

25 Aug 94

MEMORANDUM THRU

Area Engineer, NOAD *ef*
C/Const Div ATTN: Contr Adm Br

FOR C/Engr Div

SUBJECT: Narrative Completion Report for Contract No. DACW29-93-C-0077, Lake Pontchartrain, La. & Vicinity, Hurricane Protection Levee, New Orleans Lakefront Levee West of I.H.N.C., Orleans Avenue Canal Flood Protection Improvement, Phase II-D (West Side: Sta. 2+39.00 to 29+07.50 B/L), Orleans Parish, LA

1. The subject contract dated 18 June 93, was awarded to T. L. James and Co., Inc., P. O. Box 20115, New Orleans, La 70141-0115. The Notice to Proceed was issued on 22 July 93, with construction to start no later than 1 August 1993. The original completion date was set for 22 July 94, with the estimated amount of the contract being \$1,540,966.50.

2. Required work under this contract included construction of sheet piling and concrete I-type floodwall plus cofferdam, demolition of the existing wall concrete cap and sheet piling, clearing and grubbing, driving steel sheet piling, degrading and placing backfill, fertilizing and seeding, and all other incidental work.

3. The preconstruction Conference was held at the New Orleans Area Office on 22 July 93. Detailed minutes of this meeting are located in the contract file. The Notice to Proceed was signed by the contractor on 22 July 93, and the contractor began setting up field office on 26 July 93. The contractor set up the safety fence on 17 August 93, and started clearing and grubbing on 20 August 93.

4. This contract provided for 7 major construction phases: (1) cofferdam, (2) sheet pile driving, (3) I-wall construction, (4) removal of old I-wall, (5) structural excavation and backfill, (6) fertilizing, seeding and mulching, and (7) cleaning and painting of retaining wall.

5. The contractor began driving PZ-27 sheetpiles for the cofferdam on 27 Sep 93. The contractor used a 50T American 797 crane with a 90' boom, 235 Cat crawler backhoe and vibratory hammer to drive the sheet piles. Piles were pinned with a H-8 clothes pin hammer. This phase continued until 30 May 94.

AUG 26 1994

CEL MN-CD-NO-0

SUBJECT: Contract No. DACW29-93-C-0077, Lake Pontchartrain, Louisiana and Vicinity, High Level Plan, New Orleans Lakefront Levee, West of IHNC, Orleans Avenue Canal Flood Protection Improvement, Phase II-D, New Orleans, LA

6. The driving of steel sheet piles for the floodwall began on 20 October 93. Syro SPZ-22 cold rolled substitute sheets were driven to grade using a ICE 216 vibratory hammer. The crane was a 50T American crane with 90' boom. As monolith sections were completed, #6 rebars were welded across the top of the sheets. Cathodic cables were welded to the monoliths at the joints. Under the I-610 bridge, the sheet piles were driven in three segments. The contractor drove SPZ-22 type sheets for tie-ins to existing wall. All sheets were driven to grade and within allowable tolerance. The sheet pile driving operation was completed with the tie-in sheets under the I-610 bridge on 19 May 94.

7. The contractor began construction on the reinforced concrete floodwall on 29 Nov 93. The contractor used a subcontractor, American Rebar and Cable Co., for tying the rebar. The contractor placed the concrete using a 797 American crane, concrete bucket and chute. Each monolith was placed continuously. The lower half of the monolith was placed with the concrete bucket and chute. Then the top form section (protected side) was set and the top section placed using a hopper and 5' long rubber trunk. The last monolith was placed on 25 May 94.

8. The contractor used a EB-40 backhoe, American 797 crane with clam bucket, and D4 dozer for structural excavation and backfill. Structural excavation and backfill was performed concurrent to other work. The contractor began final dressing of the levee on 14 June 94. Concrete slope pavement was placed under the I-610 bridge between 13 July 94 to 19 July 94.

9. The next operation was to remove the old existing concrete cap and sheet pile down to elevation 4.00. The contractor started on 1 June 94, using a EB-40 backhoe to cut existing steel sheet pilings and remove the existing concrete floodwall. An American 797 crane was used to load blocks onto flatbeds for removal. The areas with corrugated sheet piles were easily cut and removed. The sheet pile in the other areas were cut using two torches. The last section was removed on 27 June 94.

10. The next phase of work was to clean and paint the retaining wall. The contractor started cleaning the wall on 6 July 94, using two pressure washers. Tammscoat was then applied using an airless sprayer. A final clear coat was applied by brush. The operation was finished on 18 July 94.

CEL MN-CD-ND-Q

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11. Fertilizing, seeding and mulching of completed levee as well as disturbed area was the final phase of work. This operation was begun and completed on 30 July 94. Two farm tractors were used along with a harrow, culti-packer, mechanical spreader, and mulch slurry tank. After harrowing, fertilizer was broadcast over the entire levee section. Hauled bermuda grass seed (60 lbs/acre) was then broadcast and culti-packed. Finally, fiber mulch was sprayed over the seeded areas.

12. There were eight modifications on this contract and a summary of significant ones follows:

a. P00002 (CIN-01), dated 13 Jan 94. The modification was necessary because of differing site conditions. The modification required the probing for unknown obstructions below the limits of structural excavation. The modification increased the contract by \$4,000 and added seven calendar days to the contract time.

b. P00003 (CIN-02), dated 2 Feb 94. This modification called for an additional 30 feet of I-wall and coated sheet piling. The contract was increased by \$18,200 and added 9 calendar days to the contract time.

c. P00005 (CIN-03), dated 14 Feb 94. This modification changed the contract under "Type of Finish/Structure or Portion of structure". The contract price was increased by \$10,396 with no time extension.

d. P00008 (CIN-04), dated 18 June 94. This modification was for removal and disposal of tree stumps and other subsurface debris found in the sheetpile line of construction. The contract price was increased by \$15,865.00 with no time extension.

13. The contract time was increased by 36 days.

14. Following is a list of major suppliers and subcontractors on the subject contract:

- a. Reinforcement - Lulich Steel Corp., Slidell La.
- b. Sheet Piles - Syro Steel, Girard, Ohio
- c. Concrete - Carlo Ditta Inc., Harvey La.
- d. American Rebar and Cable Co., Inc., installed the reinforcement

CELMN-CD-NO-0

SUBJECT: Contract No. DACW29-93-C-0077, Lake Pontchartrain, Louisiana and Vicinity, High Level Plan, New Orleans Lakefront Levee, West of IHNC, Orleans Avenue Canal Flood Protection Improvement, Phase II-D, New Orleans, LA

e. Economy Grassing provided erosion control as well as fertilizer, seed and mulching to complete levee section and any disturbed areas.

15. Professional Services Industries, Inc., of Jefferson, La. monitored ground vibrations.

16. The contractor submitted and enforced an adequate Accident Prevention Program. The contractor was very cooperative in the performance of the work and performed daily safety inspections in addition to holding weekly safety meetings. There was no lost time accidents throughout the duration of the project.

17. The contractor was efficient and professional in the performance of the work and any extra work required to complete this project. The equipment used was kept in good working condition. Quality control was maintained throughout the life of the contract.

18. Following is a comparison of contract quantities versus actual quantities:

Item No.	Description	Qty & Unit	Unit Price	Est. Amt	Final Qty	Earnings to Date
1	Mob & Demob	LS	LS	\$100,000	\$100,000	\$100,000
2	Clearing & Grubbing	LS	LS	\$15,433	\$15,433	\$15,433.00
3	Structural Exc. & Backfill (P00003)	LS	LS	\$40,800	\$40,800	\$40,800.00
4	Piling, Steel Sheet, PSA-23	480SF	\$10	\$4,800	510.85SF	\$5,108.50
5	Piling, Steel Sheet, PZ-27 (P00003)	73,371SF	\$9.50	\$697,024.50	72,401.51SF	\$687,814.34
6	Piling, Steel Sheet, PZ-27 In segments	3,780SF	\$13.00	\$49,140	4,007.90	\$52,102.70

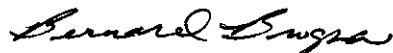
CELMN-CD-NO-Q

SUBJECT: Contract No. DACW29-93-C-0077, Lake Pontchartrain,
Louisiana and Vicinity, High Level Plan, New Orleans Lakefront
Levee, West of IHNC, Orleans Avenue Canal Flood Protection
Improvement, Phase II-D, New Orleans, LA

(P00008) LS LS \$15,865 \$15,865 \$15,865.00

19. A copy of the As-Built Drawings are attached.

20. The contract was completed in accordance with the contract
plans and specifications with final acceptance on 3 Aug 94.



BERNARD BROGNA
Quality Assurance Representative
New Orleans Area Office

CF:

Proj Engr (Gonzalez)
Proj Insp (Brogna)
Ofc Engr w/as-built
CELMN-CD-Q w/as-built
CELMN-PA
CELMN-CT
CELMN-ED-C
CELMN-CD-B
CELMN-CD-CC
CELMN-PP

Safety is a Part of Your Contract

ORLEANS AVENUE CANAL **NOAO**

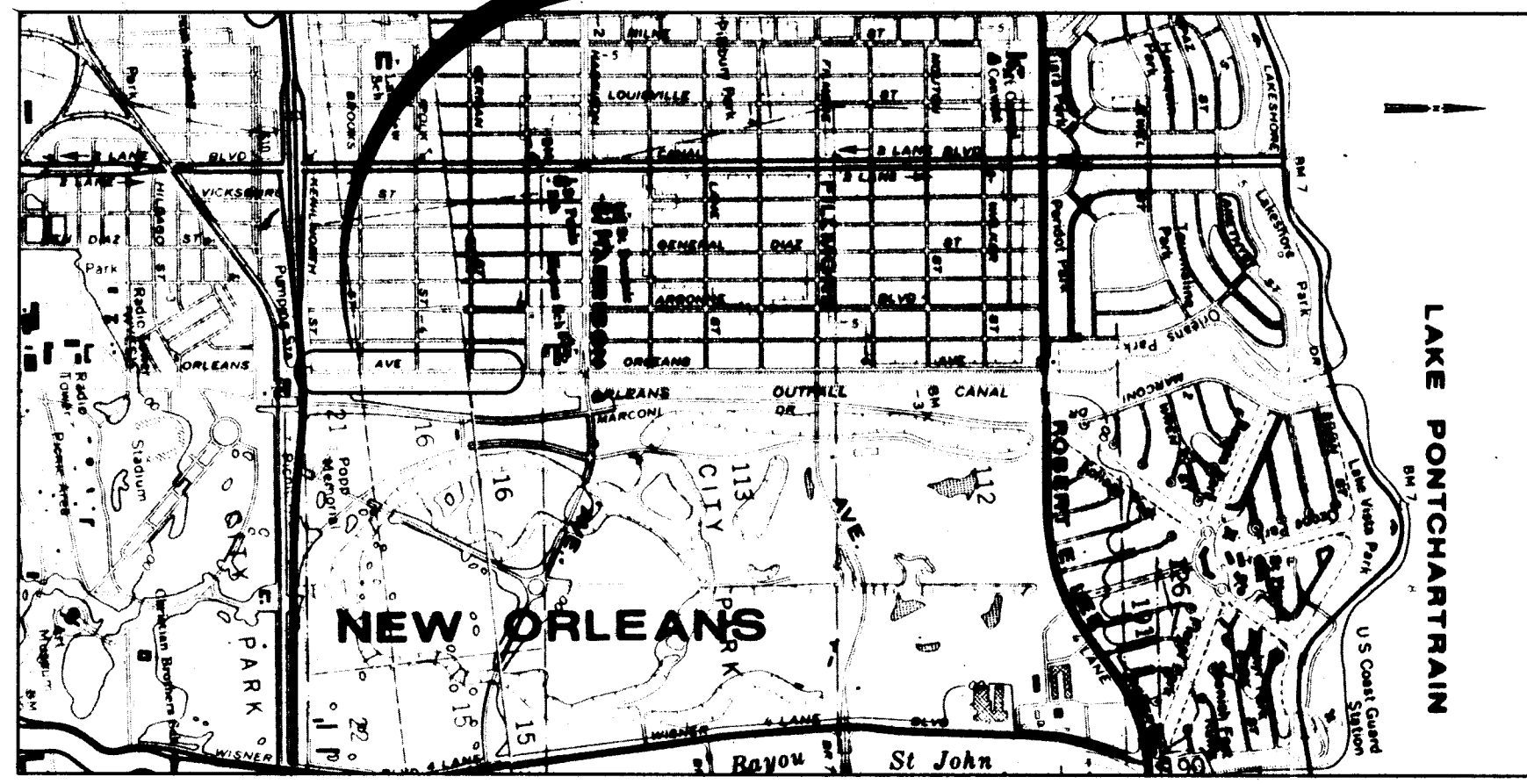
FLOOD PROTECTION IMPROVEMENT PROJECT

ORLEANS PARISH, LOUISIANA

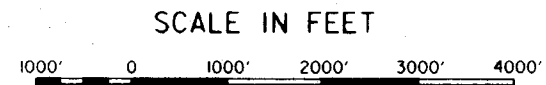
PHASE II-D

"AS BUILT"

LOCATION OF WORK

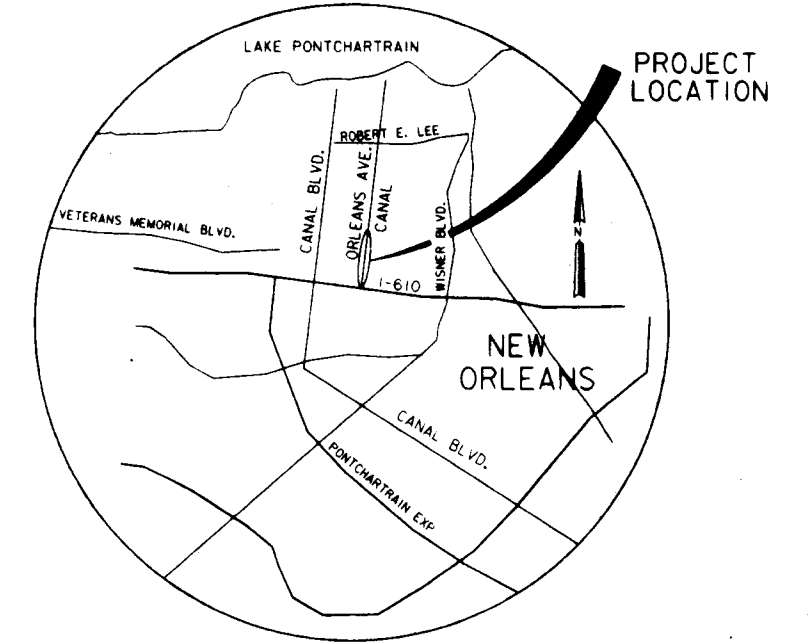


LOCATION MAP

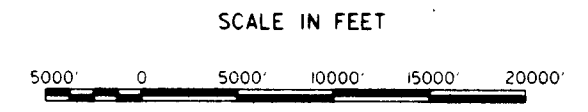


"AS BUILT"

BUILT"



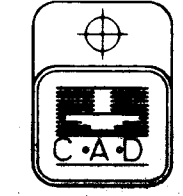
VICINITY MAP



NOTE:
DRAWINGS IN THIS FOLIO
HAVE BEEN REDUCED ONE
HALF THE ORIGINAL SCALE

DRAWING INDEX			
DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
1	LOCATION AND VICINITY MAP	15	RIGHTS OF WAY AND STAGING AREA
2	GENERAL NOTES AND LEGEND	16	SOIL BORING LOGS
3	PROJECT MAP	16a	SOIL BORING LEGEND
4	GEOMETRIC LAYOUT	17	BORROW AREA LOCATION
5-8	PLAN/PROFILE SHEETS	18-24	CROSS SECTIONS
9	TYPICAL SECTIONS		
10	STEEL SHEET PILING AND MONOLITH LAYOUT		
11-12	TYPICAL "I"-WALL DETAILS		
12a	TYPICAL "I"-WALL DETAILS		
13-13a	"I"-WALL ARCHITECTURAL TREATMENT		
14	CONNECTIONS TO EXIST. WALL AND MISCELLANEOUS DETAILS		

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
<small>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</small>		<small>DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METairie, LOUISIANA 70002</small>	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
LOCATION AND VICINITY MAP			
<small>DESIGNED BY: M.A. SHELLEY DRAWN BY: P. LARSEN CHECKED BY: J. SMITH DATE: 1/24/93</small>	<small>APPROVED BY: [Signature] DATE: 1/24/93</small>	<small>CARD FILE: E-200 PLOT DATE: MARCH 1993 PLOT SCALE: 1" = 1'</small>	<small>SOLICITATION NO.: DACW29-93-B-0042 FILE NO.: H-4-40205 PAGE 1 OF 24</small>



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GENERAL SYMBOLS EXISTING

- 8" Ø OAK TREE AND TRUNK DIAMETER
- ⊕ B-54 SOIL BORING AND NUMBER
- ⊕ B-54 5" Ø SOIL BORING AND NUMBER
- ⊕ B.M. BENCH MARK
- Y Y Y Y BANK OR SLOPE LINES
- ℙ PROPERTY LINE
- ROW, PROPERTY LINE
- X-X- FENCE
- G- GAS (NATURAL)
- S- SANITARY SEWER
- SFM- SEWER FORCE MAIN
- D- STORM DRAIN
- W- WATER MAIN
- T- BURIED TELEPHONE CABLE
- <-> DRAINAGE CULVERT (UNDER 36"Ø)
- [-] DRAINAGE CULVERT (36" AND OVER)
- ⊙ SANITARY SEWER MANHOLE
- ⊙ STORM DRAIN MANHOLE
- ⊕ B-75 SHALLOW SOIL BORING AND NO.
- E-E- ELECTRIC CONDUIT BURIED
- E- ELECTRIC CABLE OVERHEAD
- C.B. CATCH BASIN
- ⊕ DROP INLET
- ⊙ TELEPHONE MANHOLE
- ⊕ TELEPHONE JUNCTION BOX
- ⊕ WATER MANHOLE W/VALVE
- ⊕ FIRE HYDRANT
- ⊕ GAS OR WATER VALVE
- ⊙ GAS MANHOLE
- ⊙ BASELINE STATION MARKER (RRS, JR, CN, GIP)
- ⊕ SURVEY BASELINE AND PISTATION
- ℙ BASELINE
- TRAFFIC OR RR SIGNAL LIGHT
- POWER POLE OR TELEPHONE POLE
- PP POWER POLE AND GUY ANCHOR
- TRANSMISSION TOWER
- ▨ STRUCTURE (HOUSE, GARAGE)
- ▨ GRADE
- ▨ CONC. DRIVEWAY OR WALK
- ⊕ ELECTRIC (NOPS) MANHOLE
- ⊕ STREET LIGHT
- ▨ TOP OF EXISTING FLOODWALL

PROPOSED

PROFILES & SECTIONS

- PLANS
- ▲ AREA OF LEVEE DEGRADING
- ▨ W/L (FLOOD SIDE) STEEL SHEET PILING OR I-WALL
- ▨ AREA OF FILL (SEMI-COMPACTED FILL) LEVEE OR BERM
- Y Y Y Y REQ'D. BANK OR SLOPE LINES
- TOP OF SHEET PILING OR I-WALL
- EL. +1.0 CONCRETE I-WALL W/BOTTOM OF CONCRETE ELEVATION
- EL. -27.0 STEEL SHEET PILING W/BOTTOM OF PILING ELEVATION
- ▨ AREA OF FILL
- ▨ REQ'D. GRADE OF LEVEE OR BERM
- ▨ AREA OF LEVEE DEGRADING

Reinforcement Embedment and Splice Table

Bar Size	Minimum Embedment Length, Inches		Minimum Lap Length Inches	
	Top Bars	Other	Top Bars	Other
3	13	12	16	12
4	17	12	22	16
5	21	15	27	20
6	27	19	35	25
7	37	26	48	34
8	48	35	63	45
9	61	44	80	57
10	78	56	101	72
11	96	68	124	89
14	130	93	•	•
18	169	120	•	•

- Notes:
- Values in the table shall apply for bars spaced laterally, not less than 3db and when bars have concrete cover which complies with ACI 7.7.1.
 - When bar spacing laterally is greater than 5db and when bars have 2.5db or more inches of concrete cover, the values in the table may be reduced by a factor of 0.8.
 - Embedment and splice lengths shall be a minimum of 12 inches.
 - *Number 14 and 18 bars shall not be lap spliced. These bars shall be spliced with mechanical butt splices only.
 - Top bars are horizontal bars and bars inclined less than 45 degrees with respect to a horizontal plane which are placed such that more than 12 inches of concrete is cast in the member below the bar.

ABBREVIATIONS

- AZ AZIMUTH
- BM BENCH MARK
- BP BRACE POLE
- CB CATCH BASIN
- CMP CORRUGATED METAL PIPE
- CN CONCRETE NAIL
- CONC CONCRETE
- CP CONCRETE PIPE
- CSP CORRUGATED STEEL PIPE
- CY CUBIC YARD
- DI DROP INLET
- DIA DIAMETER
- D/W DRIVEWAY
- EL ELEVATION
- EXIST EXISTING
- FND FOUND
- FT FOOT
- HORIZ HORIZONTAL
- HWY HIGHWAY
- ID INTERNAL DIAMETER
- INV INVERT
- IR IRON ROD
- LF LINEAR FEET
- LG LONG
- LT. LEFT
- MAX MAXIMUM
- MH MANHOLE
- MIN MINIMUM
- MSL MEAN SEA LEVEL
- OD OUTSIDE DIAMETER
- OLB ORLEANS LEVEE BOARD
- PI POINT OF INTERSECTION
- POT POINT ON TRAVERSE
- PROJ PROJECT
- PVC POLYVINYL CHLORIDE PIPE
- RCP REINFORCED CONCRETE PIPE
- RD ROAD
- RET RETAINING
- REINF REINFORCING
- REQ'D REQUIRED
- ROW OR R/W RIGHT-OF-WAY
- RR RAILROAD
- RRS RAILROAD SPIKE
- RT RIGHT
- SECT SECTION
- SMH SEWER MANHOLE
- ST STREET
- STA BASELINE STATION
- TC TOP OF CURB
- TEL TELEPHONE
- TYP TYPICAL
- UG UNDERGROUND
- USCGS UNITED STATES COAST & GEODETIC SURVEY
- VERT VERTICAL
- WT WEIGHT
- WS WATER SURFACE
- C/L CENTER LINE
- ⊕ OR W.B. WEST BASELINE
- W/L WALL LINE
- GIP GALVANIZED IRON PIPE
- NIC NOT IN CONTRACT
- NGVD NATIONAL GEODETIC VERTICAL DATUM

GENERAL NOTES

- All azimuths are true south azimuths turned in a clockwise direction from 0 degrees (due south).
- All elevations are expressed in feet and refer to National Geodetic Vertical Datum (N.G.V.D.).
- All R/W and construction easement lines are parallel with or perpendicular to the baseline, unless otherwise indicated.
- For soil boring logs, see DWG 16.
- For existing utilities location and approximate location of relocated utilities see 'Plan and Profile' drawings.

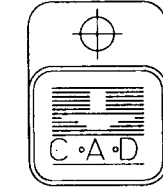
STEEL NOTES (STRUCTURAL STEEL)

- All structural steel shall be ASTM A36, unless otherwise noted.
- To prevent corrosion by moisture between steel surfaces in contact, all such contacts shall be sealed watertight by running a continuous 1/8" fillet weld along all edges of the contact, unless otherwise noted.
- All welding shall be electric welding. Workmanship and technique where applicable shall conform to the American Welding Society specifications AWS D1-B3 Structural Welding Code.
- Welding symbols shown are those adopted by the American Welding Society and indicate only size and type of welds required. Detailed information shall be shown on the shop drawings and submitted by the contractor for approval.
- Items marked C.R.S. shall be corrosion resistant steel (Stainless Steel). See specifications.

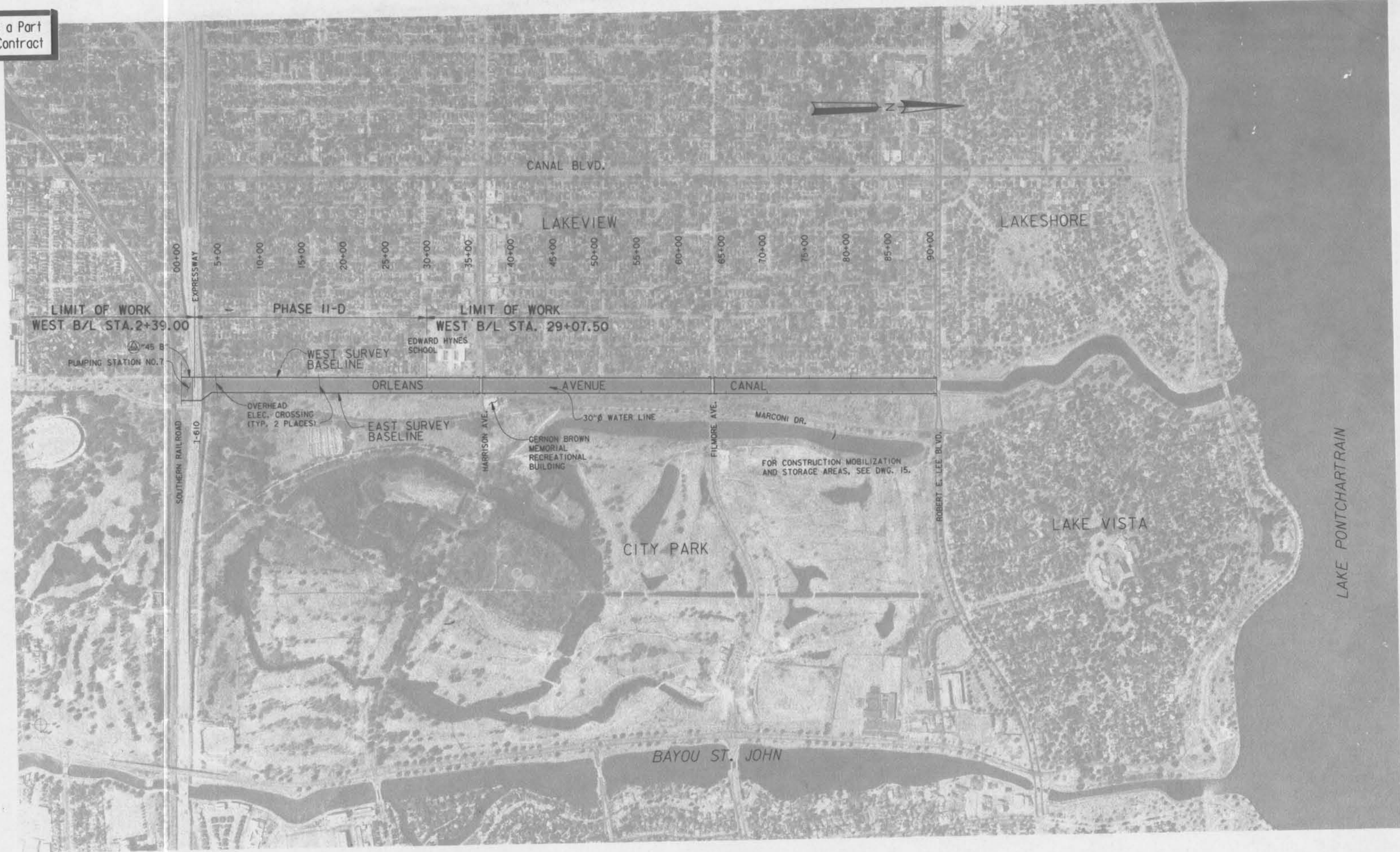
CONCRETE NOTES (CAST-IN-PLACE CONCRETE)

- f'c = 3000 PSI, fy = 60,000 PSI
f'c = 2000 PSI, fy = 65,000 PSI (slope pavement only)
- All unformed surfaces shall be given a float finish, unless otherwise specified.
- All exterior formed surfaces not covered by backfill shall be class 'A' finish and surfaces covered by backfill shall be class 'D' finish, unless otherwise noted.
- Construction joints shall be provided where shown.
- Unless otherwise noted, provide 3/4" chamfer at all exposed joints, edges, external corners, vertical expansion joints and horizontal construction joints.
- All primary reinforcement shall have a minimum cover of 3" unless otherwise noted. The cover for secondary reinforcement may be reduced from the above by the diameter of the bar.
- All bends of reinforcement and all bar spacers and supports shall be in accordance with the American Concrete Institute 'Manual of Standard Practice for Detailing Reinforced Concrete Structures' in effect at the time of fabrication.
- Reinforcing bar designation numbers conform to the current numbering system of the Concrete Reinforcing Steel Institute.
- All reinforcing shall be lapped or embedded according to the tables on this drawing, unless otherwise noted.

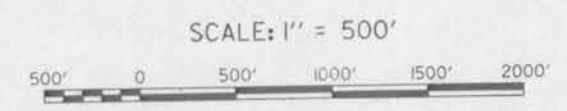
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+7.50) ORLEANS PARISH, LOUISIANA			
GENERAL NOTES AND LEGEND			
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 1"	PLOT DATE: MARCH 1993
DRAWN BY: P.M. KILLEEN	CHECKED BY: T.M. SMITH	CADD FILE: II-D02	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.		SOLICITATION NO. DACW29-93-B-0042	
DESIGN ENGINEER		DWG. 2 OF 24	




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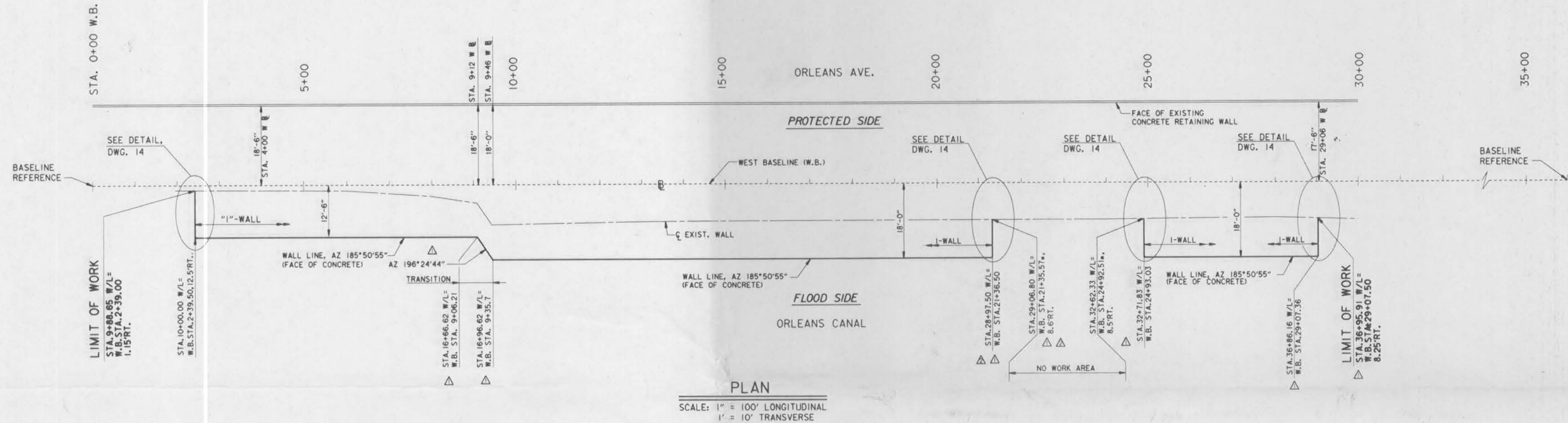
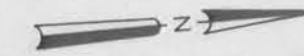


PROJECT MAP
PLAN
SCALE: 1" = 500'



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA PROJECT MAP			
DESIGNED BY: M.B.SHUKLA	DATE: FEB., 1993	PLOT SCALE: 500	PLOT DATE: MARCH 1993
DRAWN BY: CJK/KCR	CHECKED BY: T.M.SMITH	CADD FILE: 11-003	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		SOLICITATION NO. DACW29-93-B-0042	DWG. 3 OF 24

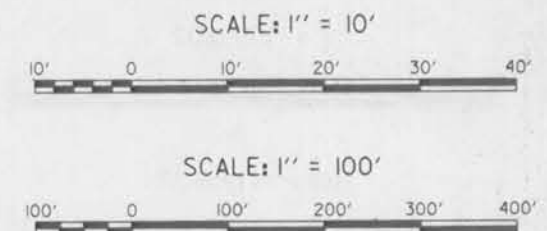
Safety is a Part of Your Contract



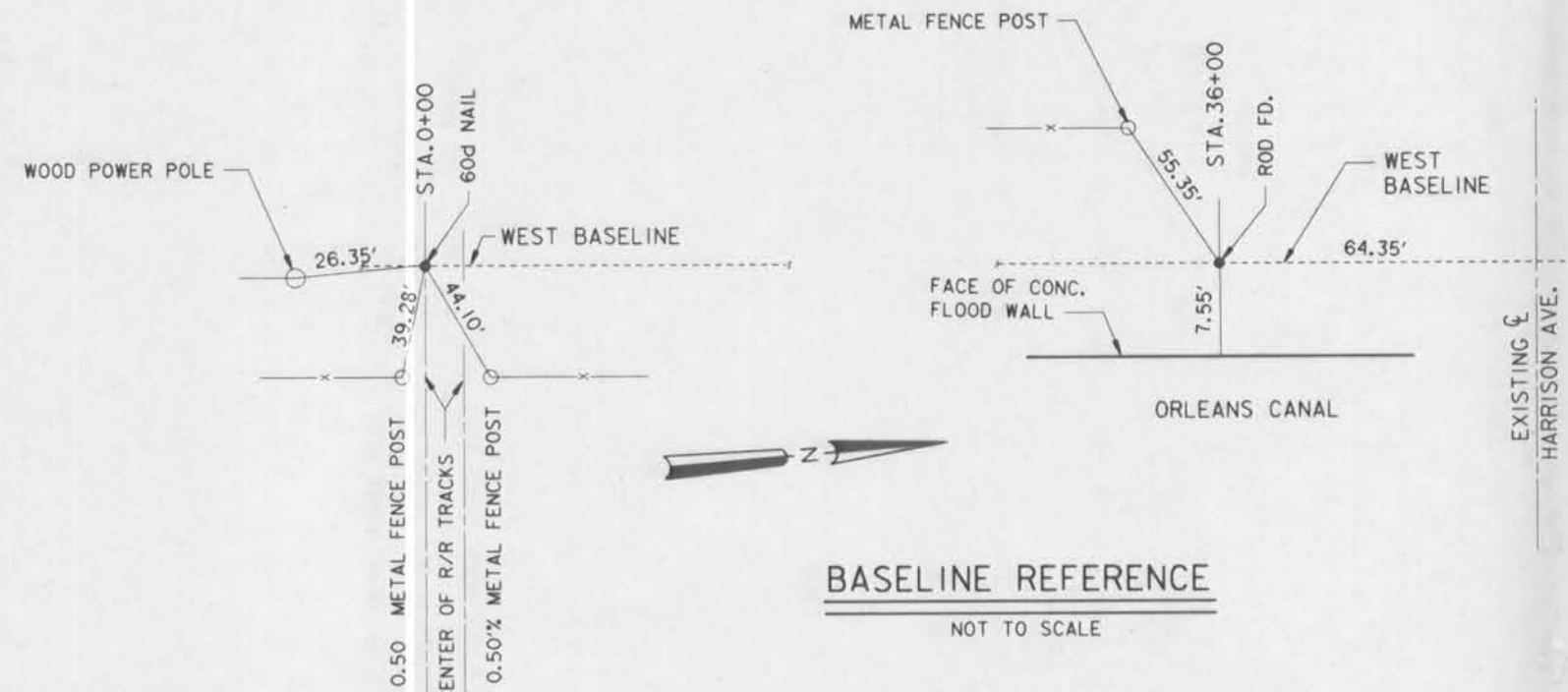
PLAN
SCALE: 1" = 100' LONGITUDINAL
1" = 10' TRANSVERSE

NOTE: FOR SHEET PILING AND MONOLITH LAYOUT, SEE DWG. 10.

PROJECT BENCH MARK (M.S.L. EL = NGVD EL.)
EL. 7.11 M.S.L. (1983 DATUM). C. & G.S. REFERENCE MARK DISK "CHRYSLER RM". AT NEW ORLEANS, ABOUT 0.45 MILES EAST ALONG LAKESHORE DRIVE FROM JUNCTION OF CANAL BOULEVARD, 125 YARDS NORTHWEST OF THE NORTHWEST CORNER OF LAKESHORE DRIVE BRIDGE OVER ORLEANS CANAL. SET IN THE TOP OF THE CONCRETE SEA WALL ALONG SHORE OF LAKE PONTCHARTRAIN, 33 FEET NORTHEAST OF THE NORTH ONE OF A GROUP OF PALM TREES, 66 FEET WEST OF CHRYSLER STATION DESCRIBED, 270 FEET NORTH OF THE CENTER LINE OF LAKESHORE DRIVE AND ABOUT 2 FEET ABOVE THE LEVEL OF THE DRIVE.



W.B. = WEST BASELINE



BASELINE REFERENCE
NOT TO SCALE

THIS PLAN ACCOMPANIES
MODIFICATION P0003
TO CONTRACT NUMBER
DACW29-93-C-0077

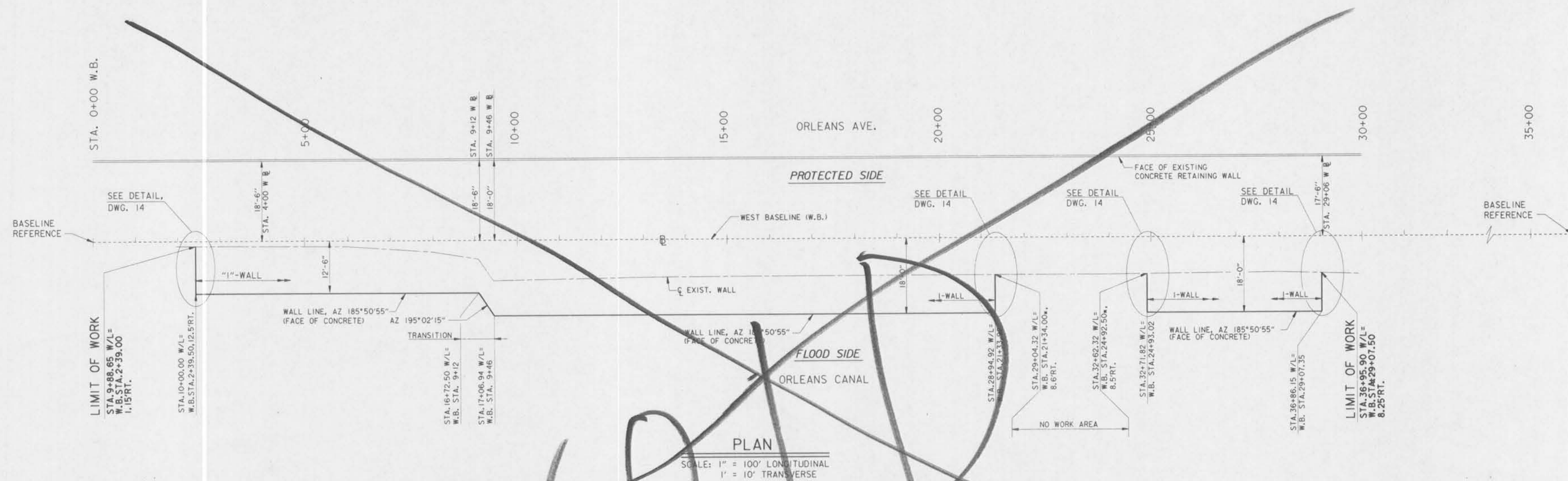
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED LIMITS OF I-WALL, MOD. NO. 3	11-5-93	J.A.R.
△	REVISED W/L STATIONING AND REMOVED TEMPORARY BM DATA, AMENDMENT NO. 1.	5-11-93	M.D.

REVISIONS	
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. 3 METAIRIE, LOUISIANA 70002

LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
GEOMETRIC LAYOUT			
DESIGNED BY: T. M. SMITH	DATE: FEB., 1993	PLOT SCALE: 100	PLOT DATE: FEB 1994
DRAWN BY: K.C. REID	CADD FILE: 11-DD4	FILE NO. H-4-40205	
CHECKED BY: J.W. HOLTGREVE	SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 4 OF 24



Safety is a Part of Your Contract



PLAN
SCALE: 1" = 100' LONGITUDINAL
1" = 10' TRANSVERSE

NOTE: FOR SHEET PILING AND MONOLITHIC LAYOUT, SEE DWG. 10.

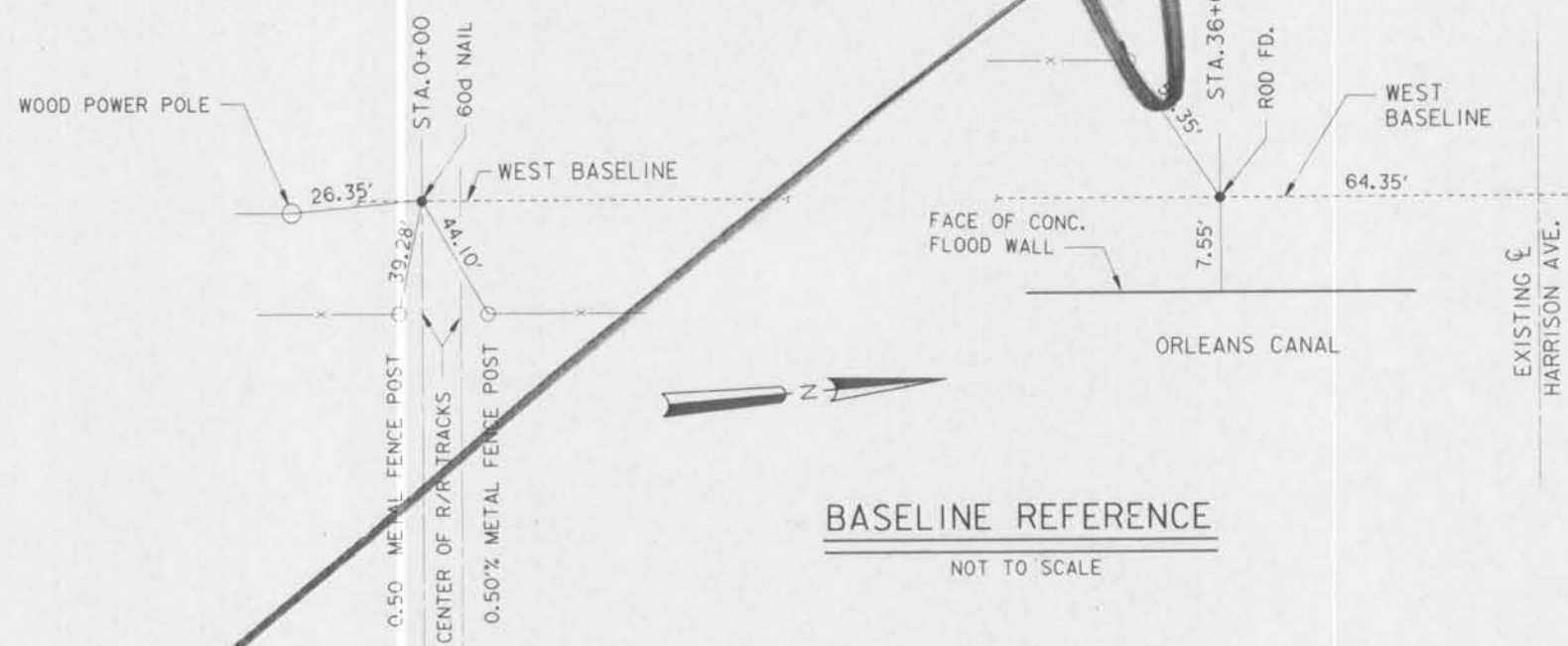
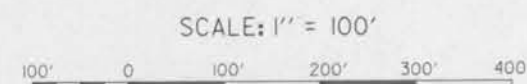
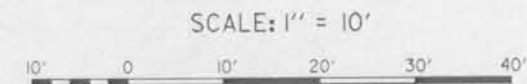
PROJECT BENCH MARK (M.S.L. EL = NGVD EL.)

EL. 7.11 M.S.L. (1983 DATUM). C. & G.S. REFERENCE MARK DISK "CHRYSLER RM". AT NEW ORLEANS, ABOUT 0.45 MILES EAST ALONG LAKESHORE DRIVE FROM JUNCTION OF CANAL BOULEVARD, 125 YARDS NORTHWEST OF THE NORTHWEST CORNER OF LAKESHORE DRIVE BRIDGE OVER ORLEANS CANAL, SET IN THE TOP OF THE CONCRETE SEA WALL ALONG SHORE OF LAKE PONTCHARTRAIN, 33 FEET NORTHEAST OF THE NORTH ONE OF A GROUP OF PALM TREES, 66 FEET WEST OF CHRYSLER STATION DESCRIBED, 270 FEET NORTH OF THE CENTER LINE OF LAKESHORE DRIVE AND ABOUT 2 FEET ABOVE THE LEVEL OF THE DRIVE.

TEMPORARY BENCH MARK*

EL. 1.07 M.S.L. N.O.S & W.B. BENCH MARK "45 B". COPPER BOLT IN SOUTH END OF DOOR SILL FOR WEST ENTRANCE TO ORLEANS PUMPING STATION.

* TEMPORARY BENCH MARKS ARE FURNISHED FOR INFORMATION ONLY AND WERE USED DURING THE FIELD SURVEY PERFORMED DURING MAY-JULY, 1985. PRIOR TO USE BY CONTRACTOR AND OTHER AGENCIES, THE TEMPORARY BENCH MARKS MUST BE VERIFIED USING THE PROJECT BENCH MARK ABOVE.



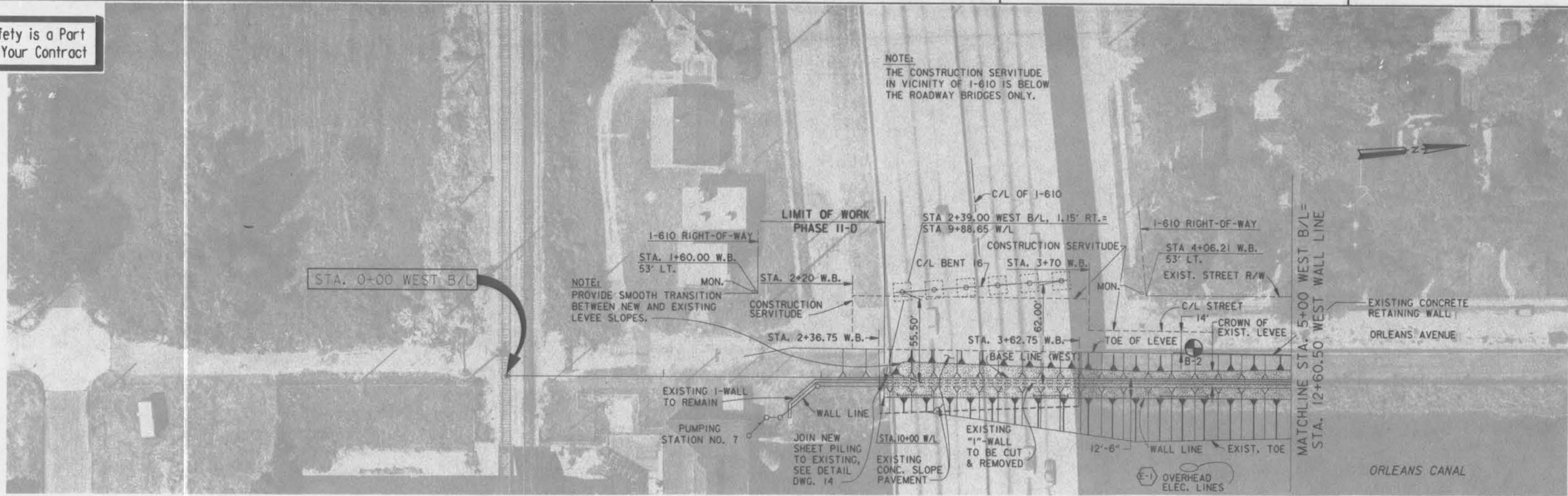
BASELINE REFERENCE
NOT TO SCALE



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 N. ESPERANZA AVE., S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE) B/L STA.2+39.00 TO STA.29+07.50 ORLEANS PARISH, LOUISIANA			
GEOMETRIC LAYOUT			
DESIGNED BY: T. M. SMITH	DATE: FEB. 1993	PLOT SCALE: 100	PLOT DATE: MARCH 1993
DRAWN BY: K.C. REID	CHECKED BY: J.W. HOLTGREVE	CADD FILE: 11-004	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		SOLICITATION NO. DACW29-93-B-0042	DWG. 4 OF 24



Safety is a Part of Your Contract

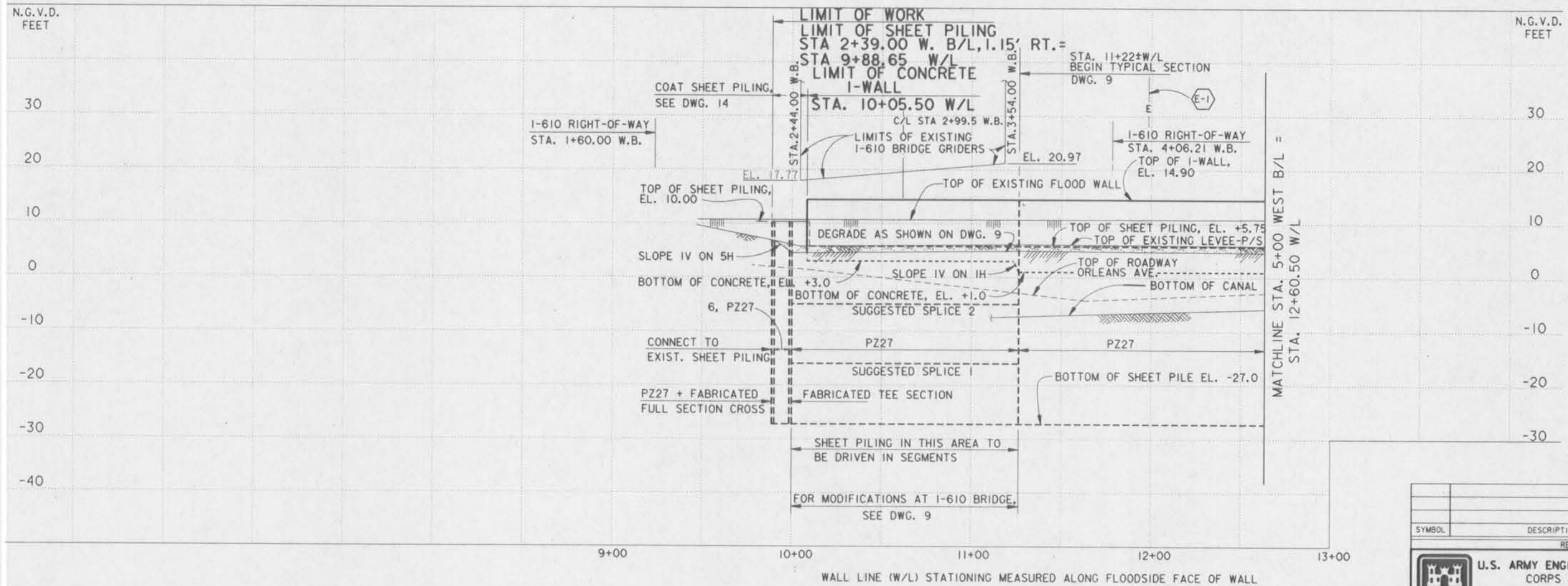


NOTE:
THE CONSTRUCTION SERVITUDE IN VICINITY OF I-610 IS BELOW THE ROADWAY BRIDGES ONLY.

NOTE:
PROVIDE SMOOTH TRANSITION BETWEEN NEW AND EXISTING LEVEE SLOPES.

PLAN
SCALE: 1" = 30'

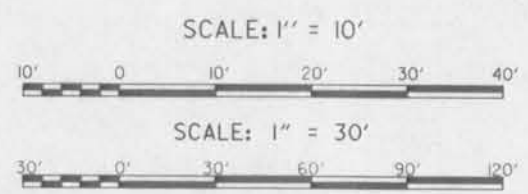
AERIAL FLOWN OCT., 1981



WEST SIDE PROFILE
SCALE: 1" = 30' HORIZ.
1" = 10' VERT.

EXISTING UTILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-1	AERIAL POWER LINE	4+32	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE RELOCATED CONCURRENT WITH CONTRACT BY OTHERS

- NOTES:
1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
 2. USE OF A VIBRATORY HAMMER TO DRIVE SHEET PILING WITHIN LDOT RIGHTS-OF-WAY IS REQUIRED. THE PRESENCE OF AN LDOT INSPECTOR IS REQUIRED FOR ALL WORK PERFORMED WITHIN THE RIGHTS-OF-WAY.
 3. FOR SHEET PILING LAYOUT, SEE DWG. 10.
 4. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

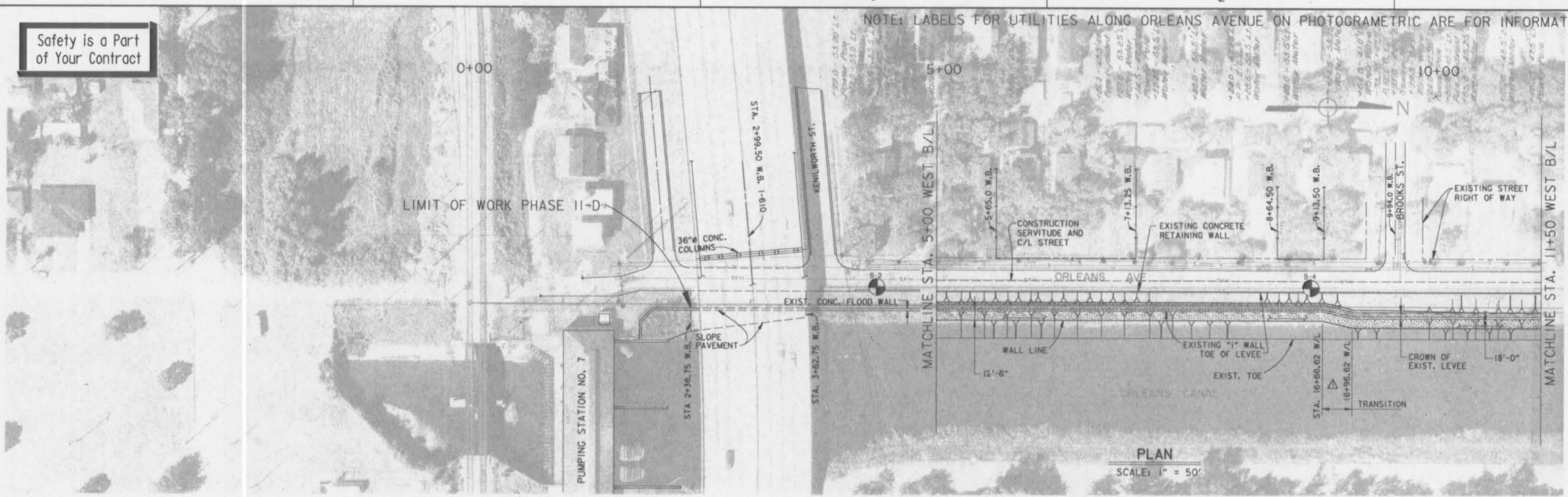


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA <small>BOARD OF LEVEE COMMISSIONERS ORLEANS DISTRICT NEW ORLEANS, LOUISIANA</small>			
<small>DESIGN ENGINEERING, INC. 3330 N. ESPERANZA AVE., S. METAIRIE, LOUISIANA 70002</small> LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE) B/L STA. 2+39.00 TO STA. 29+07.50 ORLEANS PARISH, LOUISIANA PLAN/PROFILE STAS. 2+40 W.B TO 5+00 W.B.			
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 30	PLOT DATE: MARCH 1993
DRAWN BY: K.C.R. & G.F.G.	CHECKED BY: T.M. SMITH	CADD FILE: 11-D05	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 5 OF 24	



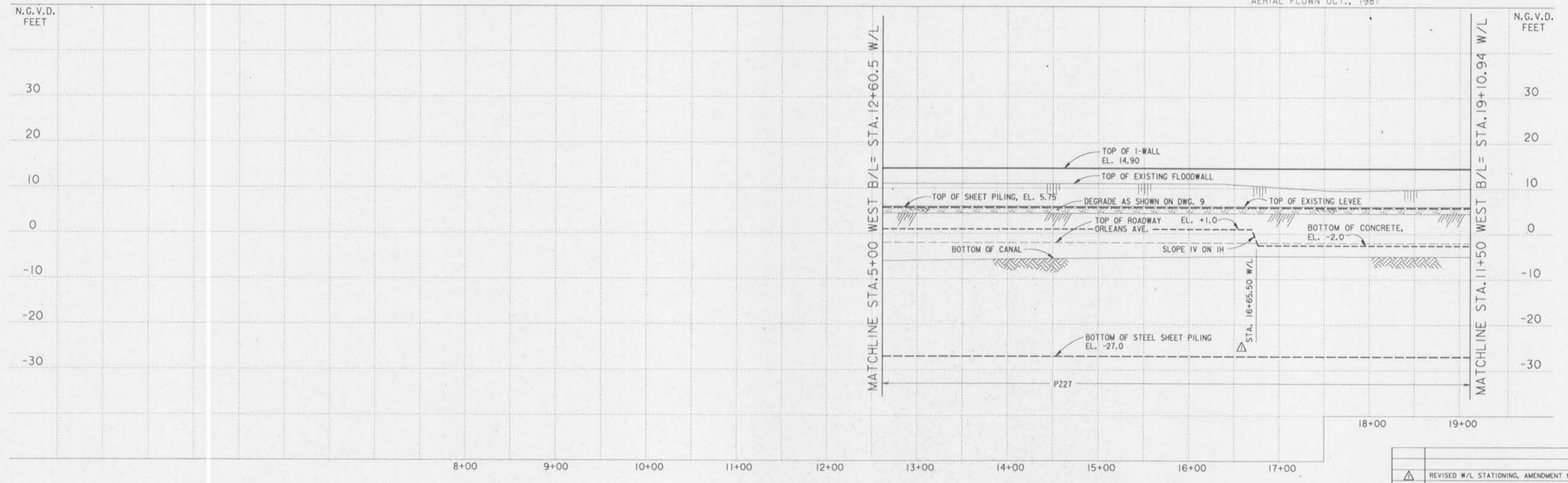
Safety is a Part of Your Contract

NOTE: LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.

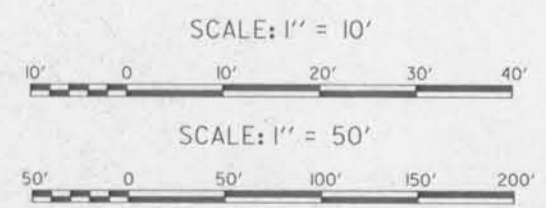


PLAN
SCALE: 1" = 50'

AERIAL FLOWN OCT., 1981



WEST SIDE PROFILE
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.



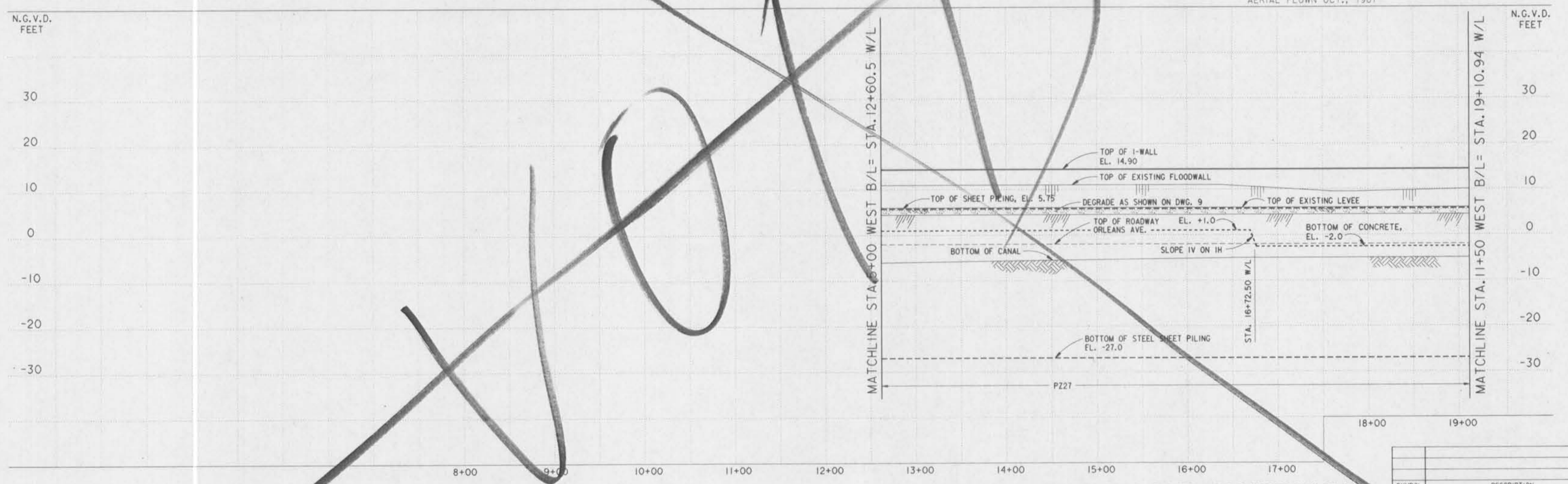
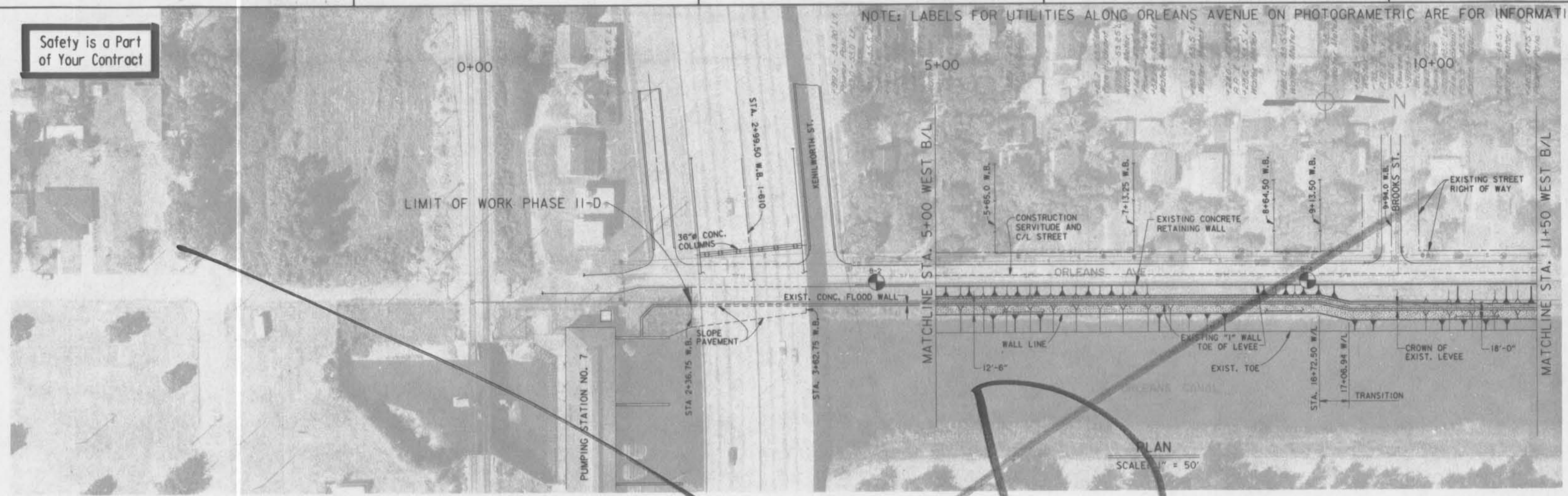
- NOTES:
1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
 2. USE OF A VIBRATORY HAMMER TO DRIVE SHEET PILING WITHIN LDOTD RIGHTS-OF-WAY IS REQUIRED. THE PRESENCE OF AN LDOTD INSPECTOR IS REQUIRED FOR ALL WORK PERFORMED WITHIN THE RIGHTS-OF-WAY.
 3. FOR SHEET PILING LAYOUT, SEE DWG. 10.
 4. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

REVISIONS	DATE	APPROVED
Δ REVISD W/L STATIONING, AMENDMENT NO. 1.	5-11-93	M.D.
REVISIONS		
<p>U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA</p>		
<p>BOARD OF LEVEE COMMISSIONERS NEW ORLEANS, LOUISIANA</p>		
<p>DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE., S. METAIRIE, LOUISIANA 70002</p>		
<p>LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN</p>		
<p>NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.</p>		
<p>ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE; B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA</p>		
<p>PLAN/PROFILE STAS. 5+00 W.B. TO 11+50 W.B.</p>		
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 50
DRAWN BY: K.C.R. & G.F.G.	CHECKED BY: T.M. SMITH	PLOT DATE: MAY 1993
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	FILE NO. H-4-40205
DESIGN ENGINEER		DWG. 6 OF 24

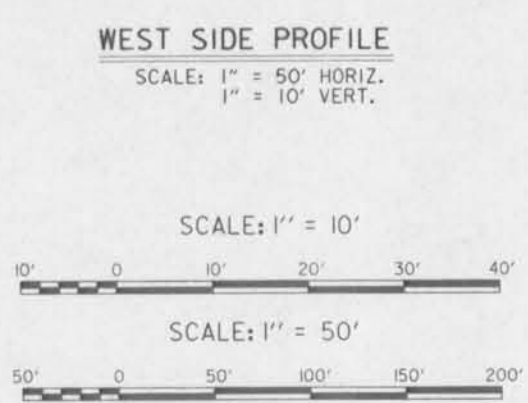


Safety is a Part of Your Contract

NOTE: LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.



- NOTES:
1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
 2. USE OF A VIBRATORY HAMMER TO DRIVE SHEET PILING WITHIN LDOTD RIGHTS-OF-WAY IS REQUIRED. THE PRESENCE OF AN LDOTD INSPECTOR IS REQUIRED FOR ALL WORK PERFORMED WITHIN THE RIGHTS-OF-WAY.
 3. FOR SHEET PILING LAYOUT, SEE DWG. 10.
 4. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

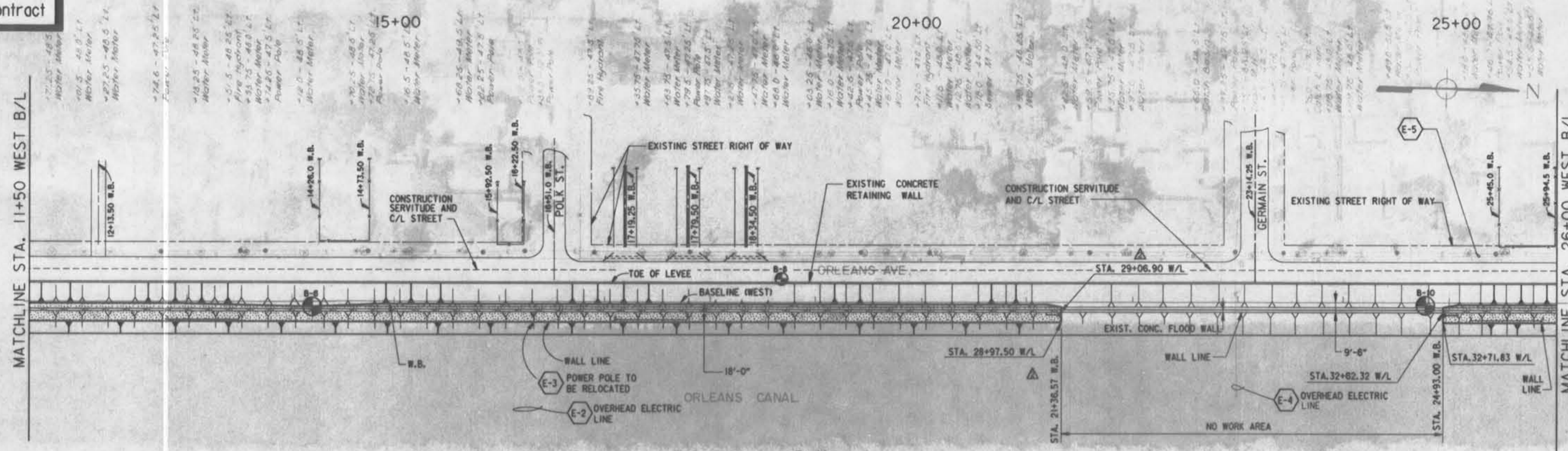


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE) B/L STA. 2+39.00 TO STA. 29+07.50 ORLEANS PARISH, LOUISIANA			
PLAN/PROFILE STAS. 5+00 W.B. TO 11+50 W.B.			
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 50	PLOT DATE: MARCH 1993
DRAWN BY: K.C.R. & G.F.G.	CHECKED BY: T.M. SMITH	CADD FILE: 11-006	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 6 OF 24	



Safety is a Part of Your Contract

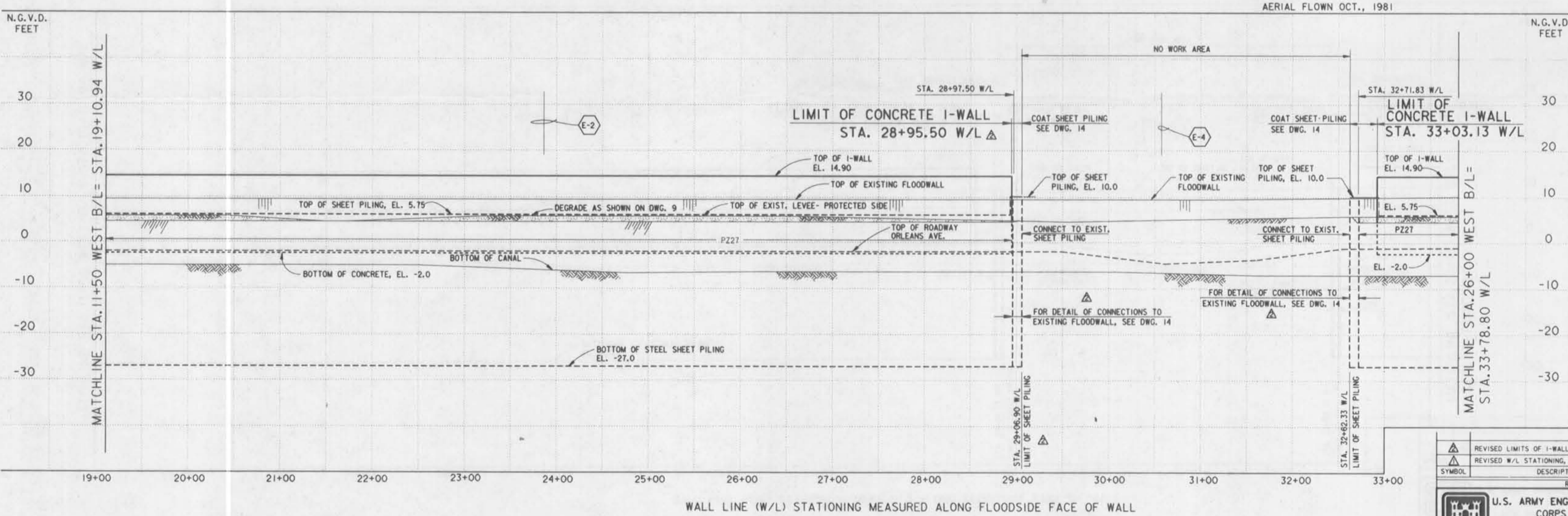
NOTE: LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.



PLAN
SCALE: 1" = 50'

NOTE:
PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING LEVEE AT THE LIMITS OF THE NO WORK AREA.

THIS PLAN ACCOMPANIES MODIFICATION POOR TO CONTRACT NUMBER DACW29-93-C-0077



WALL LINE (W/L) STATIONING MEASURED ALONG FLOODSIDE FACE OF WALL

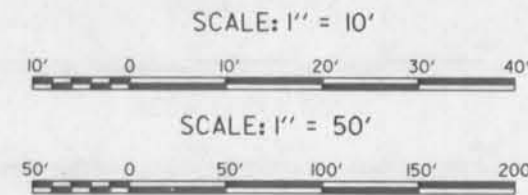
EXISTING UTILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-2	AERIAL POWER LINE	16+30	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE RELOCATED ON A DAILY BASIS BY OTHERS.
E-3	POWER POLE	16+30	NEW ORLEANS PUBLIC SERVICE, INC.	REMOVED PREVIOUS TO CONTRACT AWARD.
E-4	GUY WIRE FOR HIGH VOLTAGE TOWER	22+97	NEW ORLEANS PUBLIC SERVICE, INC.	NOT AFFECTED.
E-5	AERIAL POWER LINES 13,000 VOLTS TRANSMISSION	ALONG ORLEANS AVENUE	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE DE-ENERGIZED AS REQUIRED BY OTHERS.

WEST SIDE PROFILE

SCALE: 1" = 50' HORIZ.
1" = 10' VERT.

- NOTES:
1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
 2. FOR SHEET PILING LAYOUT, SEE DWG. 10.
 3. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

NOTE:
A STANDARD FABRICATED CONNECTION MAY BE SUBSTITUTED FOR PSA 23, AS APPROVED BY COR.



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED LIMITS OF I-WALL, MOD. NO. 3	11-5-93	J.A.R.
△	REVISED W/L STATIONING, AMENDMENT NO. 1.	5-11-93	M.D.

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT
PHASE II-D (WEST SIDE) B/L STA. 2+39.00 TO STA. 29+07.50
ORLEANS PARISH, LOUISIANA

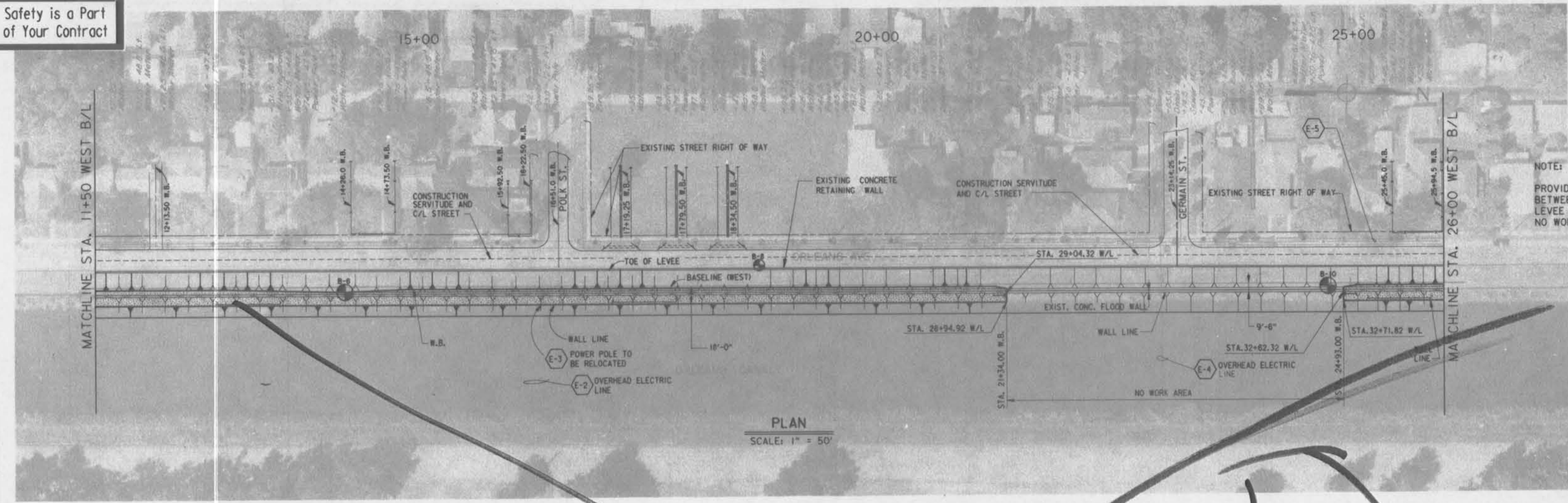
PLAN/PROFILE STAS. 11+50 W.B. TO 26+00 W.B.

DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 50	PLOT DATE: FEB 1994
DRAWN BY: K.C.R. & G.F.G.	CADD FILE: 11-D07	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 7 OF 24



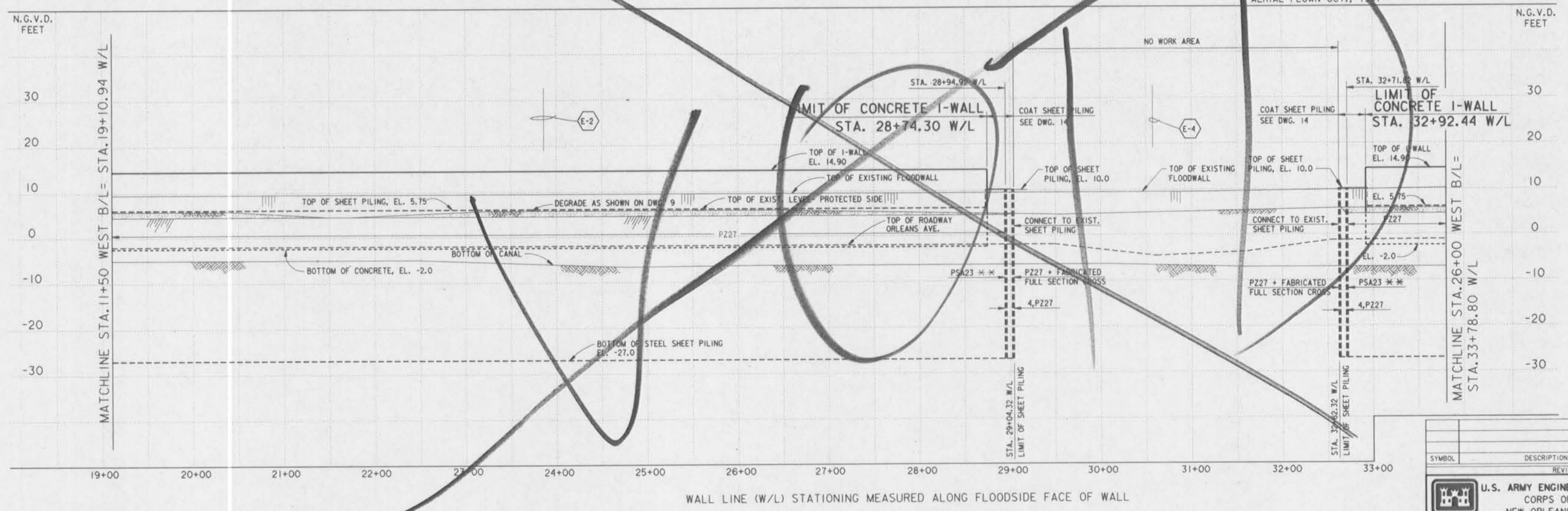
Safety is a Part of Your Contract

NOTE: LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC ARE FOR INFORMATION ONLY.



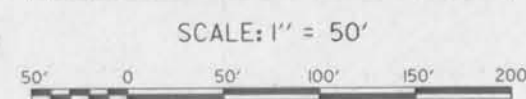
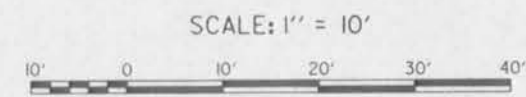
NOTE: PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING LEVEE AT THE LIMITS OF THE NO WORK AREA.

PLAN
SCALE: 1" = 50'



WEST SIDE PROFILE
SCALE: 1" = 50' HORIZ.
1" = 10' VERT.

** NOTE:
A STANDARD FABRICATED CONNECTION MAY BE SUBSTITUTED FOR PSA 23, AS APPROVED BY COR.



EXISTING UTILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-2	AERIAL POWER LINE	16+30	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE RELOCATED ON A DAILY BASIS BY OTHERS.
E-3	POWER POLE	16+30	NEW ORLEANS PUBLIC SERVICE, INC.	REMOVED PREVIOUS TO CONTRACT AWARD.
E-4	GUY WIRE FOR HIGH VOLTAGE TOWER	22+97	NEW ORLEANS PUBLIC SERVICE, INC.	NOT AFFECTED.
E-5	AERIAL POWER LINES 13,000 VOLTS TRANSMISSION	ALONG ORLEANS AVENUE	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE DE-ENERGIZED AS REQUIRED BY OTHERS.

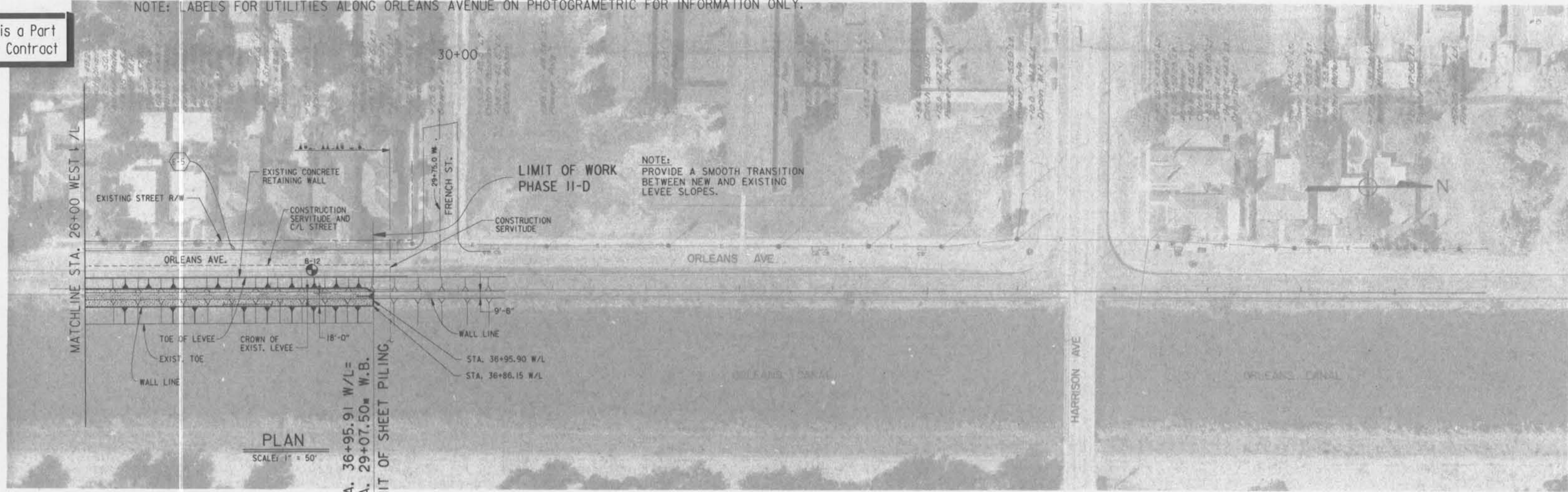
- NOTES:
1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
 2. FOR SHEET PILING LAYOUT, SEE DWG. 10.
 3. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE): B/L STA. 2+39.00 TO STA. 29+07.50 ORLEANS PARISH, LOUISIANA			
PLAN/PROFILE STAS. 11+50 W.B. TO 26+00 W.B.			
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 50	PLOT DATE: MARCH 1993
DRAWN BY: K.C.R. & G.F.G.	CHECKED BY: T.M. SMITH	CADD FILE: 11-007	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DESIGN ENGINEER	DWG. 7 OF 24



Safety is a Part of Your Contract

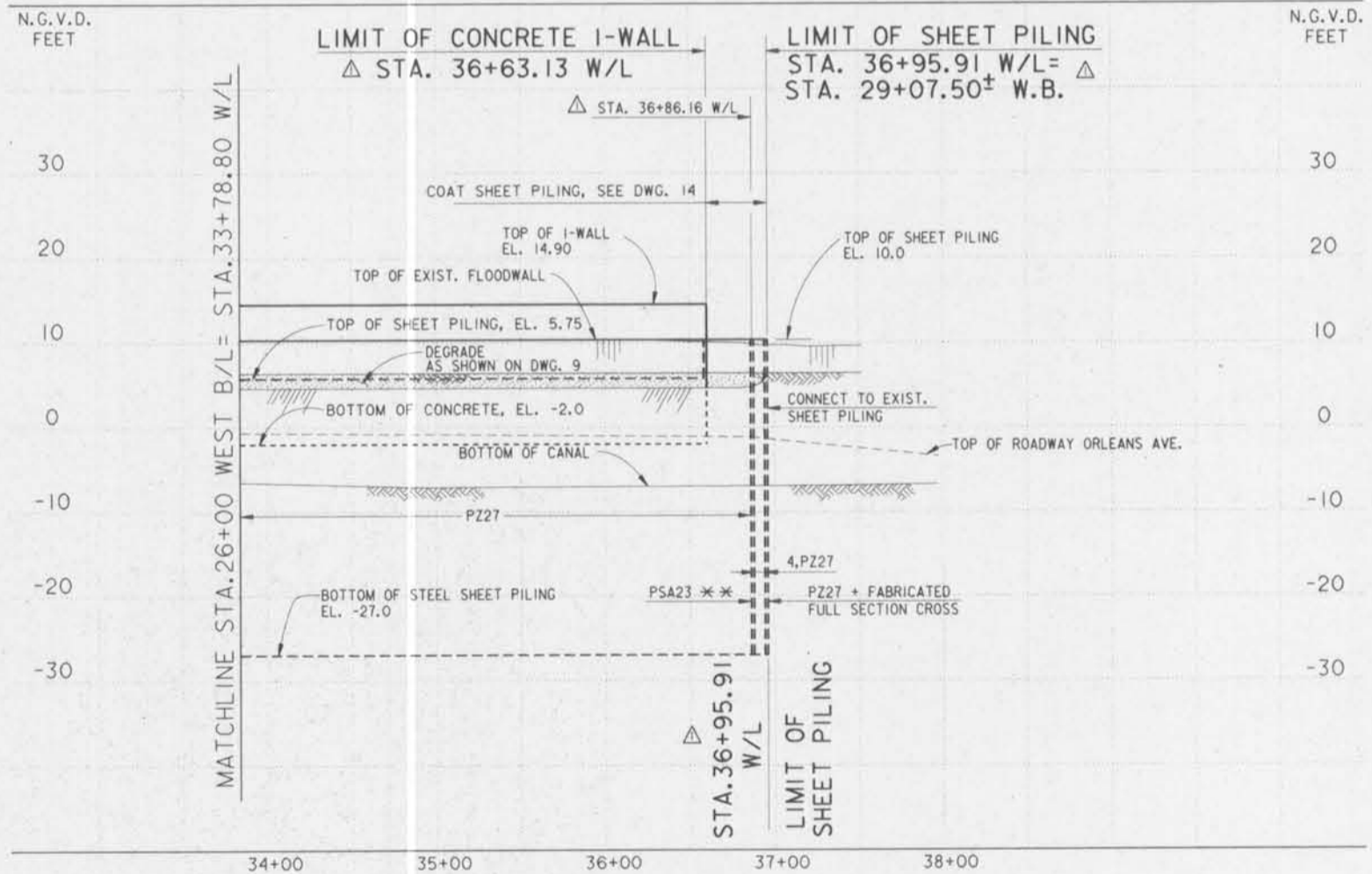
NOTE: LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMMETRIC FOR INFORMATION ONLY.



PLAN
SCALE: 1" = 50'

STA. 36+95.91 W/L =
STA. 29+07.50± W.B.
LIMIT OF SHEET PILING

AERIAL FLOWN OCT., 1981



WALL LINE (W/L) STATIONING MEASURED ALONG FLOOD SIDE FACE OF WALL

WEST SIDE PROFILE

SCALE: 1" = 50' HORIZ.
1" = 10' VERT.

SCALE: 1" = 10'



SCALE: 1" = 50'



** NOTE:
A STANDARD FABRICATED CONNECTION MAY BE SUBSTITUTED FOR PSA 23, AS APPROVED BY THE COR.

NOTES:

1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
2. FOR SHEET PILING LAYOUT, SEE DWG. 10.
3. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

EXISTING UTILITIES.

ITEM NO.	DESCRIPTION	STA. W/L	OWNER	DISPOSITION
E-5	AERIAL POWER LINES 13,000 VOLTS TRANSMISSION	ALONG ORLEANS AVENUE	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE DE-ENERGIZED AS REQUIRED BY OTHERS.

SYMBOL	REVISIONS	DATE	APPROVED
△	REVISED W/L STATIONING, AMENDMENT NO. 1.	5-11-93	M.D.

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

DESIGN ENGINEERING, INC.
3330 W. ESPERANDE AVE., S.
METAIRIE, LOUISIANA 70002

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT
PHASE II-D (WEST SIDE B/L: STA. 2+39.00 TO STA. 29+07.50)
ORLEANS PARISH, LOUISIANA

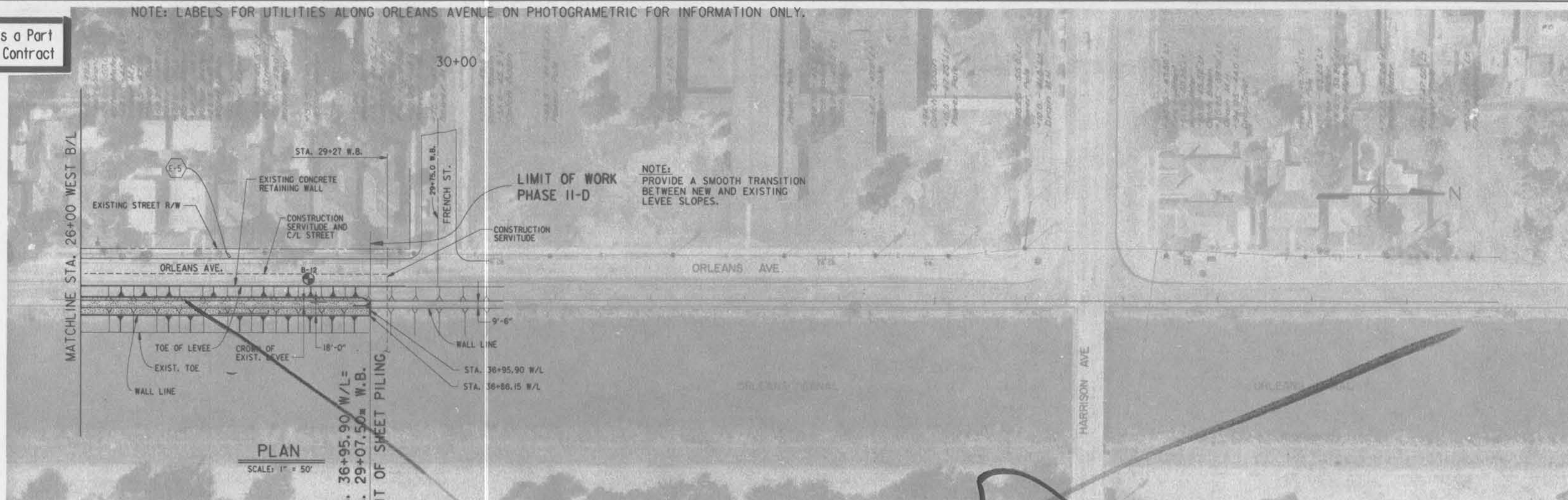
PLAN/PROFILE STAS. 26+00 W.B. TO 29+06.30 W.B.

DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 50	PLOT DATE: MAY 1993
DRAWN BY: K.C.R. & G.F.G.	CHECKED BY: T.M. SMITH	CADD FILE: 11-D08	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 8 OF 24

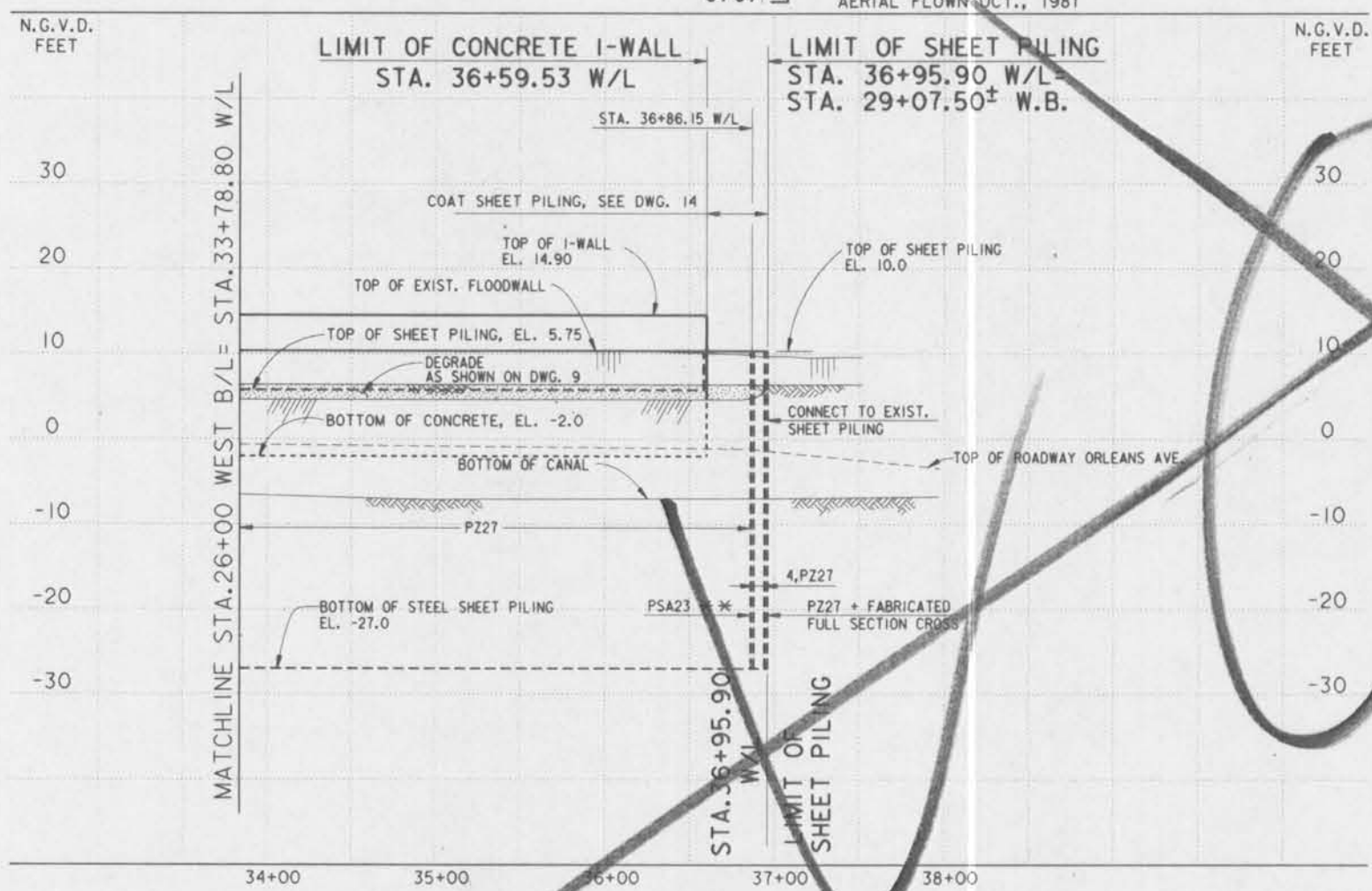


Safety is a Part of Your Contract

NOTE: LABELS FOR UTILITIES ALONG ORLEANS AVENUE ON PHOTOGRAMETRIC FOR INFORMATION ONLY.



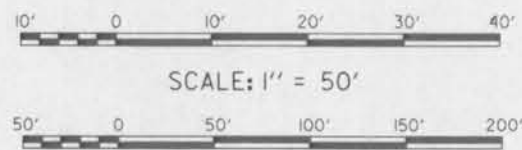
PLAN
SCALE: 1" = 50'



WEST SIDE PROFILE

SCALE: 1" = 50' HORIZ.
1" = 10' VERT.

SCALE: 1" = 10'



** NOTE:
A STANDARD FABRICATED CONNECTION MAY BE SUBSTITUTED FOR PSA 23, AS APPROVED BY THE COR.

NOTES:

1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
2. FOR SHEET PILING LAYOUT, SEE DWG. 10.
3. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

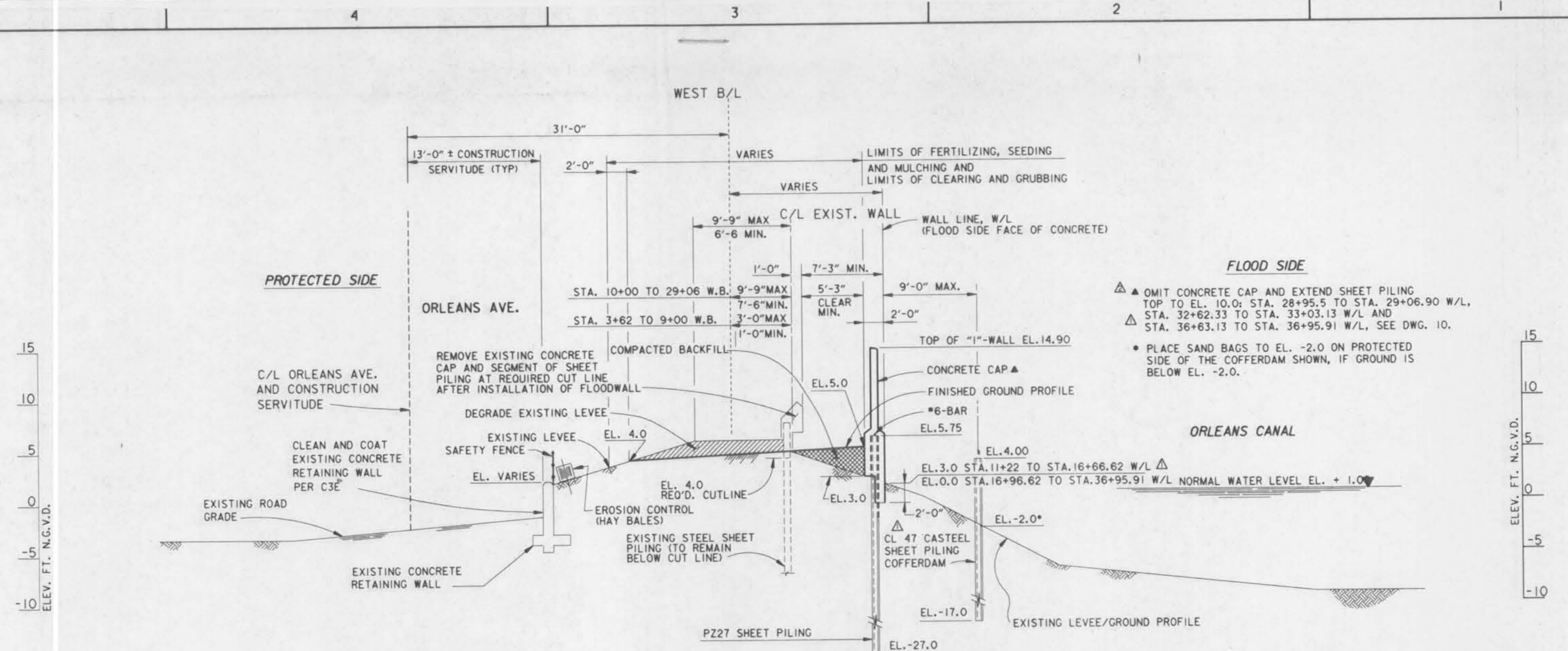
EXISTING UTILITIES

ITEM NO.	DESCRIPTION	STA. W/L	OWNER	DISPOSITION
E-5	AERIAL POWER LINES 13,000 VOLTS TRANSMISSION	ALONG ORLEANS AVENUE	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE DE-ENERGIZED AS REQUIRED BY OTHERS.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPERANZA AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE B/L: STA. 29+07.50 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
PLAN/PROFILE STAS. 26+00 W.B. TO 29+06.30 W.B.			
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 50	PLOT DATE: MARCH 1993
DRAWN BY: K.C.R. & G.F.G.	CHECKED BY: T.M. SMITH	CADD FILE: 11-008	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 8 OF 24	



Safety is a Part of Your Contract



TYPICAL WALL SECTION
 STA. 11+22 TO STA. 36+95.91 W/L
 (EXCEPT STA. 28+95.50 TO STA. 32+62.33 W/L)
 WEST SIDE OF CANAL
 SCALE: 1" = 5'-0"

CONSTRUCTION SEQUENCE NOTES:

1. THE EXISTING FLOODWALL IS NOT TO BE REMOVED UNTIL COMPLETION OF THE NEW "1"-WALL.

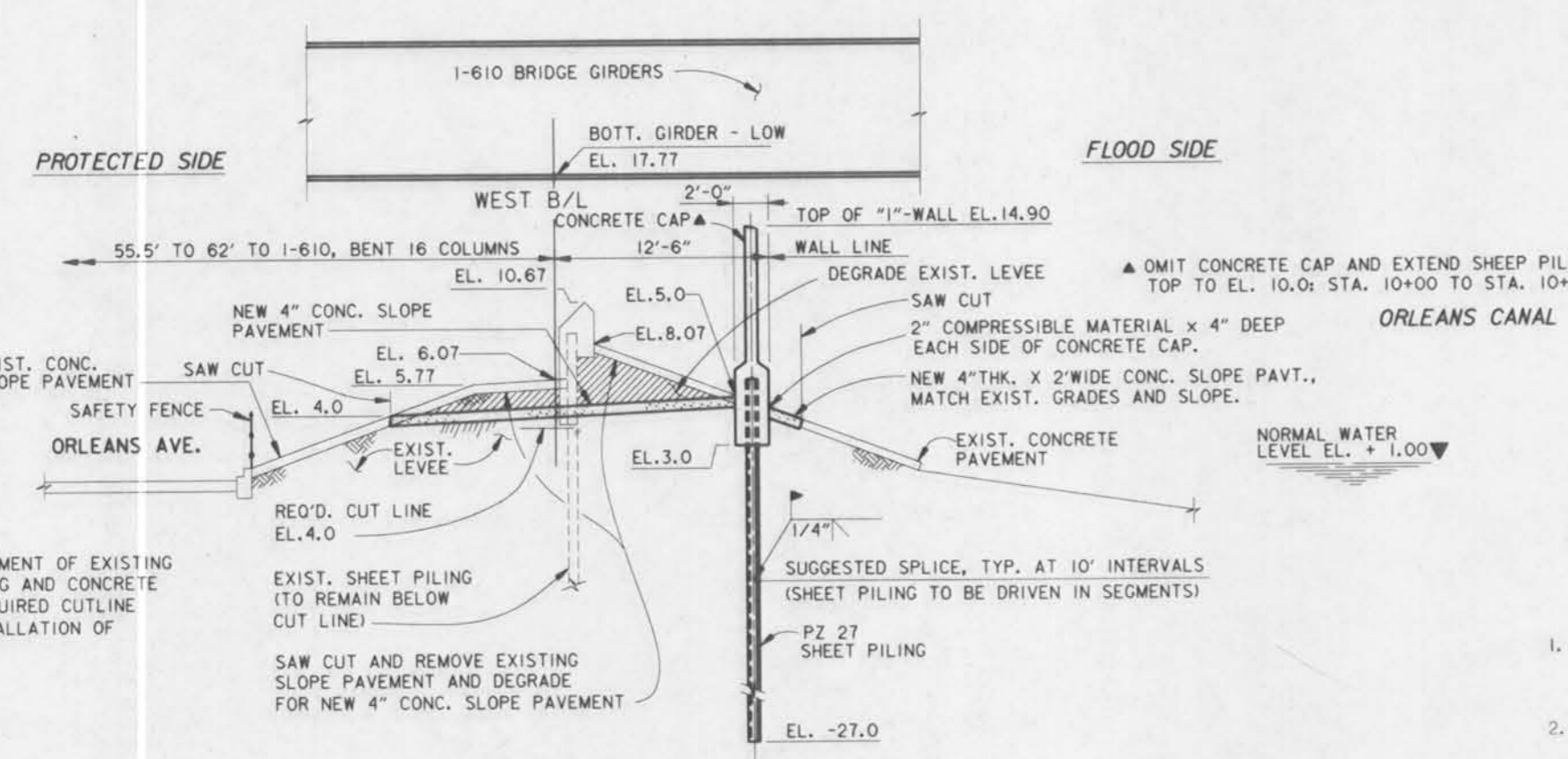
COFFERDAM NOTES

1. "1"-WALL MONOLITH CONCRETE SHALL BE CAST "IN THE DRY". AREA ENCLOSED BY COFFERDAM SHALL BE DEWATERED PRIOR TO CASTING OF MONOLITH CONCRETE.
2. COFFERDAM SHEET PILING SHALL BE CLOSED TO THE NEW SHEET PILING TO FORM A WATERTIGHT CELL AROUND THE MONOLITHS TO BE CAST. SHOP DRAWINGS SHOWING ALL COFFERDAM SHEET PILING DETAILS, SHALL BE SUBMITTED TO THE COR FOR APPROVAL.
3. AN ALTERNATE LOCATION OF COFFERDAM SHEET PILING, CLOSE TO "1"-WALL TO SUIT CONCRETE FORM REQUIREMENTS MAY BE SELECTED BY CONTRACTOR.

NOTE:
 FOR GENERAL NOTES, SEE DWG. 2.

△ PROVIDE A SMOOTH TRANSITION IN FINISHED GRADE ELEVATIONS BETWEEN STATIONS 16+66.62 W/L AND 16+96.62 W/L.

THIS PLAN ACCOMPANIES MODIFICATION P0003 TO CONTRACT NUMBER DACW29-93-C-0077



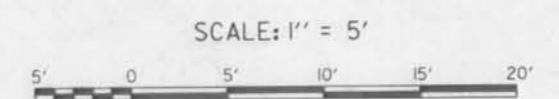
TYPICAL WALL SECTION AND SLOPE PAVEMENT
MODIFICATION AT 1-610 BRIDGE

STA. 10+00 TO STA. 11+22 W/L
 WEST SIDE OF CANAL
 SCALE: 1" = 5'-0"

WORK WITHIN LDOT RIGHTS OF WAY
 USE OF A VIBRATORY HAMMER TO DRIVE SHEET PILING WITHIN LDOT RIGHTS-OF-WAY IS REQUIRED. THE PRESENCE OF AN LDOT INSPECTOR IS REQUIRED FOR ALL WORK PERFORMED WITHIN THE RIGHTS-OF-WAY.

CONCRETE SLOPE PAVEMENT NOTES

1. NEW SLOPE PAVEMENT SHALL BE 2,000 P.S.I. CONCRETE. PAVEMENT SHALL BE REINFORCED WITH 6x8-4/4 WELDED WIRE FABRIC.
2. JOINTS IN NEW PAVEMENT SHALL BE SPACED AT 10' MAXIMUM. AND TO MATCH EXISTING JOINT LOCATIONS.
3. NEW SLOPE PAVEMENT SHALL ABUT CONCRETE "1"-WALL.



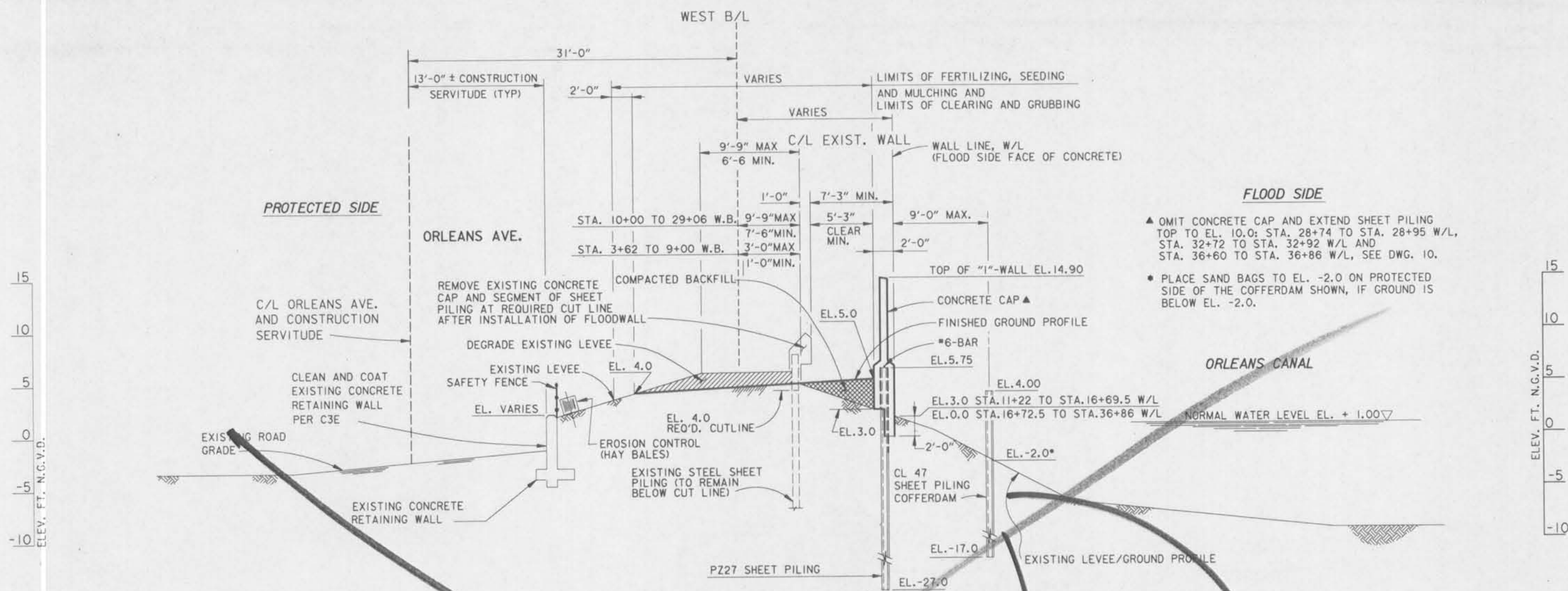
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED LIMITS OF 1'-WALL, MOD. NO. 3	11-5-93	J.A.R.
△	GENERAL REVISIONS, AMENDMENT NO. 1	5-11-93	M.D.

REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS	DESIGN ENGINEER	DATE	APPROVED
CORPS OF ENGINEERS	DESIGN ENGINEER	DATE	APPROVED
NEW ORLEANS, LOUISIANA	DESIGN ENGINEER	DATE	APPROVED

DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 60	PLOT DATE: FEB 1994
DRAWN BY: K.C. REID	CADD FILE: 11-009		FILE NO. H-4-40205
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEER, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 9 OF 24



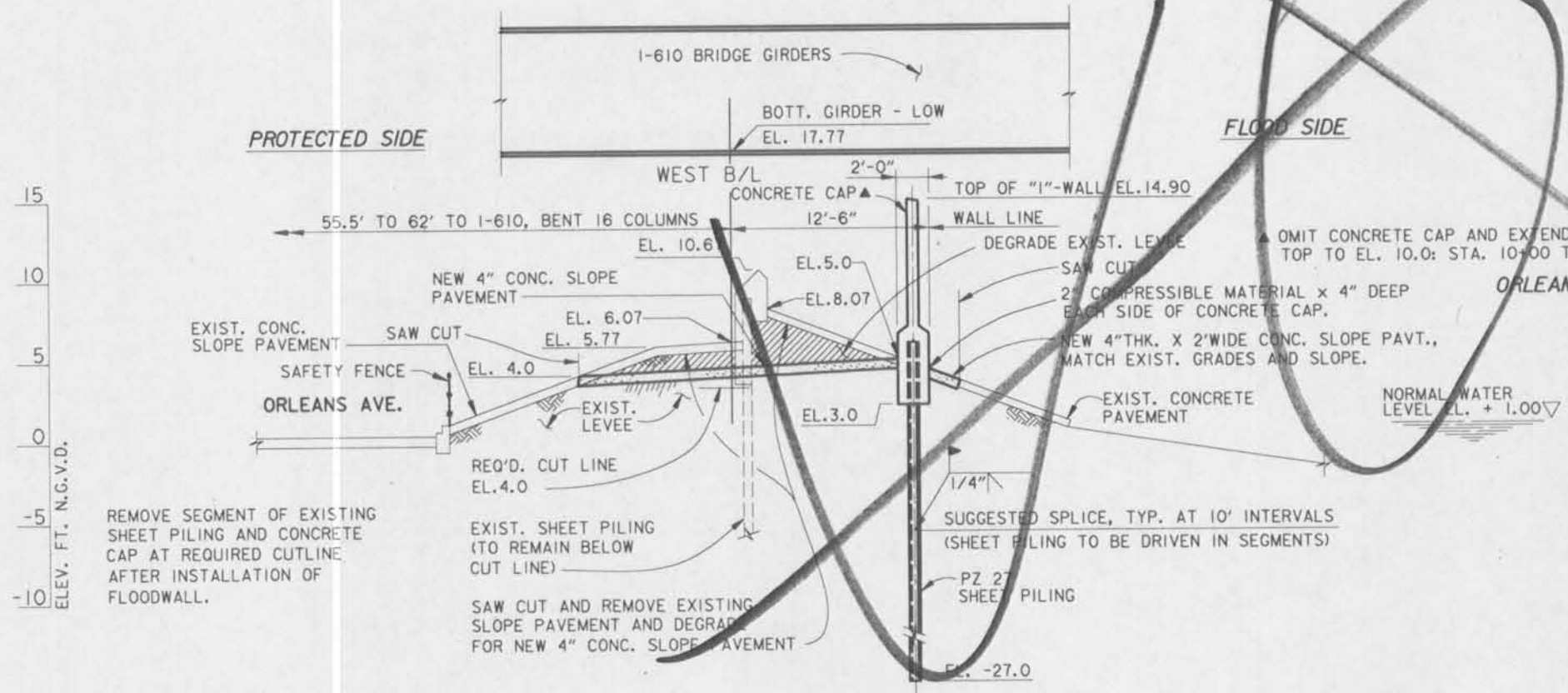
Safety is a Part of Your Contract



TYPICAL WALL SECTION

STA. 11+22 TO STA. 36+86 W/L
(EXCEPT STA. 28+95 TO STA. 33+72 W/L)
WEST SIDE OF CANAL
SCALE: 1" = 5'-0"

- CONSTRUCTION SEQUENCE NOTES:**
1. THE EXISTING FLOODWALL IS NOT TO BE REMOVED UNTIL COMPLETION OF THE NEW "1"-WALL.
- COFFERDAM NOTES:**
1. "1"-WALL MONOLITH CONCRETE SHALL BE CAST "IN THE DRY". AREA ENCLOSED BY COFFERDAM SHALL BE DEWATERED PRIOR TO CASTING OF MONOLITH CONCRETE.
 2. COFFERDAM SHEET PILING SHALL BE CLOSED TO THE NEW SHEET PILING TO FORM A WATERTIGHT CELL AROUND THE MONOLITHS TO BE CAST. SHOP DRAWINGS SHOWING ALL COFFERDAM SHEET PILING DETAILS, SHALL BE SUBMITTED TO THE COR FOR APPROVAL.
 3. AN ALTERNATE LOCATION OF COFFERDAM SHEET PILING, CLOSE TO "1"-WALL TO SUIT CONCRETE FORM REQUIREMENTS MAY BE SELECTED BY CONTRACTOR.
- NOTE:**
FOR GENERAL NOTES, SEE DWG. 2.



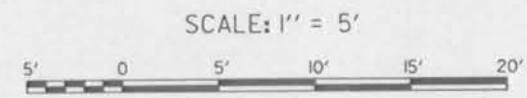
TYPICAL WALL SECTION AND SLOPE PAVEMENT MODIFICATION AT I-610 BRIDGE

STA. 10+00 TO STA. 11+22 W/L
WEST SIDE OF CANAL
SCALE: 1" = 5'-0"

WORK WITHIN LDOOT RIGHTS OF WAY
USE OF A VIBRATORY HAMMER TO DRIVE SHEET PILING WITHIN LDOOT RIGHTS-OF-WAY IS REQUIRED. THE PRESENCE OF AN LDOOT INSPECTOR IS REQUIRED FOR ALL WORK PERFORMED WITHIN THE RIGHTS-OF-WAY.

CONCRETE SLOPE PAVEMENT NOTES:

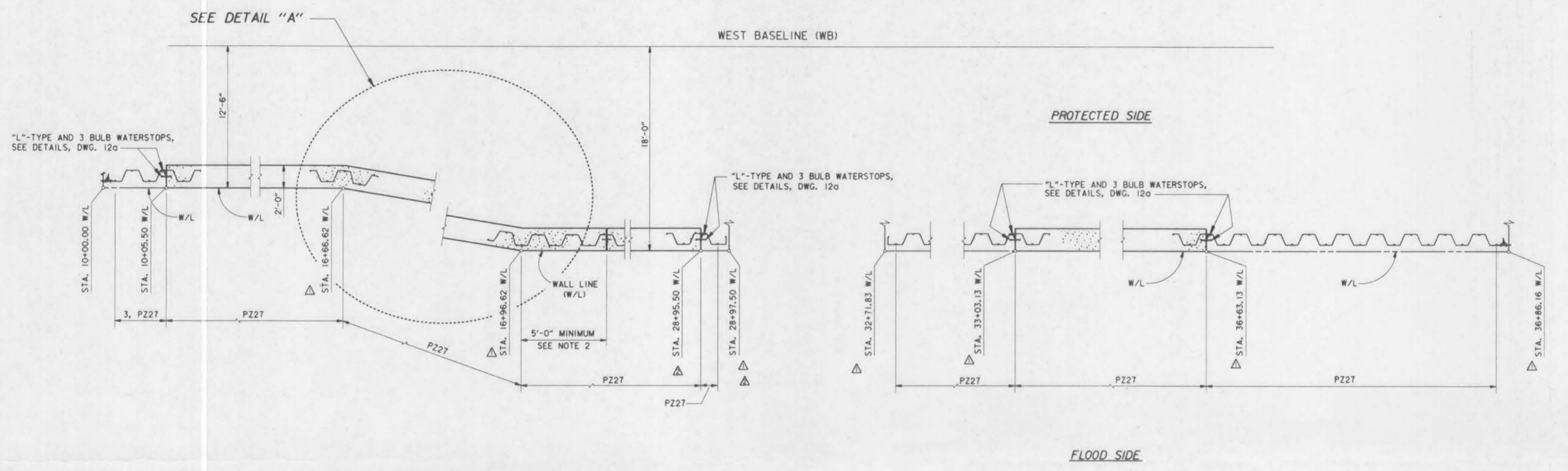
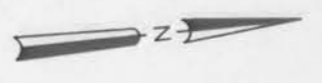
1. NEW SLOPE PAVEMENT SHALL BE 2,000 P.S.I. CONCRETE. PAVEMENT SHALL BE REINFORCED WITH 6x6 #4 WELDED WIRE FABRIC.
2. JOINTS IN NEW PAVEMENT SHALL BE SPACED AT 10' MAXIMUM. AND TO MATCH EXISTING JOINT LOCATIONS.
3. NEW SLOPE PAVEMENT SHALL ABUT CONCRETE "1"-WALL.



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
TYPICAL SECTIONS			
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: K.C. REID	CHECKED BY: T.M. SMITH	CADD FILE: 11-D09	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEER, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 9 OF 24	



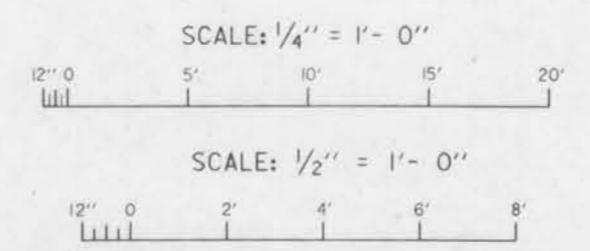
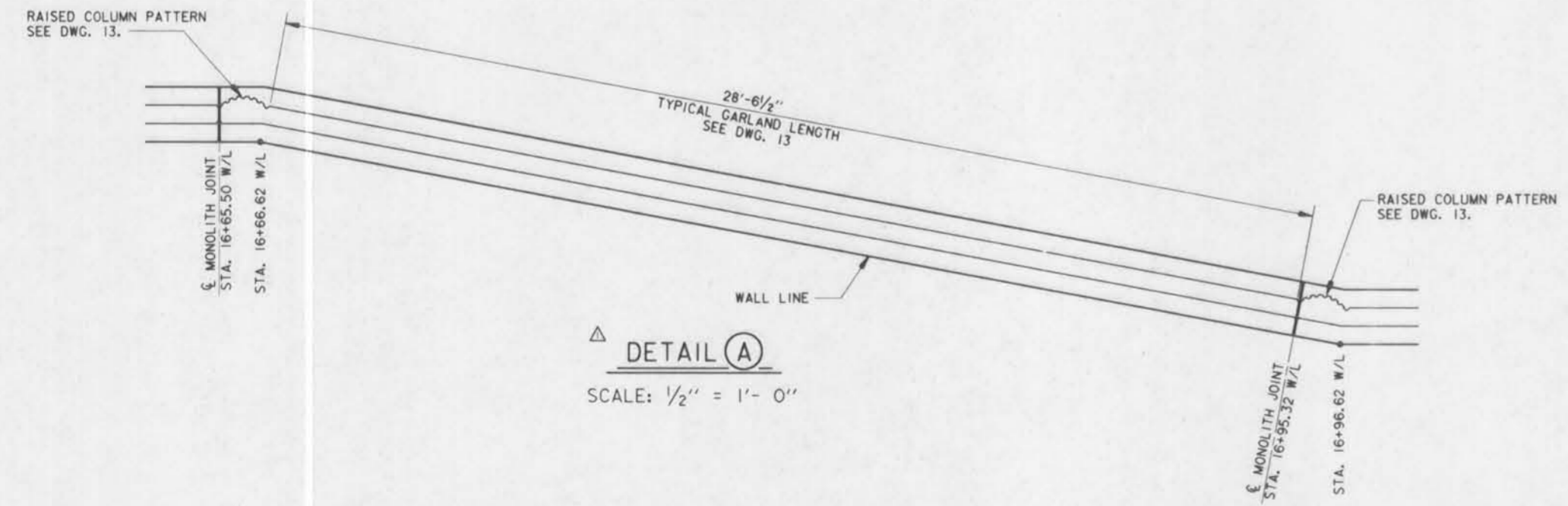
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- NOTES:
1. "I"-WALL MONOLITHS TO CONFORM TO LENGTHS SHOWN ON TYPICAL "I"-WALL DETAILS, DWG. 11.
 2. MONOLITHS JOINTS TO BE OFFSET FROM WALL ANGLE POINTS A MINIMUM OF 5'-0".
 3. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

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

THIS PLAN ACCOMPANIES
MODIFICATION P0003
TO CONTRACT NUMBER
DACW29-93-C-0077



SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED LIMITS OF I-WALL, MOD. NO. 3	11-5-93	J.A.R.
△	REVISED W/L STATIONING, AMENDMENT NO. 1.	5-11-93	M.D.

REVISIONS	
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN

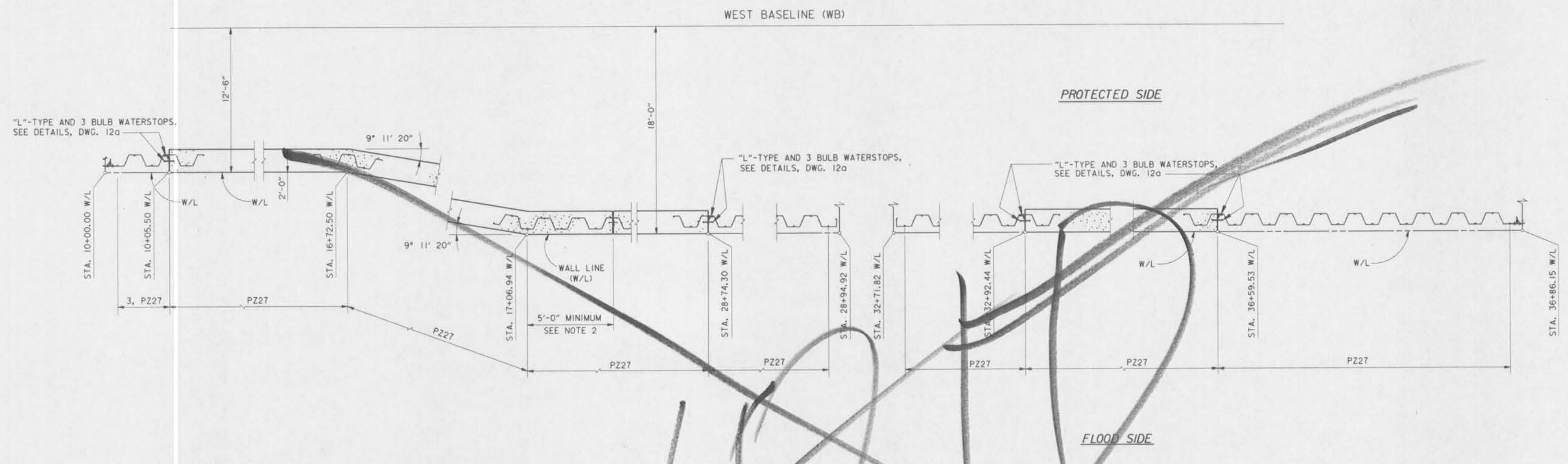
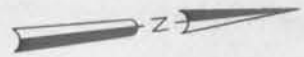
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT
PHASE II-D (WEST SIDE) B/L STA. 2+39.00 TO STA. 29+07.50
ORLEANS PARISH, LOUISIANA

STEEL SHEET PILING AND MONOLITH LAYOUT

DESIGNED BY: V. PANELL	DATE: FEB. 1993	PLOT SCALE: 48	PLOT DATE: FEB 1994
DRAWN BY: K.A. WJITALA	CHECKED BY: T.M. SMITH	CADD FILE: 11-D10	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 10 OF 24	

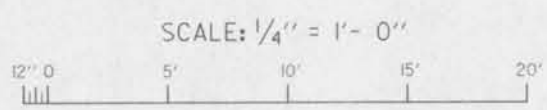



Safety is a Part
of Your Contract



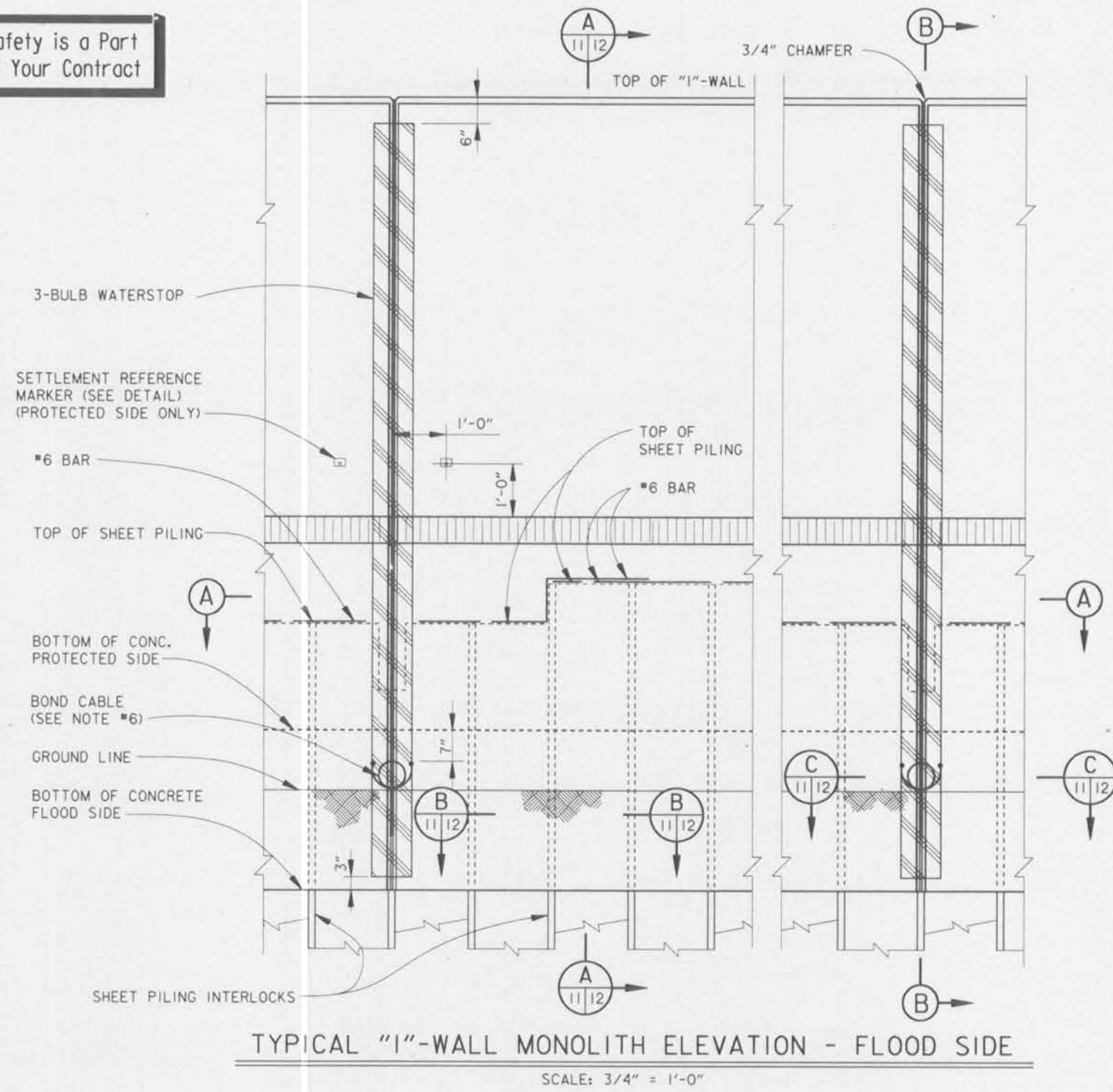
- NOTES:
1. "I"-WALL MONOLITHS TO CONFORM TO LENGTHS SHOWN ON TYPICAL "I"-WALL DETAILS, DWG. 11.
 2. MONOLITHS JOINTS TO BE OFFSET FROM WALL ANGLE POINTS A MINIMUM OF 5'-0".
 3. FOR SHEET PILING CONNECTION DETAILS, SEE DWG. 14.

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

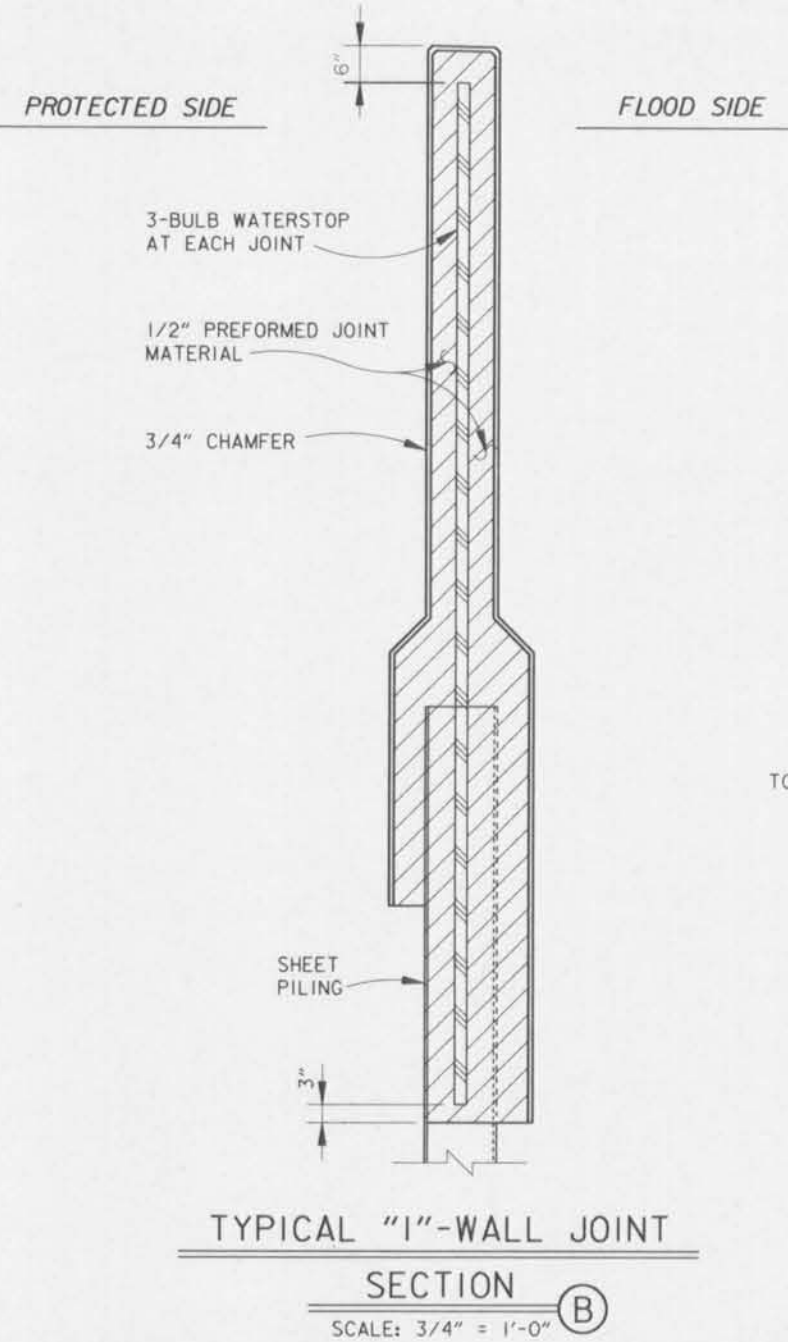


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEEVEE COMMISSIONERS ORLEANS LEEVE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEEVE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
STEEL SHEET PILING AND MONOLITH LAYOUT			
DESIGNED BY: V. PANELL	DATE: FEB. 1993	PLOT SCALE: 48	PLOT DATE: MARCH 1993
DRAWN BY: K.A. WDJTALA	CADD FILE: 11-D10	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 10 OF 24

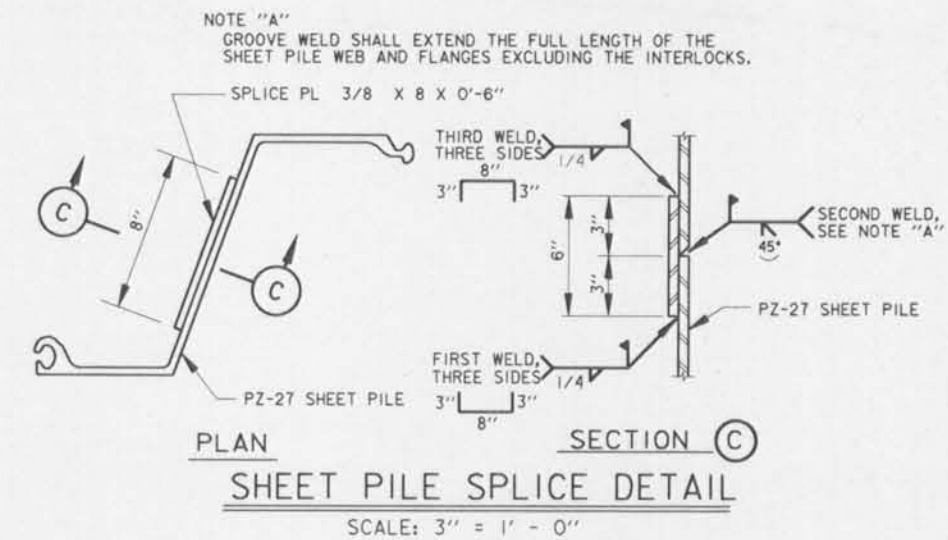
Safety is a Part of Your Contract



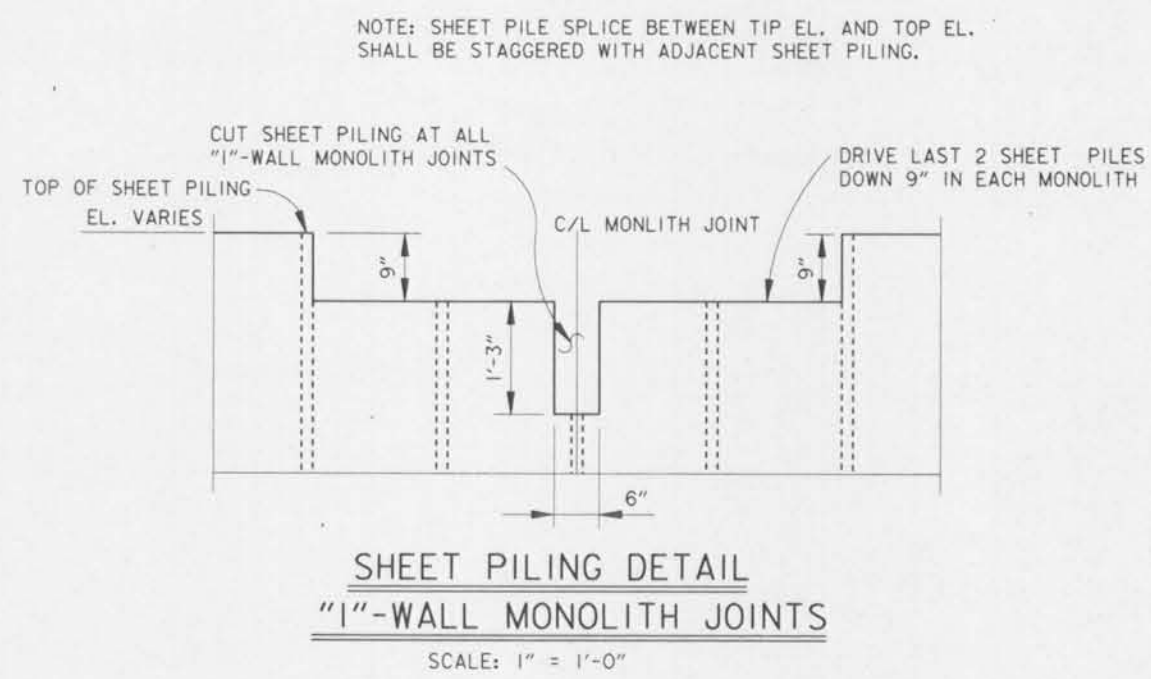
TYPICAL "1"-WALL MONOLITH ELEVATION - FLOOD SIDE
SCALE: 3/4" = 1'-0"



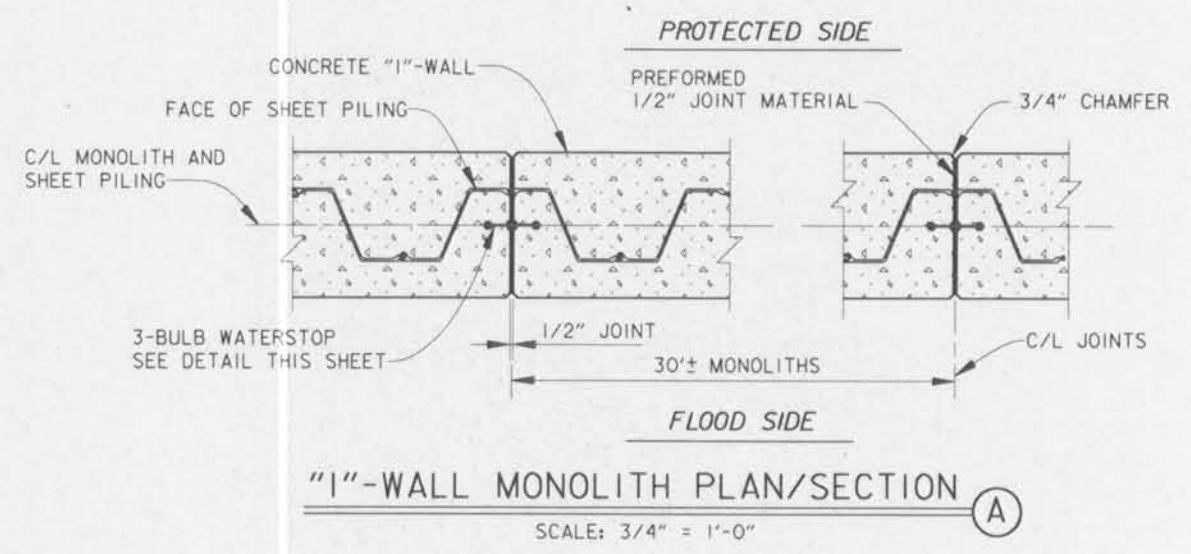
TYPICAL "1"-WALL JOINT
SECTION B
SCALE: 3/4" = 1'-0"



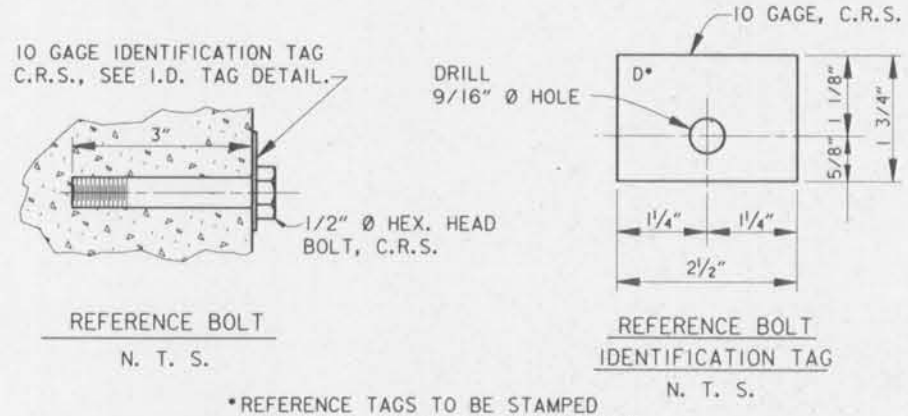
SHEET PILE SPlice DETAIL
SECTION C
SCALE: 3\"/>



SHEET PILING DETAIL
"1"-WALL MONOLITH JOINTS
SCALE: 1" = 1'-0"



"1"-WALL MONOLITH PLAN/SECTION A
SCALE: 3/4" = 1'-0"

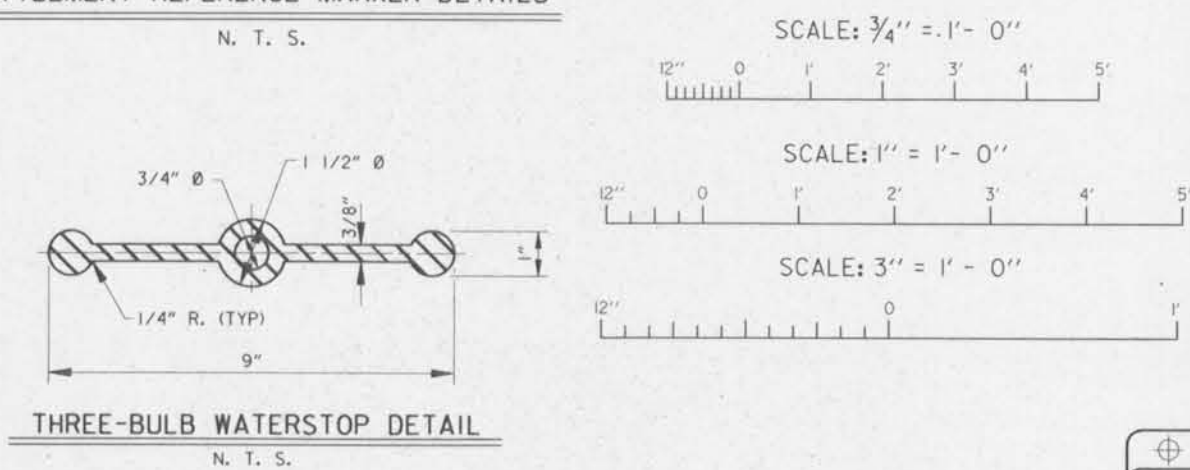


SETTLEMENT REFERENCE MARKER DETAILS
N. T. S.

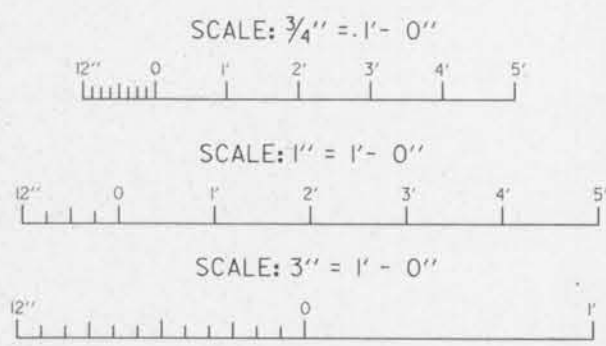
- "1" WALL NOTES:
- FOR GENERAL STRUCTURAL NOTES, SEE DWG. NO. 2.
 - ALL HOLES CUT IN STEEL SHEET PILING FOR REINFORCING STEEL OR ANCHOR BOLTS SHALL NOT EXCEED 2" DIAMETER, UNLESS OTHERWISE INDICATED.
 - ALL HOLES CUT THROUGH STEEL SHEET PILING SHALL MISS INTERLOCKS.
 - FOR WALL REINFORCEMENT DETAILS, SEE DWG. NO. 12.
 - STABILIZATION SLABS MAY BE OMITTED AT THE OPTION OF THE CONTRACTOR AND UPON APPROVAL OF THE C.O.R.
 - #6 REINFORCING BAR TO BE WELDED TO THE TOP OF EACH STEEL SHEET PILE. #6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE MONOLITH JOINT. INSTALL BOND CABLE AT ALL "1"-WALL JOINTS AND AT ALL TRANSITIONS FROM "1"-WALL TO STEEL SHEET PILING. BOND CABLES SHALL HAVE AN 8" DIAMETER LOOP TO ALLOW FOR STRESSES. BOND CABLES SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL PILES 7" BELOW BOTTOM OF CONCRETE CAP FOR "1"-WALL JOINTS AND AT TRANSITIONS FROM "1"-WALL TO STEEL SHEET PILING. WELDED CONNECTIONS SHALL BE COATED WITH SPLICING EPOXY TO OBTAIN MOISTURE PROOF JOINT. INSTALL BONDING CABLES ON PROTECTED SIDE. SEE SPECIFICATIONS.

Δ SETTLEMENT REFERENCE MARKER SCHEDULE							
S.R.M. NO.*	WEST W/L STA.	DIST. BELOW TOP OF WALL	FINAL ** ELEVATIONS	S.R.M. NO.	WEST W/L STA.	DIST. BELOW TOP OF WALL	FINAL ** ELEVATIONS
D 1	10+05	6.9'		D 6	25+65.5	6.9'	
D 2	13+05	6.9'		D 7	28+65.5	6.9'	
D 3	16+05	6.9'		D 8	33+03.13	6.9'	
D 4	19+65.5	6.9'		D 9	34+83.13	6.9'	
D 5	22+65.5	6.9'		D 10	36+63.13	6.9'	

** THE CONTRACTOR SHALL TAKE FINAL ELEVATIONS OF ALL SETTLEMENT MARKERS AND SHALL SUBMIT THIS DATA TO THE CONTRACTING OFFICER REPRESENTATIVE (COR)

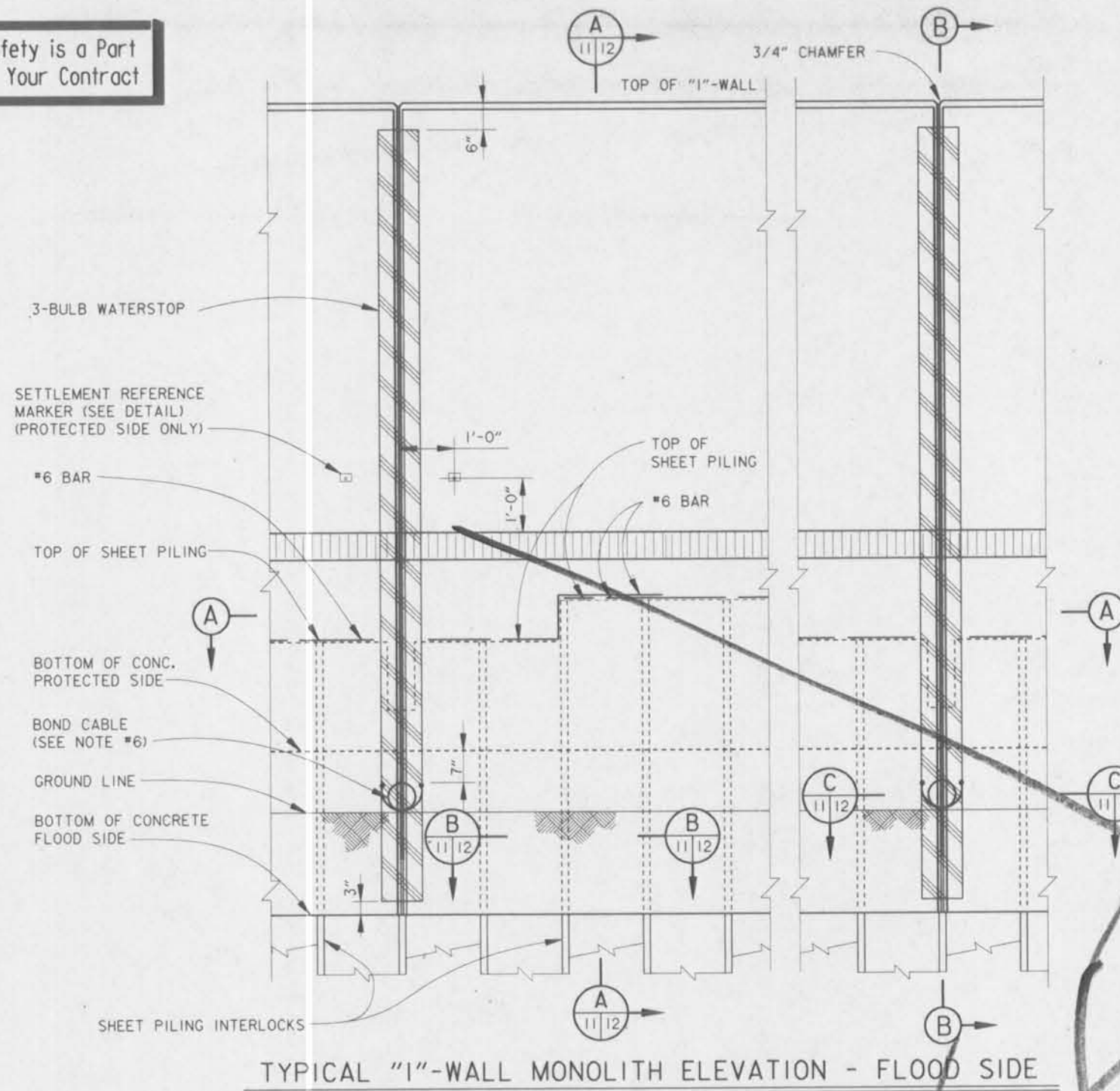


THREE-BULB WATERSTOP DETAIL
N. T. S.

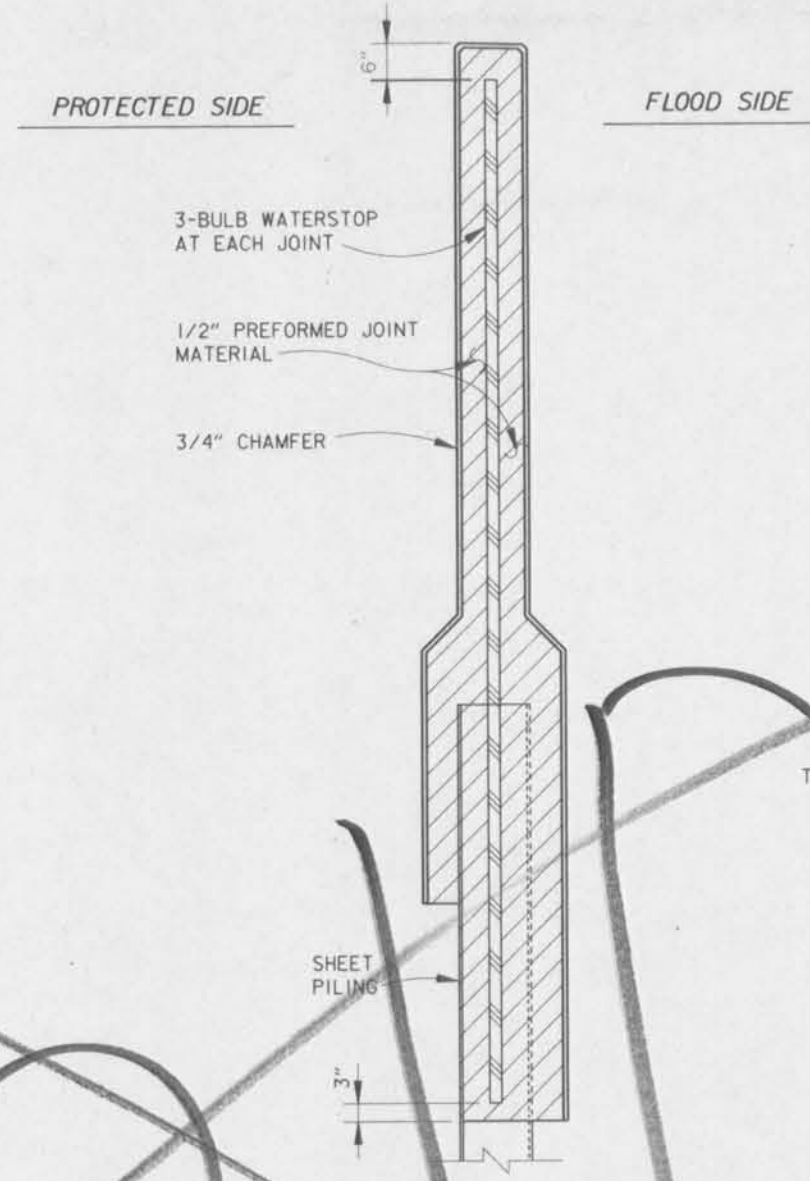


Δ	REVISED SETTLEMENT REFERENCE MARKER SCHEDULE, AMENDMENT NO. 1.	5-11-93	M.D.
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA <small>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</small>			
<small>LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE) B/L STA.2+39.00 TO STA.29+07.50) ORLEANS PARISH, LOUISIANA</small>			
TYPICAL "1"-WALL DETAILS			
DESIGNED BY: V. PANELL	DATE: FEB., 1993	PLOT SCALE: 16	PLOT DATE: MAY 1993
DRAWN BY: CJ KOCH	CHECKED BY: T SMITH	CADD FILE: 11-D11	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 11 OF 24	

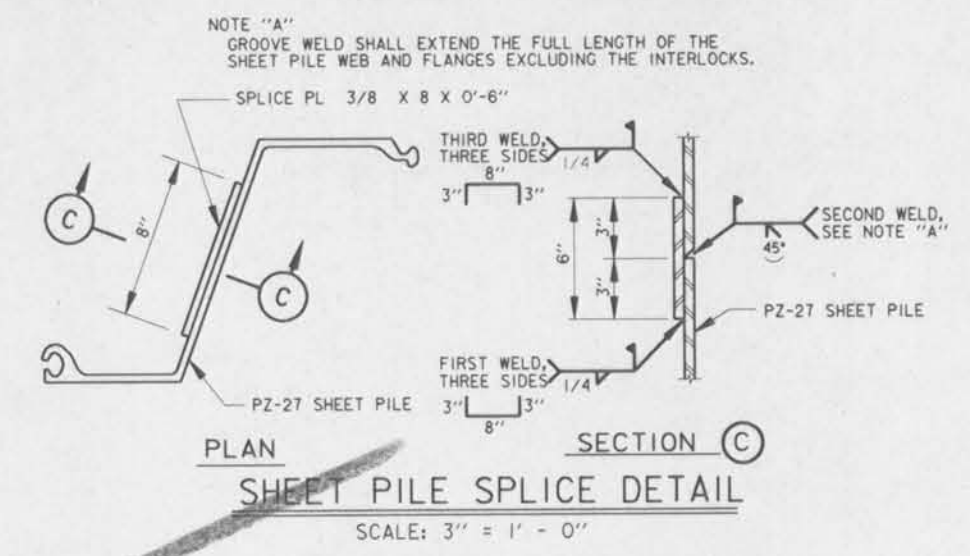
Safety is a Part of Your Contract



TYPICAL "1"-WALL MONOLITH ELEVATION - FLOOD SIDE
SCALE: 3/4" = 1'-0"

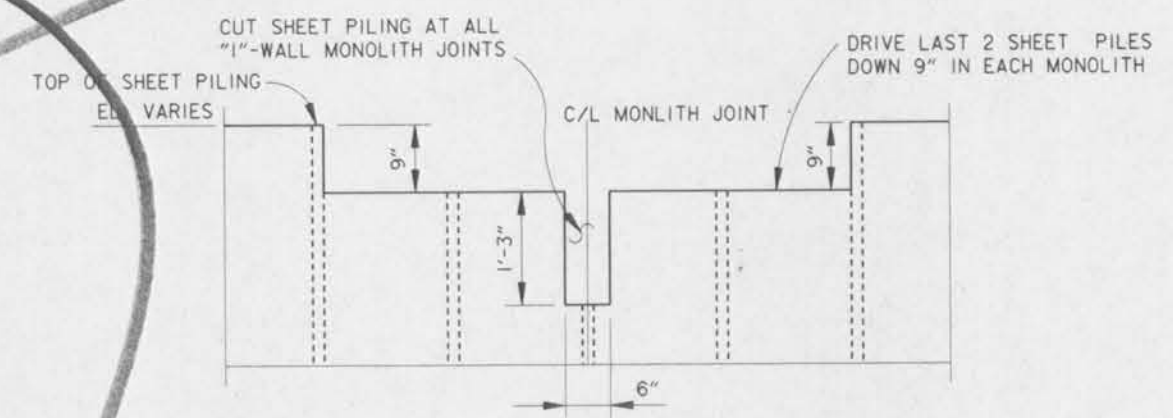


TYPICAL "1"-WALL JOINT SECTION B
SCALE: 3/4" = 1'-0"

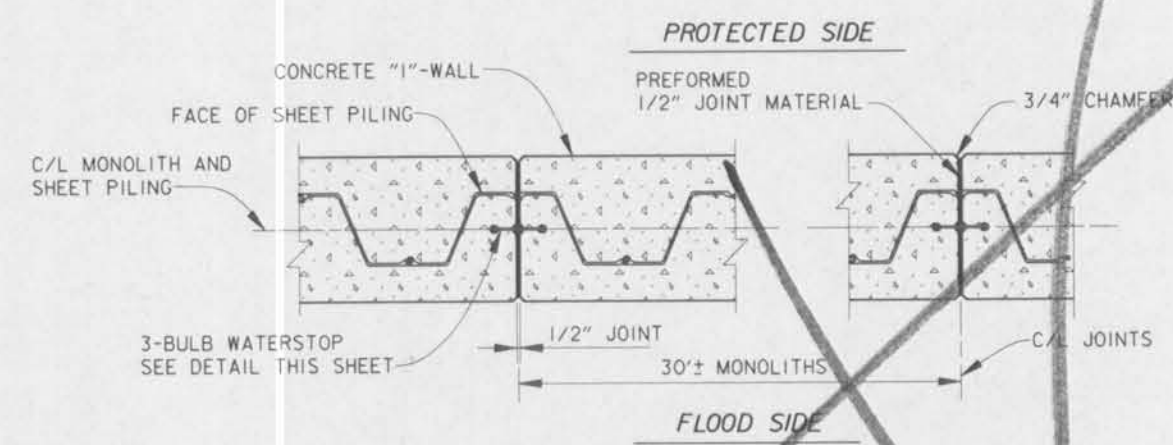


PLAN SECTION C
SHEET PILE SPlice DETAIL
SCALE: 3" = 1'-0"

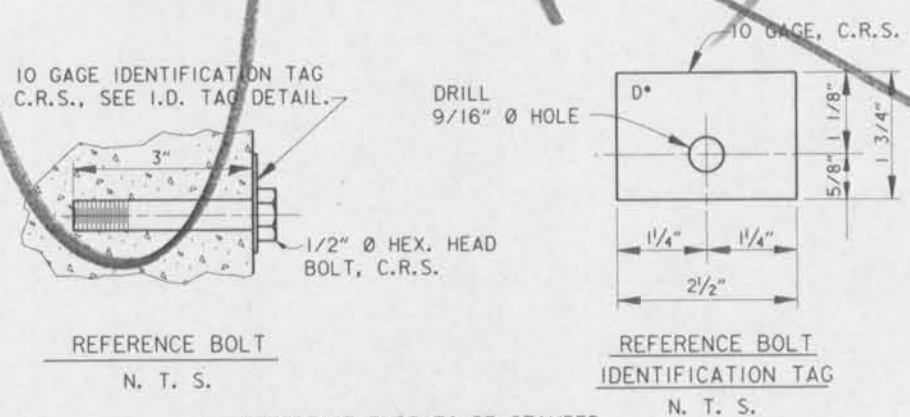
NOTE: SHEET PILE SPlice BETWEEN TIP EL. AND TOP EL. SHALL BE STAGGERED WITH ADJACENT SHEET PILING.



SHEET PILING DETAIL
"1"-WALL MONOLITH JOINTS
SCALE: 1" = 1'-0"



"1"-WALL MONOLITH PLAN/SECTION A
SCALE: 3/4" = 1'-0"



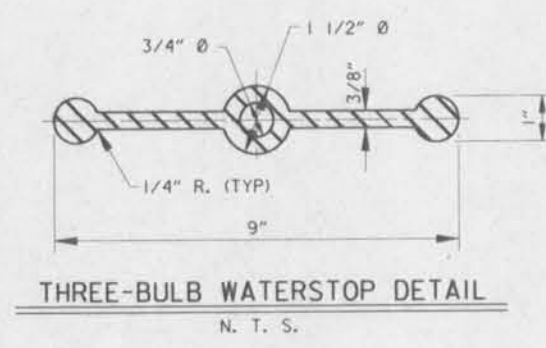
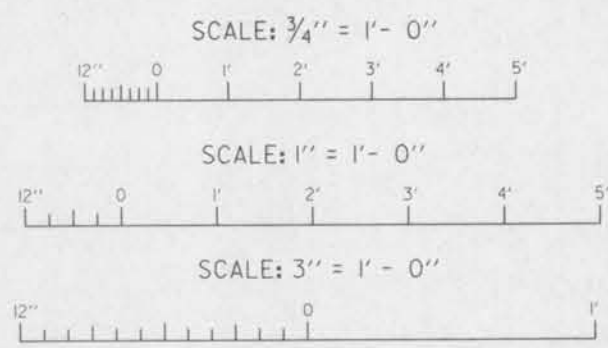
SETTLEMENT REFERENCE MARKER DETAILS
N. T. S.

"1" WALL NOTES:

- FOR GENERAL STRUCTURAL NOTES, SEE DWG. NO. 2.
- ALL HOLES CUT IN STEEL SHEET PILING FOR REINFORCING STEEL OR ANCHOR BOLTS SHALL NOT EXCEED 2" DIAMETER, UNLESS OTHERWISE INDICATED.
- ALL HOLES CUT THROUGH STEEL SHEET PILING SHALL MISS INTERLOCKS.
- FOR WALL REINFORCEMENT DETAILS, SEE DWG. NO. 12.
- STABILIZATION SLABS MAY BE OMITTED AT THE OPTION OF THE CONTRACTOR AND UPON APPROVAL OF THE C.O.R.
- #6 REINFORCING BAR TO BE WELDED TO THE TOP OF EACH STEEL SHEET PILE. #6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE MONOLITH JOINT. INSTALL BOND CABLE AT ALL "1"-WALL JOINTS AND AT ALL TRANSITIONS FROM "1"-WALL TO STEEL SHEET PILING. BOND CABLES SHALL HAVE AN 8" DIAMETER LOOP TO ALLOW FOR STRESSES. BOND CABLES SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL PILES 7" BELOW BOTTOM OF CONCRETE CAP FOR "1"-WALL JOINTS AND AT TRANSITIONS FROM "1"-WALL TO STEEL SHEET PILING. WELDED CONNECTIONS SHALL BE COATED WITH SPLICING EPOXY TO OBTAIN MOISTURE PROOF JOINT. INSTALL BONDING CABLES ON PROTECTED SIDE. SEE SPECIFICATIONS.

SETTLEMENT REFERENCE MARKER SCHEDULE							
S.R.M. NO.*	WEST W/L STA.	DIST. BELOW TOP OF WALL	FINAL ** ELEVATIONS	S.R.M. NO.	WEST W/L STA.	DIST. BELOW TOP OF WALL	FINAL ** ELEVATIONS
D 1	10+06	6.9'		D 6	25+06	6.9'	
D 2	13+06	6.9'		D 7	28+74	6.9'	
D 3	16+06	6.9'		D 8	32+93	6.9'	
D 4	19+06	6.9'		D 9	34+76	6.9'	
D 5	22+06	6.9'		D 10	36+59	6.9'	

** THE CONTRACTOR SHALL TAKE FINAL ELEVATIONS OF ALL SETTLEMENT MARKERS AND SHALL SUBMIT THIS DATA TO THE CONTRACTING OFFICER REPRESENTATIVE (COR)



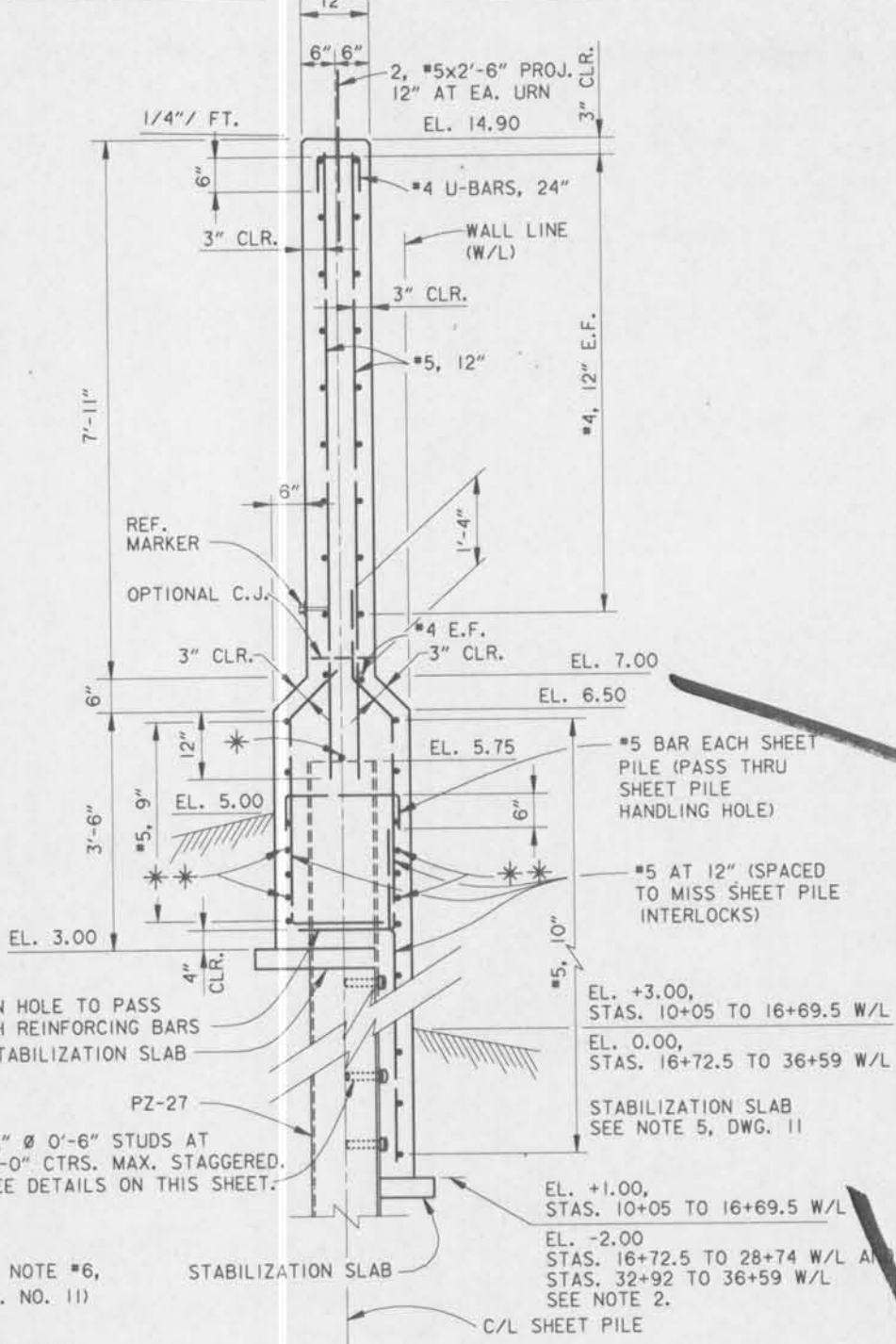
THREE-BULB WATERSTOP DETAIL
N. T. S.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
<small>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</small>		<small>DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002</small>	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE) B/L STA.2+39.00 TO STA.29+07.50 ORLEANS PARISH, LOUISIANA			
TYPICAL "1"-WALL DETAILS			
DESIGNED BY: V PANNELL	DATE: FEB., 1993	PLOT SCALE: 16	PLOT DATE: MARCH 1993
DRAWN BY: CJ KOCH	CHECKED BY: T SMITH	CADD FILE: II-D11	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		SOLICITATION NO. DACW29-93-B-0042	DWG. 11 OF 24

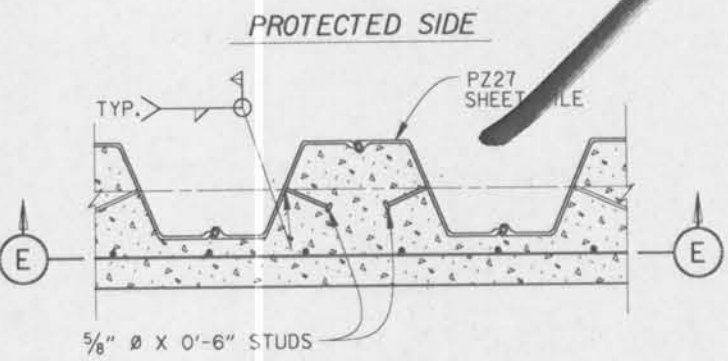


Safety is a Part of Your Contract

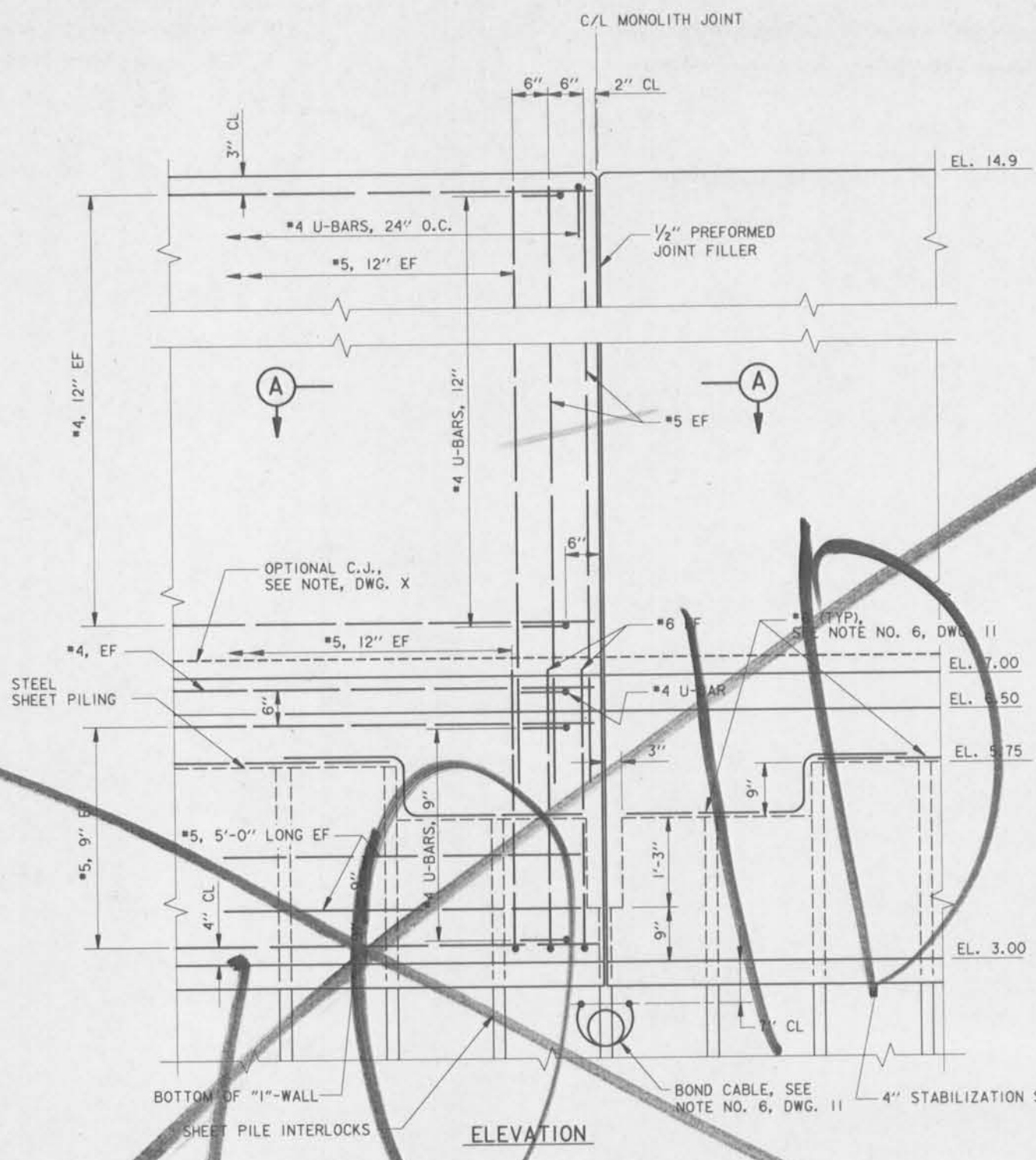
PROTECTED SIDE FLOOD SIDE



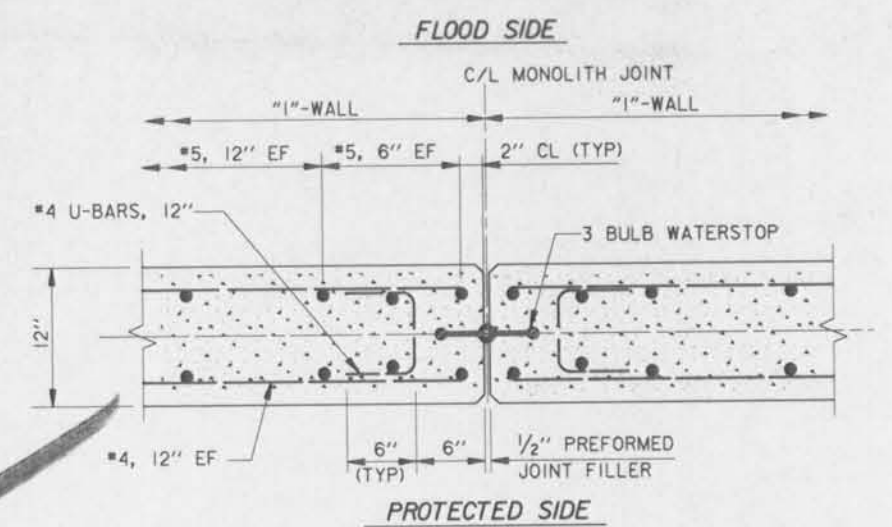
TYPICAL "1"-WALL SECTION A SCALE: 3/4" = 1'-0"



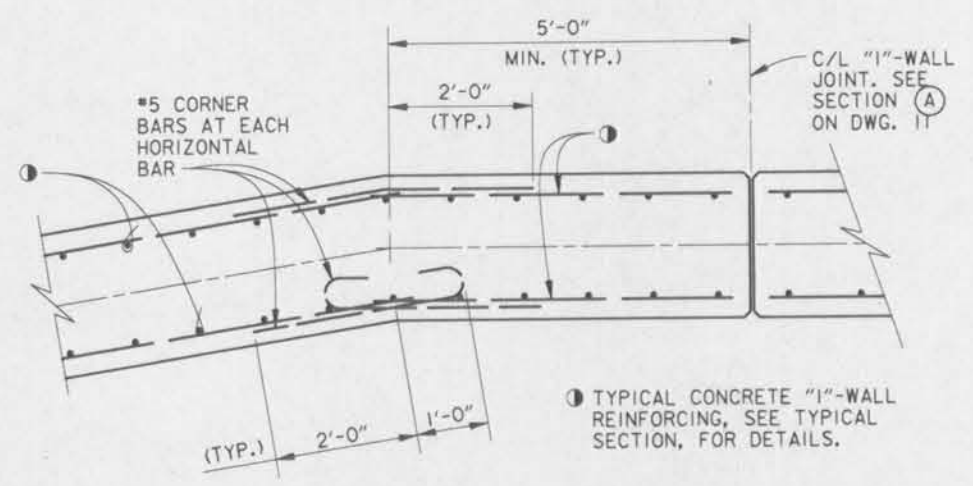
SECTION B SCALE: 1" = 1'-0"



DETAIL OF "1"-WALL MONOLITH JOINTS SCALE: 1" = 1'-0"

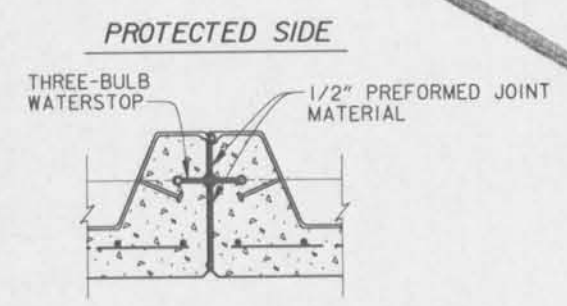


TYPICAL REINFORCEMENT AT MONOLITH JOINTS SCALE: 1 1/2" = 1'-0"

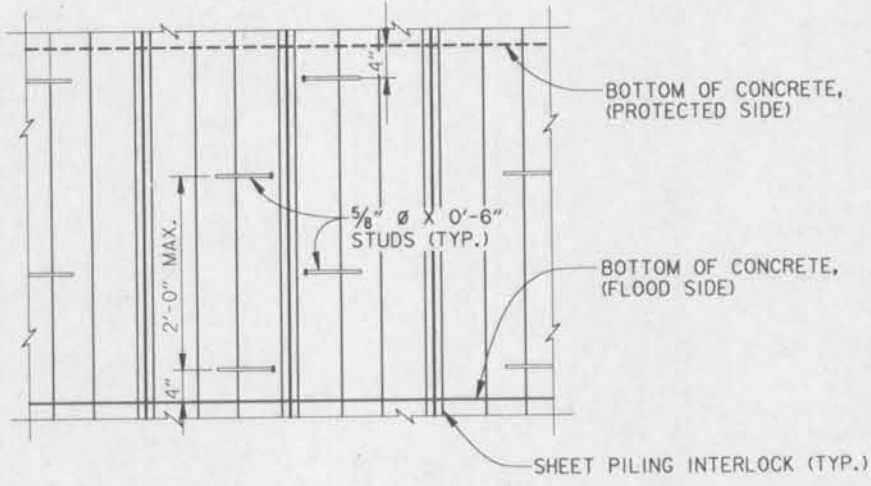


"1"-WALL CORNER REINFORCING DETAIL (STEEL SHEETING NOT SHOWN) SCALE: 3/4" = 1'-0"

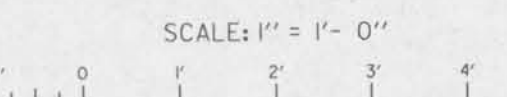
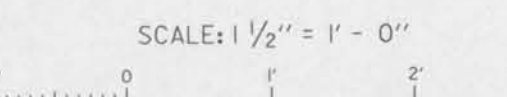
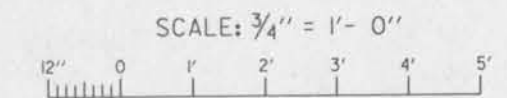
- NOTES:
 1. FOR GENERAL NOTES, SEE DWG. 2.
 2. PROVIDE A 1 V ON 1 H TRANSITION AT THE BOTTOM OF CONCRETE "1"-WALL (FLOOD SIDE ONLY) CENTERED AT STA. 16+71.0 W/L.



"1"-WALL JOINT C SCALE: 1" = 1'-0"



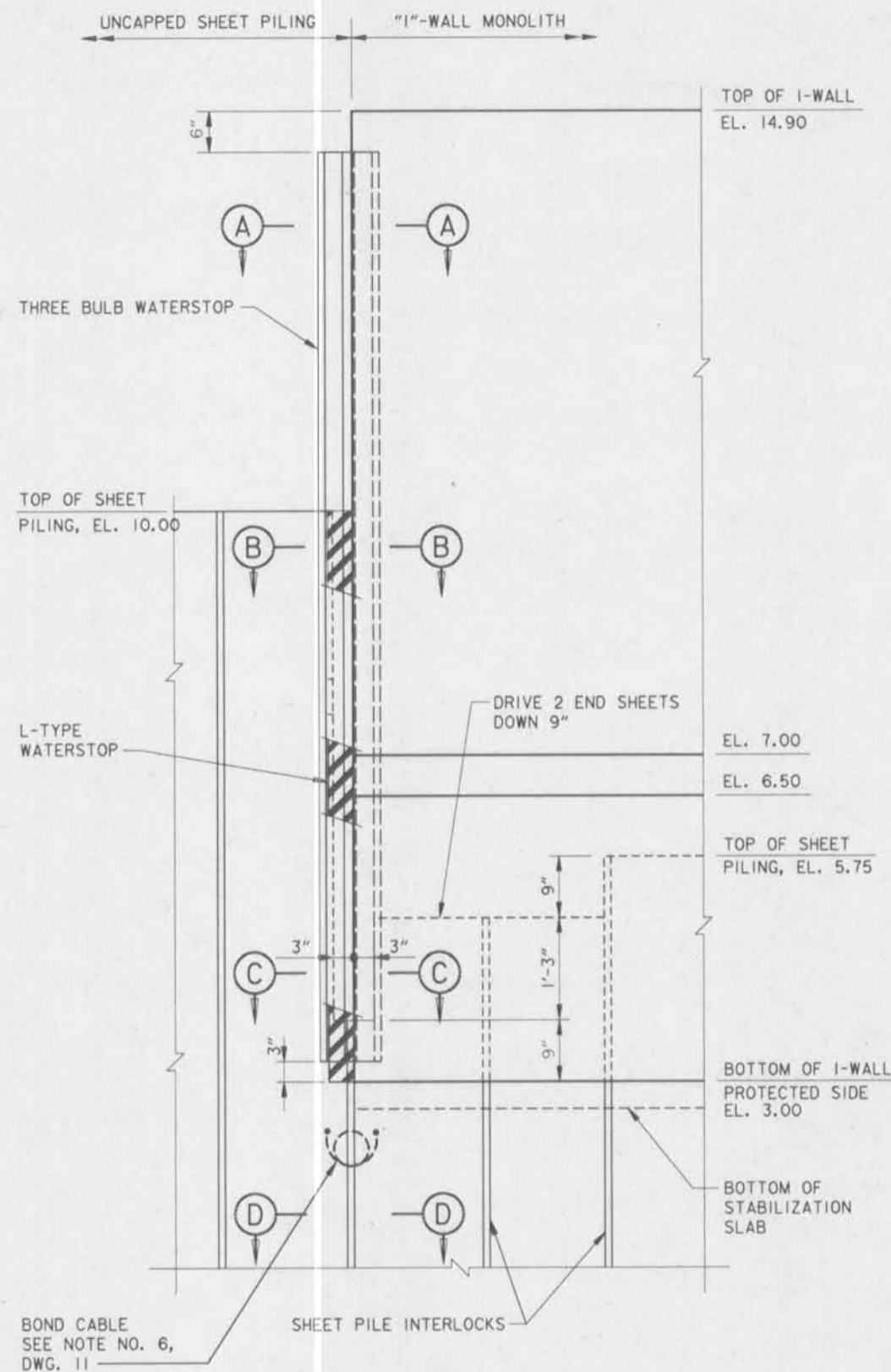
SECTION E SCALE: 1" = 1'-0"



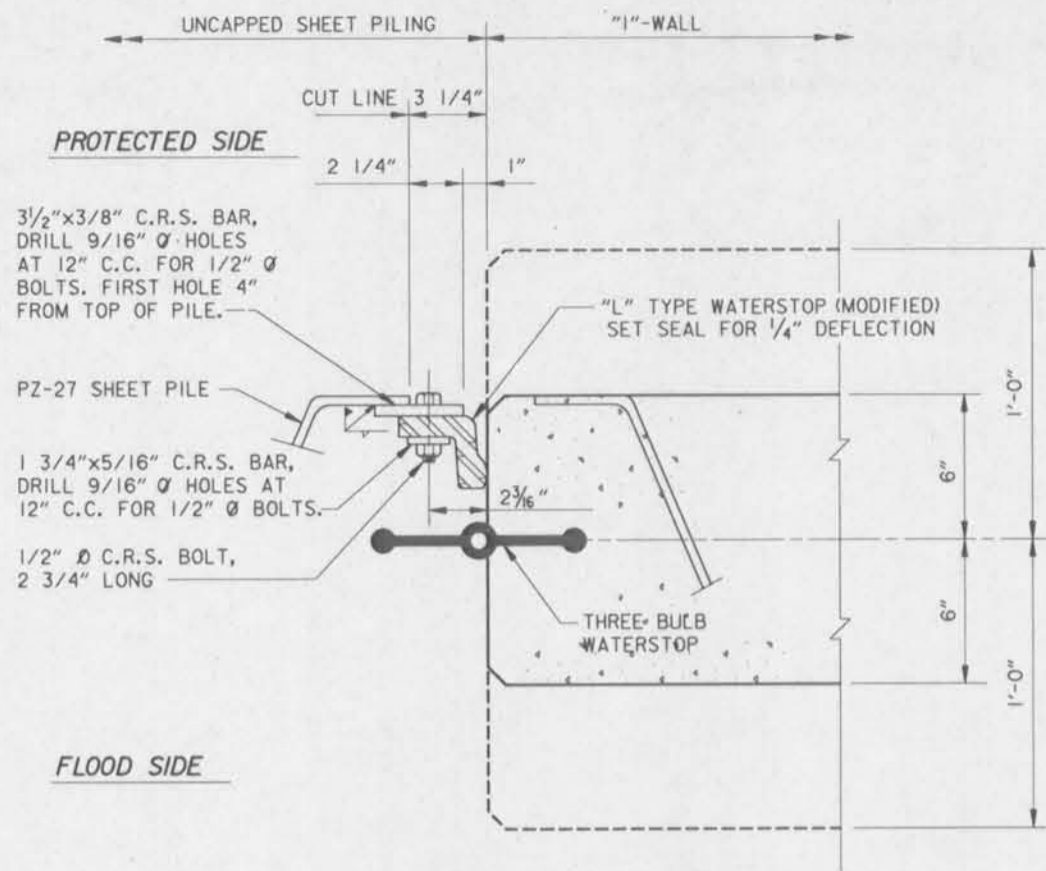
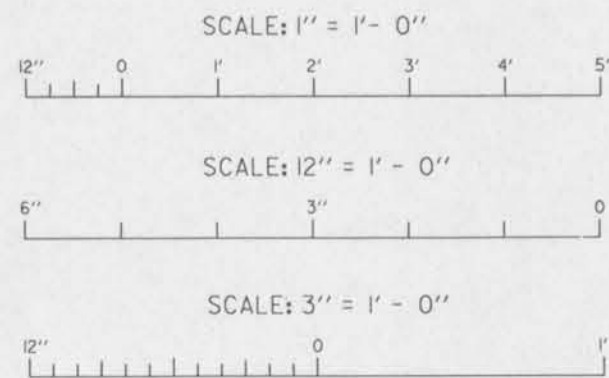
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE 11-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
TYPICAL "1"-WALL DETAILS			
DESIGNED BY: V. PANNELL	DATE: FEB., 1993	PLOT SCALE: 16	PLOT DATE: MARCH 1993
DRAWN BY: CJK & GFC	CHECKED BY: T. SMITH	CADD FILE: 11-D12	FILE NO.: H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO.: DACW29-93-B-0042	DWG. 12 OF 24	



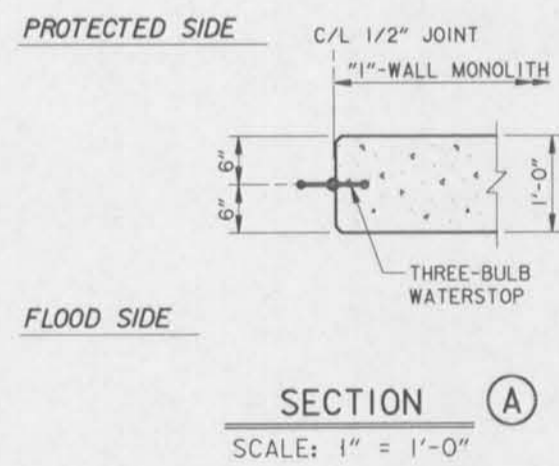
Safety is a Part of Your Contract



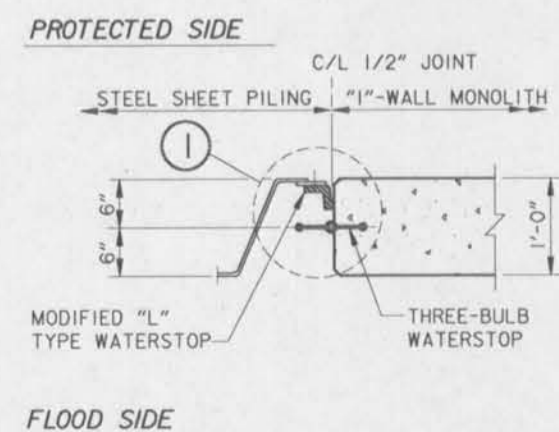
FLOOD SIDE ELEVATION
UNCAPPED SHEET PILING TO "1"-WALL
 SCALE: 1" = 1'-0"



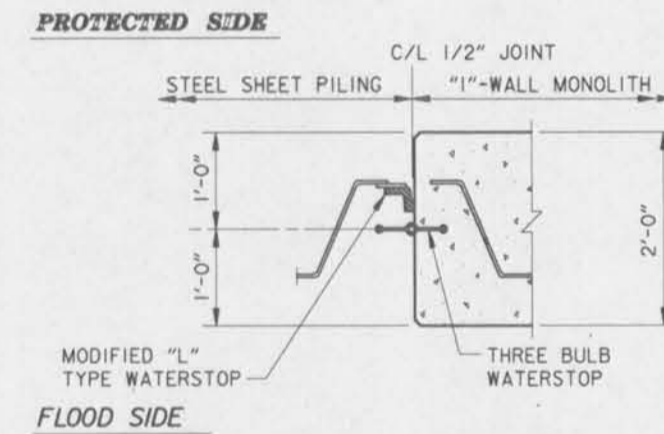
TRANSITION - I-WALL TO UNCAPPED SHEET PILING
DETAIL 1
 SCALE: 3" = 1'-0"



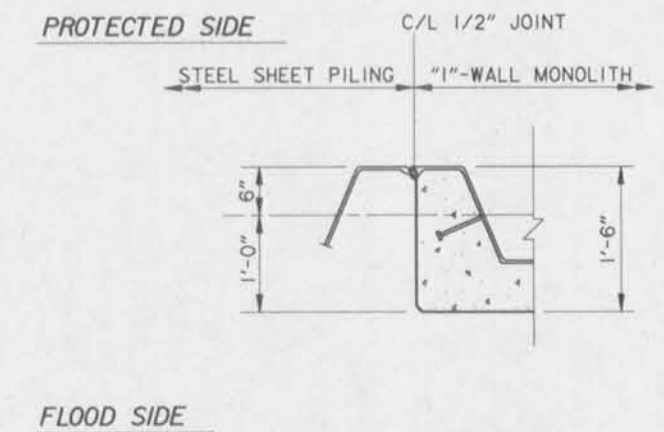
SECTION A
 SCALE: 1" = 1'-0"



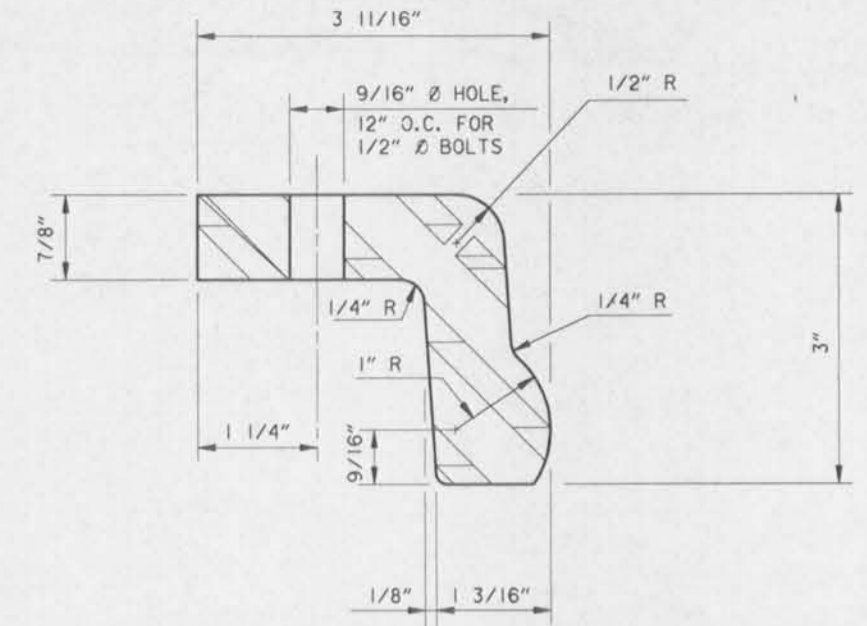
SECTION B
 SCALE: 1" = 1'-0"



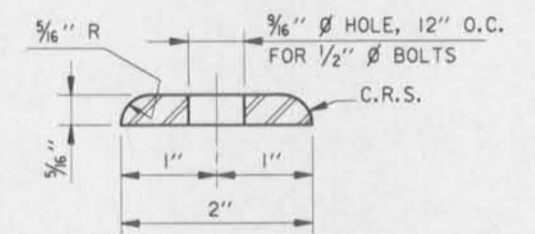
SECTION C
 SCALE: 1" = 1'-0"



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



MODIFIED "L" TYPE WATERSTOP
 SCALE: 12" = 1'-0"

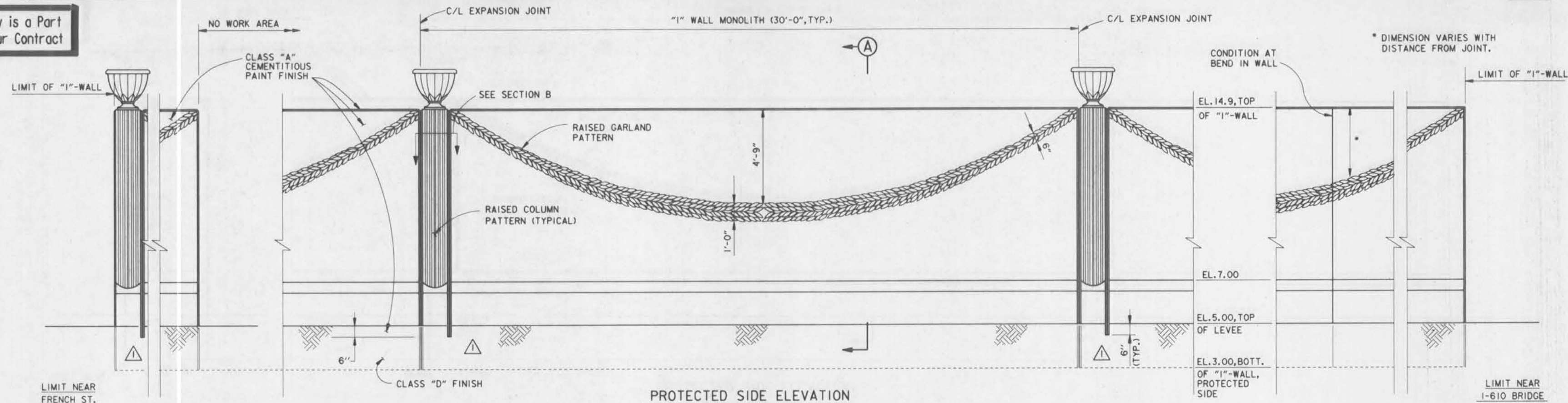


SEAL RETAINING BAR
 SCALE: 12" = 1'-0"

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE; B/L STA.2+39.00 TO STA.29+07.50) ORLEANS PARISH, LOUISIANA			
TYPICAL "1"-WALL DETAILS			
DESIGNED BY: V. PANSELL	DATE: FEB., 1993	PLOT SCALE: 12	PLOT DATE: MARCH 1993
DRAWN BY: C. KOCH	CHECKED BY: T. SMITH	CADD FILE: 11-D12A	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 12a OF 24	



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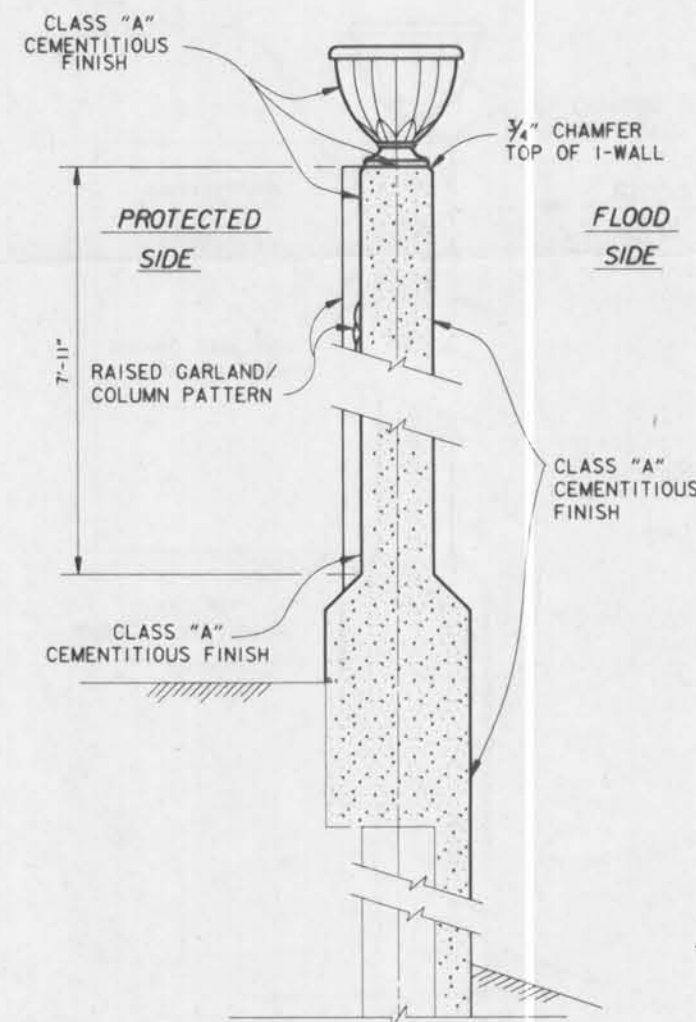
PROTECTED SIDE ELEVATION
TYPICAL "1"-WALL TREATMENT

1/2" = 1'-0"

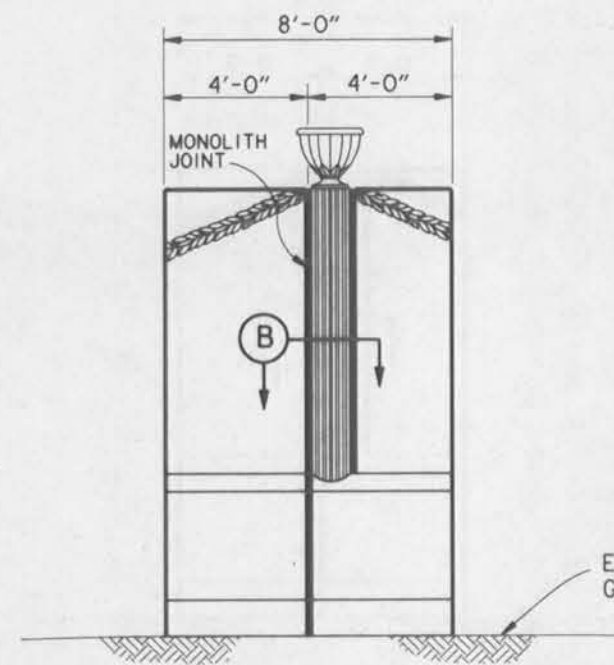
THIS PLAN ACCOMPANIES
MODIFICATION 0000#
TO CONTRACT NUMBER
DACW29-93-C-0077

NOTES:

1. CONTRACTOR SHALL SUBMIT DRAWINGS SHOWING THE LOCATION OF ALL JOINTS IN ALL FORMS USED FOR CONSTRUCTION FOR PRIOR APPROVAL.
2. ALL EXPOSED SURFACES SHALL BE FINISHED BY COATING WITH CEMENTITIOUS PAINT, SUCH AS "THOROSEAL" BY STANDARD DRY WALL PRODUCTS OR EQUAL, (FED. SPEC. AA-1555 '81) TO A DEPTH OF 1'-0" BELOW FINAL GRADE. A COLOR, BEIGE, IS TO BE ADDED TO THE COATING.
3. OMIT CHAMFERS ON ALL HORIZONTAL CONSTRUCTION JOINTS.



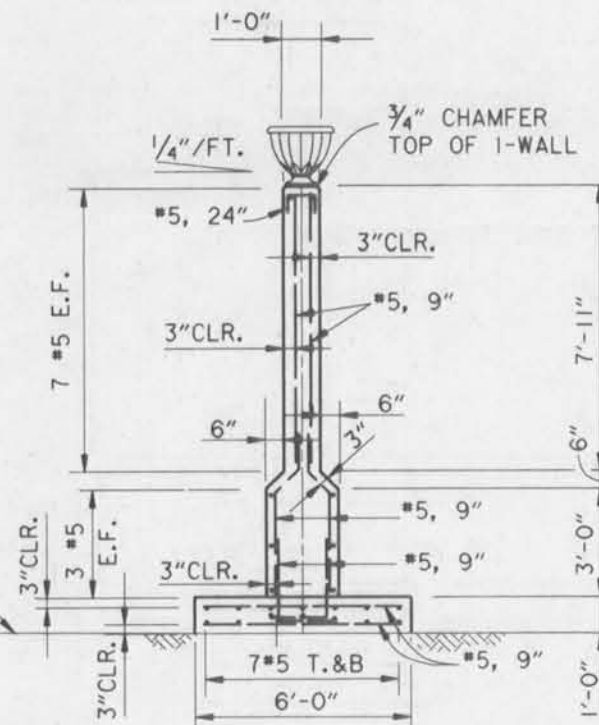
SECTION A
3/4" = 1'-0"



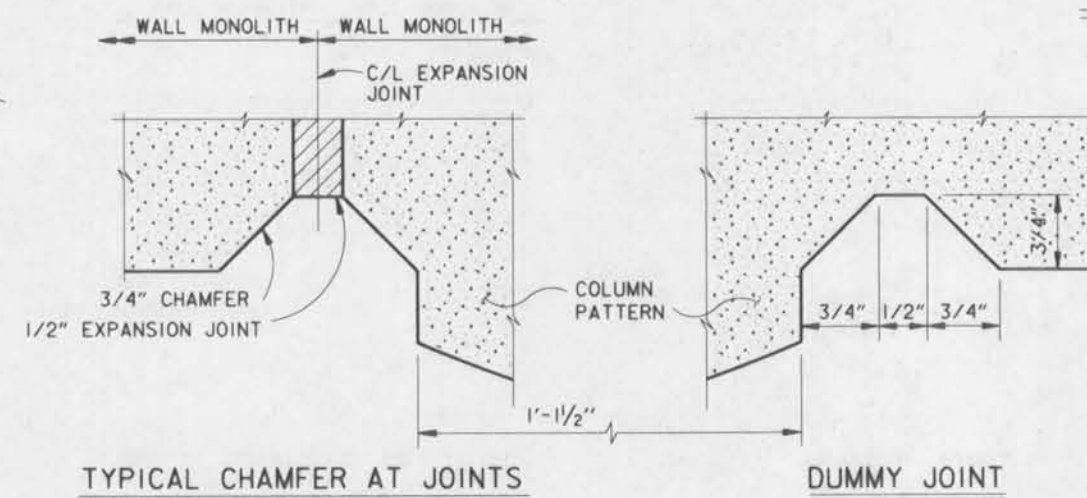
PROTECTED SIDE ELEVATION
CLASS "A" CEMENTITIOUS FINISH TO BE APPLIED TO SURFACES AS REQUIRED FOR "1"-WALL

"1"-WALL MOCK-UP

3/8" = 1'-0"



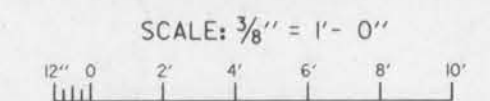
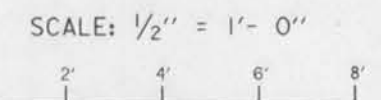
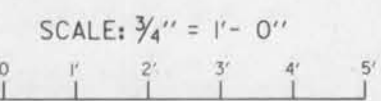
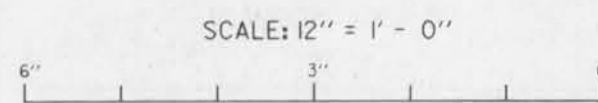
WALL SECTION



TYPICAL CHAMFER AT JOINTS

DUMMY JOINT

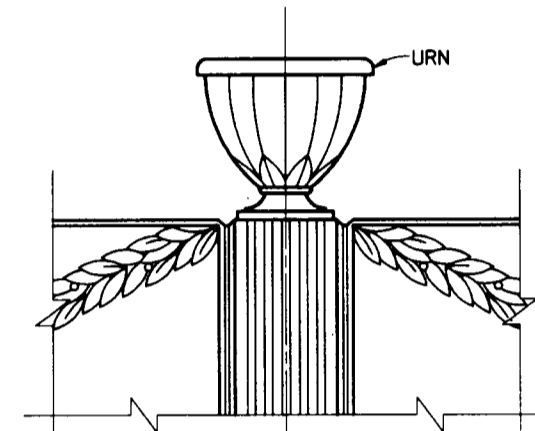
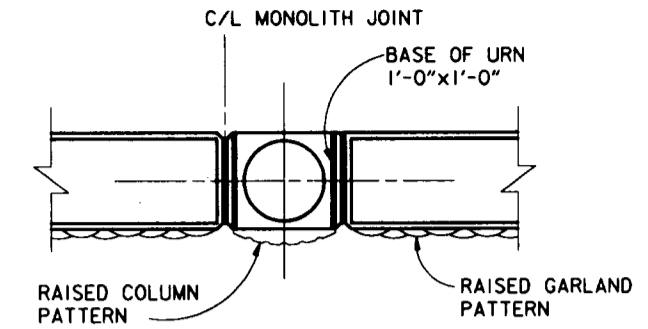
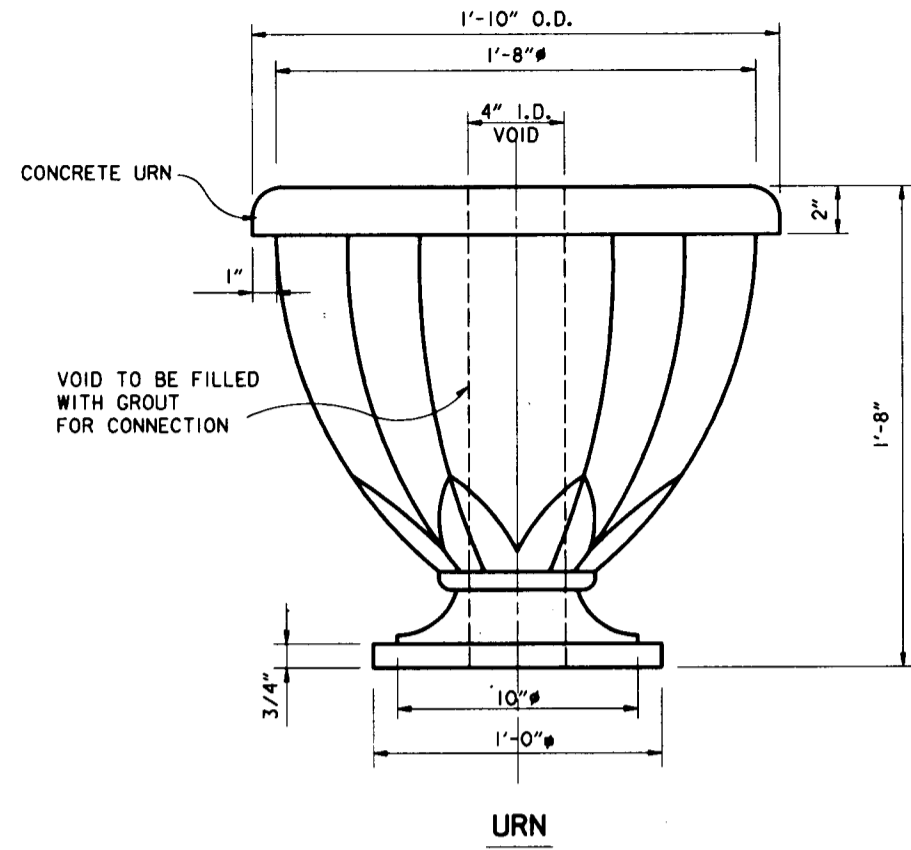
SECTION B
FULL SIZE



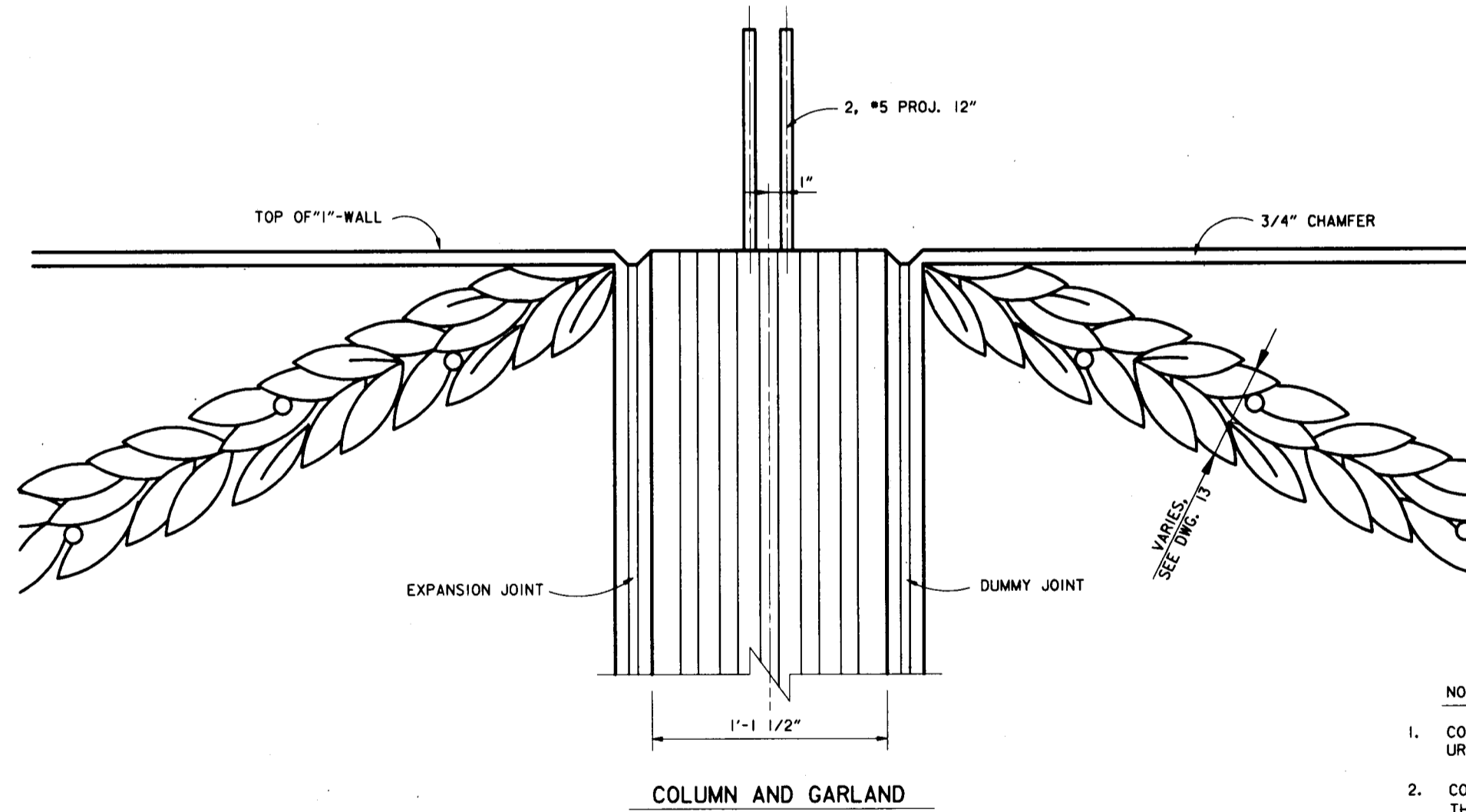
SYMBOL	DESCRIPTION	DATE	APPROVED
△	MODIFIED DUMMY JOINT LENGTH, MOD. NO. 5	12-14-93	M.D.
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN			
NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C.			
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE; B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
"1"-WALL ARCHITECTURAL TREATMENT			
DESIGNED BY: V. PANNELL	DATE: FEB. 1993	PLOT SCALE: 24	PLOT DATE: MARCH 1993
DRAWN BY: K.A. WOTALA	CADD FILE: 11-D13	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042	DWG. 13 OF 24	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			



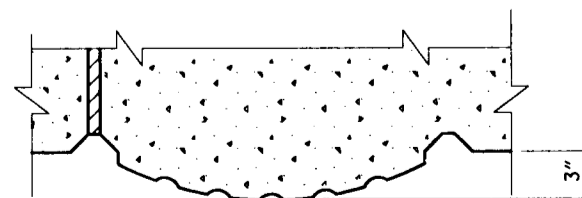
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ASSEMBLED VIEWS
SCALE: 1" = 1'-0"



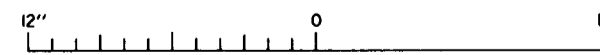
DETAIL VIEWS
SCALE: 3" = 1'-0"



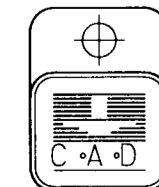
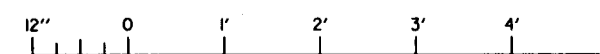
NOTES:

1. CONTRACTOR WILL BE FURNISHED WITH MOLDS OF THE URN, COLUMN AND GARLAND SHAPES BY THE GOVERNMENT.
2. CONTRACTOR SHALL MAKE REQUIRED FORMS AND FORM LINERS USING THE MOLDS SUPPLIED BY THE GOVERNMENT.
3. URNS TO BE PRECAST AND INSTALLED ONTO BARS WHICH PROJECT FROM THE TOP OF "T"-WALL. FILL VOID IN URN WITH GROUT TO CONNECT URN TO "T"-WALL.

SCALE: 3" = 1'-0"

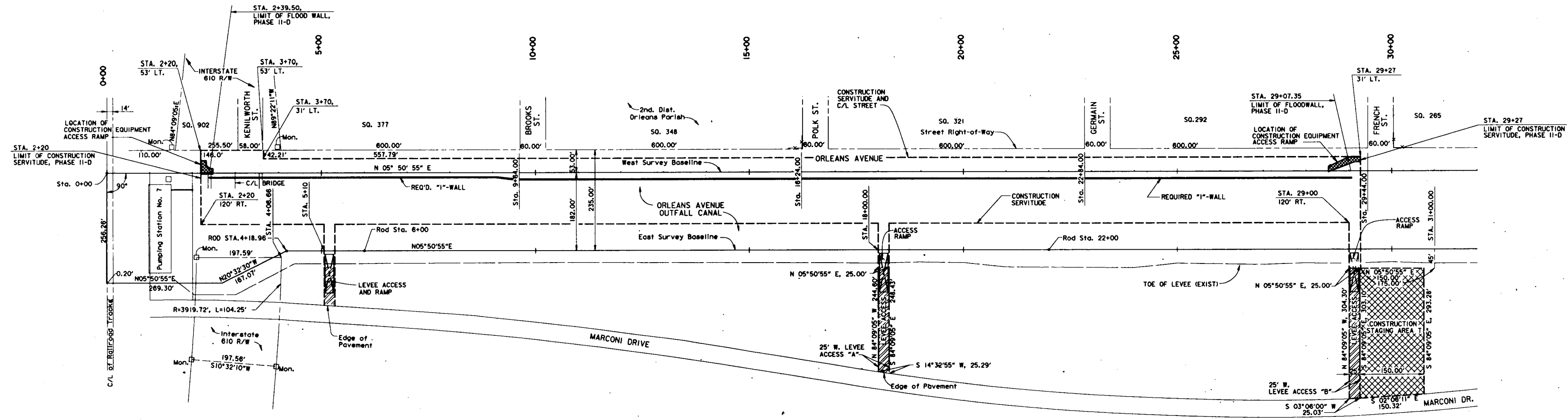


SCALE: 1" = 1'-0"



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
"1"-WALL ARCHITECTURAL TREATMENT			
DESIGNED BY: E. ALFEREZ	DATE: FEB., 1993	PLOT SCALE: 4	PLOT DATE: MARCH 1993
DRAWN BY: K.A. WOJITALA	CADD FILE: 11-D13A	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042	DWG. 130 OF 24	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			

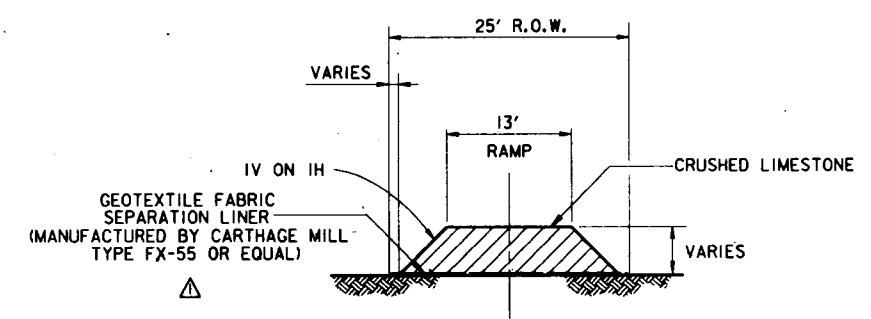
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PLAN

SCALE: 1" = 100'

NOTE:
ALL "STA" CALL OUTS REFER TO WEST SURVEY BASELINE (W.B.) OR EAST SURVEY BASELINE (E.B.). THEY ARE EQUAL.



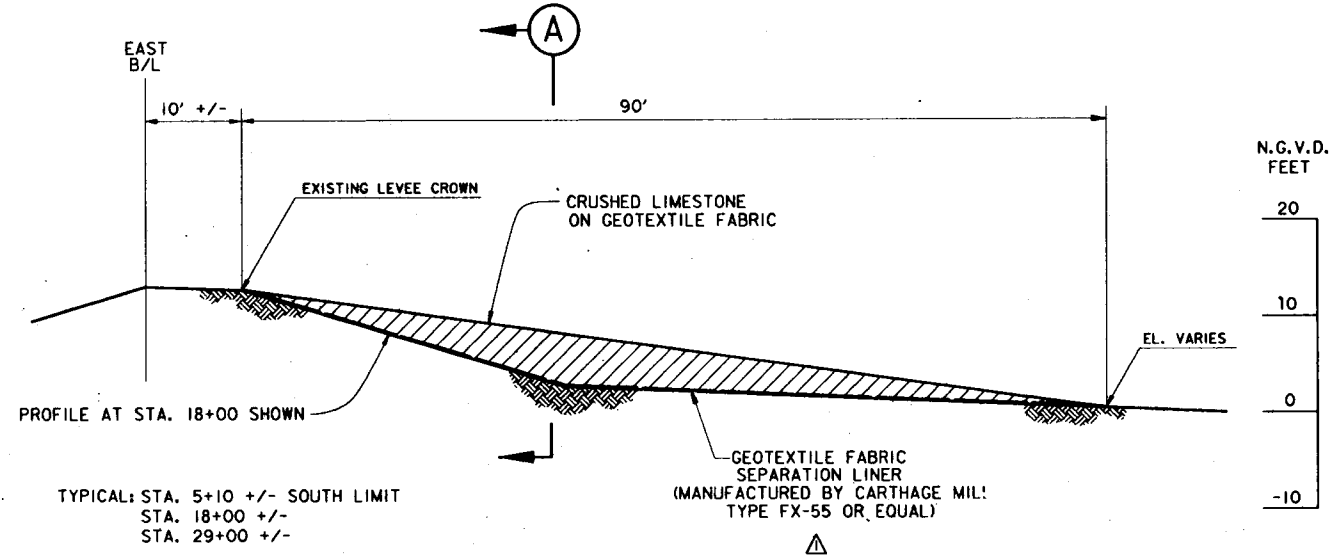
SECTION A
SCALE: 1" = 10'

LEGEND

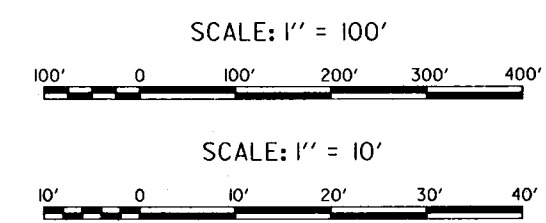
- RIGHT-OF-WAY
- CONSTRUCTION SERVITUDE LIMITS
- BASELINE

NOTES:

1. EXISTING TREES IN THE WAY OF STAGING AREAS AND LEVEE ACCESS SHALL BE REMOVED BY CONTRACTOR. TREES ALONG MARCONI DRIVE IN THE WAY OF STAGING AREAS AND LEVEE ACCESS SHALL BE TRIMMED AS REQUIRED BY THE CONTRACTOR. THESE TREES MAY BE REMOVED ONLY IF APPROVED BY THE COR. SEE C2B-4.6.3.
2. AREAS USED FOR CONSTRUCTION STAGING SHALL BE RESTORED TO EXISTING PROFILES AND FERTILIZED AND SEEDING AFTER UTILIZATION IS COMPLETED.
3. LEVEE AREAS USED FOR ACCESS RAMPS SHALL BE RESTORED TO ORIGINAL DESIGN SECTION AND FERTILIZED AND SEEDING AFTER RAMP MATERIAL IS REMOVED.
4. THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN A TEMPORARY SAFETY FENCE AROUND THE CONSTRUCTION STAGING AREAS AND LEVEE ACCESS WHICH ARE USED. SEE H-9 g.



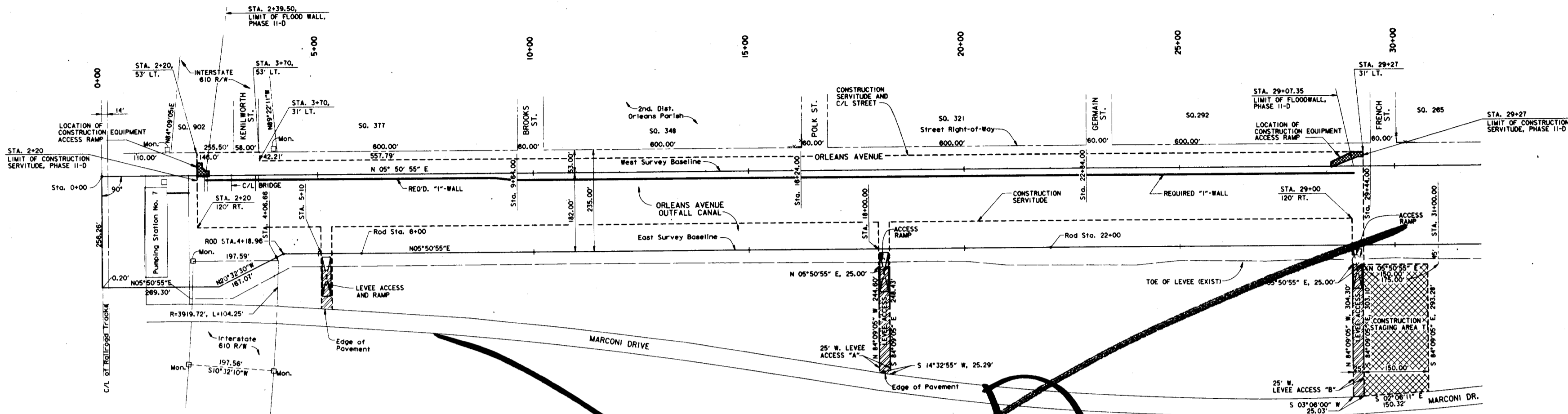
ACCESS RAMP DETAIL
SCALE: 1" = 10'



CHANGED TYPE GEOTEXTILE FABRIC, AMENDMENT NO. 1.	5-11-93	M.D.
REVISIONS		
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA		
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA	DESIGN ENGINEERING, INC. 3330 W. ESPERANDE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA		
RIGHTS-OF-WAY AND STAGING AREA		
DESIGNED BY: T.M.SMITH	DATE: FEB. 1993	PLOT SCALE: 100
DRAWN BY: G.F.GETCHER	CADD FILE: r11-D15	PLOT DATE: MAY 1993
CHECKED BY: T.M.SMITH	SOLICITATION NO. DACW29-93-B-0042	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		DWG. 15 OF 24

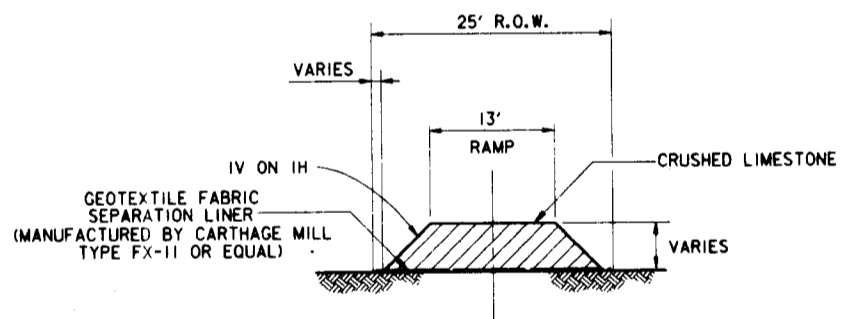


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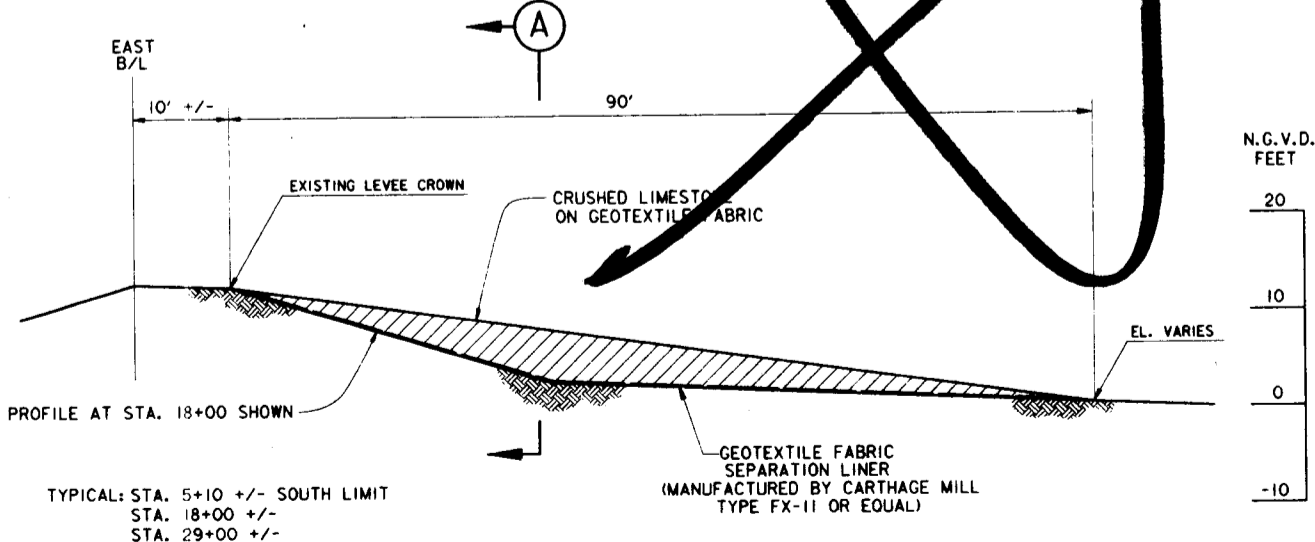


PLAN
SCALE: 1" = 100'

NOTE:
ALL "STA" CALL OUTS REFER TO WEST SURVEY BASELINE (W.B.) OR EAST SURVEY BASELINE (E.B.) IF THEY ARE EQUAL.



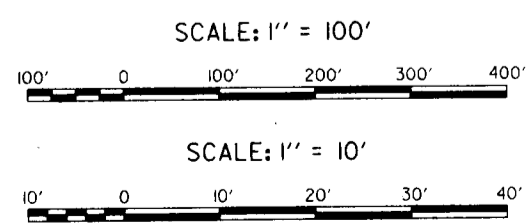
SECTION A
SCALE: 1" = 10'



ACCESS RAMP DETAIL
SCALE: 1" = 10'

NOTES:

- EXISTING TREES IN THE WAY OF STAGING AREAS AND LEVEE ACCESS SHALL BE REMOVED BY CONTRACTOR. TREES ALONG MARCONI DRIVE IN THE WAY OF STAGING AREAS AND LEVEE ACCESS SHALL BE TRIMMED AS REQUIRED BY THE CONTRACTOR. THESE TREES MAY BE REMOVED ONLY IF APPROVED BY THE COR. SEE C2B-4.6.3.
- AREAS USED FOR CONSTRUCTION STAGING SHALL BE RESTORED TO EXISTING PROFILES AND FERTILIZED AND SEEDDED AFTER UTILIZATION IS COMPLETED.
- LEVEE AREAS USED FOR ACCESS RAMPS SHALL BE RESTORED TO ORIGINAL DESIGN SECTION AND FERTILIZED AND SEEDDED AFTER RAMP MATERIAL IS REMOVED.
- THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN A TEMPORARY SAFETY FENCE AROUND THE CONSTRUCTION STAGING AREAS AND LEVEE ACCESS WHICH ARE USED. SEE H-9 g.



LEGEND

- RIGHT-OF-WAY
- CONSTRUCTION SERVITUDE LIMITS
- BASELINE

REVISIONS			
SYMBOL	DESCRIPTION	DATE	APPROVED
<p>U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA</p> <p>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</p> <p>DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002</p> <p>LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE 11-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA</p> <p>RIGHTS-OF-WAY AND STAGING AREA</p>			
DESIGNED BY: T.M.SMITH	DATE: FEB., 1993	PLOT SCALE: 100	PLOT DATE: MARCH 1993
DRAWN BY: G.F.GETCHER	CHECKED BY: T.M.SMITH	CADD FILE: 11-D15	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DESIGN ENGINEER	DWG. 15 OF 24



Safety is a Part of Your Contract

W.B. STA.4+36, 23'LT.

LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Orleans Levee District, Orleans Avenue Outfall Canal
O.L.B. Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, La.
Design Engineering, Inc. Metairie, Louisiana

Boring No. 2 Soil Technician: George Hardee Date 21 September 1985
Ground Elev. -1.70 Datum NGVD Gr. Water Depth

Sample No.	SAMPLE DEPTH (Feet)		DEPTH STRATUM (Feet)		VISUAL CLASSIFICATION	STANDARD PENETRATION TEST
	From	To	From	To		
			0.0	0.3	Asphalt w/gravel	
			0.3	1.0		
1	1.0	2.5	1.0	2.5	Dense tan fine sand	11 36
2	5.5	7.0	2.5	7.0	Wood	2 7
3	8.5	9.0	7.0	9.0	Medium stiff gray clay w/sand pockets & roots	
4	9	10.5	9.0		Dense gray fine sand	2 30
5	11.5	13.0	13.5		Ditto	8 45
6	14.0	15.5	13.5	17.0	Very dense gray fine sand	12 50-9"
7	18.5	20.0	17.0	22.0	Dense gray fine sand	5 31
8	23.5	25.0	22.0		Very dense gray fine sand	11 50-8"
9	28.5	30.0			Ditto	14 50-9"
10	33.5	35.0	37.0		Ditto	14 50-8"
11	38.5	40.0	37.0	41.0		9 18
12	43.0	44.0	41.0	44.0	Medium stiff gray sandy clay w/shells & large sand pockets	
13	44.0	45.5	44.0	48.5	Medium dense gray silty sand	1 25
14	48.5	50.0	48.5	50.0	Medium stiff gray clay w/sand pockets & shells	4 3

W.B. STA.9+00, 23'LT.

LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Orleans Levee District, Orleans Avenue Outfall Canal
O.L.B. Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, La.
Design Engineering, Inc. Metairie, Louisiana

Boring No. 4 Soil Technician: R. Elkins Date 21 September 1985
Ground Elev. -1.54 Datum NGVD Gr. Water Depth

Sample No.	SAMPLE DEPTH (Feet)		DEPTH STRATUM (Feet)		VISUAL CLASSIFICATION	STANDARD PENETRATION TEST
	From	To	From	To		
			0.0	0.5	Asphalt	
			0.5	1.0	Medium compact tan & white sand & shells	
1	1.5	2.5	1.0	3.0	Medium stiff gray & tan clay w/miscellaneous fill	
2	4.0	5.0	3.0	6.0	Soft gray clay w/organic matter & roots	
3	6.0	7.5	6.0		Dense gray sand	5 34
4	8.5	10.0	11.0		Ditto	8 34
5	11.0	12.5	11.0		Very dense gray fine sand	12 50-10"
6	13.5	15.0	18.5		Ditto	26 50-5
7	18.5	20.0	18.5	23.5	Dense gray sand	10 35
8	23.5	25.0	23.5		Very dense gray sand w/shell fragments	19 50-10"
9	28.5	30.0			Ditto	25 50-8"
10	33.5	35.0	38.5		Ditto	15 50-8"
11	38.5	40.0	38.5	43.5	Medium dense gray sand w/clay layers	5 16
12	43.5	45.0	43.5	48.5	Dense gray sand	12 41
13	48.5	50.0	48.5	50.0	Very soft gray clay w/sand layers	2 4

W.B. STA.14+17, 4'RT.

LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Orleans Levee District, Orleans Avenue Outfall Canal
O.L.B. Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, La.
Design Engineering, Inc. Metairie, Louisiana

Boring No. 6 Soil Technician: A. J. Mayeux Date 21 September 1985
Ground Elev. -5.80 Datum NGVD Gr. Water Depth

Sample No.	SAMPLE DEPTH (Feet)		DEPTH STRATUM (Feet)		VISUAL CLASSIFICATION	STANDARD PENETRATION TEST
	From	To	From	To		
1	2.0	3.0	0.0	5.0	Medium stiff brown & gray clay w/sand shell fragments & gravel (fill)	
2	5.0	6.0	5.0	8.0	Soft brown & gray fissured clay w/sand pockets	
3	8.0	9.0	8.0	10.0	Soft dark gray clay w/sand pockets & organic matter	
			10.0	11.0	Humus & miscellaneous fill	
4	11.0	12.0	11.0	14.0	Very soft gray clay w/wood, roots & organic matter	
5	14.0	15.5	14.0	16.0	Medium dense gray sand w/wood & organic matter	2 28
6	16.5	18.0	16.0		Medium dense gray sand w/shell fragments	4 10
7	19.0	20.5	23.0		Ditto	6 22
8	23.5	25.0	23.0		Dense gray sand w/shell fragments	15 46
9	28.5	30.0			Ditto	11 31
10	33.5	35.0			Ditto	10 34
11	38.5	40.0	41.0		Ditto	5 33
12	43.5	45.0	41.0		Medium dense gray sand w/shell fragments	6 19
13	48.5	50.0	50.0		Ditto	4 19

W.B. STA.18+67, 24.5'LT.

LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Orleans Levee District, Orleans Avenue Outfall Canal
O.L.B. Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, La.
Design Engineering, Inc. Metairie, Louisiana

Boring No. 8 Soil Technician: R. Elkins Date 19 September 1985
Ground Elev. -1.77 Datum NGVD Gr. Water Depth

Sample No.	SAMPLE DEPTH (Feet)		DEPTH STRATUM (Feet)		VISUAL CLASSIFICATION	STANDARD PENETRATION TEST
	From	To	From	To		
			0.0	0.5	Asphalt	
			0.5	1.0	Medium compact tan & white sand & shells	
1	1.0	2.0	1.0	3.0	Soft to medium stiff gray & brown clay w/organic clay layers, roots & humus	
2	4.5	5.5	3.0	8.0	Very soft brown & gray clay w/roots & organic matter	
3	8.5	10.0	8.0	11.0	Dense gray sand w/roots	3 36
4	11.0	12.5	11.0		Medium dense gray sand	7 28
5	13.5	15.0	16.0		Ditto	4 19
6	16.0	17.5	16.0	18.5	Very dense gray sand	15 50-9"
7	18.5	20.0	18.5	23.5	Medium dense gray sand	6 28
8	23.5	25.0	23.5	26.5	Very dense gray sand	14 50-8"
9	28.5	30.0	28.5	33.5	Dense gray sand w/shell fragments	10 43
10	33.5	35.0	33.5	36.5	Loose gray sand w/shell fragments	5 8
11	38.5	40.0	38.5	43.5	Medium dense gray sand w/shell fragments	8 22
12	43.5	45.0	43.5		Medium stiff gray clay w/shell fragments & sand pockets	1 2
13	48.0	49.0	50.0		Medium stiff gray clay w/shell fragments	

W.B. STA.24+94, 2'LT.

LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Orleans Levee District, Orleans Avenue Outfall Canal
O.L.B. Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, La.
Design Engineering, Inc. Metairie, Louisiana

Boring No. 10 Soil Technician: A. J. Mayeux Date 21 September 1985
Ground Elev. -5.80 Datum NGVD Gr. Water Depth

Sample No.	SAMPLE DEPTH (Feet)		DEPTH STRATUM (Feet)		VISUAL CLASSIFICATION	STANDARD PENETRATION TEST
	From	To	From	To		
1	2.0	3.0	0.0	4.5	Medium stiff brown & gray clay w/silty sand pockets	
2	5.0	6.0	4.5	8.0	Very soft to soft brown clay w/humus & sand pockets	
3	8.0	9.0	8.0	10.0	Very soft dark gray clay w/organic matter & sand pockets	
4	11.0	12.0	10.0		Very soft brown & gray clay w/organic matter	
5	15.0	16.0	18.0		Very soft brown & gray clay w/humus & roots	
6	18.5	20.0	18.0		Medium dense gray sand	2 16
7	21.0	22.5			Ditto	5 18
8	23.5	25.0			Medium dense gray sand w/shell fragments	3 15
9	26.0	27.5			Ditto	3 15
10	28.5	30.0			Ditto	4 22
11	33.5	35.0			Ditto	6 18
12	38.5	40.0			Ditto	6 20
13	43.5	45.0	48.0		Ditto	8 22
14	48.5	50.0	48.0	50.0	Soft gray w/sand pockets & shell fragments	3 3

W.B. STA.28+38, 24'LT.

LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Orleans Levee District, Orleans Avenue Outfall Canal
O.L.B. Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, La.
Design Engineering, Inc. Metairie, Louisiana

Boring No. 12 Soil Technician: R. Elkins Date 20 September 1985
Ground Elev. -3.30 Datum NGVD Gr. Water Depth

Sample No.	SAMPLE DEPTH (Feet)		DEPTH STRATUM (Feet)		VISUAL CLASSIFICATION	STANDARD PENETRATION TEST
	From	To	From	To		
			0.0	0.5	Asphalt	
1	3.0	4.5	0.5	5.0	Loose gray sand w/wood	10
2	5.0	6.5	5.0		Very soft gray clay w/sand	1 2
			7.5	8.5	Ditto	
3	10.5	11.5	12.0		Ditto	
4	12.0	13.5	12.0		Loose gray sand w/wood	1 7
5	14.5	16.0	17.0		Ditto	1 7
6	17.5	18.5	17.0	19.5	Medium dense gray sand	3 12
7	19.5	21.0	19.5	23.5	Loose gray sand	2 8
8	23.5	25.0	23.5	28.5	Medium dense gray sand	5 28
9	28.5	30.0	28.5	33.5	Dense gray sand	10 37
10	33.5	35.0	33.5	38.5	Medium dense gray sand w/shell fragments	2 18
11	38.5	40.0	38.5	41.5	Soft gray sandy clay	7 6
12	43.0	44.0	41.5		Medium stiff gray clay w/sand pockets & shell fragments	
13	48.0	49.0	50.0		Ditto	

W.B. STA.31+38, 28'LT.

LOG OF BORING
EUSTIS ENGINEERING COMPANY
SOIL AND FOUNDATION CONSULTANTS
METAIRIE, LA.

Name of Project: Orleans Levee District, Orleans Avenue Outfall Canal
O.L.B. Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, La.
Design Engineering, Inc. Metairie, Louisiana

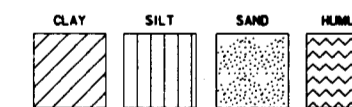
Boring No. 14 Soil Technician: A. J. Mayeux Date 20 September 1985
Ground Elev. -3.30 Datum NGVD Gr. Water Depth

Sample No.	SAMPLE DEPTH (Feet)		DEPTH STRATUM (Feet)		VISUAL CLASSIFICATION	STANDARD PENETRATION TEST
	From	To	From	To		
			0.0	0.5	Asphalt	
			0.5	1.5	Sand & shell fill	
1	2.0	3.0	1.5	3.0	Soft black & gray clay w/organic matter, roots & shell fragments	
2	5.0	6.0	3.0	7.5	Very soft gray & black clay w/organic matter & roots	
3	8.0	9.0	7.5	10.0	Soft gray clay	
4	11.0	12.0	10.0	12.0	Very soft gray clay w/sand pockets	
5	12.0	13.5	12.0	15.0	Loose gray clayey sand w/shell fragments	1 5
6	15.0	16.5	15.0		Medium dense gray sand w/shell fragments	3 11
7	18.5	20.0			Ditto	7 19
8	21.0	22.5			Ditto	3 11
9	23.5	25.0	28.5		Ditto	5 16
10	28.5	30.0	28.5		Dense gray sand w/shell fragments	6 32
11	33.5	35.0			Ditto	10 48
12	38.5	40.0	41.0		Ditto	10 35
13	43.5	45.0	41.0		Medium stiff gray clay w/sand pockets & shell fragments	3 6
14	49.0	50.0	50.0		Ditto	

Notes:

- STANDARD PENETRATION TEST
*Number in first column indicates number of blows of 140-lb hammer dropped 30 in. required to seat 2-in. O.D. splitspoon sampler 6 in. Number in second column indicates number of blows of 140-lb. hammer dropped 30 in. required to drive 2-in. O.D. splitspoon sampler 1 ft. after seating 6 in.
- While these logs of borings are considered to be representative of subsurface conditions at its respective location on the date shown, it is not warranted that it is representative of subsurface conditions at other locations and times.

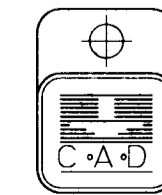
LEGEND



Predominant type shown heavy.
Modifying type shown light.

NOTE:
THE APPROXIMATE LOCATION OF THE SOIL BORINGS ARE SHOWN ON DWGS. 5 THROUGH 8.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002 LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA.2+39.00 TO STA.29+07.50) ORLEANS PARISH, LOUISIANA SOIL BORING LOGS			
DESIGNED BY: EUSTIS	DATE: FEB., 1993	PLOT SCALE: 1	PLOT DATE: MARCH 1993
DRAWN BY: K.C. REID	CHECKED BY: T.M. SMITH	CADD FILE: 11-016	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEER, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 16 OF 24	



Safety is a Part of Your Contract

UNIFIED SOIL CLASSIFICATION

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

NOTE: Soils possessing characteristics of two groups are designated by combinations of group symbols.

DESCRIPTIVE SYMBOLS

COLOR		CONSISTENCY FOR COHESIVE SOILS		MODIFICATIONS	
COLOR	SYMBOL	CONSISTENCY	COHESION IN LBS./SQ.FT. FROM UNCONFINED COMPRESSION TEST	MODIFICATION	SYMBOL
TAN	T	VERY SOFT	< 250	Traces	Tr
YELLOW	Y	SOFT	250-500	Fine	F
RED	R	MEDIUM	500-1000	Medium	M
BLACK	BK	STIFF	1000-2000	Coarse	C
GRAY	Gr	VERY STIFF	2000-4000	Concretions	cc
LIGHT GRAY	IGr	HARD	> 4000	Rootlets	rt
DARK GRAY	dGr			Lignite fragments	lg
BROWN	Br			Shale fragments	sh
LIGHT BROWN	lBr			Sandstone fragments	sds
DARK BROWN	dBr			Shell fragments	slf
BROWNISH-GRAY	brGr			Organic matter	o
GRAYISH-BROWN	gyBr			Clay strata or lenses	CS
GREENISH-GRAY	gnGr			Silt strata or lenses	SIS
GRAYISH-GREEN	gyGn			Sand strata or lenses	SS
GREEN	Gn			Sandy	S
BLUE	Bl			Gravelly	G
BLUE-GREEN	BlGn			Boulders	B
WHITE	Wh			Slickensides	SL
MOTTLED	Mot			Wood	Wd
				Oxidized	Ox

PLASTICITY CHART
For classification of fine-grained soils

NOTES:

FIGURES TO LEFT OF BORING UNDER COLUMN " W OR D₁₀"

Are natural water contents in percent dry weight

When underlined denotes D₁₀ size in mm *

FIGURES TO LEFT OF BORING UNDER COLUMNS " LL" AND " PL"

Are liquid and plastic limits, respectively

SYMBOLS TO LEFT OF BORING

∇ Ground-water surface and date observed

⊙ 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 test **

FW Denotes free water encountered in boring or sample

FIGURES TO RIGHT OF BORING

Are values of cohesion in lbs./sq.ft. from unconfined compression tests

In parenthesis 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

Where underlined with a solid line denotes laboratory permeability in centimeters per second of undisturbed sample

Where underlined with a dashed line denotes laboratory permeability in centimeters per second of sample remoulded to the estimated natural void ratio.

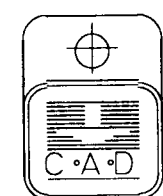
*The D₁₀ size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D₁₀.

**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.

TYPICAL NOTES:

- While the borings are representative of subsurface conditions at their respective locations and for their respective vertical reaches, local variations characteristic of the 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".
- Ground-water elevations shown on the boring logs represent ground-water surfaces encountered in such borings on the dates shown. Absence of water surface data on certain borings indicates that no ground-water data are available from the boring but does not necessarily mean that ground-water will not be encountered at the locations or within the vertical reaches of such borings.
- 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.
- Unless otherwise noted:
 - Undisturbed borings, indicated by the letter "U", are taken with a 5" I.D. Piston Type Sampler.
 - General type borings are taken with a 1 7/8" I.D. Tube Sampler and/or a 1 3/8" I.D. Split Spoon Sampler.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE 11-D (WEST SIDE) B/L STA. 2+39.00 TO STA. 29+07.50 ORLEANS PARISH, LOUISIANA			
SOIL BORING LEGEND			
DESIGNED BY: J. RICHARDS	DATE: FEB. 1993	PLOT SCALE: 1	PLOT DATE: MARCH 1993
DRAWN BY: U.S.A.C.E.	CHECKED BY: J. ROMERO	CADD FILE: 11-016A	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 16a OF 24	

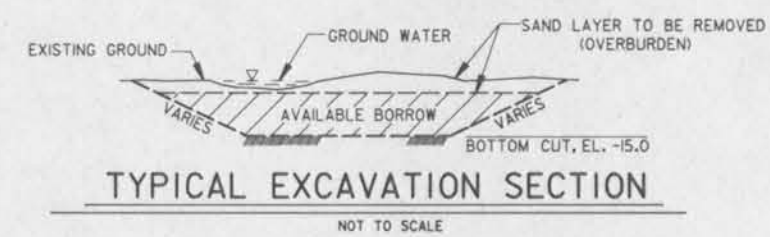
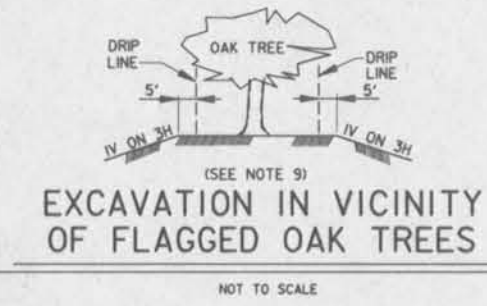
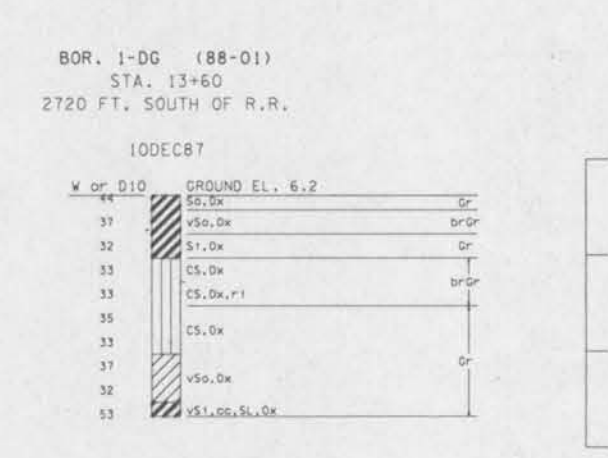
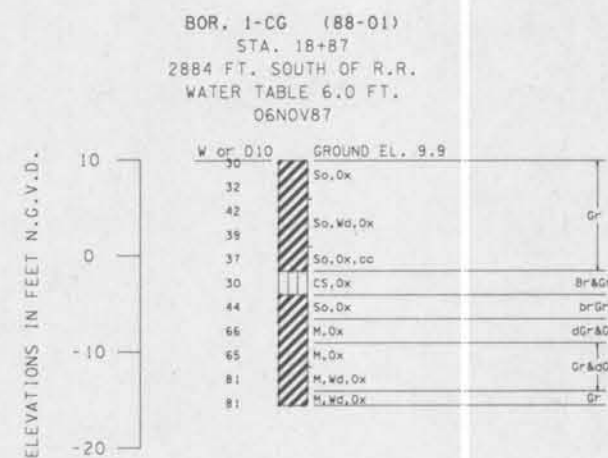
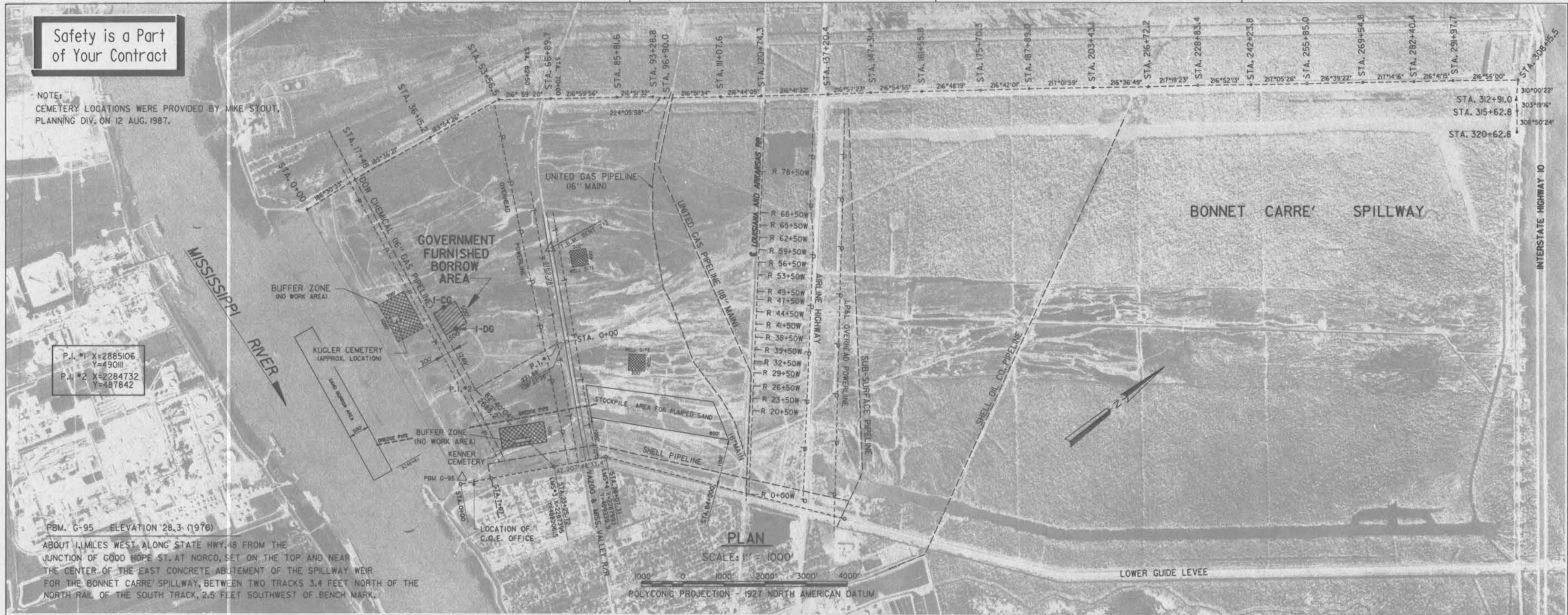


Safety is a Part of Your Contract

NOTE: CEMETERY LOCATIONS WERE PROVIDED BY MIKE STOUT, PLANNING DIV. ON 12 AUG. 1987.

P.I. #1 X=2885106
Y=490111
P.I. #2 X=2284732
Y=487842

PBM. G-95 ELEVATION 28.3 (1976)
ABOUT 1/2 MILES WEST ALONG STATE HWY. 48 FROM THE JUNCTION OF GOOD HOPE ST. AT NORCO, SET ON THE TOP AND NEAR THE CENTER OF THE EAST CONCRETE ABUTMENT OF THE SPILLWAY WEIR FOR THE BONNET CARRE' SPILLWAY, BETWEEN TWO TRACKS 3.4 FEET NORTH OF THE NORTH RAIL OF THE SOUTH TRACK, 2.5 FEET SOUTHWEST OF BENCH MARK.



- NOTES:**
- FOR GENERAL NOTES, SEE DWG. 2.
 - ACCESS TO THE BORROW PIT LOCATION FROM AIRLINE HIGHWAY SHALL BE BY EXISTING DIRT ROADS LOCATED THROUGHOUT THE SPILLWAY.
 - NO EXCAVATION WITHIN 100 FEET OF POWER POLES.
 - SAND OVERBURDEN SHALL BE STOCKPILED PARALLEL TO THE SPILLWAY GUIDE LEVEE.
 - THE GOVERNMENT HAS THE RIGHT TO REQUIRE THE CONTRACTOR TO MOVE OUT OF THE SPILLWAY WITH A 10 DAY NOTICE.
 - SIDE SLOPES OF BORROW PIT SHALL NOT EXCEED 1V ON 3H.
 - EXCAVATION BELOW EL. -15.0 FEET IS NOT REQUIRED; HOWEVER, IF THE BORROW MATERIAL IS ACCEPTABLE BELOW EL. -15.0 FEET AND THE CONTRACTOR ELECTS TO EXCAVATE DEEPER, THE CONTRACTOR MAY DO SO IF APPROVED BY CONTRACTING OFFICER.
 - EXCAVATION WITHIN THE BORROW AREA SHALL BEGIN AT THE MOST SOUTHERN END OF THE PIT AND SHALL PROGRESS FULL WIDTH AND DEPTH TOWARD THE NORTH END. THE CONTRACTOR SHALL BEGIN EXCAVATION OPERATIONS IN AREAS ADJACENT TO PREVIOUSLY EXCAVATED PITS.
 - PRIOR TO CONSTRUCTION, CERTAIN EXISTING OAK TREES IN THE BORROW AREA SHALL BE ADEQUATELY MARKED WITH FLAGGING BY THE CONTRACTING OFFICER TO REMAIN UNDISTURBED. EXCAVATION AROUND THESE MARKED TREES SHALL BE AS DETAILED ON THIS DRAWING.
 - IN THE EVENT THE BORROW AREA CONTAINS STANDING WATER, THE CONTRACTOR SHALL DEWATER THE AREA PRIOR TO CLEARING/GRUBBING AND EXCAVATING THE AREA.
 - THE GROUND WATER TABLE IS SEASONAL, I.E. VARIES WITH THE AMOUNT OF RAINFALL AND WITH THE MISSISSIPPI RIVER STAGES. THEREFORE, THE ELEVATION OF THE GROUND WATER TABLE ENCOUNTERED DURING CONSTRUCTION COULD BE DIFFERENT FROM THAT SHOWN ON THE BORING LOGS.

CH - Fat Clay
CL - Lean Clay
ML - Silt, Low Plasticity

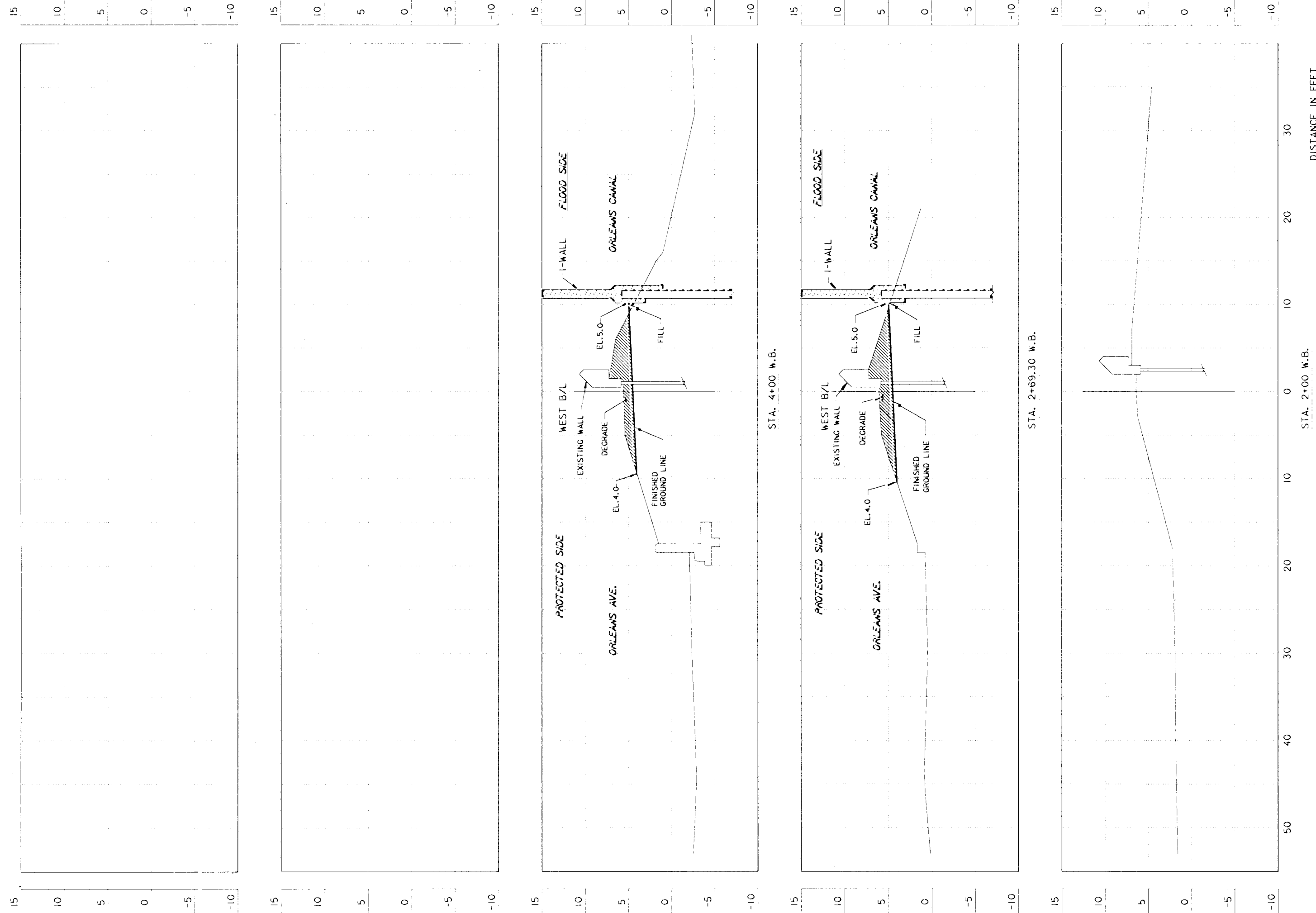
NOTE: BORINGS WERE TAKEN WITH A HAND AUGER OR SPLIT SPOON.
FOR SOIL BORING LEGEND, SEE DWG. 23A.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
BORROW AREA LOCATION			
DESIGNED BY: T.J.SMITH	DATE: FEB., 1993	PLOT SCALE: 1000	PLOT DATE: MARCH 1993
DRAWN BY: P.M.K.	CHECKED BY: T.J.SMITH	CADD FILE: II-D17	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		SOLICITATION NO. DACW29-93-B-0042	DWG. 17 OF 24

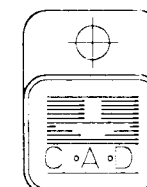
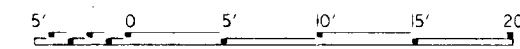



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ELEVATIONS IN FEET - N.G.V.D.



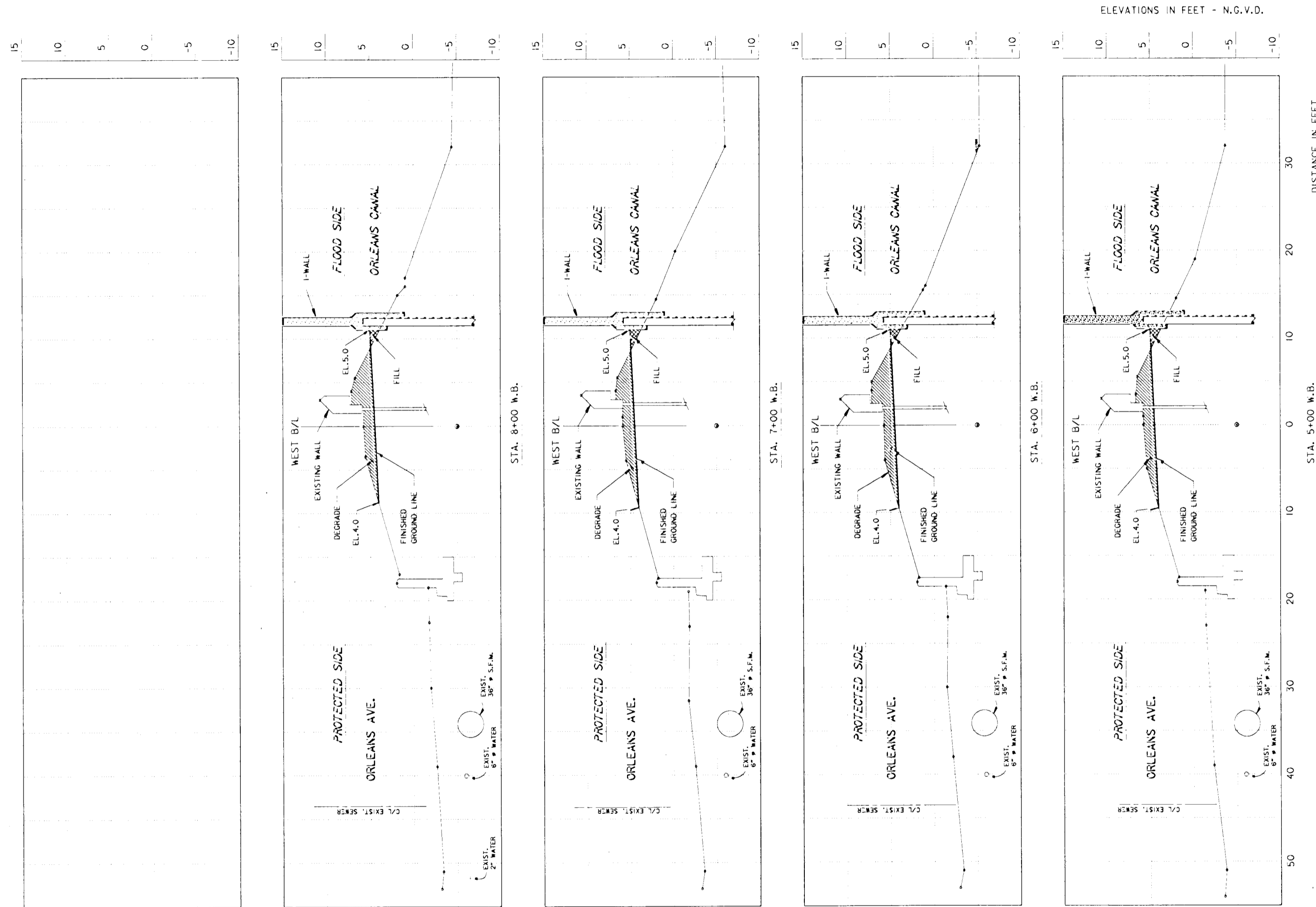
SCALE: 1" = 5'



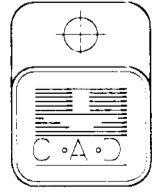
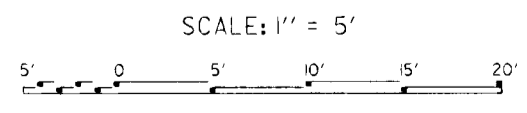
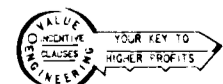
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE., S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA CROSS SECTIONS			
DESIGNED BY: J.C. NOGUEIRA	DATE: FEB., 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CHECKED BY: T.M. SMITH	CADD FILE: II-D.8	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	DESIGN ENGINEER	SOLICITATION NO. DAC#29-93-B-0042	DRG. 13 OF 24



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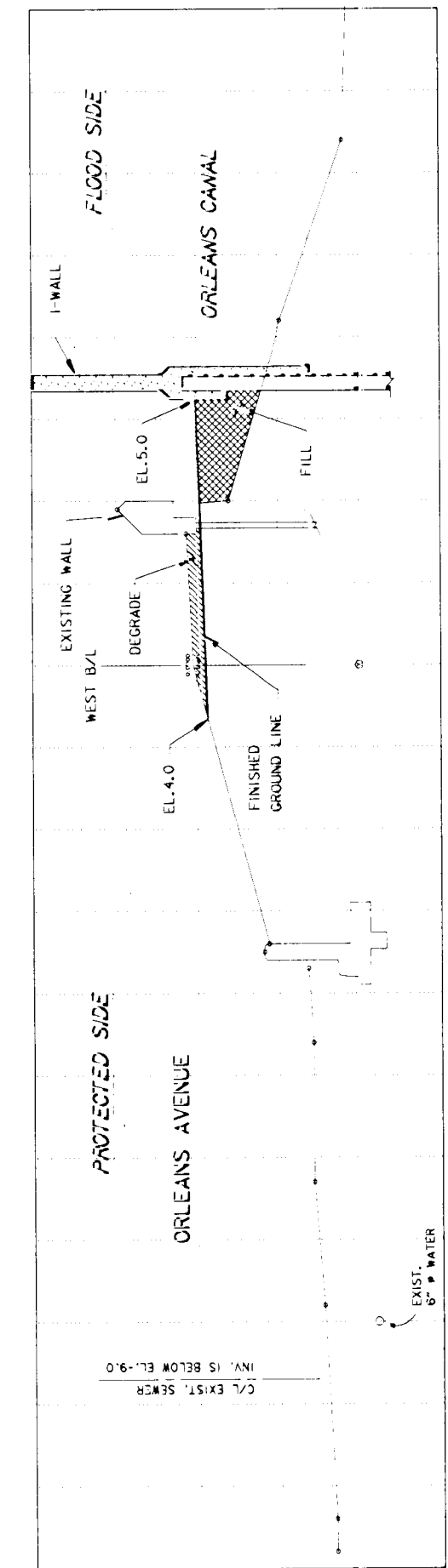


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA CROSS SECTIONS			
DESIGNED BY: M.C. NORDELLA	DATE: FEB., 1993	PLOT SCALE: 60	PLOT DATE: MARCH, 1993
DRAWN BY: C.K. CARRERA	CADD FILE: 11-D19	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEER, INC.	SOLICITATION NO. DACW29-93-B-0042	CWG. 19 OF 24



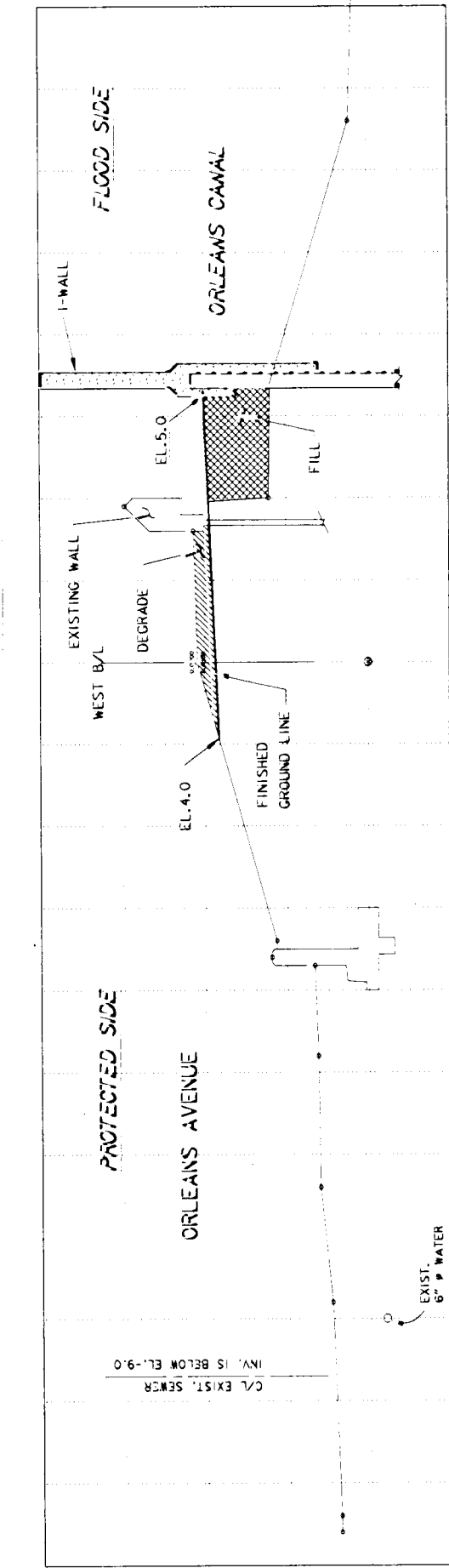
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ELEVATIONS IN FEET - N.C.V.D.
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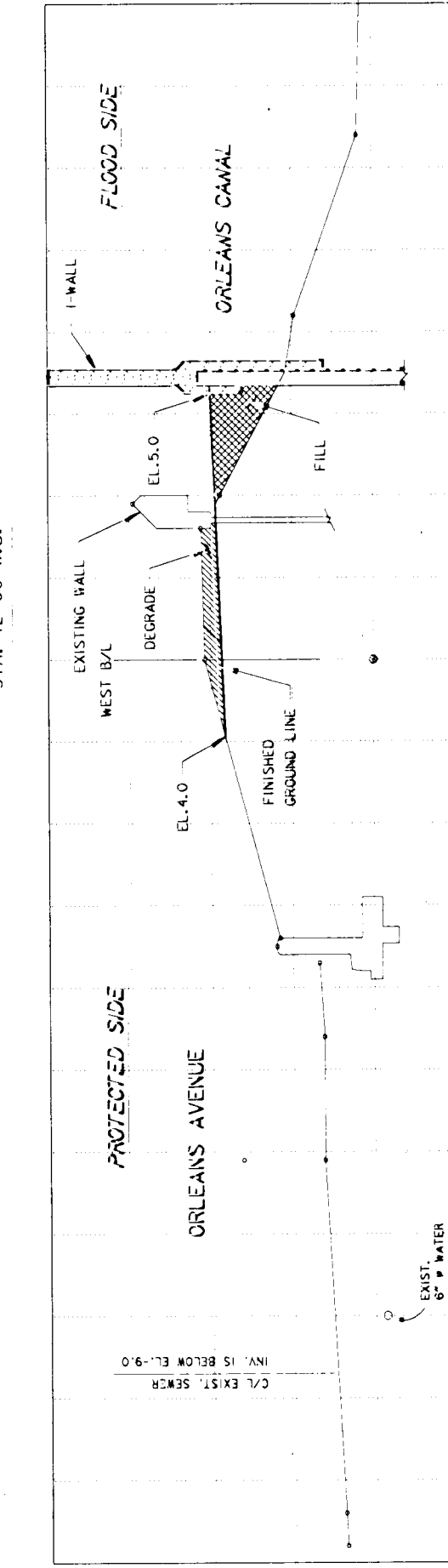
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ELEVATIONS IN FEET - N.C.V.D.
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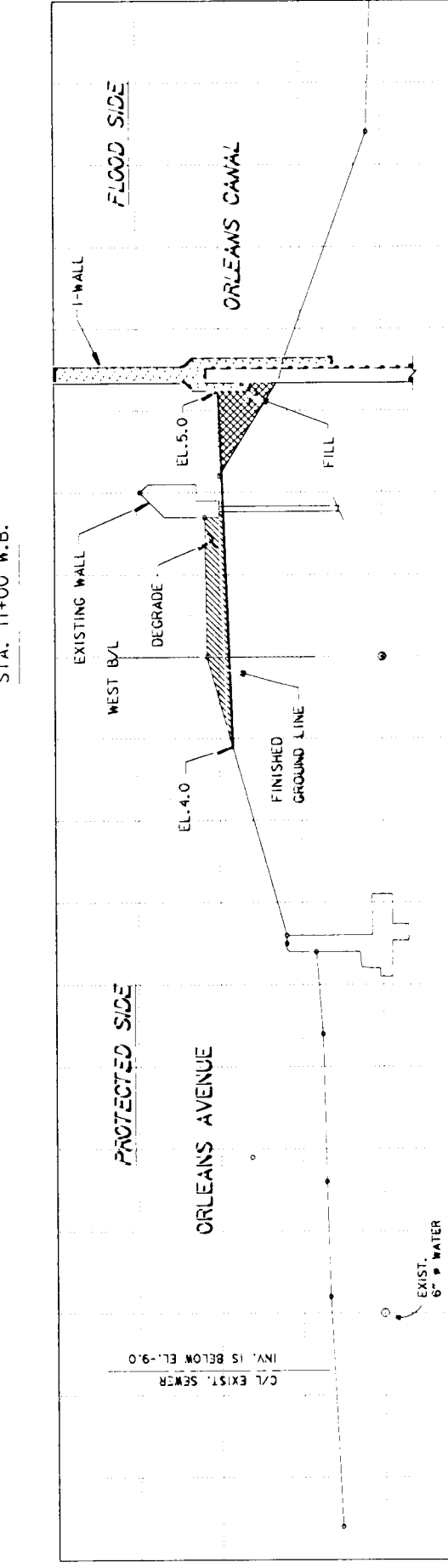
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ELEVATIONS IN FEET - N.C.V.D.
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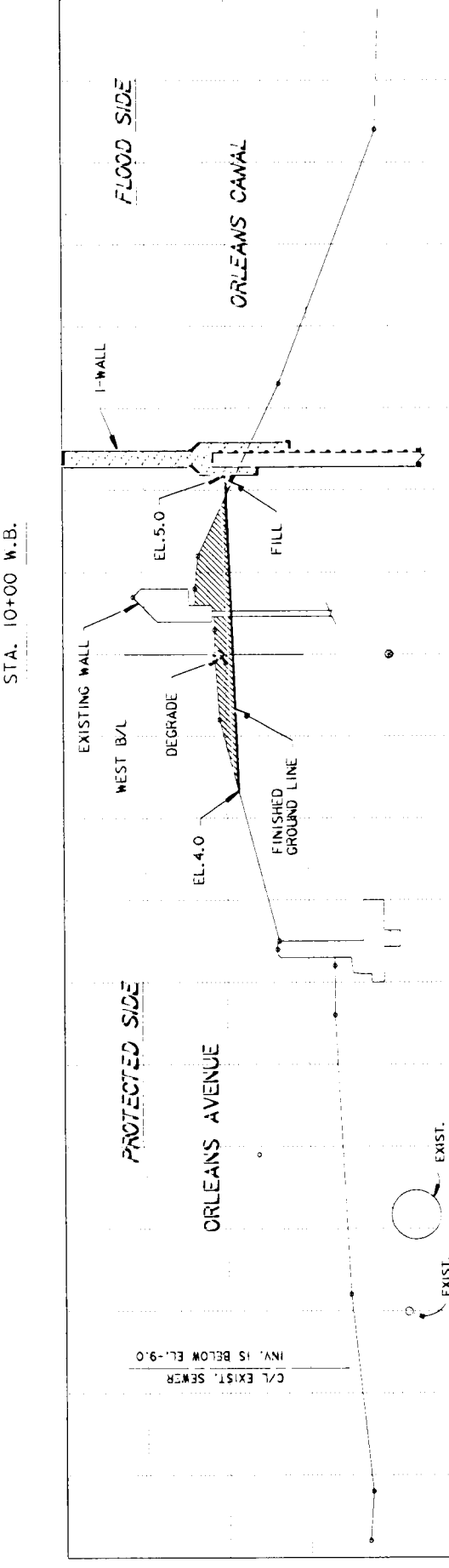
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ELEVATIONS IN FEET - N.C.V.D.
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ELEVATIONS IN FEET - N.C.V.D.
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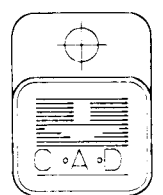
ELEVATIONS IN FEET - N.C.V.D.
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ELEVATIONS IN FEET - N.C.V.D.
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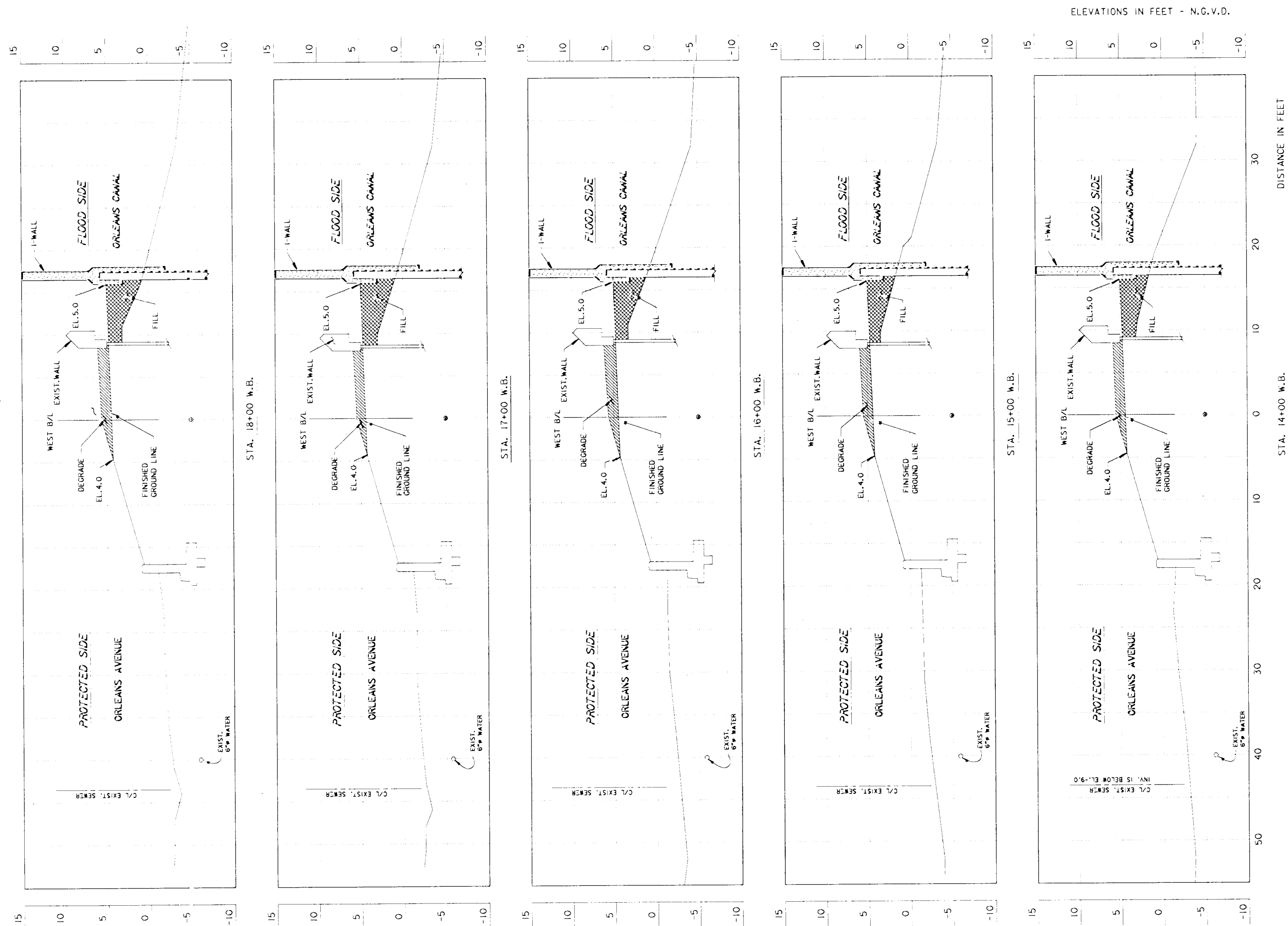
DISTANCE IN FEET
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20
30
40
50

SCALE: 1" = 5'

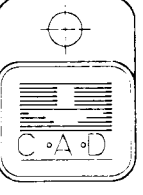
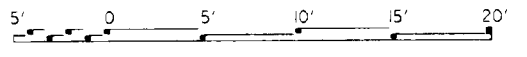


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONCHARTRAIN, LA, AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA			
CROSS SECTIONS			
DESIGNED BY: J.C. MOORE	DATE: FEB. 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPREIRA	CADD FILE: 1-220	FILE NO. H-4-40205	
CHECKED BY: T.W. SMITH	SOLICITATION NO. DAC#29-93-B-0042	DWG. 20 OF 24	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			

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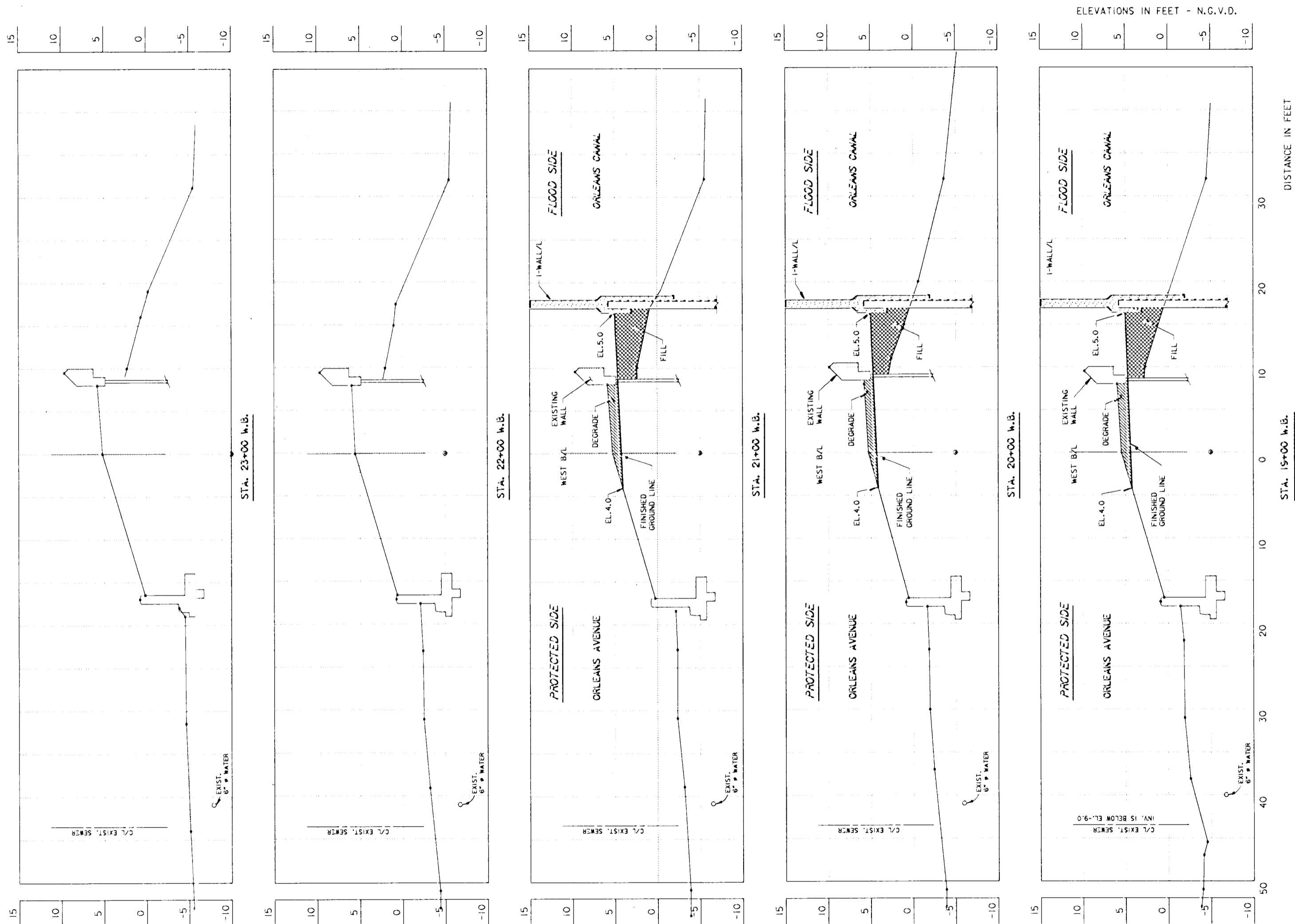
SCALE: 1" = 5'



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA CROSS SECTIONS			
DESIGNED BY: J.C. NOBLE, RA	DATE: FEB. 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CADD FILE: 1-221	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW93-B-0042	DWG. 21 OF 24	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			



Safety is a Part of Your Contract



SCALE: 1" = 5'

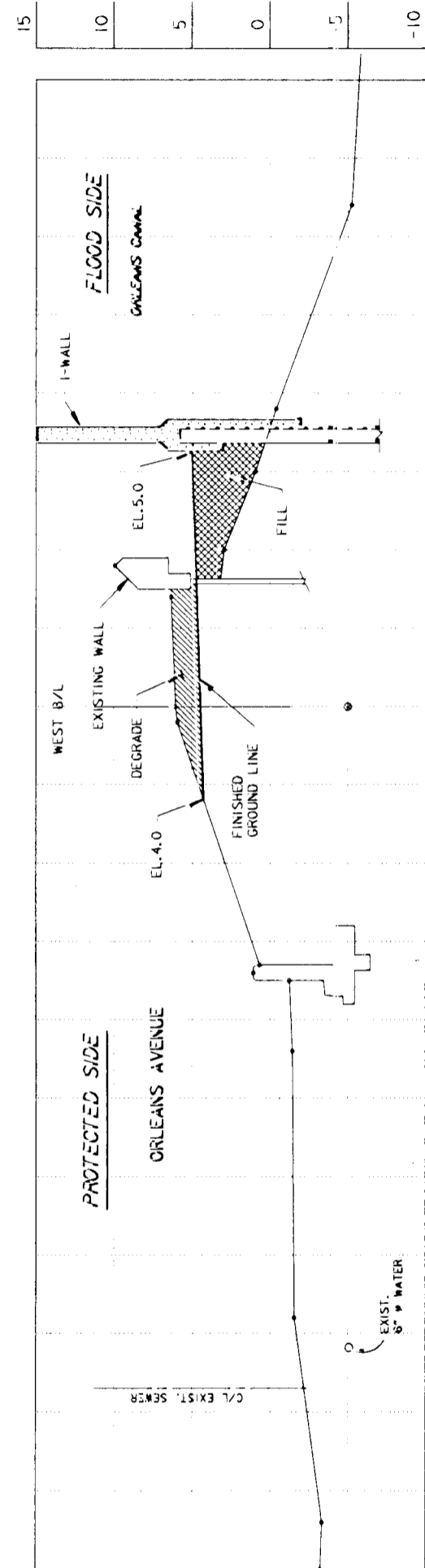


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE: B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA CROSS SECTIONS			
DESIGNED BY: J.C. NOGUEIRA	DATE: FEB. 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CARRERA	CADD FILE: 11-022	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042	CWO. 22 OF 24	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			

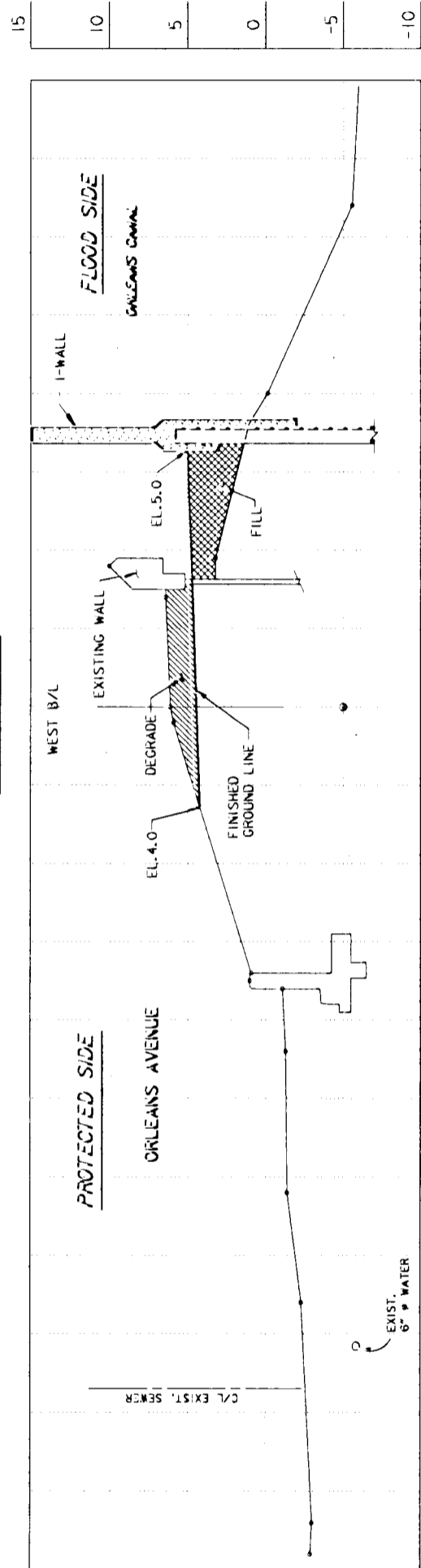


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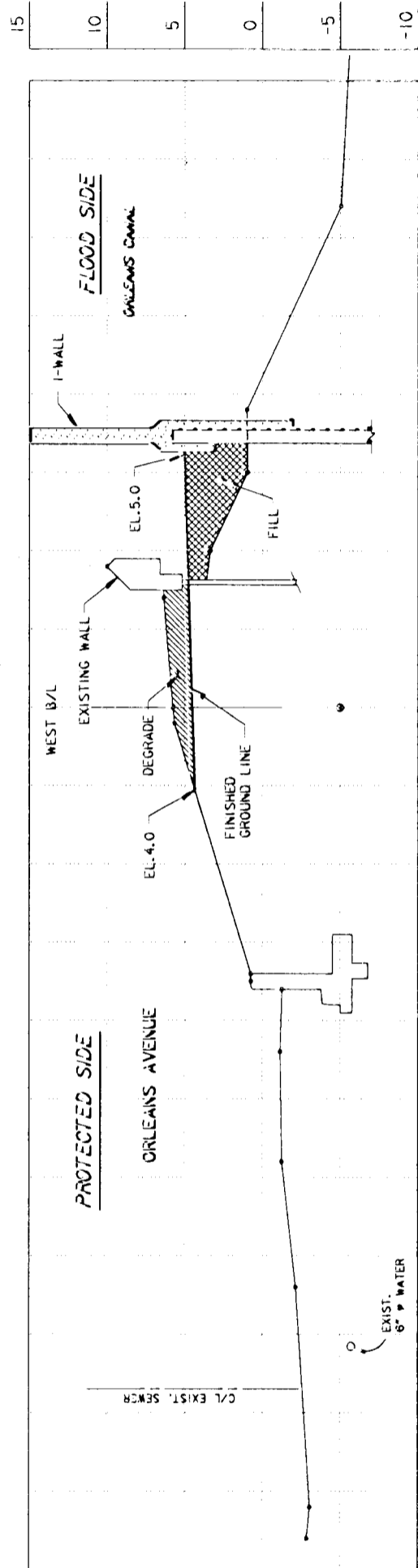
ELEVATIONS IN FEET - N.G.V.D.



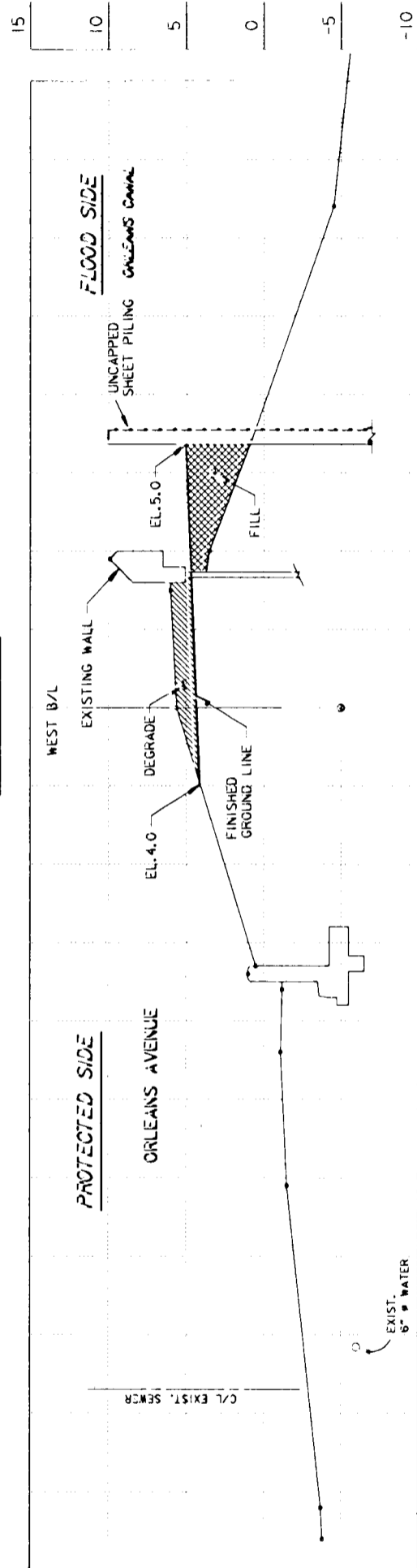
STA. 28+00 W.B.



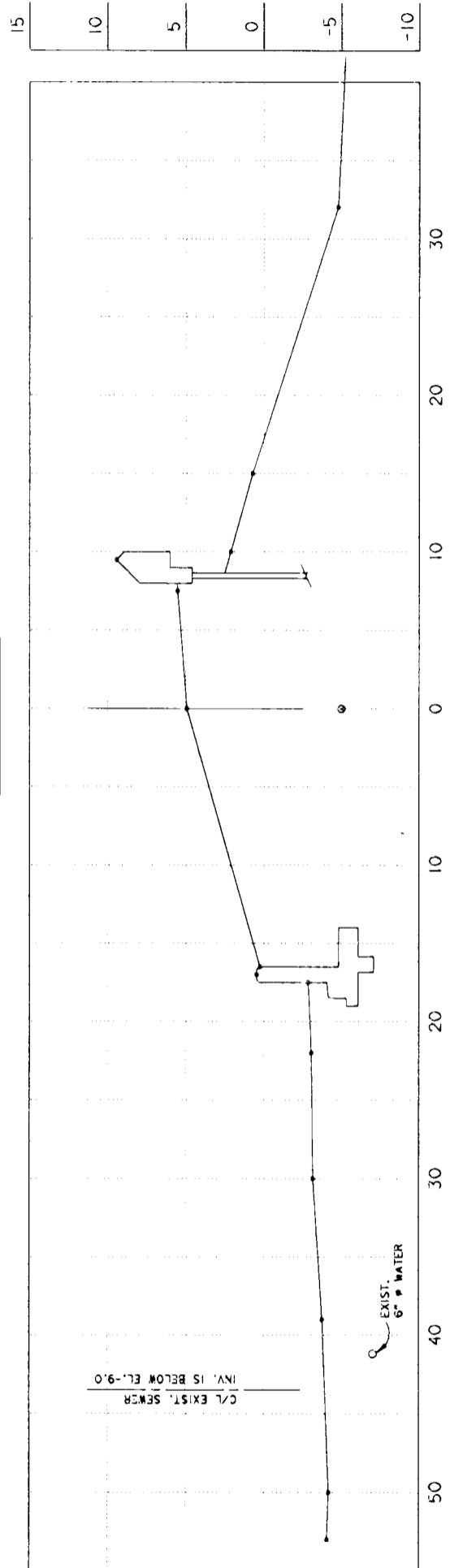
STA. 27+00 W.B.



STA. 26+00 W.B.



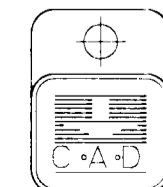
STA. 25+00 W.B.



STA. 24+00 W.B.

DISTANCE IN FEET

SCALE: 1" = 5'

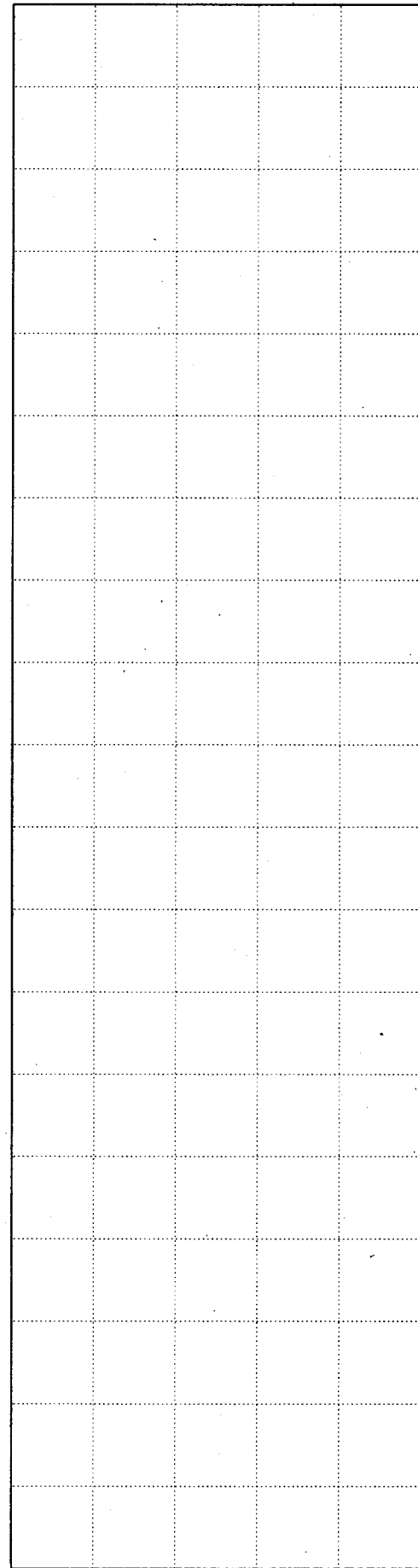


SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA CROSS SECTIONS			
DESIGNED BY: J.C. NORDEBERG	DATE: FEB. 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CADD FILE: 11-023	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042	CMG. 23 OF 24	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			



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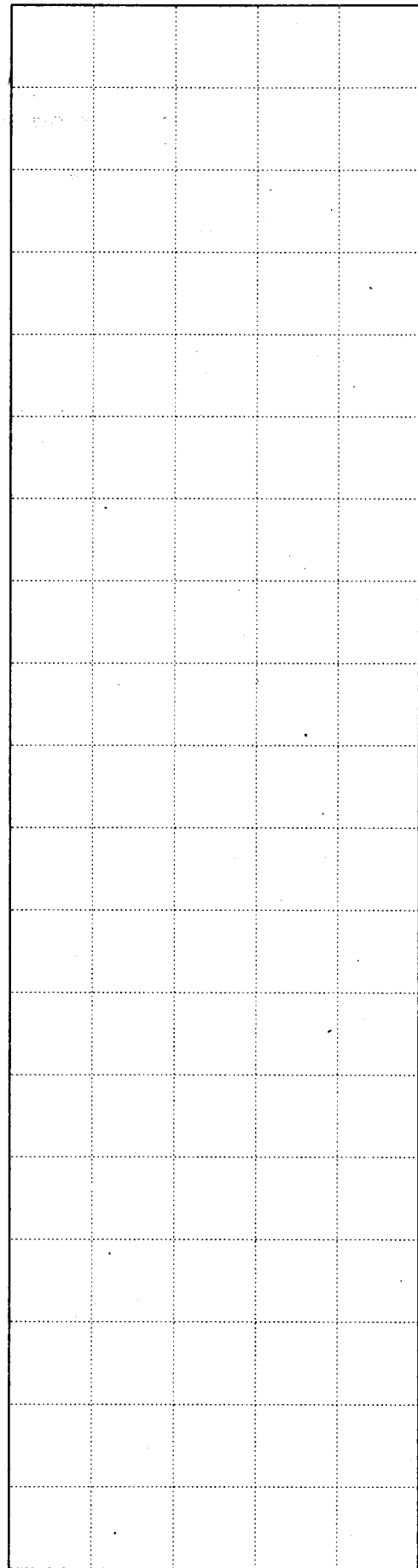
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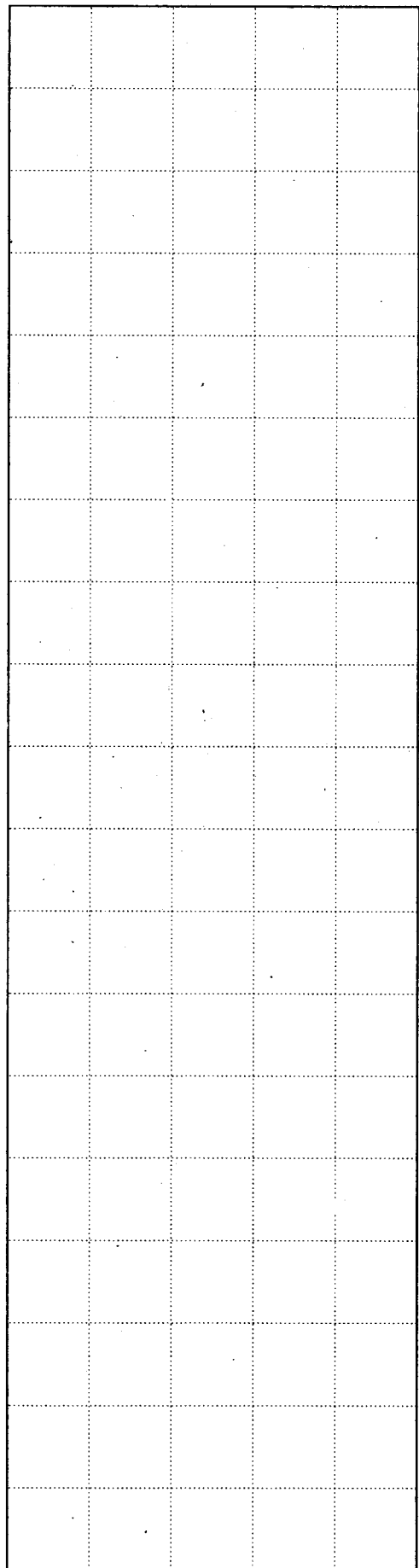
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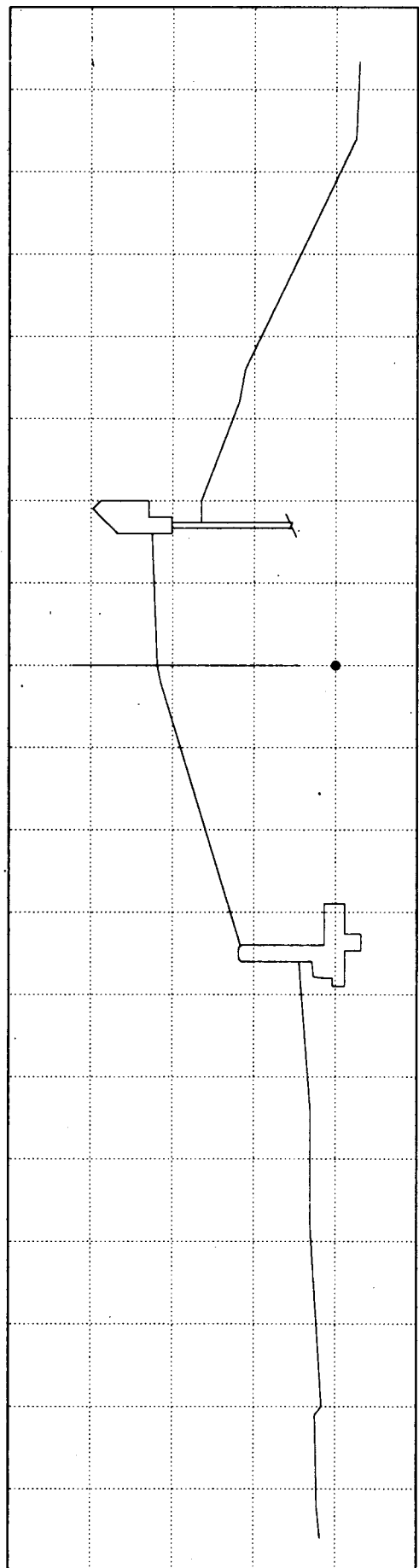
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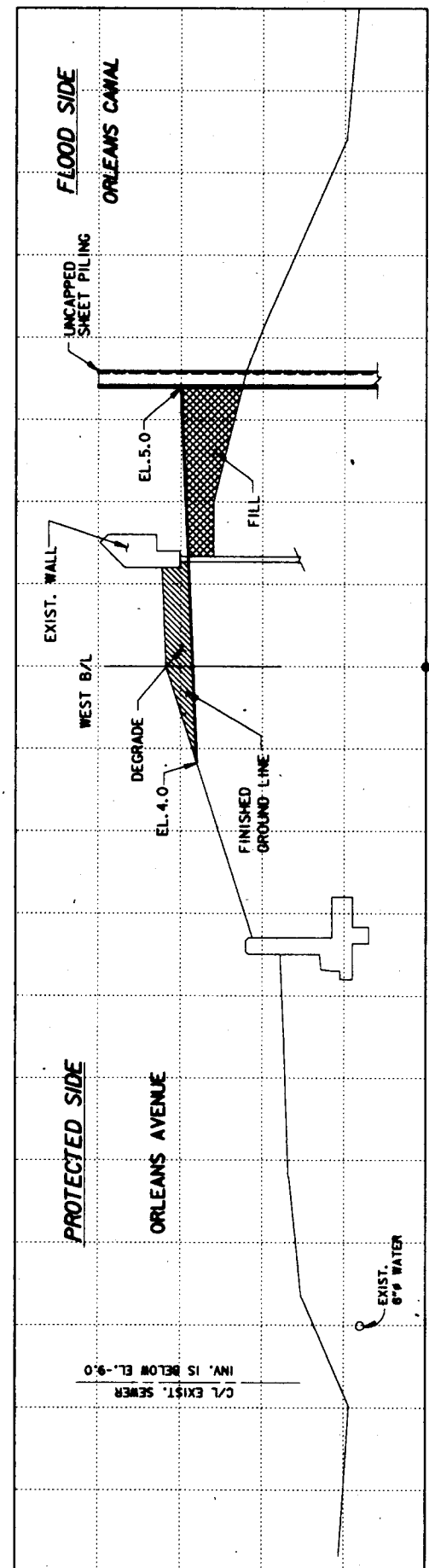


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ELEVATIONS IN FEET - N.G.V.D.

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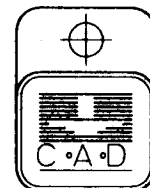


STA. 30+00 W.B.

DISTANCE IN FEET

STA. 29+00 W.B.

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SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METairie, LOUISIANA 70002	
LAKE PONTCHARTRAIN, LA. AND VICINITY HIGH LEVEL PLAN NEW ORLEANS LAKEFRONT LEVEE WEST OF I.H.N.C. ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT PHASE II-D (WEST SIDE B/L STA. 2+39.00 TO STA. 29+07.50) ORLEANS PARISH, LOUISIANA CROSS SECTIONS			
DESIGNED BY: J.C. NOGUEIRA	DATE: FEB., 1993	PLOT SCALE: 10	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CHECKED BY: T.M. SMITH	CADD FILE: 11-D24	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 24 OF 24	

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1