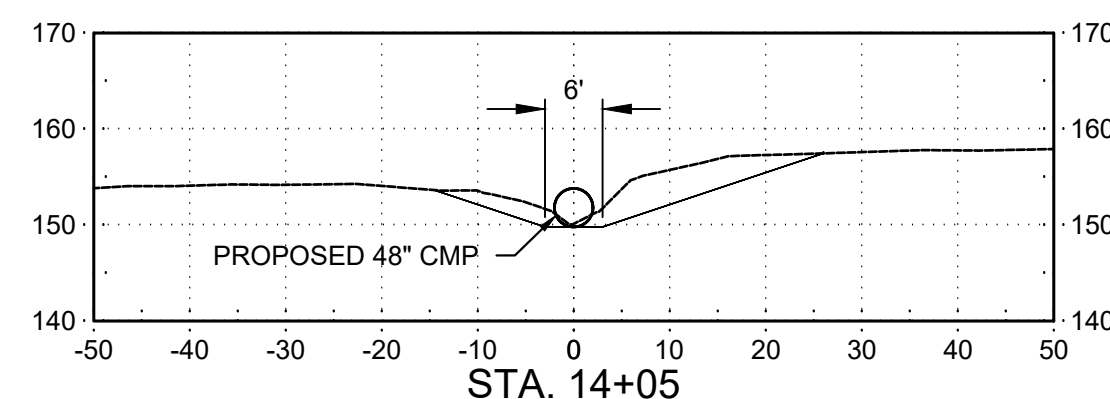
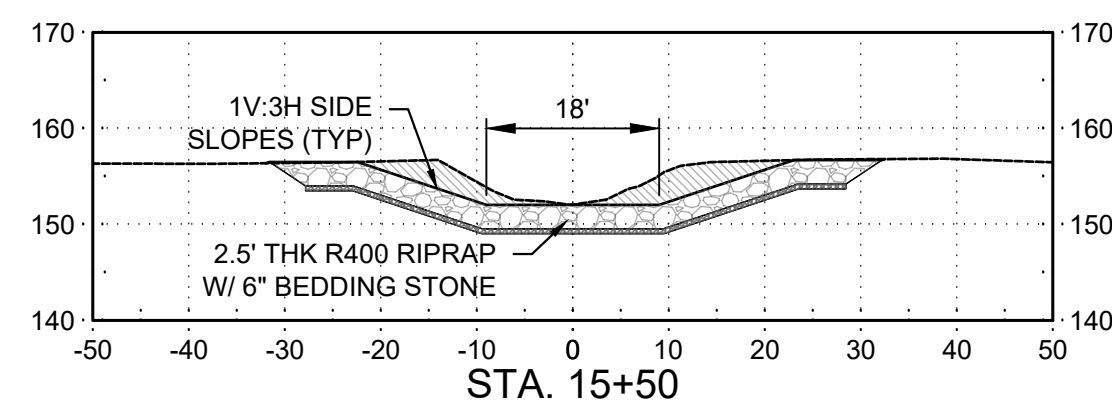
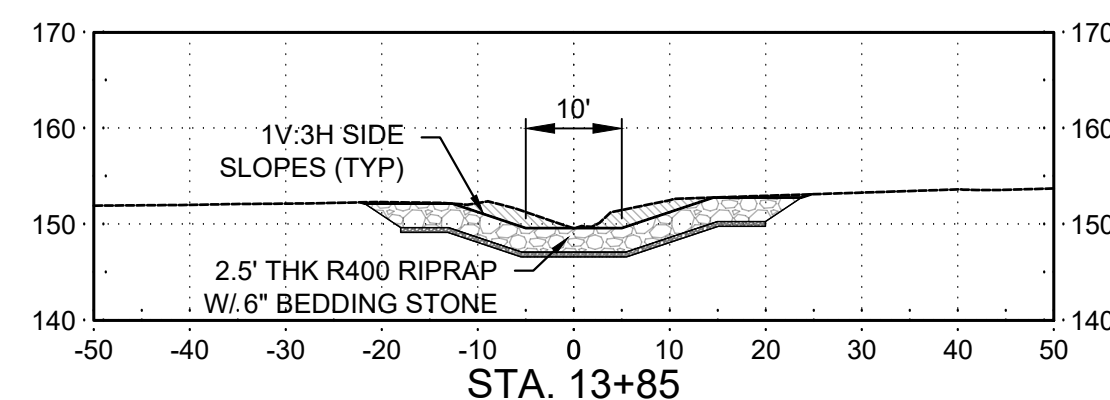
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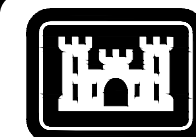
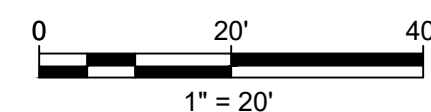
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CROSS SECTIONS ARE ORIENTED TO VIEW UPSTATION



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of Engineers®**

[illegible]

U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DESIGNED BY:	ISSUE DATE:
	G. HOLT	December 2018
	DRAWN BY:	SOLICITATION NO.:
	CHECKED BY:	
	J. GIANNINI	CONTRACT NO.:
	SUBMITTED BY:	
S. CALLAHAN	SIZE:	

MISSISSIPPI RIVER LEVEE - CONSTRUCTION
RENA LARA SEEPAGE REMEDIATION
YAZOO-MS DELTA LEVEE BOARD
COAHOMA COUNTY, MISSISSIPPI

TYPICAL CROSS SECTIONS

SHEET ID

C-300



E



B

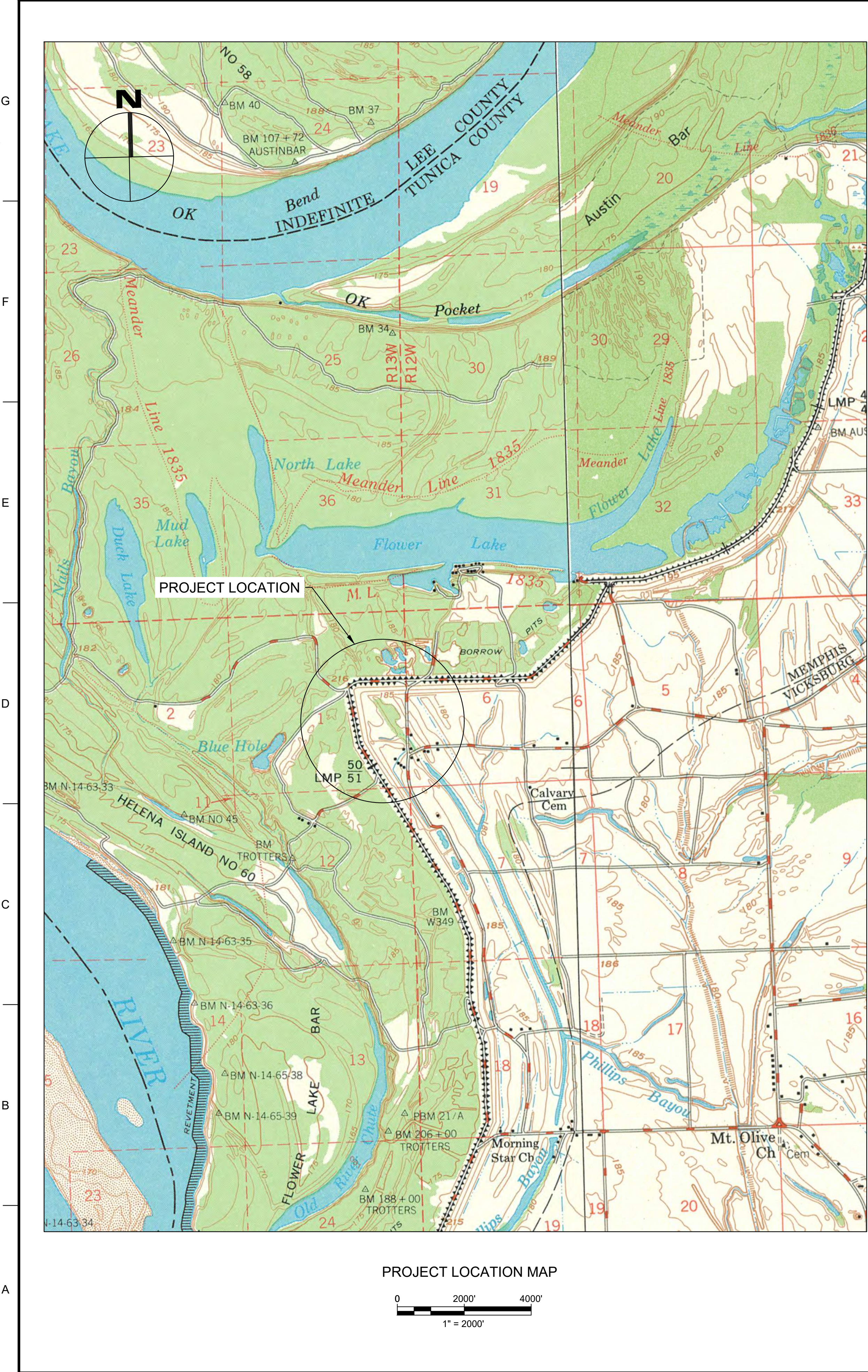
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GENERAL NOTES:

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- DESIGN FOR THIS PROJECT WAS DEVELOPED BASED ON 2017 SURVEY JMA16027. EXISTING CONTOURS SHOWN ON SHEETS MAY NOT REFLECT SITE CONDITIONS AT TIME OF CONSTRUCTION.
- ANY AERIAL PHOTOGRAPHY SHOWN ON SHEETS IS FOR REFERENCE ONLY AND SHOULD NOT BE USED TO DETERMINE OR ANTICIPATE SITE CONDITIONS AT THE TIME OF CONSTRUCTION.
- BE ADVISED THAT STATIONING BASED ON LEVEE MILE MARKERS INDICATED BY "MX/XX+XX", MAY HAVE MORE OR LESS THAN 5280 FEET PER MILE.
- GATES AND/OR FENCES ARE NOT TO BE DISTURBED, UNLESS OTHERWISE NOTED. ALL GATES AND FENCES DISTURBED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. APPROVAL FROM THE CONTRACTING OFFICER IS REQUIRED BEFORE ANY GATES OR FENCES ARE TO BE DISTURBED.
- HAUL ROUTES TO TRANSPORT BORROW MATERIAL TO THE CONSTRUCTION AREA SHALL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE CONTRACTING OFFICER PRIOR TO USE.
- MULCH OR SEEDING (TEMPORARY OR PERMANENT) WILL BE APPLIED TO ALL EARTH DENUDED OF VEGETATION DUE TO CONSTRUCTION ACTIVITIES AS SPECIFIED WITH 14 DAYS OF EITHER CONSTRUCTION ACTIVITY COMPLETION OR A TEMPORARY CEASE LONGER OF 21 DAYS. CONTRACTOR MAY USE A ROLLER TO PRESS STRAW OR MULCH INTO THE EXISTING GROUND IN ORDER TO MINIMIZE DAMAGE OR REMOVAL BY WIND OR WATER.
- FIELD ADJUSTMENTS OF EROSION CONTROL MEASURES ARE ALLOWED AS NECESSARY TO ENSURE PROPER PLACEMENT AND FUNCTION.
- UPON CONSTRUCTION COMPLETION AND PRIOR TO FINAL ACCEPTANCE, REMOVE ALL EROSION CONTROL FEATURES.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE ADHERENCE TO ALL FEDERAL, STATE, AND LOCAL SAFETY REGULATIONS THAT ARE APPLICABLE TO THE WORK ASSOCIATED WITH THIS CONSTRUCTION PROJECT.

TABULATION OF BENCHMARKS: VERTICAL CONTROL

TROTTERS SEEPAGE REMEDIATION

BENCHMARKS	ELEVATION	DESCRIPTION
K344 1983	194.86 (NAVD88; Geoid 09; U.S. Survey Foot)	TO REACH THE STATION FROM THE INTERSECTION OF AUSTIN ROAD AND OLD US 61 IN EVANSVILLE, MS, DRIVE SOUTH ON OLD US 61 (PARALLEL TO OLD RR ROW) FOR 3.65 MILES, THROUGH CLAYTON, MS, TO A PAVED ROAD RIGHT. TURN RIGHT AND CONTINUE WESTERLY ON FLOWER LAKE RD FOR 5.9 MI (9.5 KM) TO A T INTERSECTION. PROCEED NORTH ON DUNDEE RD FOR 0.4 MILES TO THE LEVEE AND TO THE ROAD AT THE TOP. TAKE THE LEFT FORK AND HEAD WEST AND SOUTH ALONG THE TOP OF THE LEVEE ABOUT 1.8 MILES TO A CATTLE GUARD, MILE POST 50/51, AND THE STATION ON THE EAST, DOWN THE SLOPE ON THE LEFT AT THE TOE OF THE LEVEE. THE STATION MARK IS NOW 3.6 FEET (1.1 METERS) NORTH OF AN ORANGE WITNESS POST AND 3.3 FEET (1.0 METERS) NORTHWEST OF A WIRE FENCE. THE MARK IS A STAINLESS STEEL ROD IN A PROTECTIVE CASING, STAMPED "K344 1983".
R349 1983	215.56 (NAVD88; Geoid 09; U.S. Survey Foot)	TO REACH THE STATION FROM THE JUNCTION OF US HIGHWAY 61 AND STATE HIGHWAY 4 IN TUNICA, GO WEST ON HIGHWAY 4 FOR 9.2 KILOMETERS (5.7 MILES) TO ITS JUNCTION WITH THE LEVEE ROAD. TURN LEFT, SOUTHEAST, ON THE PAVED, THEN DIRT LEVEE ROAD FOR 10.7 KILOMETERS (6.65 MILES) TO MILEPOST 44/45, AND BENCH MARK R 349 ON THE LEFT. THE MARK IS A STAINLESS STEEL ROD IN A STEEL LOGO COVER, RECOVERED IN GOOD CONDITION AND STAMPED "R349 1983".
X349 1983	214.28 (NAVD88; Geoid 09; U.S. Survey Foot)	TO REACH THE STATION FROM THE JUNCTION OF US HIGHWAY 49 AND STATE HIGHWAY 1, ABOUT 4.0 MILES EAST-SOUTHEAST OF HELENA, AR, GO NORTH THEN WEST ON A DIRT ROAD FOR 1.45 MILES TO THE LEVEE ROAD, TURN RIGHT, NORTH, ON THE LEVEE ROAD FOR 4.7 MILES TO THE MILEPOST 52/53 AND THE STATION ON THE RIGHT SET BETWEEN TWO STEEL BLADES PAINTED WHITE. LOCATED 3.35 METERS (11.0 FEET) E FROM THE APPROXIMATE CENTER OF THE LEVEE ROAD AND 2.35 METERS (7.7 FEET) SW FROM MILEPOST 52/53. THE STATION IS A PUNCH MARK IN THE TOP OF A STANDARD NGS STAINLESS STEEL CLASS B ROD MARK ENCASED IN A PVC PIPE WITH A LOGO CAP STAMPED "X349 1983".
USED 48/49 REF	184.67 (NAVD88; Geoid 09; U.S. Survey Foot)	TO REACH FROM THE U.S. POST OFFICE IN TUNICA GO SOUTH ON A CONCRETE STREET PARALLELING THE WEST SIDE OF THE RAILROAD TRACK FOR 0.1 MILE TO THE END OF THE CONCRETE, CONTINUE SOUTH ON A BLACKTOP ROAD FOR 3.35 MILES TO A CROSSROADS, CONTINUE SOUTH ON A BLACKTOP ROAD FOR 3.65 MILES TO A SIDE ROAD RIGHT AND THE END OF THE BLACKTOP. TURN RIGHT (WEST) AND CONTINUE ON A BLACKTOP ROAD FOR 6.05 MILES TO A SIDE ROAD CONTINUE ON AN ALL-WEATHER ROAD FOR 0.35 MILE TO THE MARK ON THE LEFT JUST BEFORE REACHING THE LEVEE. IT IS 122 FEET WEST OF THE CENTER OF A GRAVEL ROAD LEADING TO THE TOP OF THE LEVEE, 1.5 FEET SOUTHWEST OF A METAL WITNESS POST. THE DISK WAS RECOVERED IN GOOD CONDITION, STAMPED "USED REF 48/49".

GENERAL CROSS-REFERENCING SYMBOLS

A

DETAIL/SECTION

SUPPLEMENTAL INFORMATION

SCALE:

2

DETAIL/SECTION

99/999

SCALE:

TOP

FRONT

SIDE

ELEVATION

A

SECTION

SCALE:

A

SECTION CUT W/ VIEW SHOWN ON SAME DRAWING

2

SECTION CUT W/ VIEW SHOWN ON ANOTHER DRAWING

A

DETAIL SYMBOL W/ VIEW SHOWN ON SAME DRAWING

2

DETAIL SYMBOL W/ VIEW SHOWN ON ANOTHER DRAWING

SECTION/DETAIL TITLE ON SAME DRAWING (CENTERED UNDER SECTION/DETAIL)

SECTION/DETAIL TITLE ON SAME DRAWING (CENTERED UNDER SECTION/DETAIL)

VIEW SUBTITLE (CENTERED UNDER EACH VIEW)

ABBREVIATIONS

APPROX	APPROXIMATE	OF	OUTSIDE FACE
ALT W/	ALTERNATE WITH	PP	POLYPROPYLENE PIPE
ALUM	ALUMINUM	PC	POINT OF CURVE
BITUM	BITUMINOUS	PCC	POINT OF COMPOUND CURVE
BOT	BOTTOM	PI	POINT OF INTERSECTION
B/T	BETWEEN	POB	POINT OF BEGINNING
CL or C/L	CENTER LINE	POE	POINT OF ENDING
CMP	CORRUGATED METAL PIPE	PRC	POINT OF REVERSE CURVE
CONC	CONCRETE	PT	POINT OF TANGENCY
CPP	CORRUGATED PLASTIC PIPE	RTB	RIGHT TOP BANK
DIA	DIAMETER	RC	REINFORCED CONCRETE PIPE
DS	DOWNSTREAM	SAN	SANITARY
DWG	DRAWING	SDR	STANDARD
EJ	EXPANSION JOINT	SPEC	SPECIFICATIONS
EL	ELEVATION	SST	STAINLESS STEEL
EME	EXCAVATED MATERIAL EMBANKMENT	SHT	SHEET
EW	EACH WAY	TC	TOP OF CONCRETE
EX	EXISTING	TYP	TYPICAL
FES	FLARED END SECTION	UNO	UNLESS NOTED OTHERWISE
FF	FAR FACE	UNGD	UNDERGROUND
FL	FLOW LINE	US	UPSTREAM
HT	HEIGHT	W	WIDTH
INV	INVERT	WM	WATER MAIN
LG	LONG		
L/W	LANDWARD		
LTB	LEFT TOP BANK		
MAX	MAXIMUM		
MIN	MINIMUM		
MIRR	MIRRORED		
MISC	MISCELLANEOUS		
NF	NEAR FACE		
NO	NUMBER		
NST	NO STEEPER THAN		
OC	ON CENTER		

GENERAL LEGEND

△

CONTROL POINT

⊙

IRON ROD

△

PI POINT

⊕

BORING LOCATION

▽

PIEZOMETER

⊙

EXISTING RELIEF WELL

⊙

EXISTING TREE

⊙

ELECTRIC POLE

—

GUY WIRE

—E—E—

OVERHEAD POWER

—X—X—

FENCE

—

VEGETATION LIMITS

—

DITCH FLOWLINE

—xxx—

EX. CONTOUR

—CP—

EX. STORM CULVERT

—R/W—

RIGHT OF WAY

BASELINE

LEVEE CENTERLINE

⊥

PROPOSED RELIEF WELL

—xxx—

PROPOSED CONTOUR

—SF—

SILT FENCE

RIPRAP

IMPERVIOUS FILL

US Army Corps of Engineers®

DATE

DESCRIPTION

MARK

ISSUE DATE:
November 18

SOLICITATION NO.:

CONTRACT NO.:

DESIGNED BY:
DB

DRAWN BY:

CHECKED BY:

SUBMITTED BY:
DONALD S. CALLAHAN

SIZE:
ANSI D

U.S. ARMY CORPS OF ENGINEERS
MEMPHIS DISTRICT
MEMPHIS, TN

MISSISSIPPI RIVER LEVEE - CONSTRUCTION
TROTTERS SEEPAGE REMEDIATION
YAZOO-MISSISSIPPI DELTA LEVEE BOARD
TUNICA COUNTY, ARKANSAS

LOCATION MAP

SHEET ID

G-002

G

E

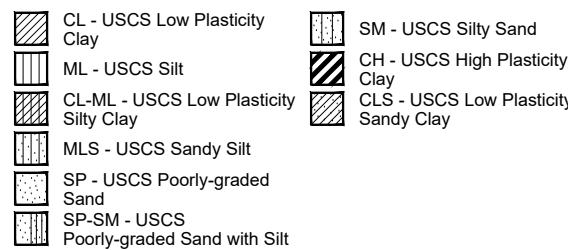
E

D

C

B

A



U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DATE: 12 November 61.	
	G. HOLT	
	SOLICITATION NO.:	
	CONTRACT NO.:	
	CHECKED BY:	
	M.C.	
	SUBMITTED BY:	
	WILLIAM S. GALLAHAN	
	SIZE:	
	ANSI/D	

BORING LOGS

B-002

A

B

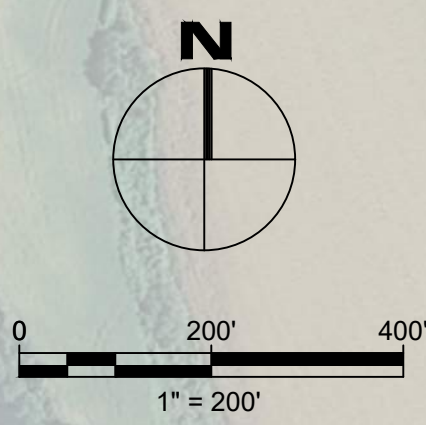
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U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DRAWN BY: G.H.		CONTRACT NO.:
	CHECKED BY: M.C.		SUBMITTED BY: RONALD S. CALLAHAN
	DATE: November 18, 1961		
	SOLICITATION NO.:		ANSI D

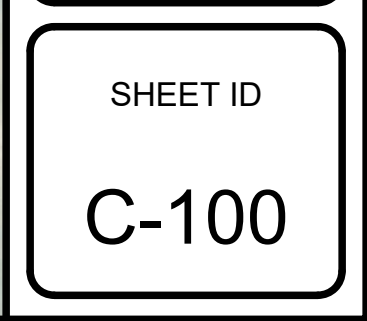
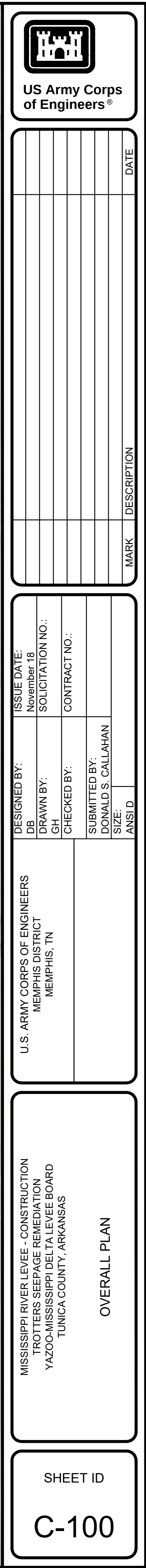
MISSISSIPPI RIVER LEVEE - CONSTRUCTION
TROTTERS SEEPAGE REMEDIATION
YAZOO-MISSISSIPPI DELTA LEVEE BOARD
TUNICA COUNTY, ARKANSAS

BORING LOGS

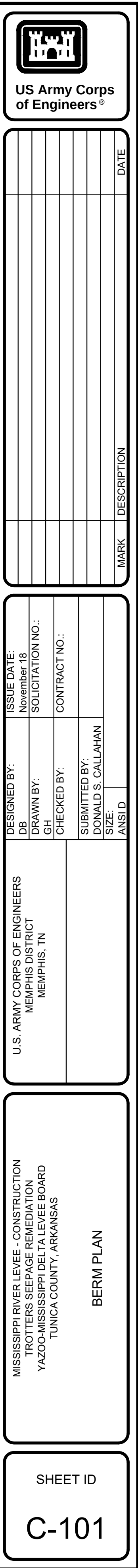
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A — B — C — D — E — F — G



DQCSET

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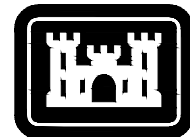
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Q

POINT TABLE			
No.	ELEVATION	NORTHING	EASTING
1	188.50	12,565,769.34	2,387,308.23
2	188.50	12,566,805.42	2,387,277.17
3	186.00	12,566,803.54	2,387,626.70
4	185.00	12,566,788.27	2,387,627.16
5	184.00	12,566,741.05	2,387,628.58
6	184.00	12,566,599.42	2,387,632.82
7	185.00	12,566,595.90	2,387,632.93
8	185.00	12,566,587.09	2,387,633.19
9	184.00	12,566,583.40	2,387,633.30
10	183.00	12,566,577.66	2,387,633.48
11	183.01	12,566,555.97	2,387,634.13
12	182.00	12,566,508.58	2,387,635.55
13	182.00	12,566,325.76	2,387,641.03
14	181.00	12,566,157.88	2,387,646.06
15	181.00	12,566,086.04	2,387,648.22
16	181.00	12,566,046.88	2,387,649.39
17	180.00	12,565,719.97	2,387,659.19
18	180.00	12,565,652.41	2,387,661.22
19	179.00	12,565,583.60	2,387,663.28
20	179.13	12,565,570.22	2,387,663.68
21	181.76	12,565,546.26	2,387,609.46
22	183.57	12,565,579.46	2,387,490.73
23	183.39	12,565,580.72	2,387,465.27
24	183.79	12,565,561.12	2,387,421.25
25	183.90	12,565,517.59	2,387,356.24
26	184.04	12,565,489.09	2,387,214.56
27	184.66	12,565,485.86	2,387,103.86
28	184.78	12,565,493.62	2,387,052.84
29	184.45	12,565,512.31	2,386,966.85
30	184.64	12,565,532.83	2,386,893.34
31	184.92	12,565,580.04	2,386,835.83
32	185.07	12,565,580.97	2,386,816.62
33	185.67	12,565,571.10	2,386,738.55
34	185.55	12,565,554.25	2,386,657.68
35	186.00	12,565,549.57	2,386,644.72
36	196.74	12,565,738.49	2,386,279.31
37	198.26	12,566,768.86	2,386,057.72



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of Engineers®**

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U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DESIGNED BY: DB	ISSUE DATE: November 18
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	CHECKED BY:	CONTRACT NO.:
	SUBMITTED BY:	
	BY: RONALD S. CALLAHAN	
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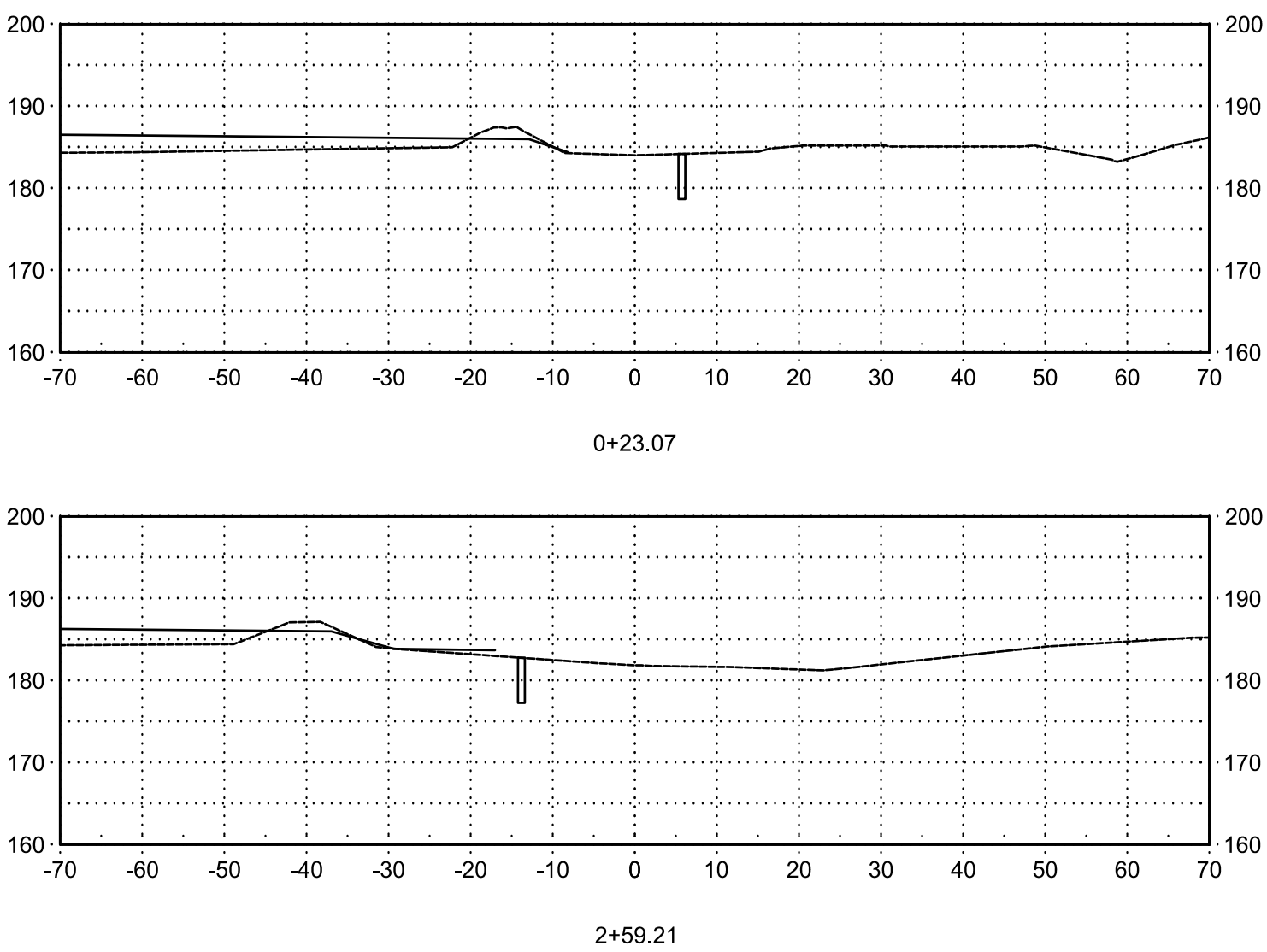
MISSISSIPPI RIVER LEVEE - CONSTRUCTION
TROTTERS SEEPAGE REMEDIATION
YAZOO-MISSISSIPPI DELTA LEVEE BOARD
TUNICA COUNTY, ARKANSAS

BERM POINT TABLE

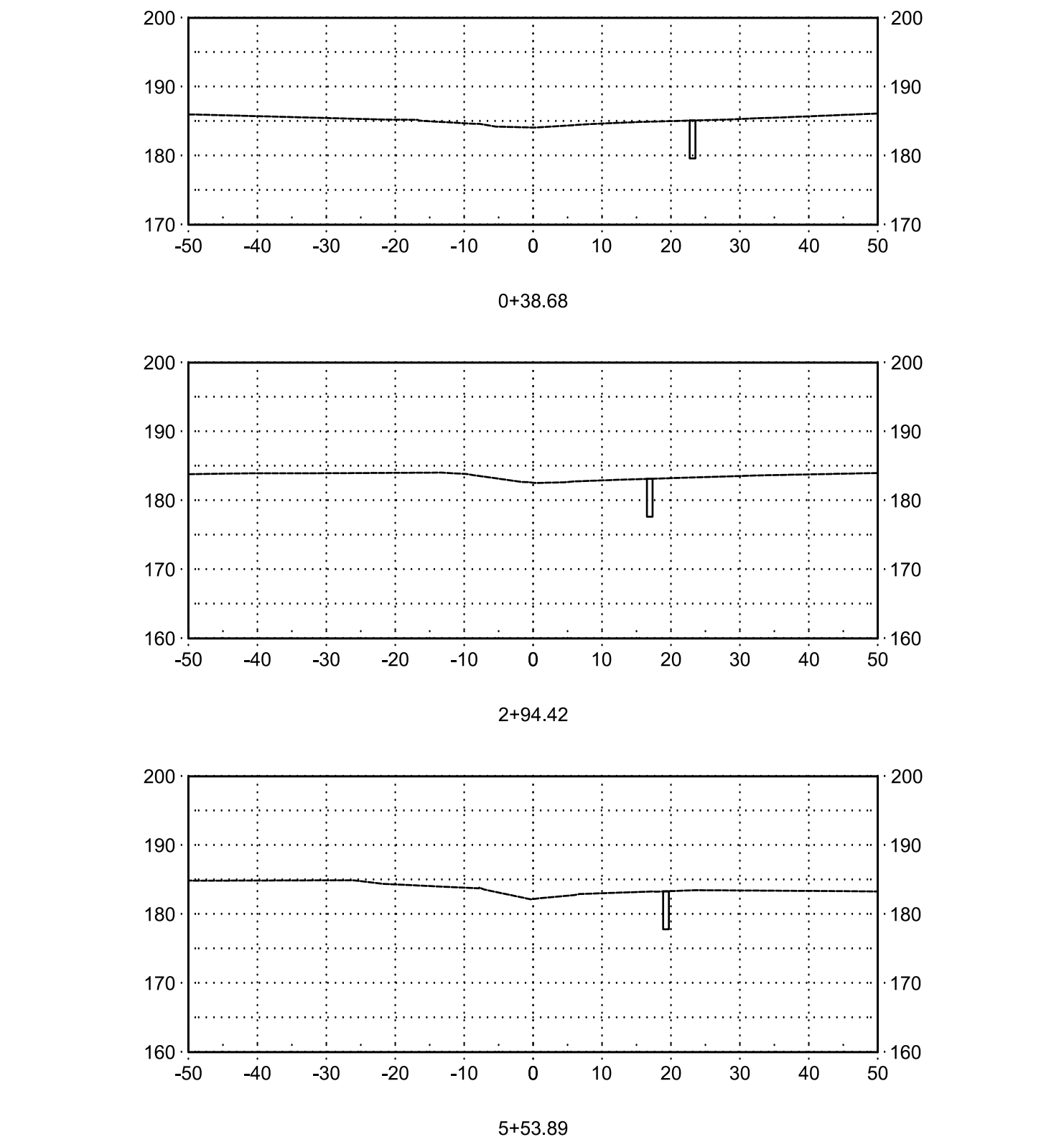
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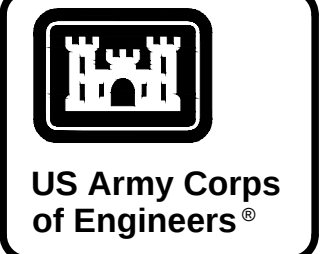
DQCSET



DITCH 2				
NUMBER	STA.	LENGTH	DIRECTION	START POINT
L2	0+00.00	99.45'	N88° 33' 57.85"E	N 12565478.31 E 2387122.73
L3	0+99.45	30.35'	S88° 00' 33.91"E	N 12565480.79 E 2387222.16
L4	1+29.80	102.27'	N77° 14' 57.40"E	N 12565479.74 E 2387252.48
L1	2+32.07	44.46'	N88° 17' 02.35"E	N 12565502.31 E 2387352.23



DITCH 7				
NUMBER	STA.	LENGTH	DIRECTION	START POINT
L5	0+00.00	25.84'	S30° 14' 53.65"E	N 12564837.08 E 2387086.20
L6	0+25.84	27.36'	S44° 55' 06.92"E	N 12564814.75 E 2387099.22
L7	0+53.20	138.84'	S31° 08' 12.57"E	N 12564795.38 E 2387118.53
L8	1+92.04	92.05'	S33° 21' 50.45"E	N 12564676.54 E 2387190.33
L9	2+84.09	47.86'	S32° 31' 24.45"E	N 12564599.66 E 2387240.95
L10	3+31.95	51.77'	S37° 46' 12.17"E	N 12564559.31 E 2387266.68
L11	3+83.71	18.92'	S12° 09' 20.15"W	N 12564518.39 E 2387298.39
L12	4+02.63	30.98'	S08° 36' 01.96"E	N 12564499.89 E 2387294.40
L13	4+33.61	27.57'	S35° 47' 43.50"E	N 12564469.26 E 2387299.03
L14	4+61.19	24.50'	S52° 40' 29.93"E	N 12564446.90 E 2387315.16
L15	4+85.69	24.72'	S42° 53' 29.35"E	N 12564432.04 E 2387334.65
L16	5+10.41	81.70'	S34° 35' 47.38"E	N 12564413.93 E 2387351.47

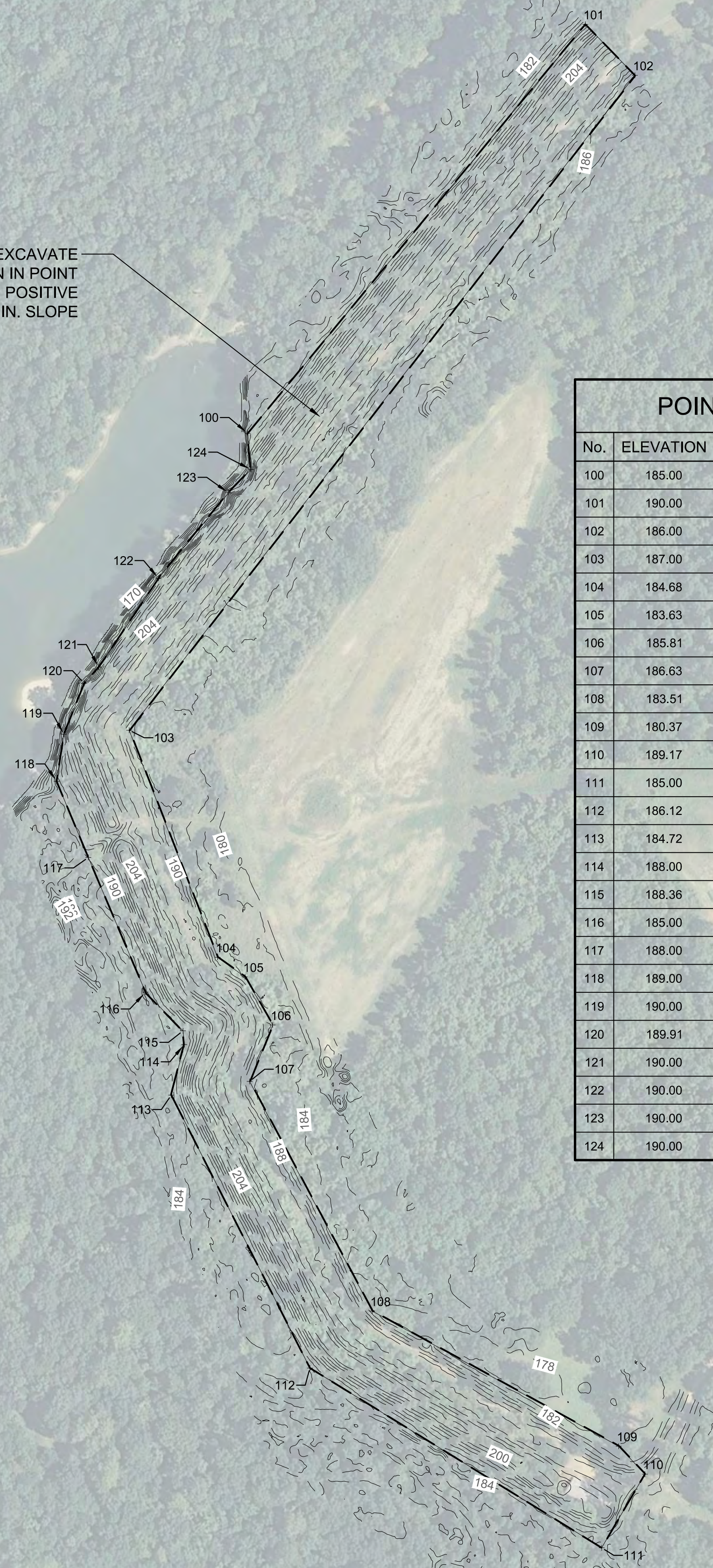
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U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DESIGNED BY:		ISSUE DATE:
	DB	WIN BY:	November 18
	GH		SOLICITATION NO.:
	CHECKED BY:	CONTRACT NO.:	
	SUBMITTED BY:	FORWARDED S. GALLAHAN	
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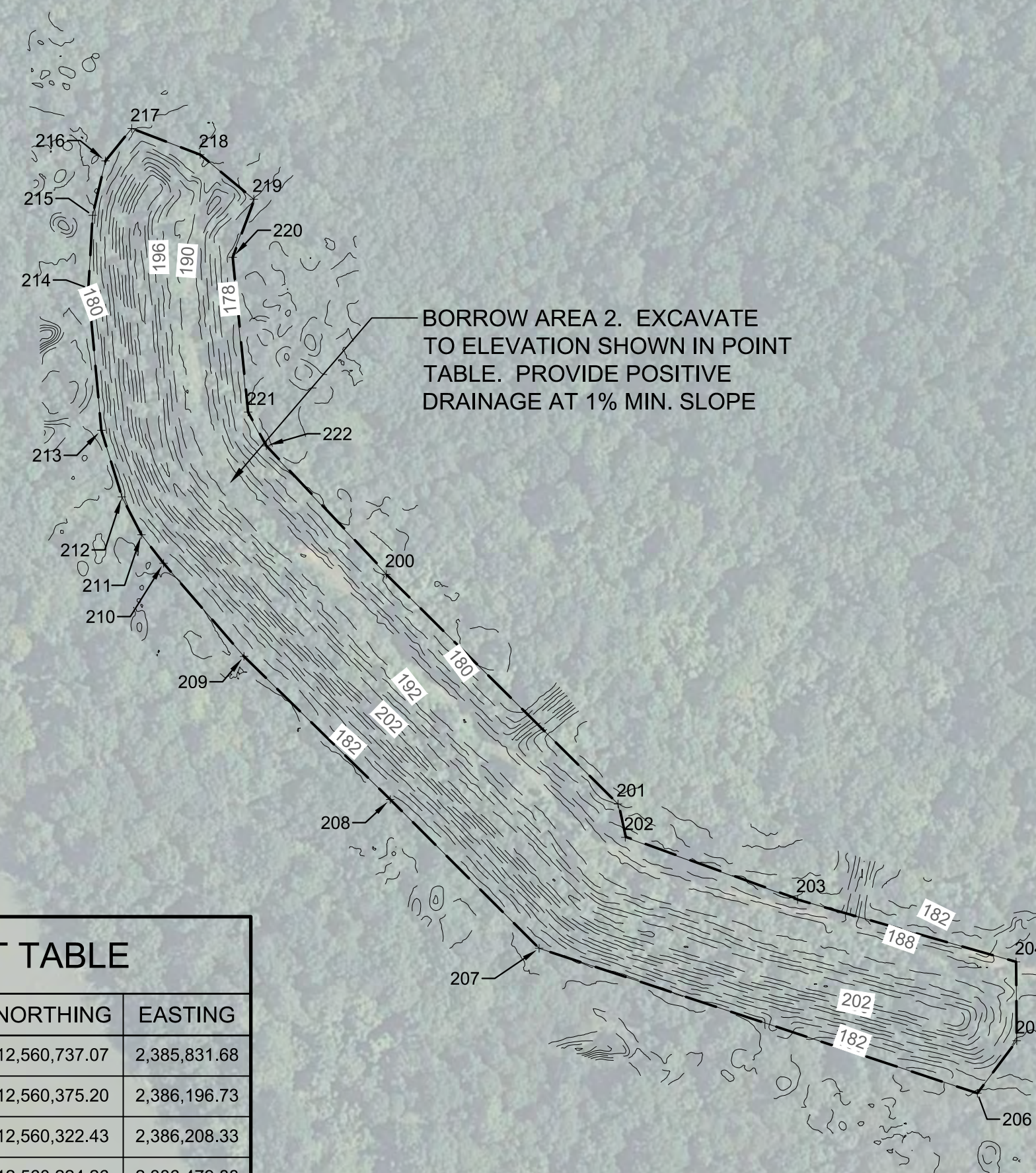
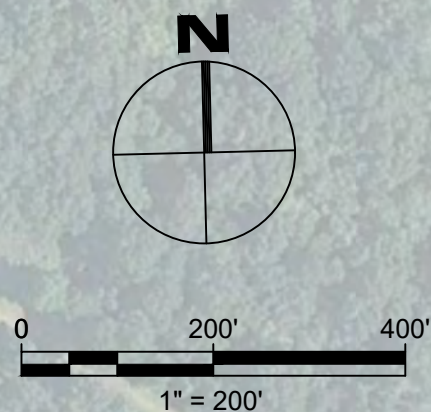
MISSISSIPPI RIVER LEVEE - CONSTRUCTION
TROTTERS STEEPAGE REMEDIATION
YAZOO-MISSISSIPPI DELTA LEVEE BOARD
TUNICA COUNTY, ARKANSAS

RELIEF WELL PLANS

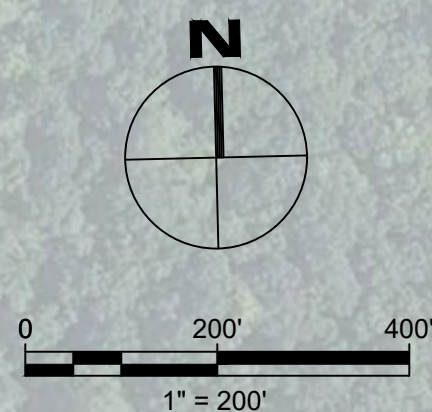
SHEET ID
C-103



POINT TABLE			
No.	ELEVATION	NORTHING	EASTING
100	185.00	12,565,350.97	2,384,017.45
101	190.00	12,566,287.90	2,384,790.88
102	186.00	12,566,171.09	2,384,904.38
103	187.00	12,564,670.99	2,383,745.90
104	184.68	12,564,150.77	2,383,948.47
105	183.63	12,564,105.84	2,384,011.36
106	185.81	12,563,995.68	2,384,074.49
107	186.63	12,563,866.54	2,384,021.75
108	183.51	12,563,340.48	2,384,302.67
109	180.37	12,563,030.85	2,384,867.30
110	189.17	12,562,966.93	2,384,927.24
111	185.00	12,562,798.21	2,384,828.31
112	186.12	12,563,209.98	2,384,160.00
113	184.72	12,563,835.09	2,383,842.39
114	188.00	12,563,950.97	2,383,872.19
115	188.36	12,563,982.40	2,383,869.21
116	185.00	12,564,070.85	2,383,783.36
117	188.00	12,564,379.43	2,383,652.30
118	189.00	12,564,553.89	2,383,579.64
119	190.00	12,564,661.87	2,383,596.09
120	189.91	12,564,778.26	2,383,642.90
121	190.00	12,564,815.35	2,383,676.12
122	190.00	12,565,018.76	2,383,813.18
123	190.00	12,565,214.70	2,383,973.39
124	190.00	12,565,268.10	2,384,024.92



POINT TABLE			
No.	ELEVATION	NORTHING	EASTING
200	179.62	12,560,737.07	2,385,831.68
201	180.00	12,560,375.20	2,386,196.73
202	184.71	12,560,322.43	2,386,208.33
203	184.45	12,560,224.26	2,386,479.88
204	189.36	12,560,126.10	2,386,824.42
205	183.86	12,560,001.57	2,386,825.40
206	179.34	12,559,918.87	2,386,763.39
207	181.35	12,560,147.37	2,386,072.54
208	179.20	12,560,382.07	2,385,837.81
209	181.00	12,560,607.80	2,385,607.24
210	180.37	12,560,754.55	2,385,480.45
211	180.24	12,560,799.64	2,385,445.64
212	179.01	12,560,859.46	2,385,414.75
213	178.87	12,560,964.45	2,385,382.38
214	179.98	12,561,188.46	2,385,361.89
215	181.44	12,561,303.42	2,385,368.65
216	182.69	12,561,389.31	2,385,388.90
217	183.02	12,561,440.49	2,385,430.18
218	183.89	12,561,399.14	2,385,538.19
219	180.00	12,561,328.79	2,385,622.68
220	105.00	12,561,237.29	2,385,589.44
221	105.00	12,560,993.18	2,385,613.68
222	105.00	12,560,939.99	2,385,642.44

[illegible]

U.S. ARMY CORPS OF ENGINEERS MEMPHIS DISTRICT MEMPHIS, TN	DESIGNED BY:	ISSUE DATE:
	DB	November 18
	DRAWN BY:	SOLICITATION NO.:
	GH	
	CHECKED BY:	CONTRACT NO.:
	SUBMITTED BY:	
	DONALD S. CALLAHAN	
	ANSI/D	

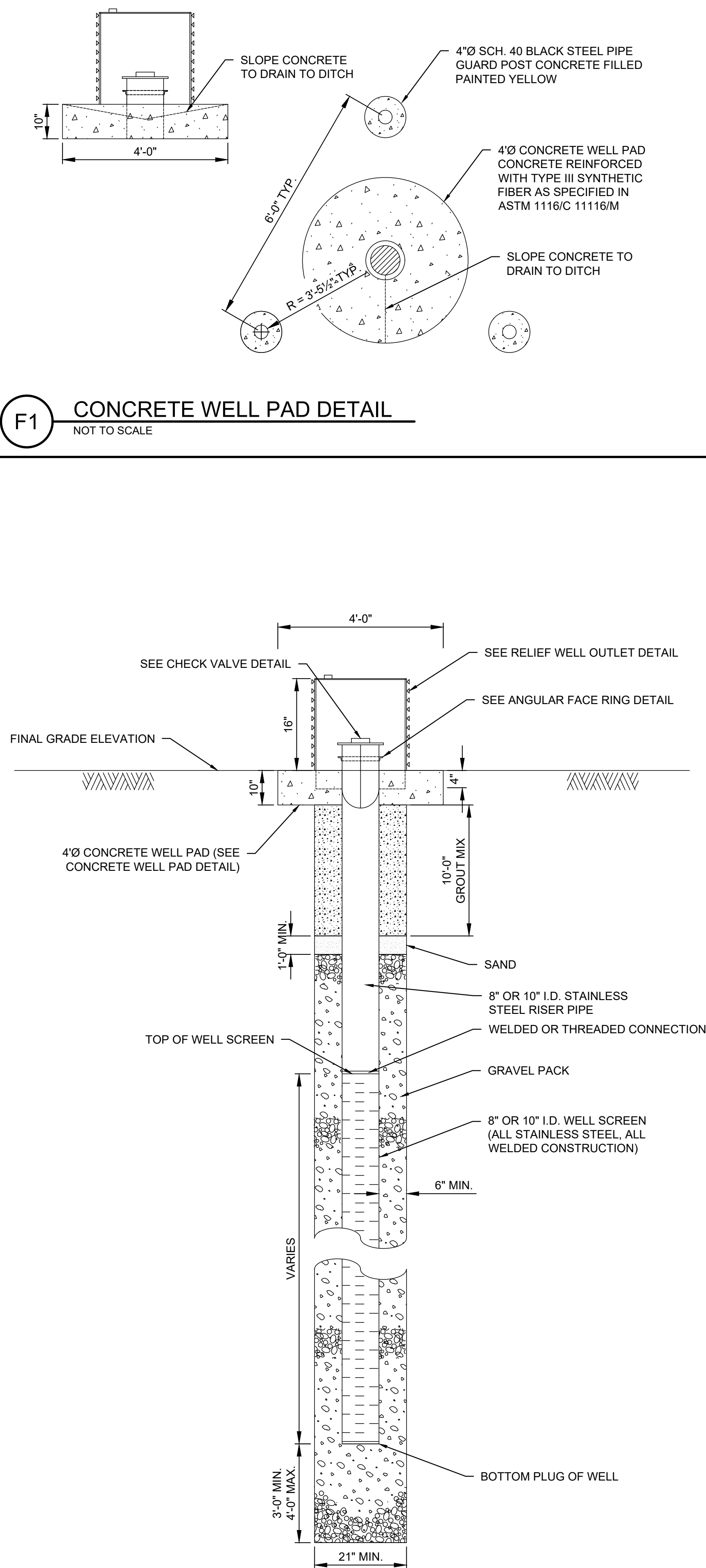
MISSISSIPPI RIVER LEVEE - CONSTRUCTION
TROTTERS SEEPAGE REMEDIATION
YAZOO-MISSISSIPPI DELTA LEVEE BOARD
TUNICA COUNTY, ARKANSAS

BORROW PLANS

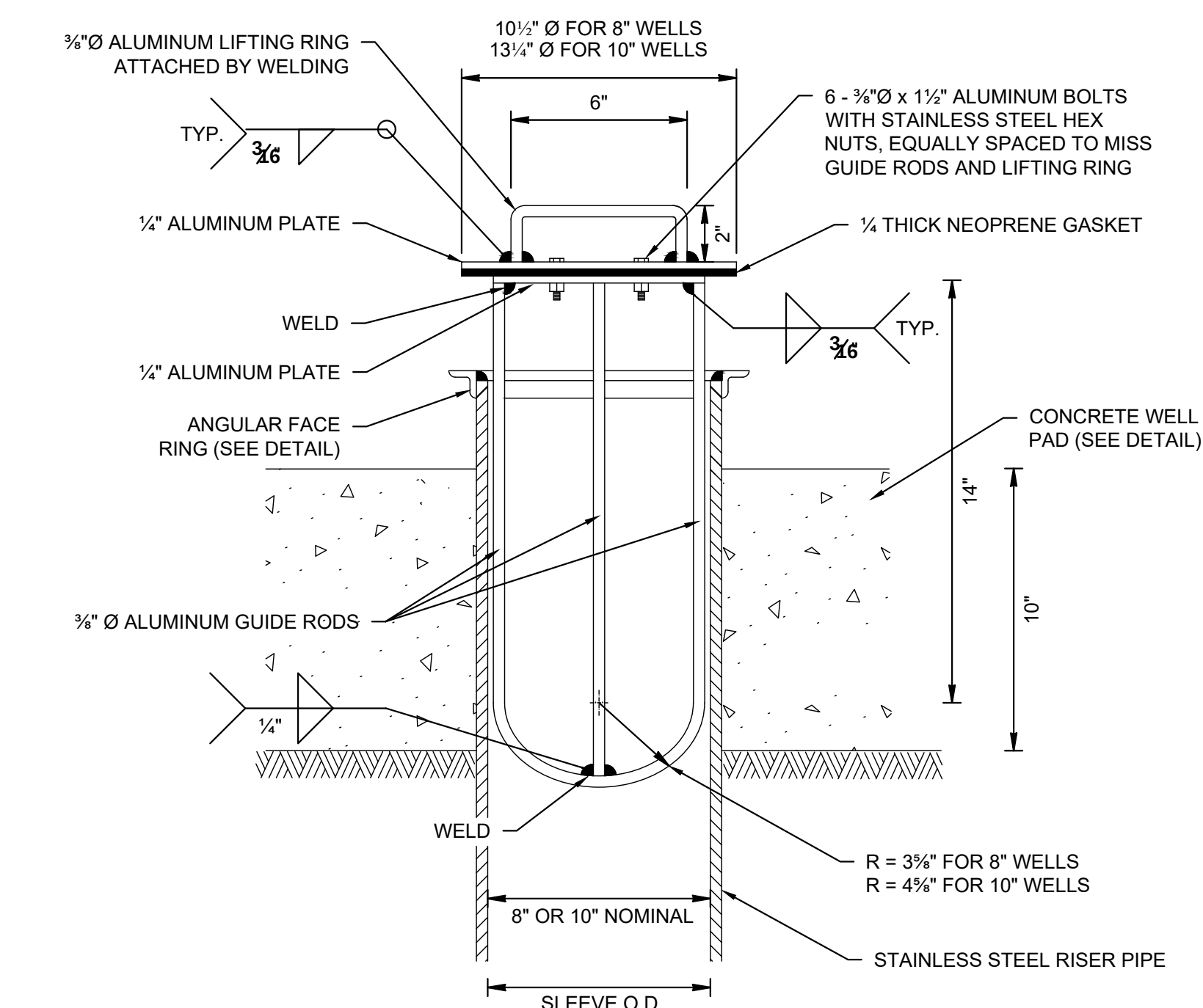
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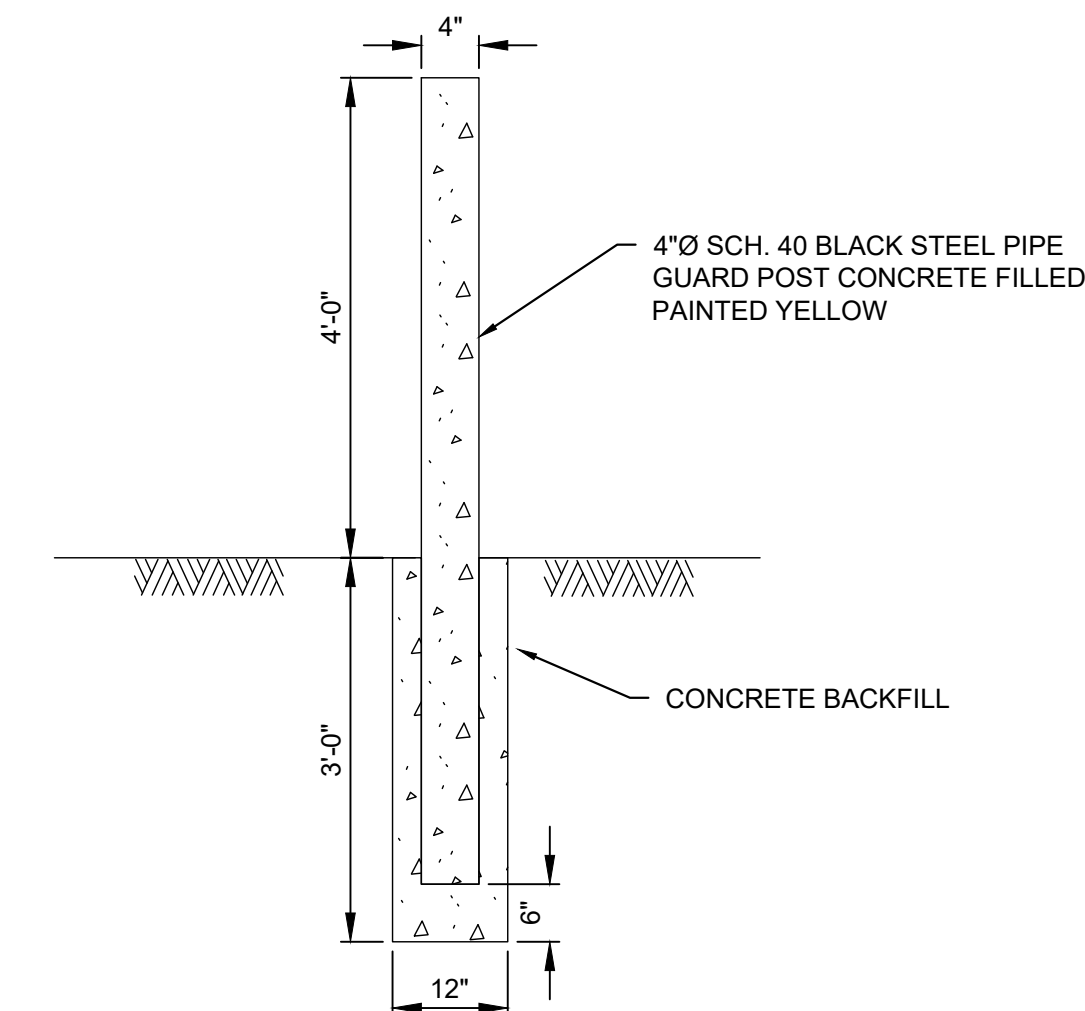
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NOT TO SCALE



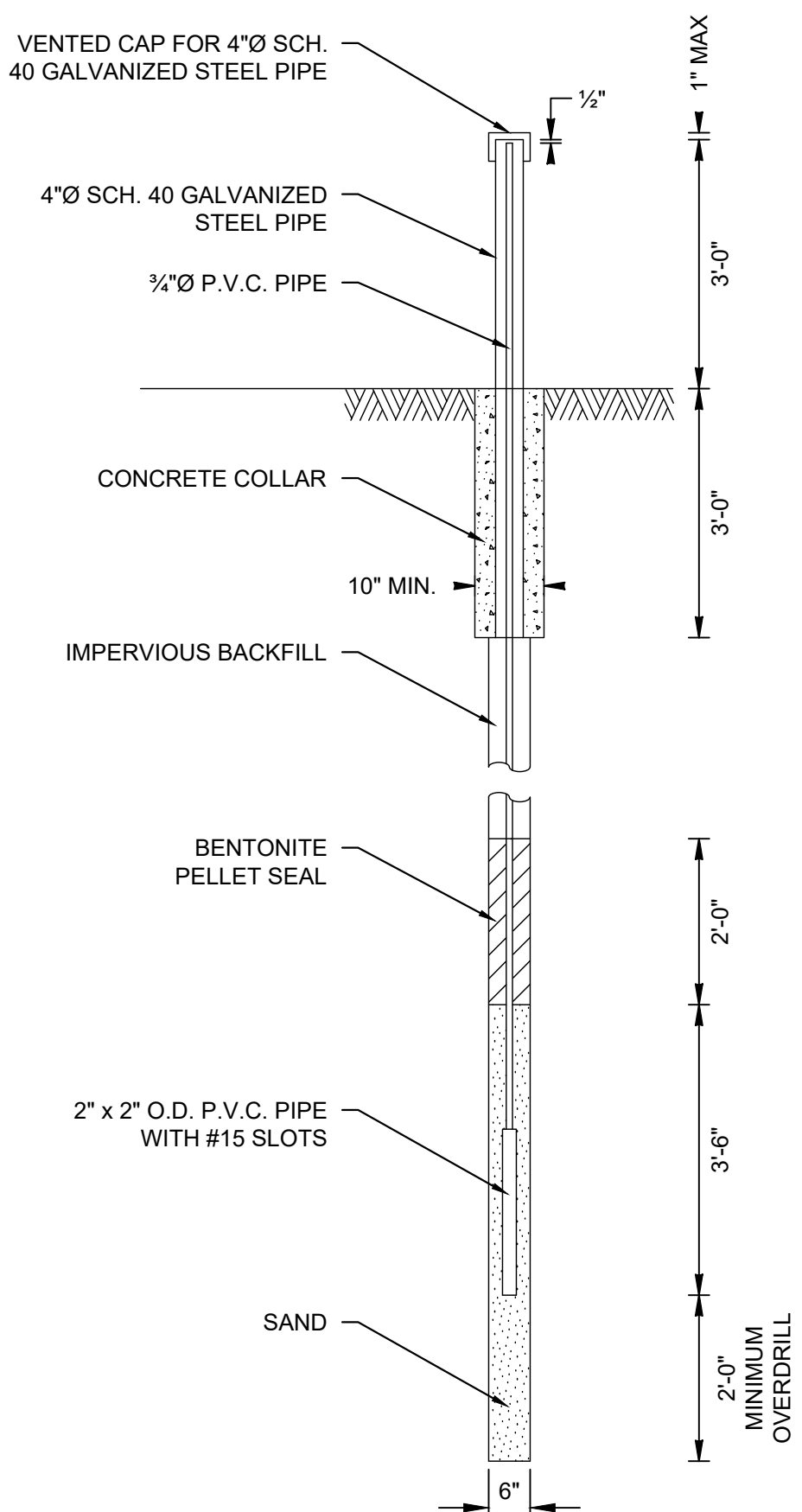
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A7 **GUARD POST DETAIL**
NOT TO SCALE



A9 **PIEZOMETER DETAIL**
NOT TO SCALE



SHEET ID
C-501

MISSISSIPPI RIVER LEVEE - CONSTRUCTION
TROTTERS SEEPAGE REMEDIATION
YAZOO-MISSISSIPPI DELTA LEVEE BOARD
TUNICA COUNTY, ARKANSAS