

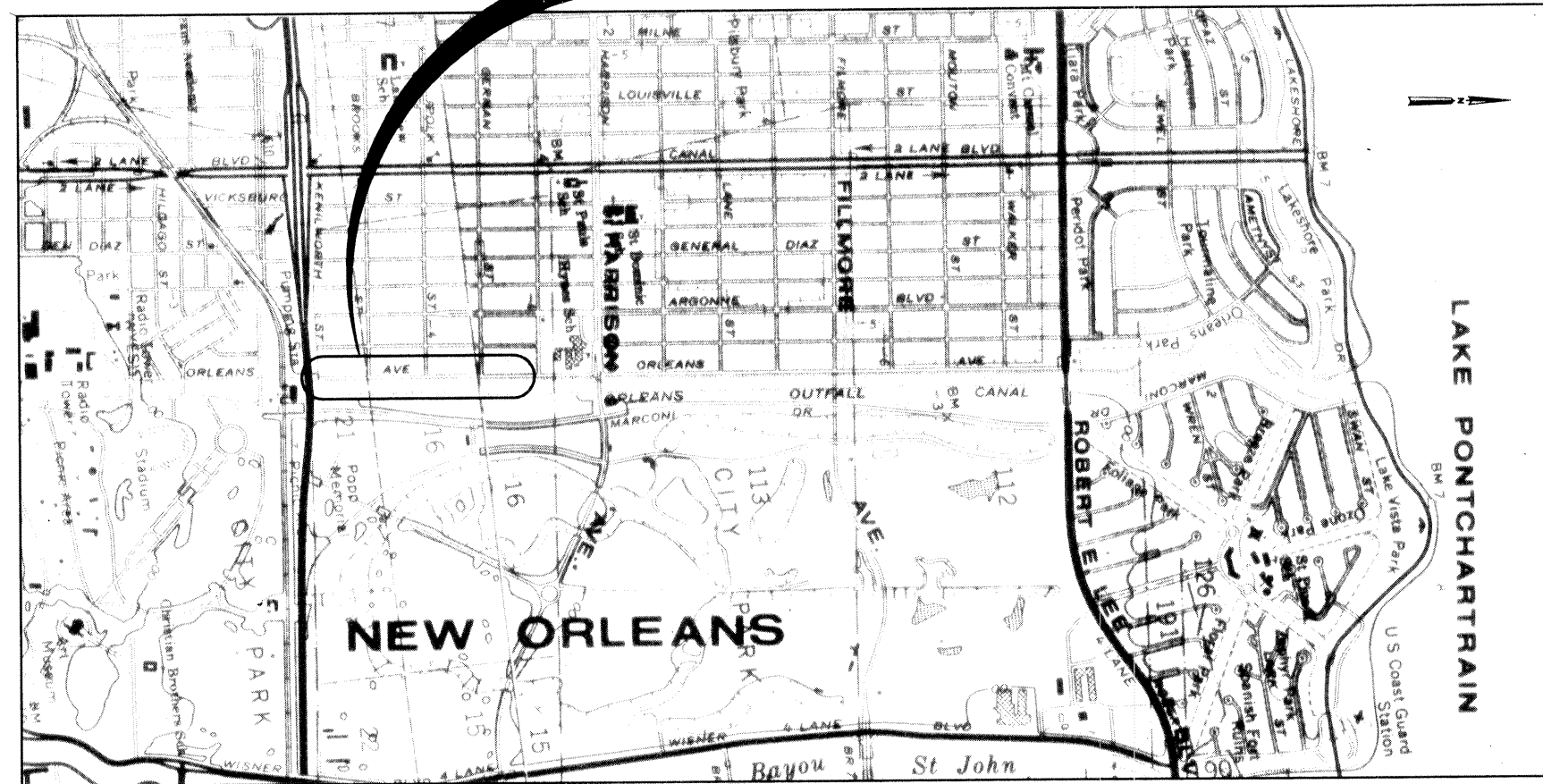
Safety is a Part
of Your Contract

ORLEANS AVENUE CANAL FLOOD PROTECTION IMPROVEMENT PROJECT

ORLEANS PARISH, LOUISIANA

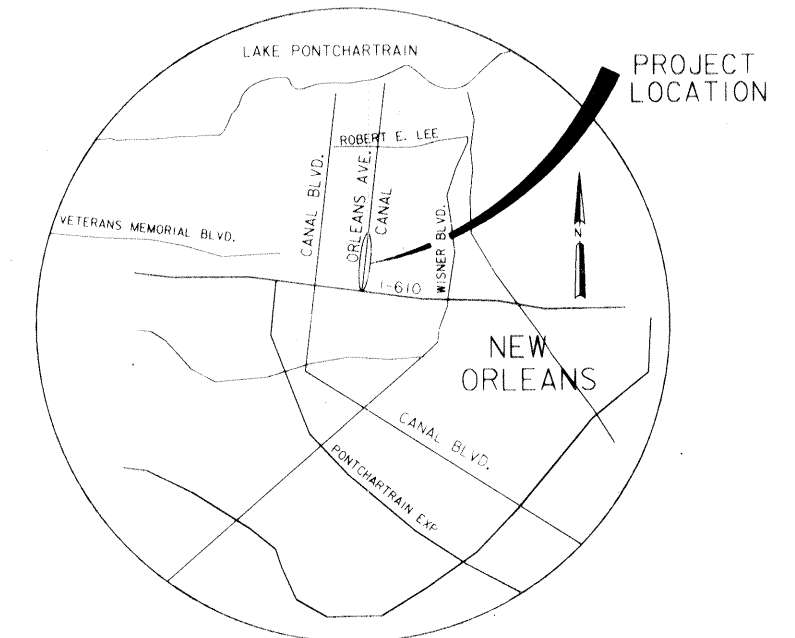
PHASE II-D

LOCATION OF WORK



LOCATION MAP

SCALE IN FEET



VICINITY MAP

SCALE IN FEET

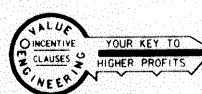


NOTE:
DRAWINGS IN THIS FOLIO
HAVE BEEN REDUCED ONE
HALF THE ORIGINAL SCALE

DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE	DRAWING NUMBER	DRAWING TITLE
1	LOCATION AND VICINITY MAP	15	RIGHTS OF WAY AND STAGING AREA
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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. ESPERANZA AVE. 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			
LOCATION AND VICINITY MAP			
DESIGNED BY: M.B. SHUKLA	APPROVED BY: <i>Robert S. Jensen</i>	CADD FILE: H-001	
DRAWN BY: P. LILLEN	CHECKED BY: T.M. SMITH	PLT DATE: MARCH 1993	PLT SCALE: 1" = 1'
DATE: FEB. 1992	APPROVED BY: <i>David W. Mankin</i>	DESIGNATION NO. DACW29-93-B-0042	
SUBMITTED BY: DESIGN ENGINEERING, INC.	CHIEF, ENGINEERING DIVISION	FILE NO. H-4-40205	
APPROVED BY: <i>John H. Hill</i>	CHIEF, ENGINEERING DIVISION	DATE: FEB. 1992	1 OF 24



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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- 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
- ⊙ 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
- SL TOP OF EXISTING FLOODWALL

PROPOSED

PLANS

- ▨ AREA OF LEVEE DEGRADING
- ▨ W/L (FLOOD SIDE) STEEL SHEET PILING OR I-WALL
- ▨ AREA OF FILL (SEMI-COMPACTED FILL) LEVEE OR BERM
- ▨ REQ'D. BANK OR SLOPE LINES

PROFILES & SECTIONS

- ▨ 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
12	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

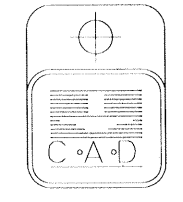
- All azimuths are true south azimuths turned in a clockwise direction from 0 degrees (due south).
- All elevations are expressed in feet and refer to National Geodetic Vertical Datum (N.G.V.D.).
- All R/W and construction easement lines are parallel with or perpendicular to the baseline, unless otherwise 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 D1-83 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.

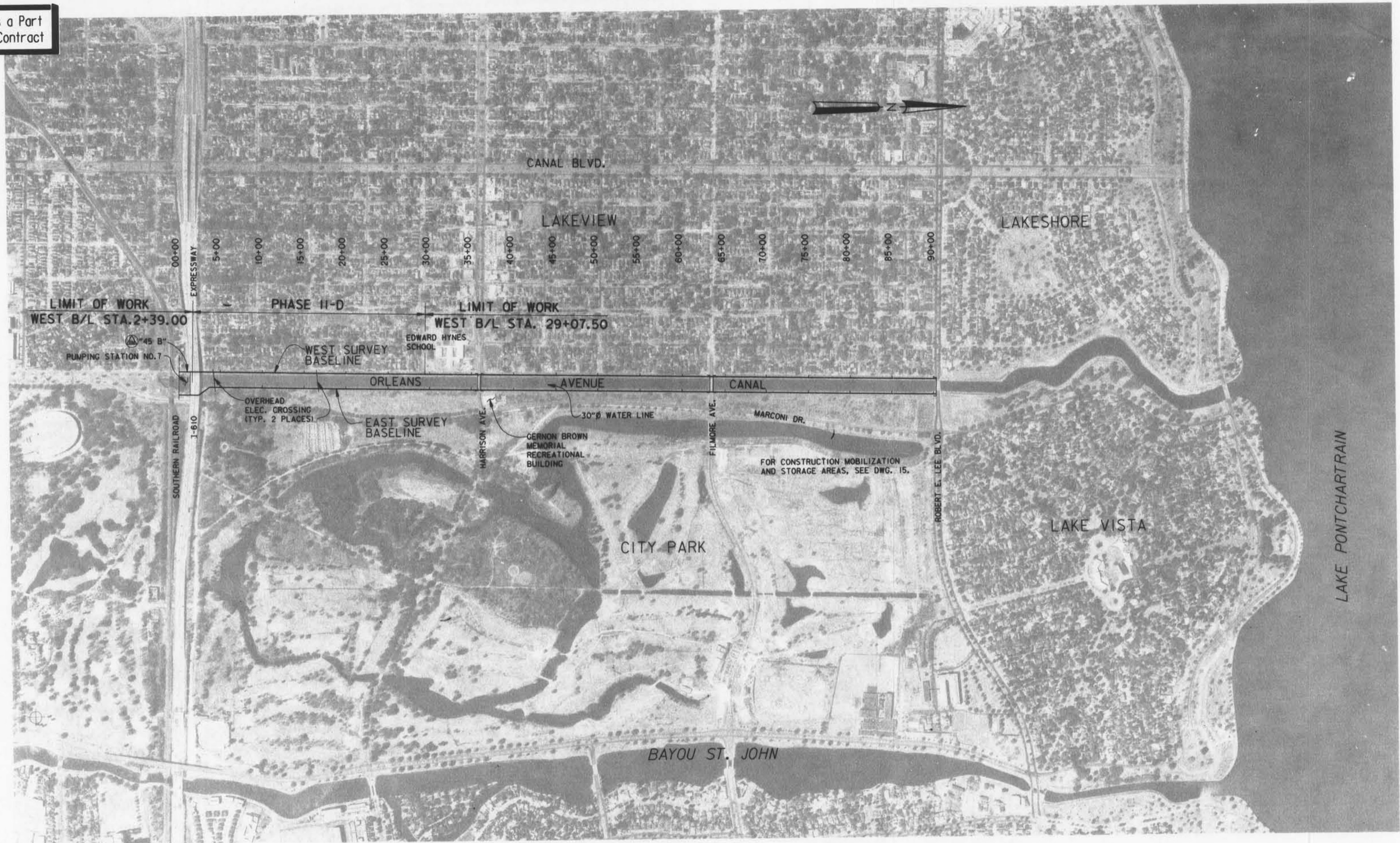
CONCRETE NOTES (CAST-IN-PLACE CONCRETE)

- 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 11-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. KILLEN	CHECKED BY: T.M. SMITH	CADD FILE: II-002	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 2 OF 24	

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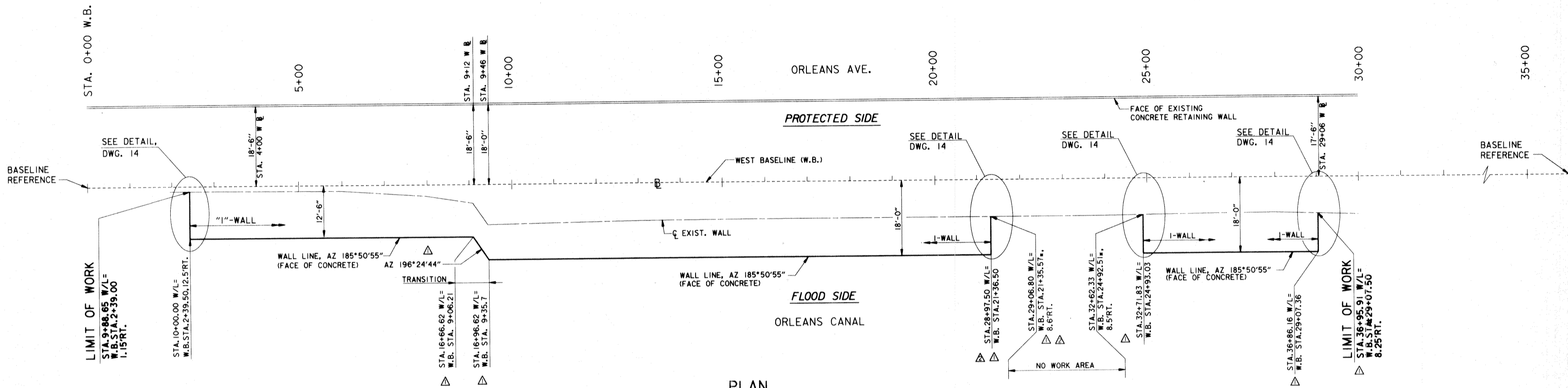
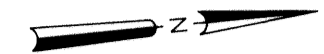


PROJECT MAP
PLAN
SCALE: 1" = 500'



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
 U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF 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 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.	SOLICITATION NO. DACW29-93-B-0042	DWG. 3 OF 24	
DESIGN ENGINEER			

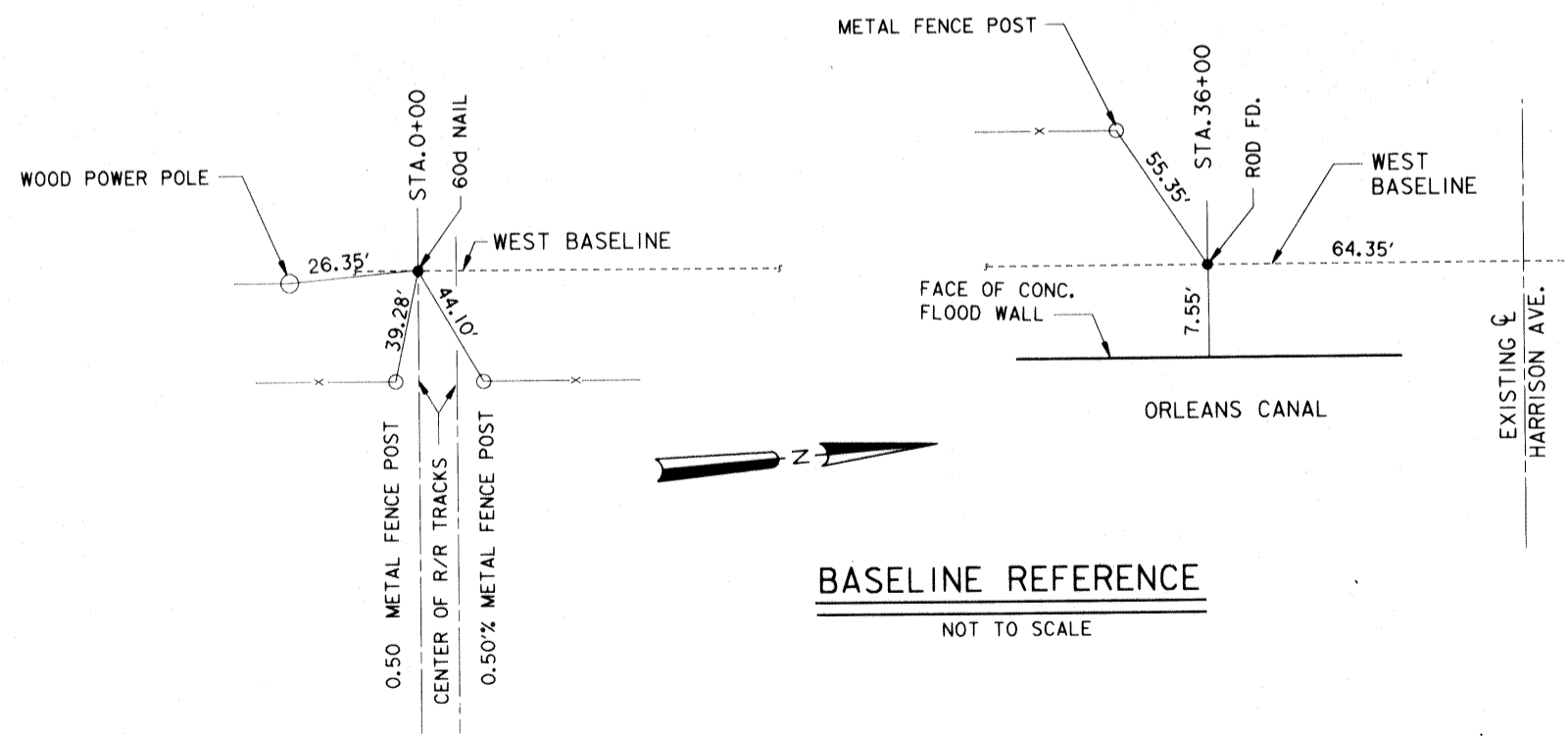
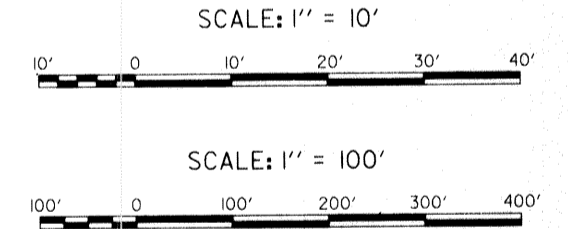
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PLAN
SCALE: 1" = 100' LONGITUDINAL
1" = 10' TRANSVERSE

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.



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

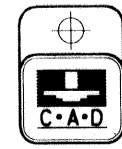
BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
NEW ORLEANS, LOUISIANA

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

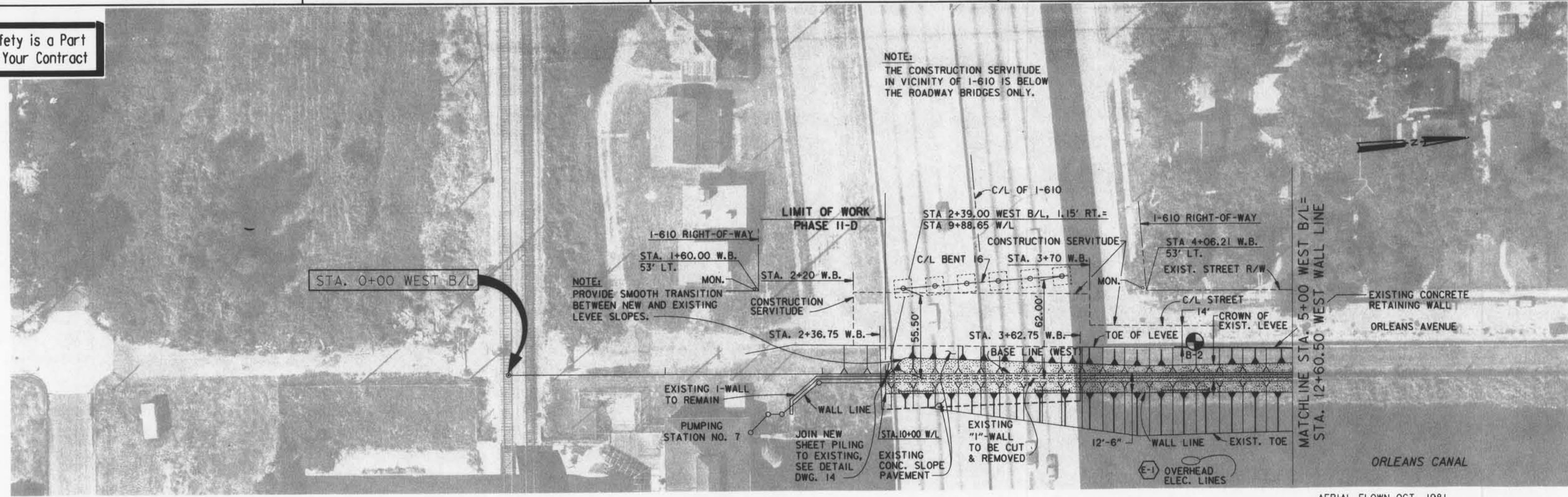
LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
NEW ORLEANS LAKEFRONT LEVEE
WEST OF I.H.N.C.
ORLEANS AVE. CANAL FLOOD PROTECTION IMPROVEMENT
PHASE II-D (WEST SIDE: B/L STA.2+39.00 TO STA.29+07.50)
ORLEANS PARISH, LOUISIANA

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-D04	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

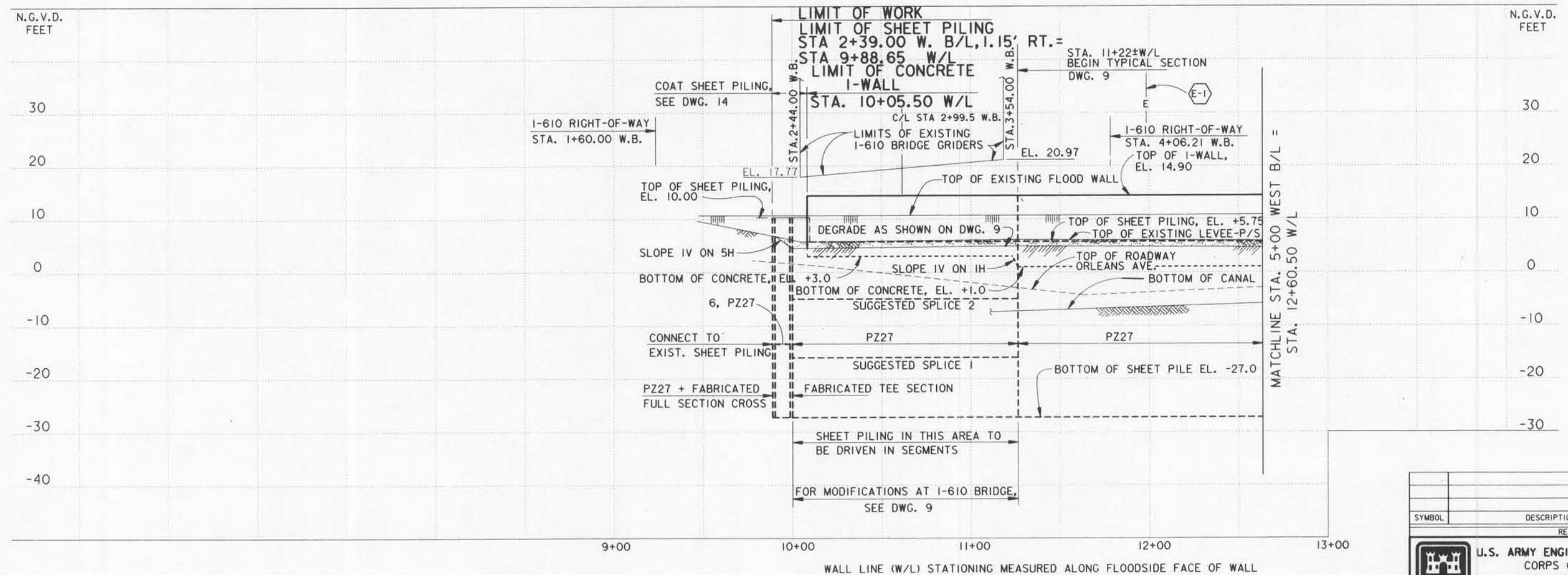


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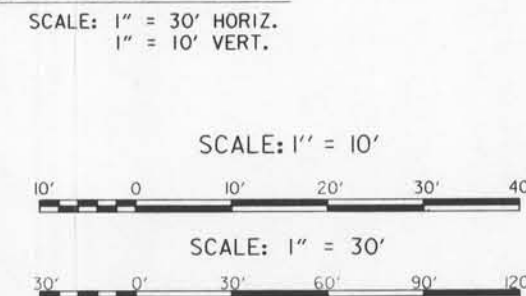


PLAN
SCALE: 1" = 30'

AERIAL FLOWN OCT. 1981



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



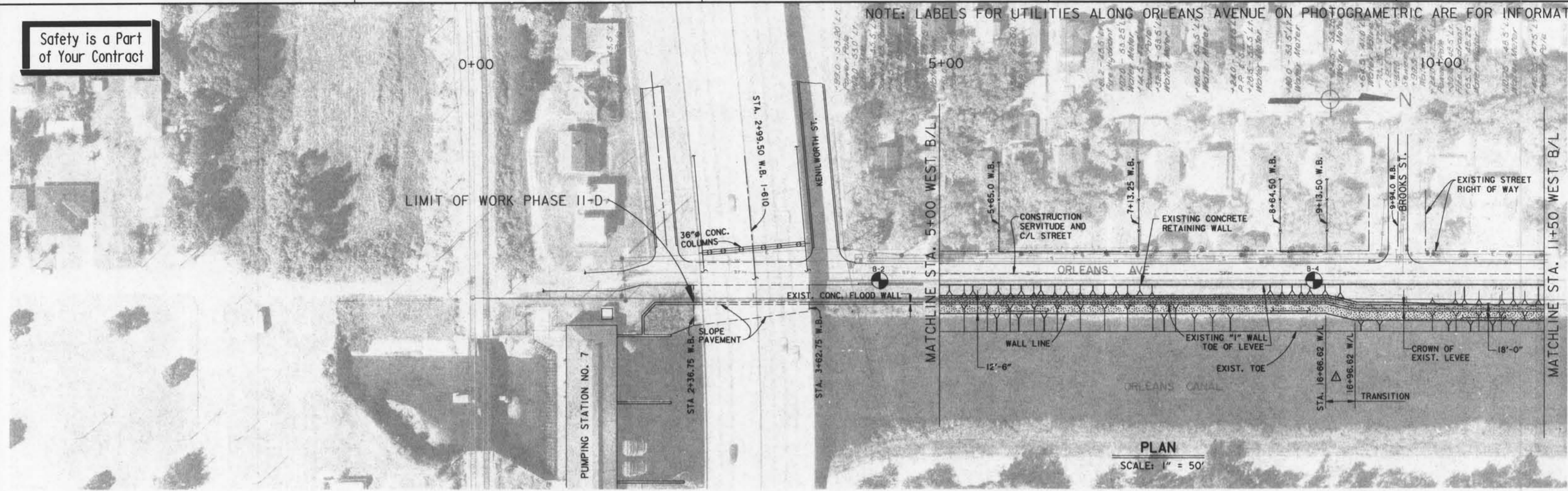
EXISTING UTILITIES				
ITEM NO.	DESCRIPTION	W.B. STA.	OWNER	DISPOSITION
E-1	AERIAL POWER LINE	4+32	NEW ORLEANS PUBLIC SERVICE, INC.	TO BE RELOCATED CONCURRENT WITH CONTRACT BY OTHERS

- 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 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			
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.D.	CADD FILE: 11-D05	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 5 OF 24



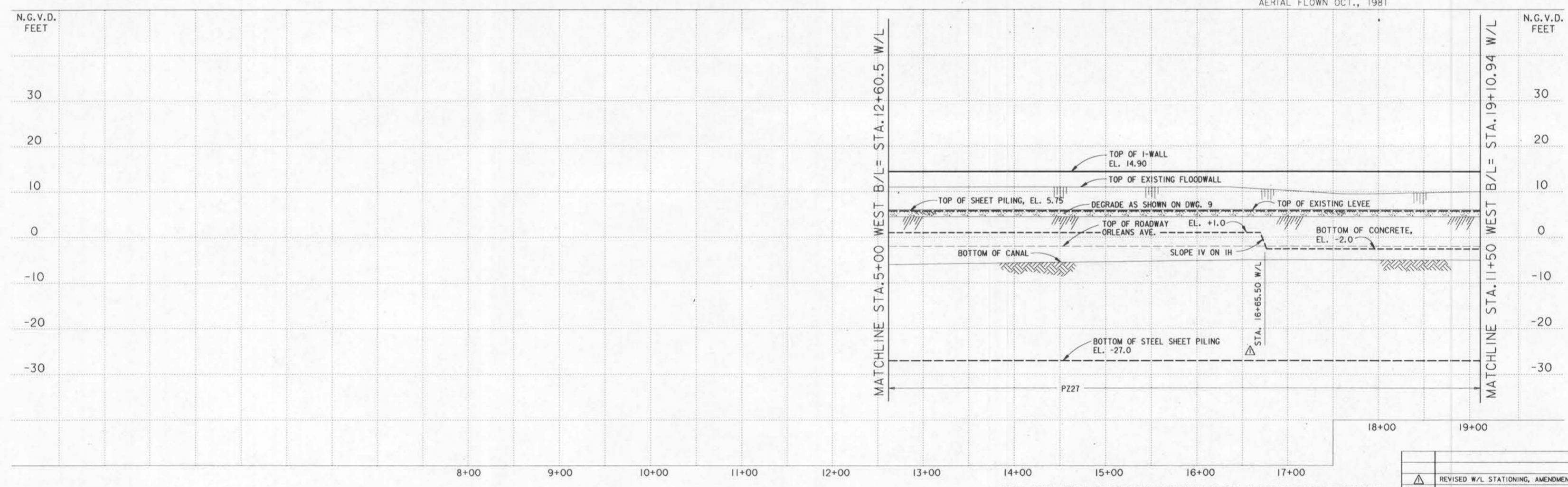
Safety is a Part of Your Contract



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

PLAN
SCALE: 1" = 50'

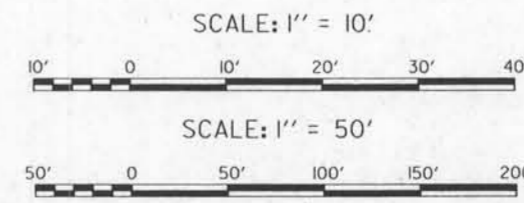
AERIAL FLOWN OCT., 1981



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

WEST SIDE PROFILE

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



NOTES:

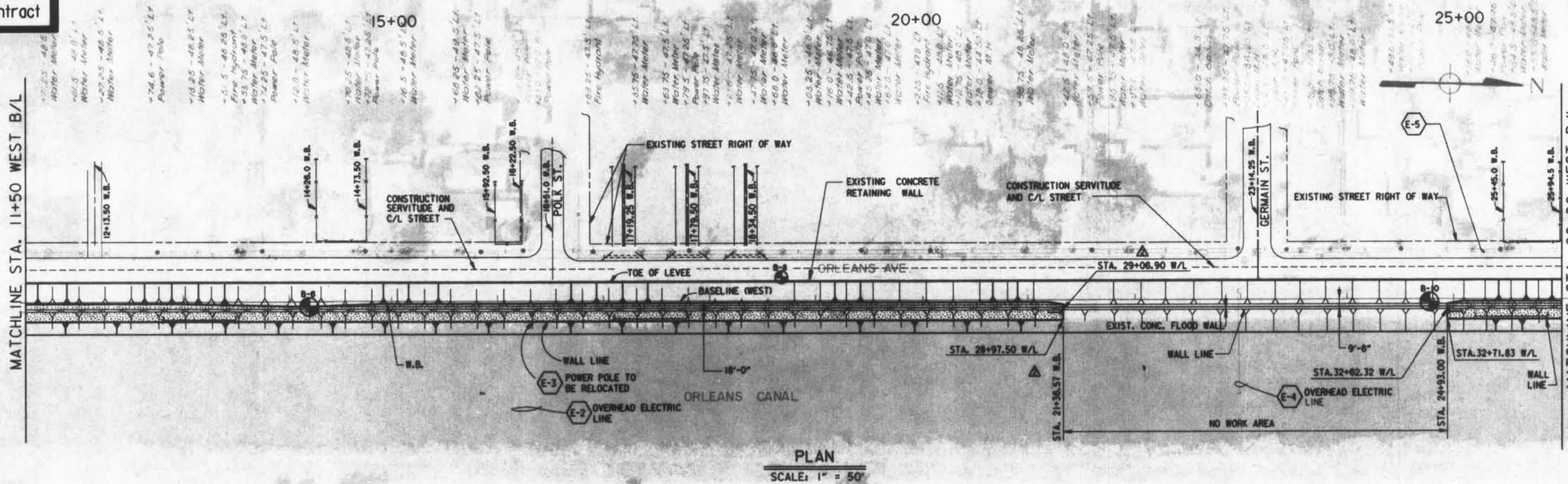
1. WALL LINE STATIONING IS MEASURED ALONG FLOOD SIDE FACE OF CONCRETE.
2. USE OF A VIBRATORY HAMMER TO DRIVE SHEET PILING WITHIN LDOTD RIGHTS-OF-WAY IS REQUIRED. THE PRESENCE OF AN LDOTD INSPECTOR IS REQUIRED FOR ALL WORK PERFORMED WITHIN THE RIGHTS-OF-WAY.
3. FOR SHEET PILING LAYOUT, SEE DWG. 10.
4.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



SYMBOL	DESCRIPTION	DATE	APPROVED
△	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			
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. 5+00 W.B. TO 11+50 W.B.			
DESIGNED BY: M.B. SHUKLA	DATE: FEB., 1993	PLOT SCALE: 50	PLOT DATE: MAY 1993
DRAWN BY: K.C.R. & G.F.C.	CADD FILE: 11-006	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	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.

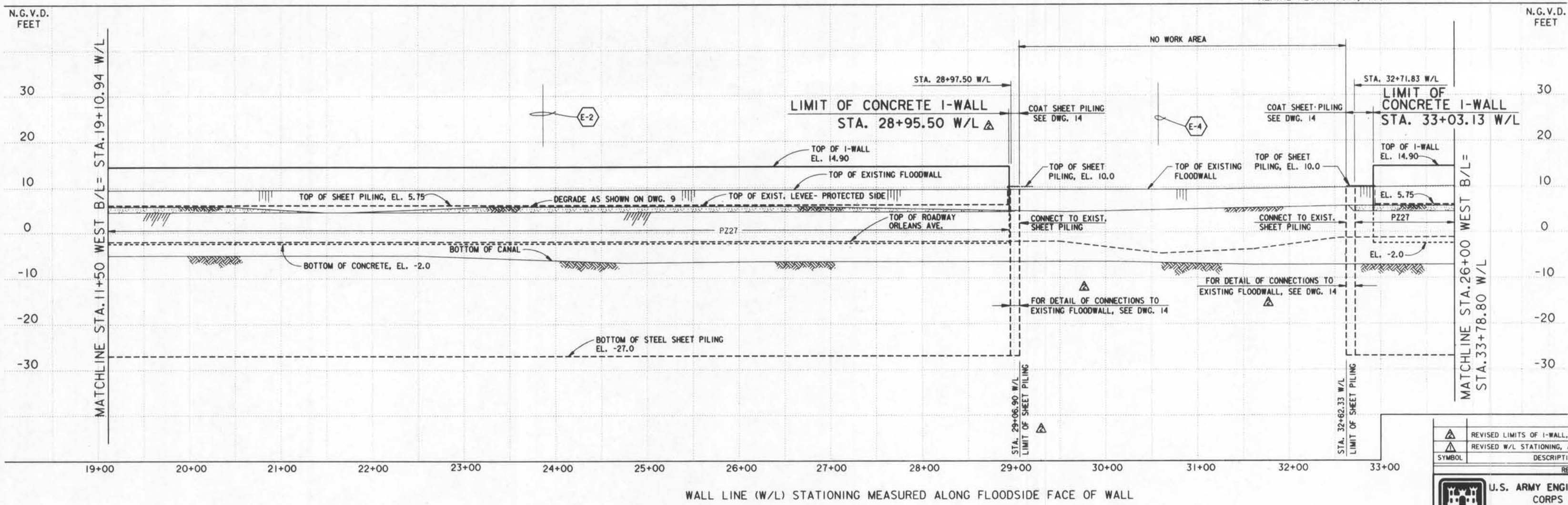


PLAN
SCALE: 1" = 50'

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

THIS PLAN ACCOMPANIES
MODIFICATION POO05
TO CONTRACT NUMBER
DACW29-93-C-0077

AERIAL FLOWN OCT., 1981



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

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.

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

SCALE: 1" = 10'
0 10' 20' 30' 40'

SCALE: 1" = 50'
0 50' 100' 150' 200'

▲	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.
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 BOARD OF LEVEE COMMISSIONERS
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 11-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
DRAWN BY: K.C.R. & G.F.G.
CHECKED BY: T.M. SMITH

DATE: FEB., 1993
CADD FILE: 11-007

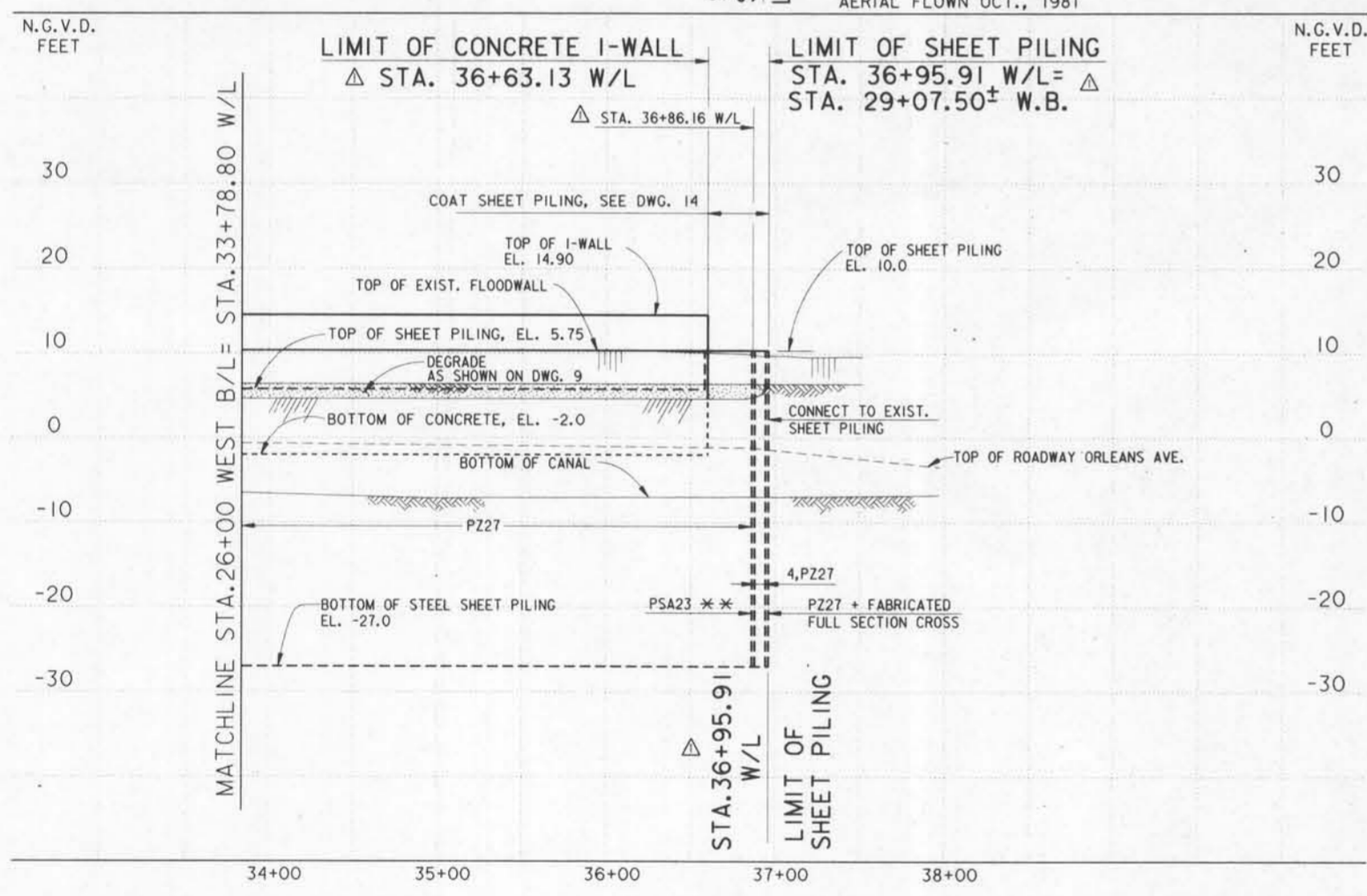
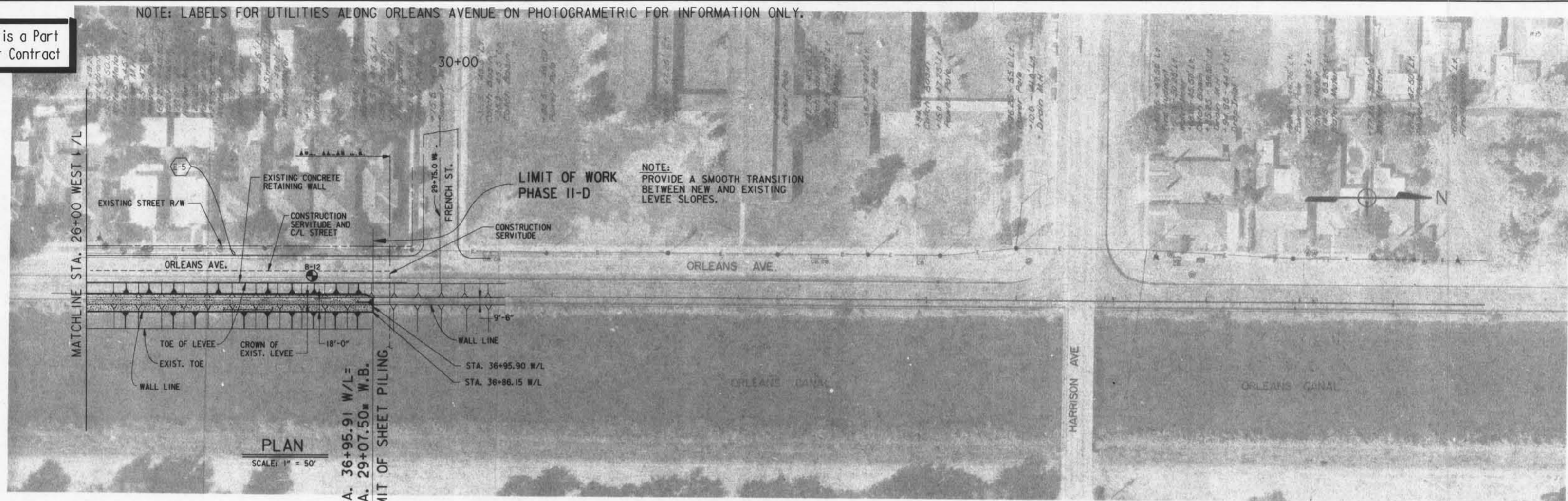
PLOT SCALE: 50
PLOT DATE: FEB 1994
FILE NO. H-4-40205

SUBMITTED BY: DESIGN ENGINEERING, INC.
DESIGN ENGINEER

SOLICITATION NO. DACW29-93-B-0042
DWG. 7 OF 24



Safety is a Part of Your Contract



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. 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

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

DESIGNED BY: M.B. SHUKLA
DRAWN BY: K.C.R. & G.F.G.
CHECKED BY: T.M. SMITH

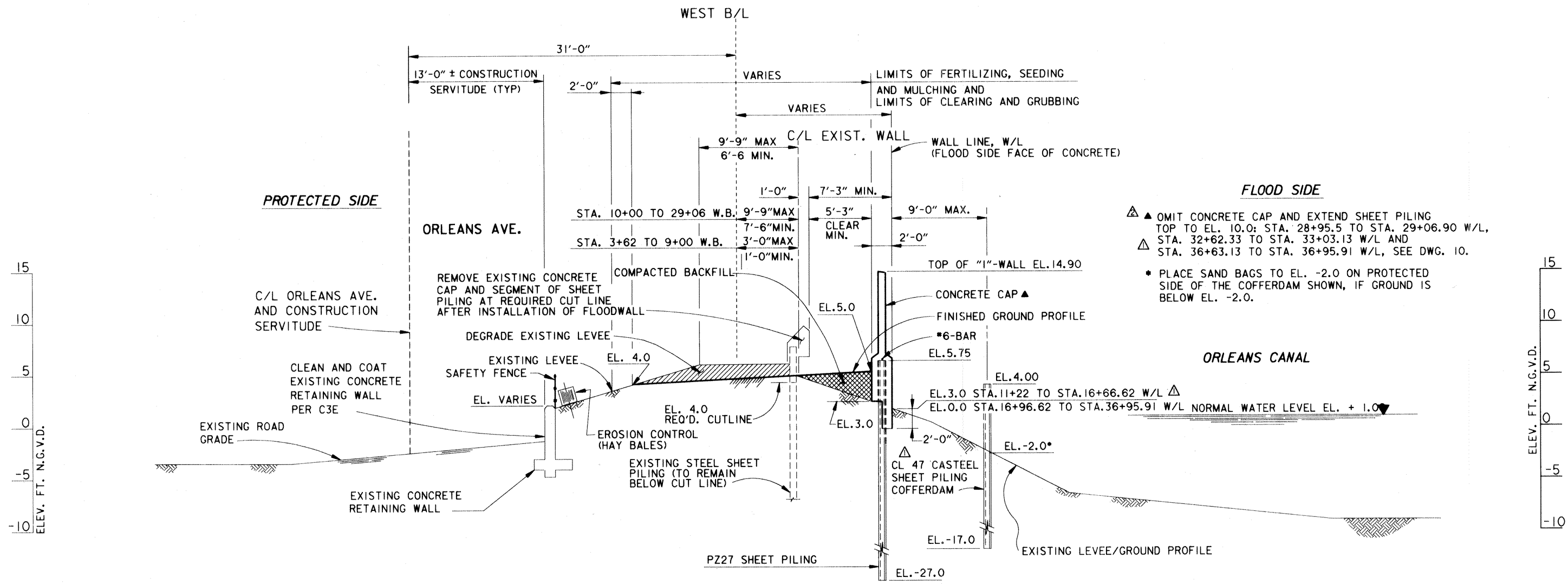
DATE: FEB., 1993
PLOT SCALE: 50
CADD FILE: 11-D08

DESIGN ENGINEERING, INC.
SOLICITATION NO. DACW29-93-B-0042

FILE NO. H-4-40205
PLOT DATE: MAY 1993
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"

- ▲ OMIT CONCRETE CAP AND EXTEND SHEET PILING TOP TO EL. 10.0: STA. 28+95.5 TO STA. 29+06.90 W/L, STA. 32+62.33 TO STA. 33+03.13 W/L AND STA. 36+63.13 TO STA. 36+95.91 W/L, SEE DWG. 10.
- PLACE SAND BAGS TO EL. -2.0 ON PROTECTED SIDE OF THE COFFERDAM SHOWN, IF GROUND IS BELOW EL. -2.0.

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.

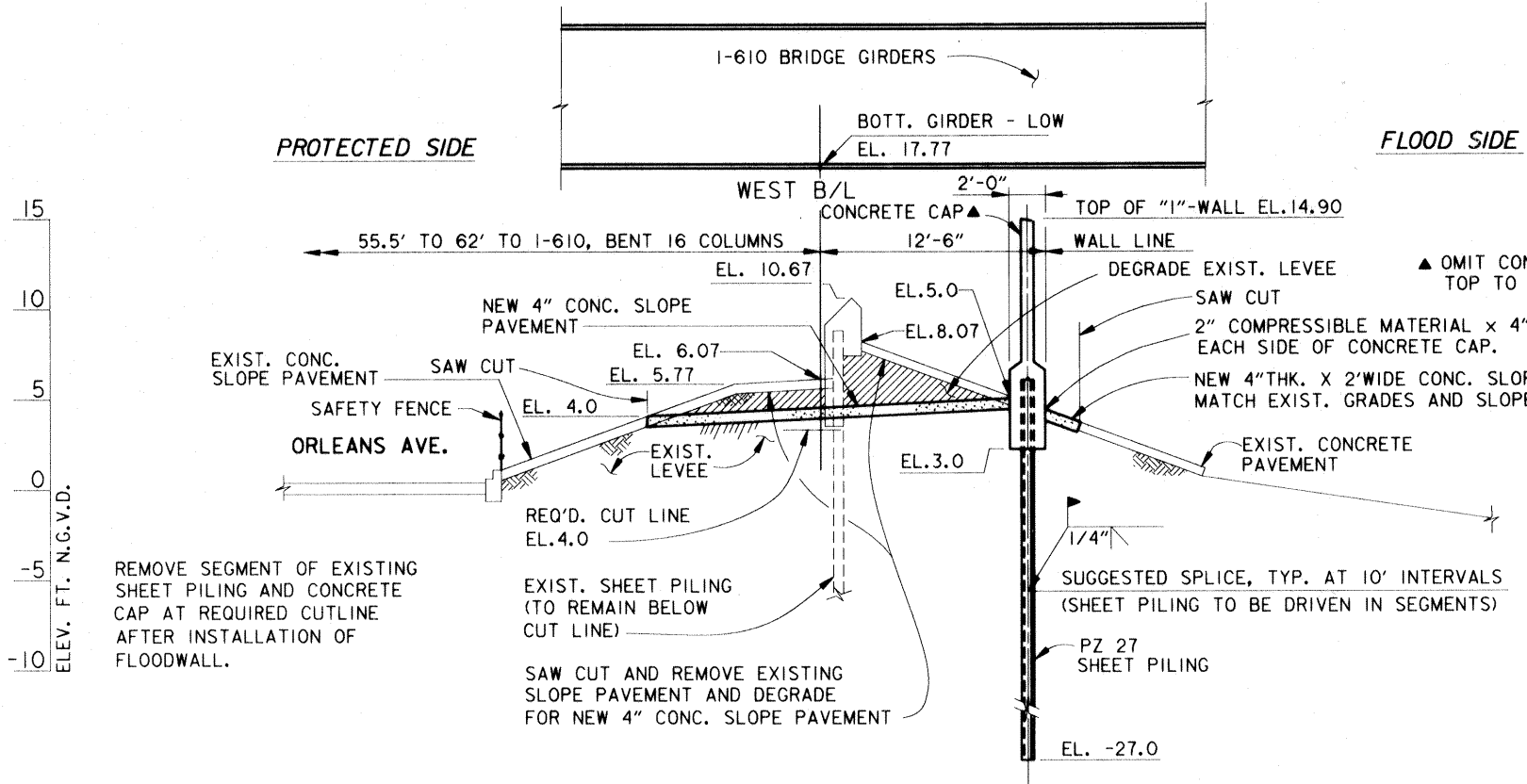
THIS PLAN ACCOMPANIES
 MODIFICATION P0003
 TO CONTRACT NUMBER
 DACW29-93-C-0077

WORK WITHIN LDOTD RIGHTS OF WAY

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.

CONCRETE SLOPE PAVEMENT NOTES

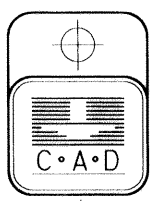
1. NEW SLOPE PAVEMENT SHALL BE 2,000 P.S.I. CONCRETE. PAVEMENT SHALL BE REINFORCED WITH 6x6-4/4 WELDED WIRE FABRIC.
2. JOINTS IN NEW PAVEMENT SHALL BE SPACED AT 10' MAXIMUM. AND TO MATCH EXISTING JOINT LOCATIONS.
3. NEW SLOPE PAVEMENT SHALL ABUT CONCRETE "1"-WALL.



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"

SCALE: 1" = 5'

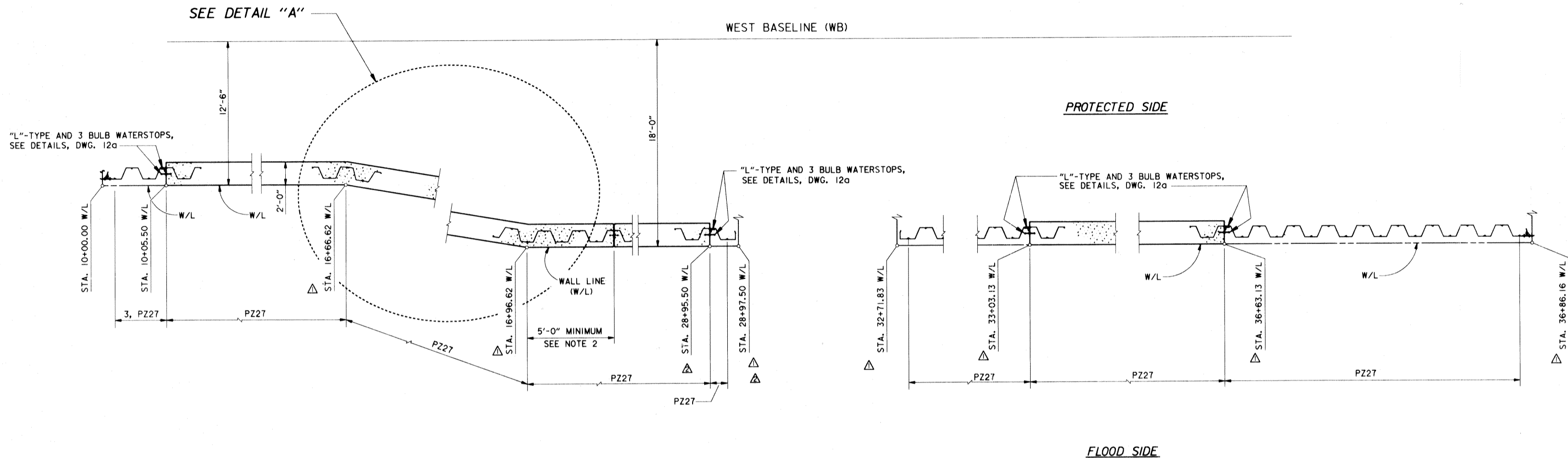


REVISIONS			
SYMBOL	DESCRIPTION	DATE	APPROVED
▲	REVISED LIMITS OF 1-WALL. MOD. NO. 3	11-5-93	J.A.R.
▲	GENERAL REVISIONS, AMENDMENT NO. 1.	5-11-93	M.O.

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: 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



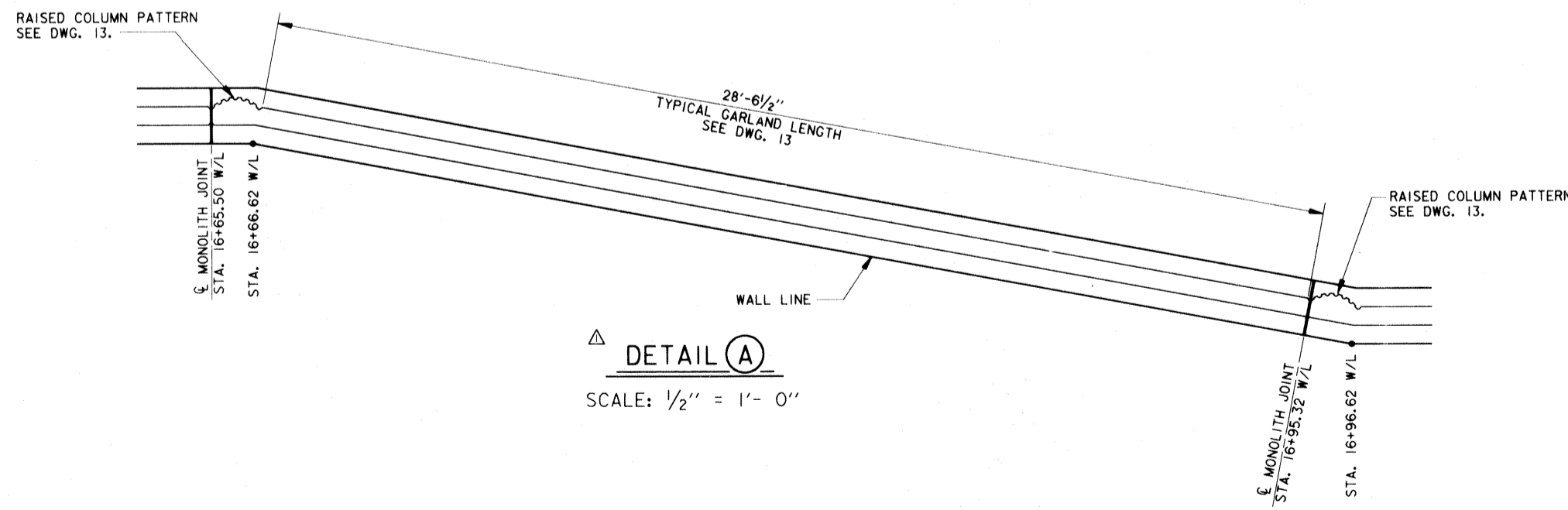
NOTES:

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

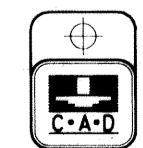
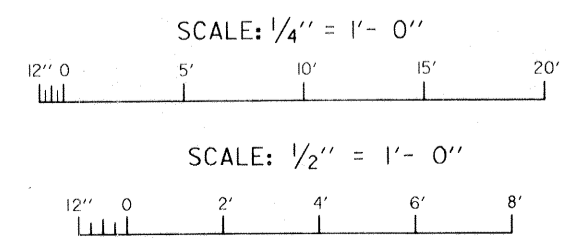
SCALE: 1/4" = 1'-0"

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



DETAIL A

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

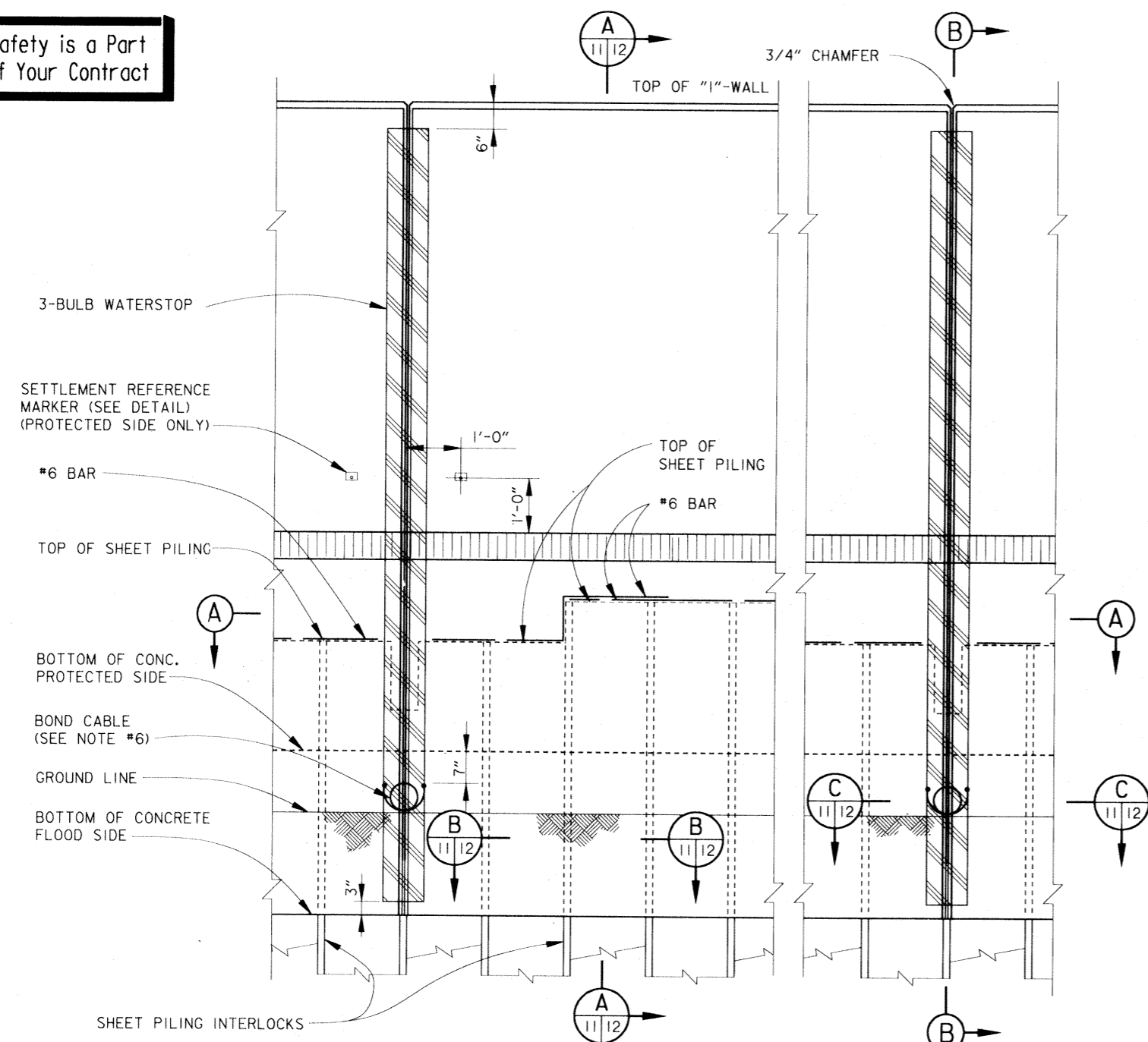


SYMBOL	REVISIONS	DATE	APPROVED
△	REVISED LIMITS OF I-WALL, MOD. NO. 3	11-5-93	J.A.R.
△	REVISED W/L STATIONING, AMENDMENT NO. 1.	5-11-93	M.D.

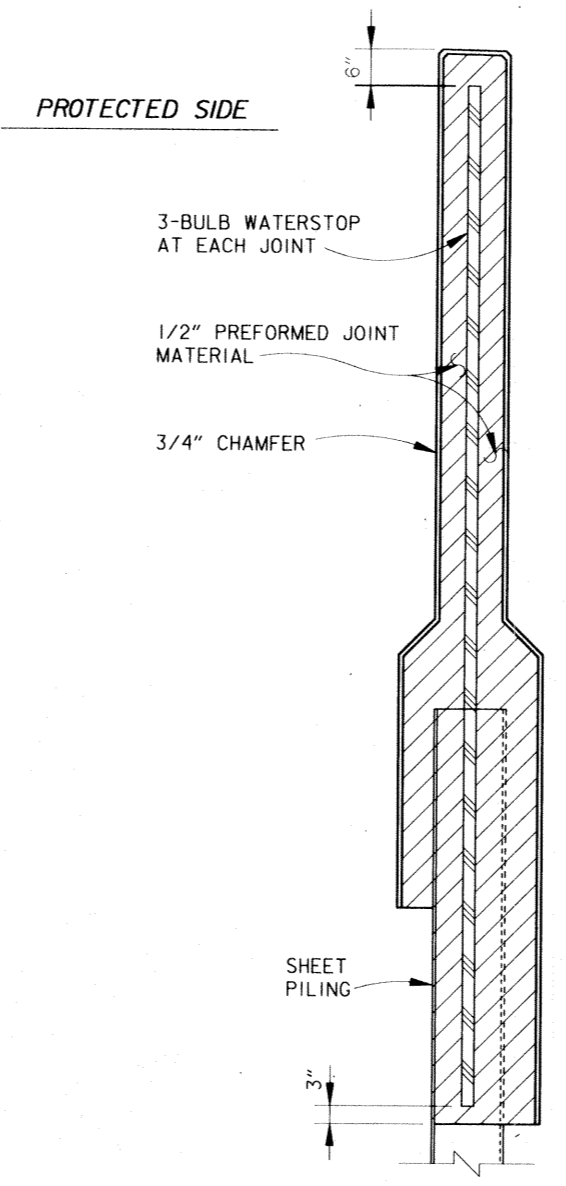
<p>U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA</p>	
<p>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</p>	<p>DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE. S. METAIRIE, LOUISIANA 70002</p>
<p>LAKE PONCHARTRAIN, LA. AND VICINITY HIGH 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>STEEL SHEET PILING AND MONOLITH LAYOUT</p>	
<p>DESIGNED BY: V.PANNELL DRAWN BY: K.A.WOJTA CHECKED BY: T.M.SMITH</p>	<p>DATE: FEB. 1993 CADD FILE: 11-D10</p>
<p>SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER</p>	<p>DESIGNATION NO. DACW29-93-B-0042</p>
<p>PLOT SCALE: 48</p>	<p>PLOT DATE: FEB 1994</p>
<p>FILE NO. H-4-40205</p>	<p>DWG. 10 OF 24</p>



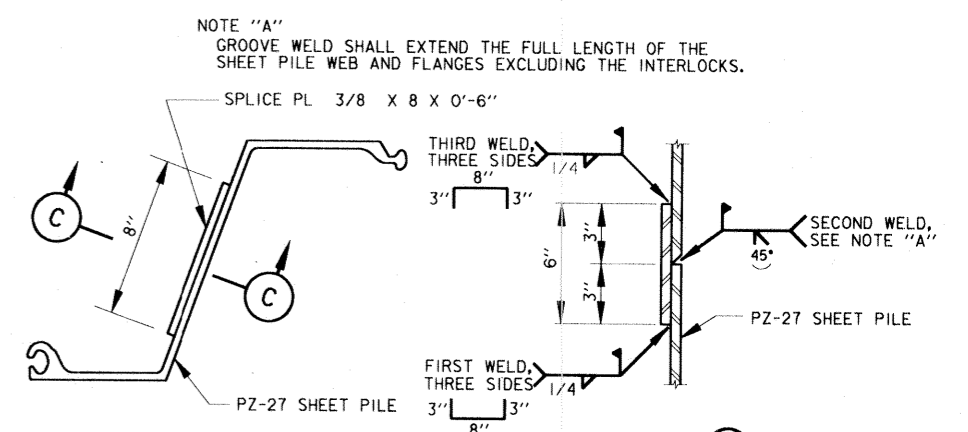
Safety is a Part of Your Contract



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

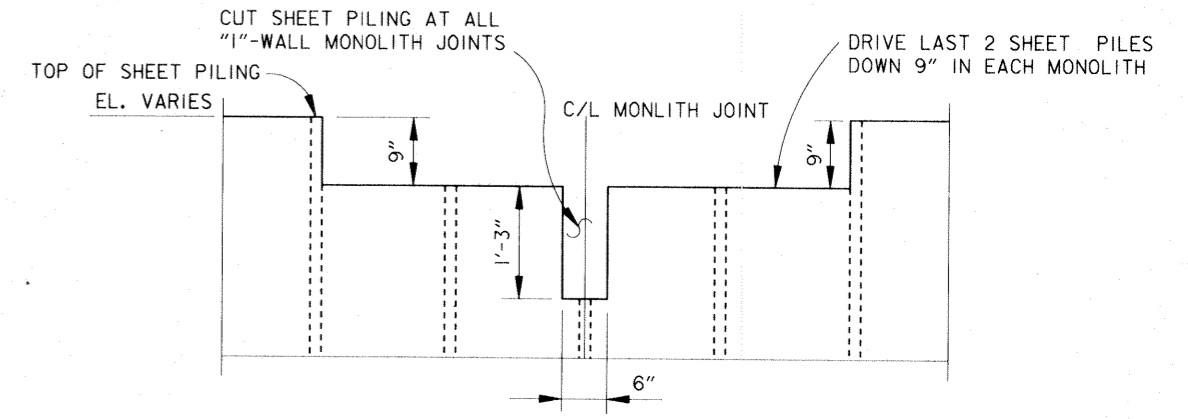


TYPICAL "I"-WALL JOINT SECTION
SCALE: 3/4" = 1'-0"



SHEET PILE SPLICE DETAIL
SCALE: 3" = 1'-0"

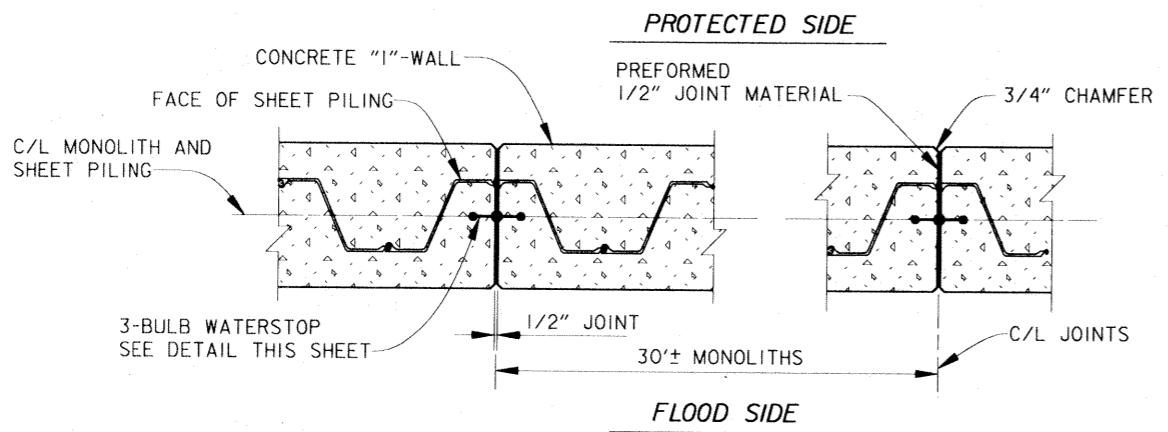
NOTE: SHEET PILE SPLICE BETWEEN TIP EL. AND TOP EL. SHALL BE STAGGERED WITH ADJACENT SHEET PILING.



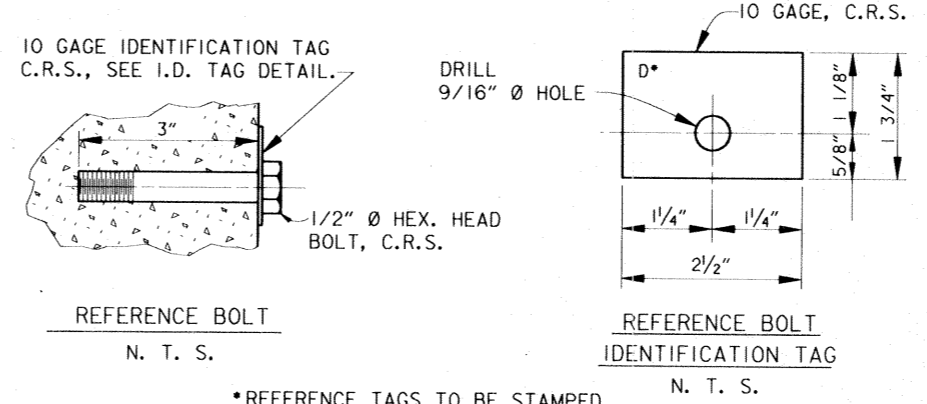
SHEET PILING DETAIL "I"-WALL MONOLITH JOINTS
SCALE: 1" = 1'-0"

"I" WALL NOTES:

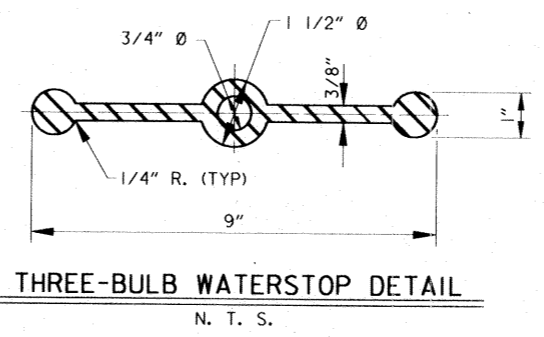
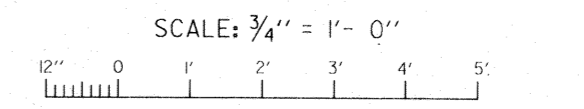
- FOR GENERAL STRUCTURAL NOTES, SEE DWG. NO. 2.
- ALL HOLES CUT IN STEEL SHEET PILING FOR REINFORCING STEEL OR ANCHOR BOLTS SHALL NOT EXCEED 2" DIAMETER, UNLESS OTHERWISE INDICATED.
- ALL HOLES CUT THROUGH STEEL SHEET PILING SHALL MISS INTERLOCKS.
- FOR WALL REINFORCEMENT DETAILS, SEE DWG. NO. 12.
- 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 "I"-WALL JOINTS AND AT ALL TRANSITIONS FROM "I"-WALL TO STEEL SHEET PILING. BOND CABLES SHALL HAVE AN 8" DIAMETER LOOP TO ALLOW FOR STRESSES. BOND CABLES SHALL BE WELDED TO ADJACENT STEEL PILES 7" BELOW BOTTOM OF CONCRETE CAP FOR "I"-WALL JOINTS AND AT TRANSITIONS FROM "I"-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.



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



SETTLEMENT REFERENCE MARKER DETAILS
N. T. S.



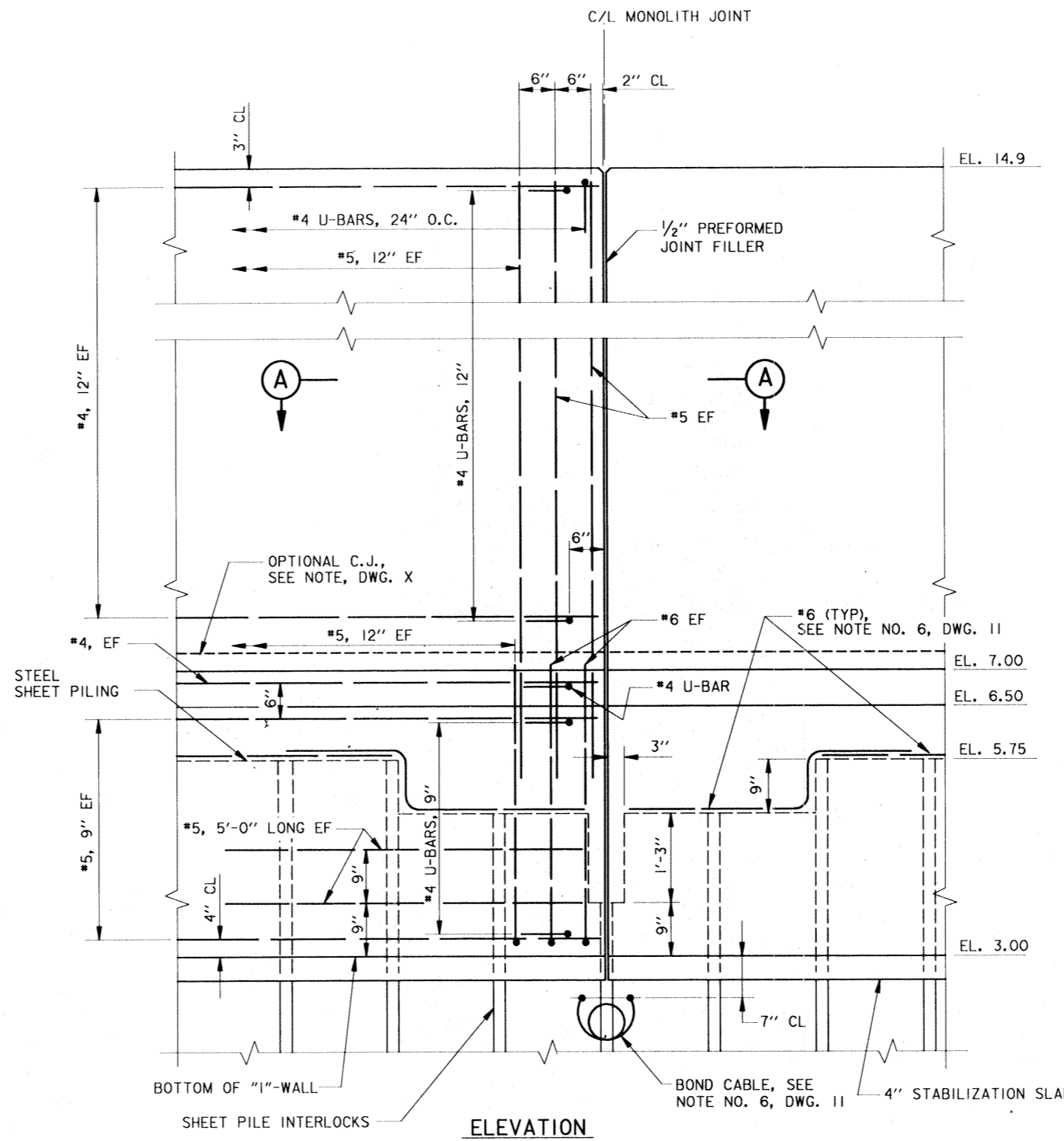
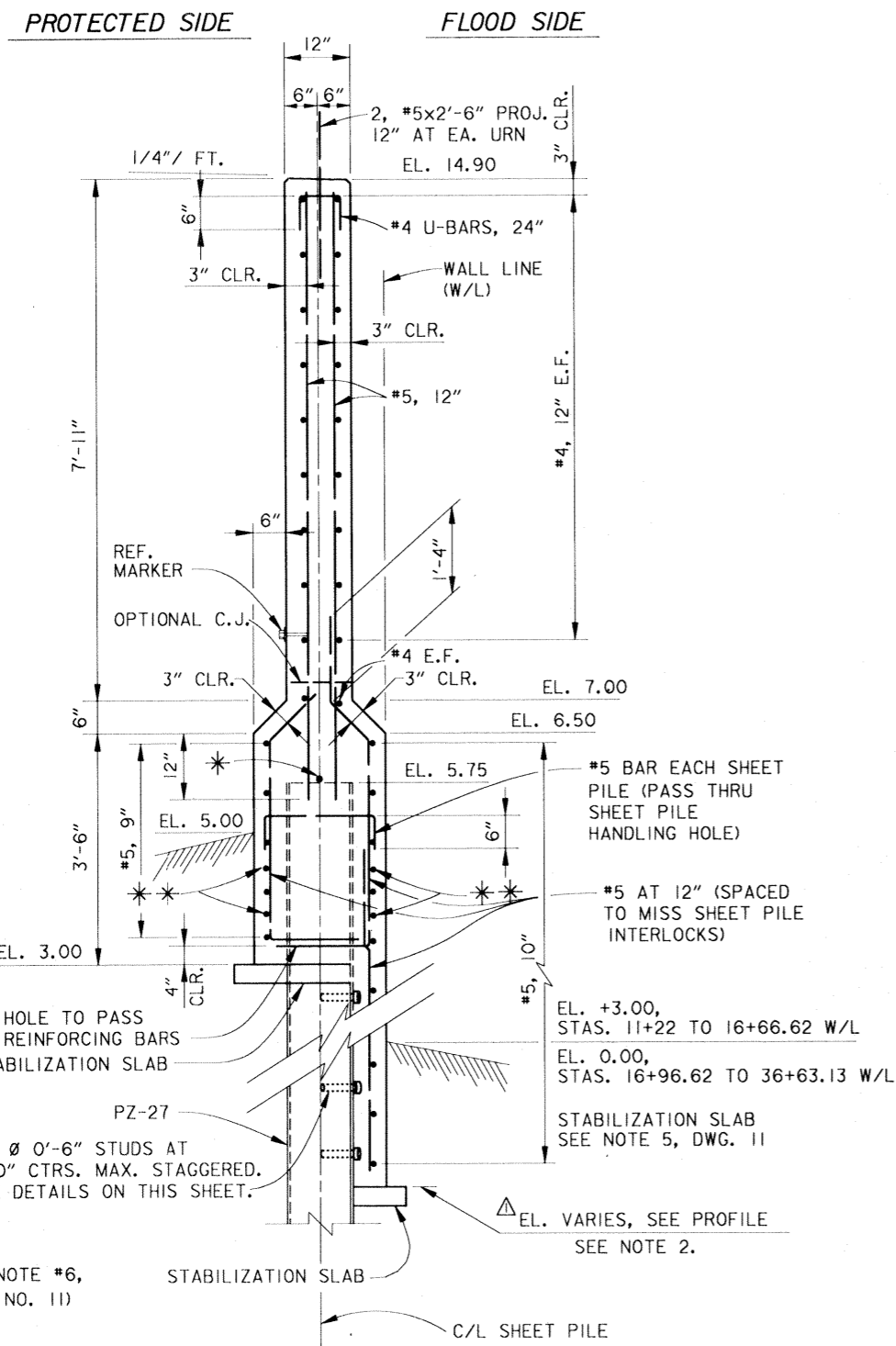
THREE-BULB WATERSTOP DETAIL
N. T. S.

△ 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'	

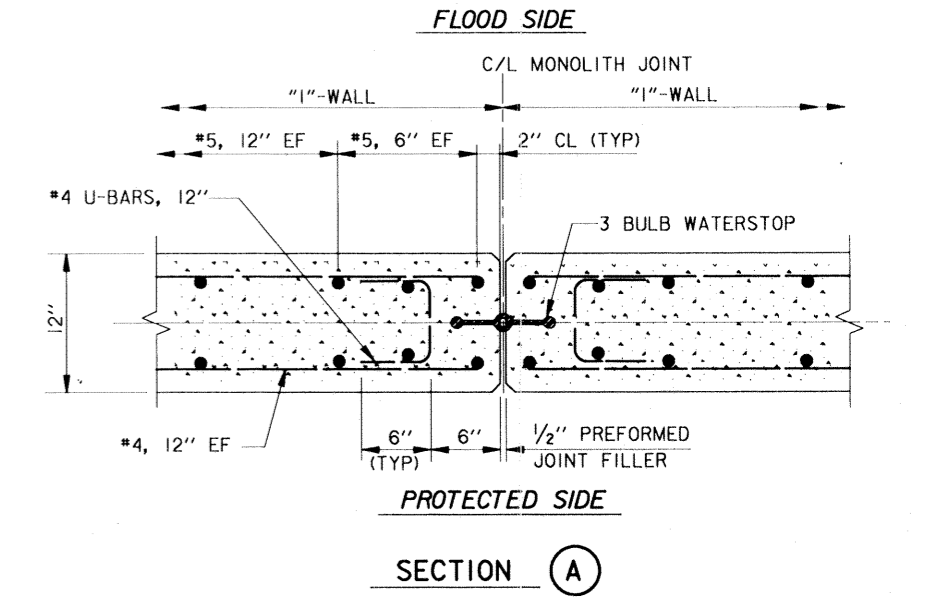
** THE CONTRACTOR SHALL TAKE FINAL ELEVATIONS OF ALL SETTLEMENT MARKERS AND SHALL SUBMIT THIS DATA TO THE CONTRACTING OFFICER REPRESENTATIVE (COR)

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		
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		
DESIGN ENGINEERING, INC. 3330 W. ESPERANZA 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		
TYPICAL "I"-WALL DETAILS		
DESIGNED BY: V PANNELL	DATE: FEB., 1993	PLOT SCALE: 16
DRAWN BY: CJ KOCH	CHECKED BY: T SMITH	PLOT DATE: MAY 1993
SUBMITTED BY:	DESIGN ENGINEERING, INC.	FILE NO. H-4-40205
DESIGN ENGINEER	DACW29-93-B-0042	DWG. 11 OF 24

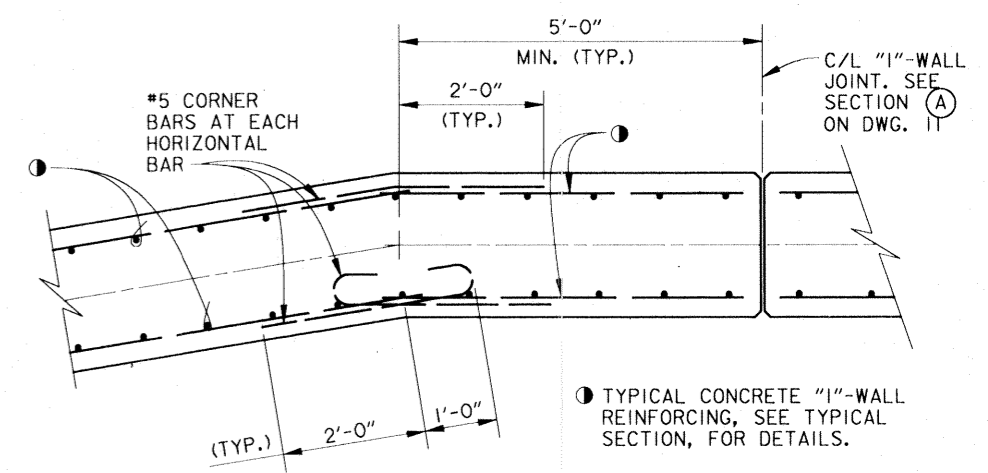
Safety is a Part of Your Contract



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

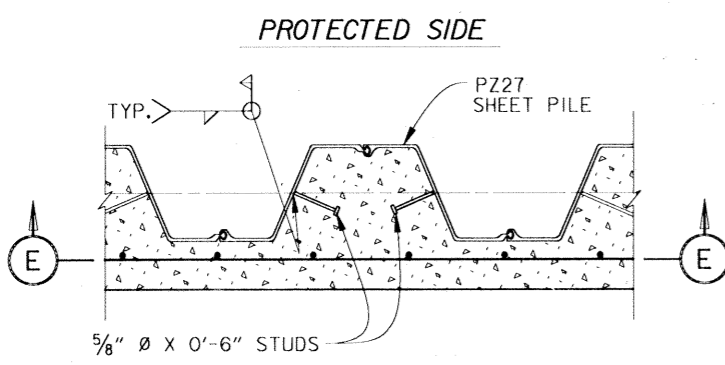


TYPICAL REINFORCEMENT AT MONOLITH JOINTS
SCALE: 1 1/2" = 1'-0"

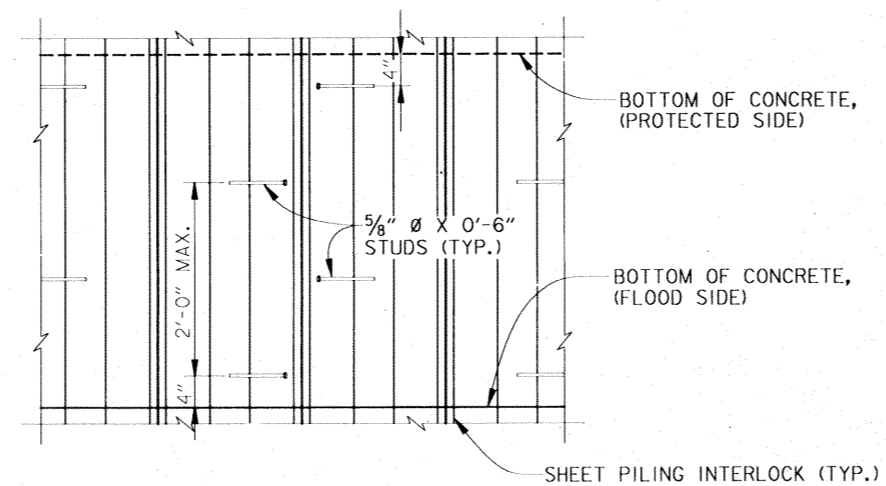


"I"-WALL CORNER REINFORCING DETAIL
(STEEL SHEETING NOT SHOWN)
SCALE: 3/4" = 1'-0"

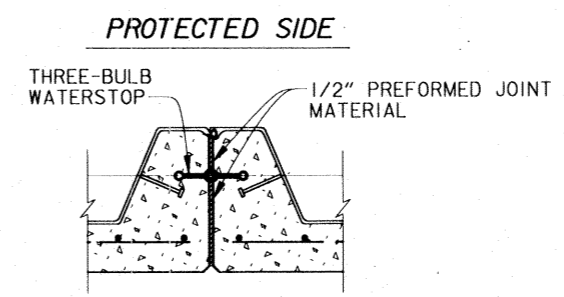
TYPICAL "I"-WALL SECTION A
SCALE: 3/4" = 1'-0"



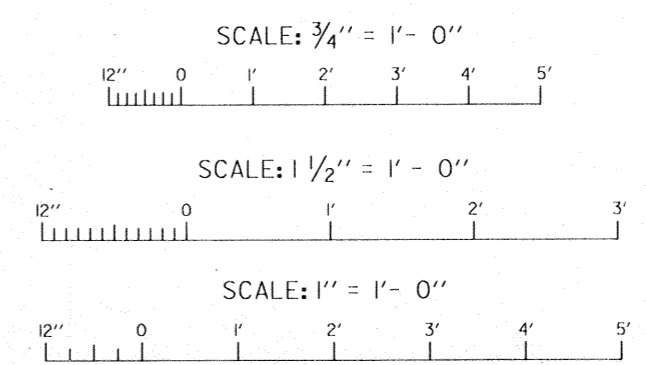
SECTION B
SCALE: 1" = 1'-0"



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



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

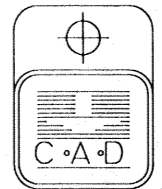
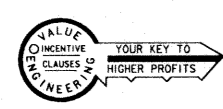


NOTES:

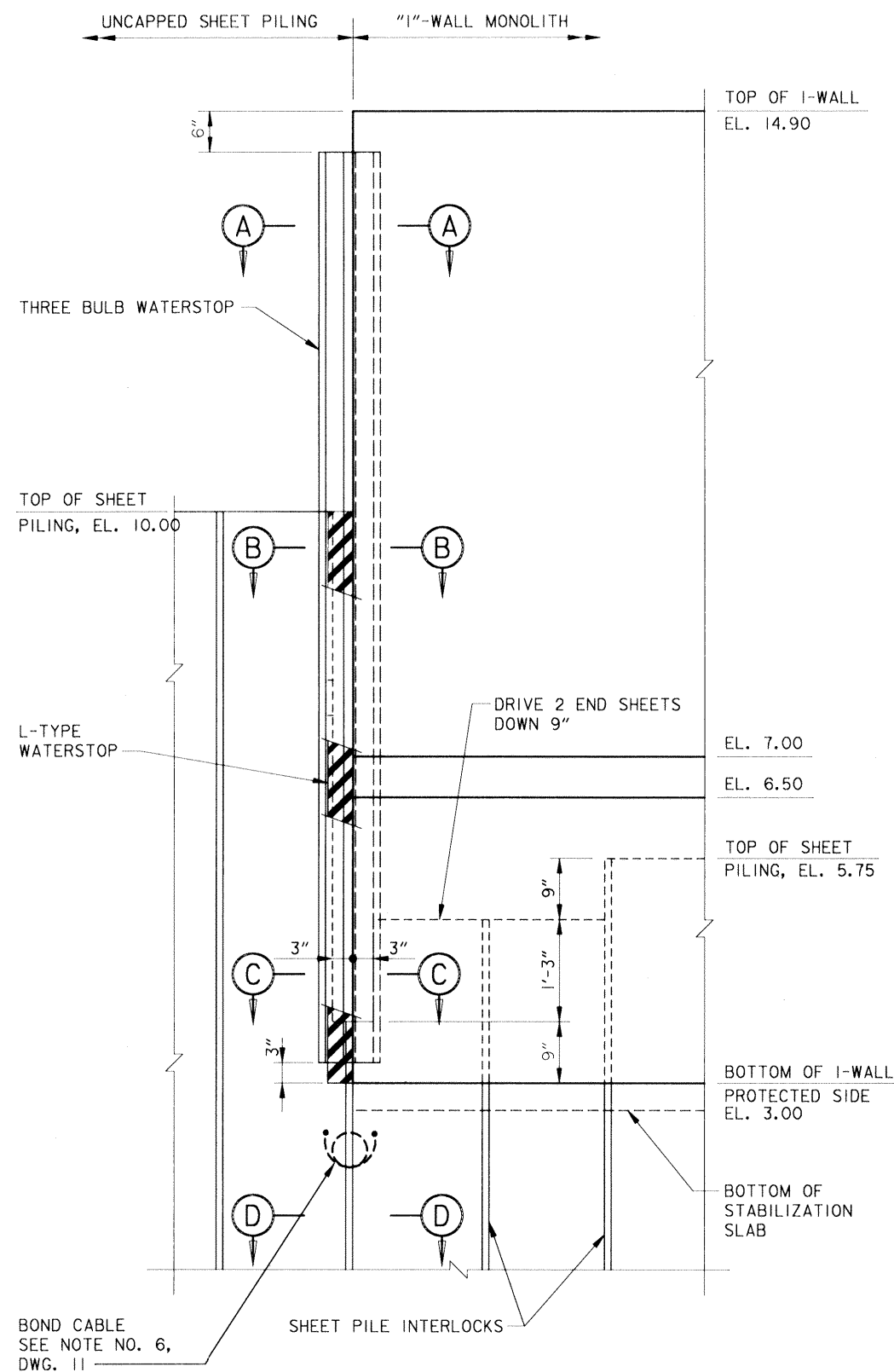
- FOR GENERAL NOTES, SEE DWG. 2.
- PROVIDE A 1 V ON 1 H TRANSITION AT THE BOTTOM OF CONCRETE "I"-WALL (FLOOD SIDE ONLY) VICINITY STA. 16+65.5 W/L.

REVISIONS			
SYMBOL	DESCRIPTION	DATE	APPROVED
△	GENERAL REVISIONS, AMENDMENT NO. 1.	5-11-93	M.D.

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. ESPRANDE AVE. S. METAIRIE, LOUISIANA 70002</small>
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	
TYPICAL "I"-WALL DETAILS	
DESIGNED BY: V PANNELL DRAWN BY: CJK & GFG CHECKED BY: T SMITH SUBMITTED BY: DESIGN ENGINEERING, INC.	DATE: FEB., 1993 PLOT SCALE: 16 SOLICITATION NO.: DACW29-93-B-0042
PLOT DATE: MAY 1993 FILE NO.: H-4-40205 DWG. 12 OF 24	



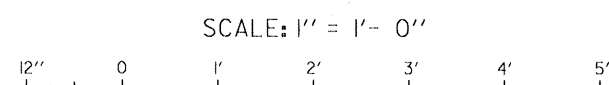
Safety is a Part of Your Contract



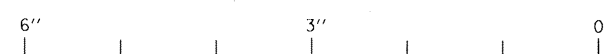
FLOOD SIDE ELEVATION

UNCAPPED SHEET PILING TO "1"-WALL

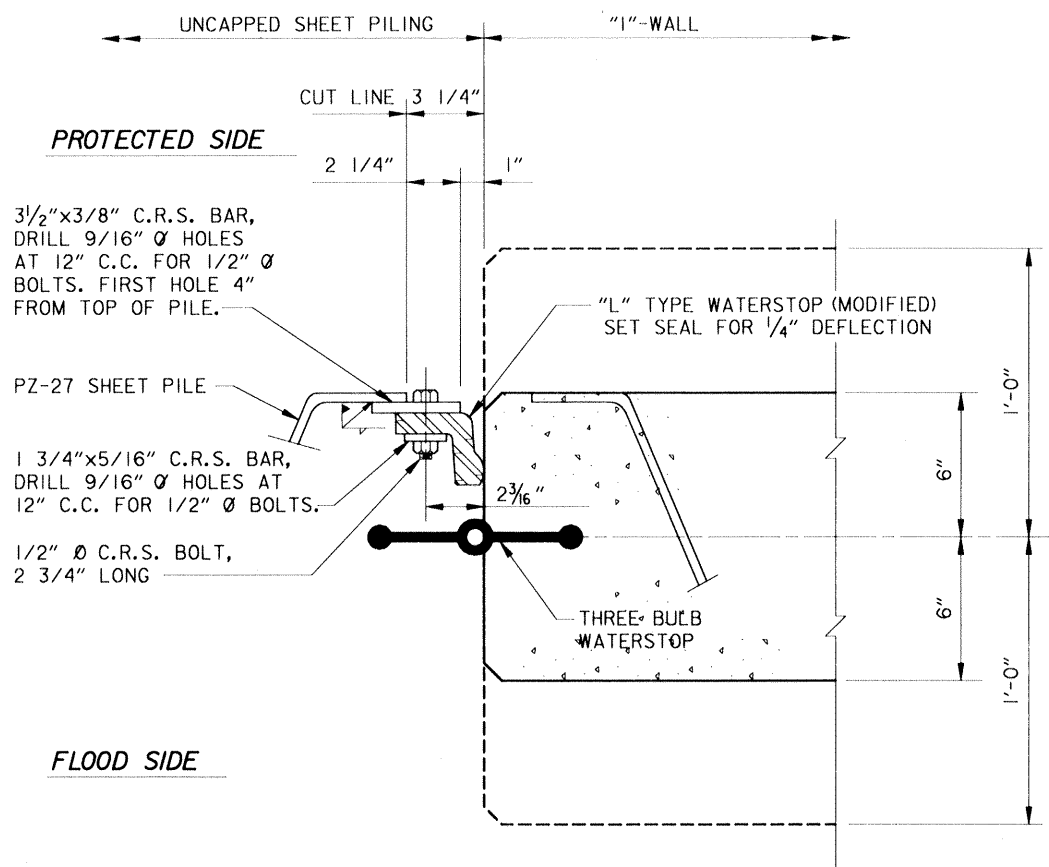
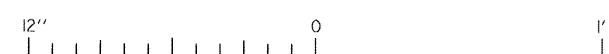
SCALE: 1" = 1'-0"



SCALE: 12" = 1' - 0"



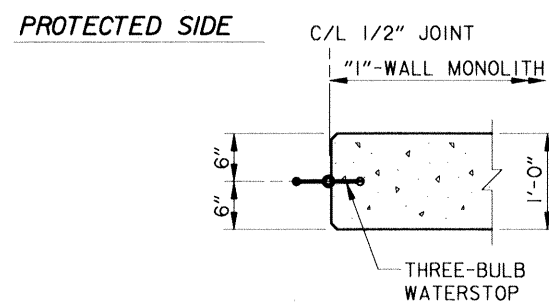
SCALE: 3" = 1' - 0"



TRANSITION - 1-WALL TO UNCAPPED SHEET PILING

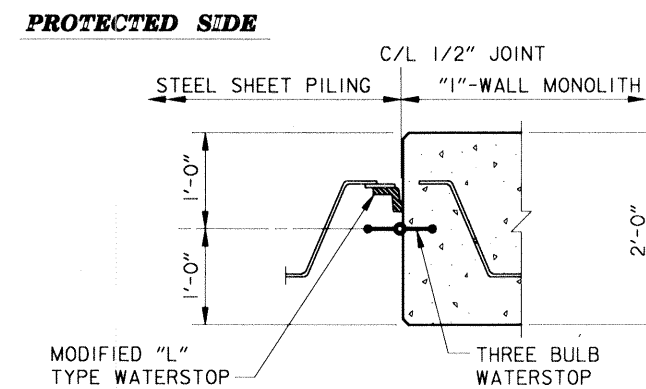
DETAIL 1

SCALE: 3" = 1'-0"



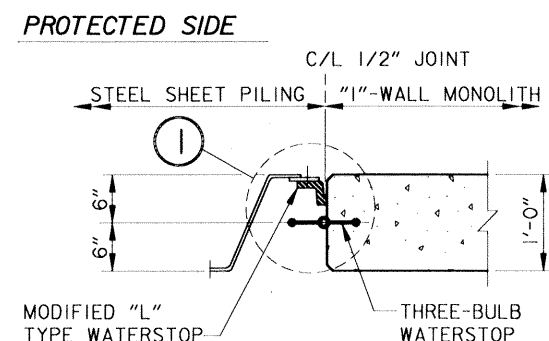
SECTION A

SCALE: 1" = 1'-0"



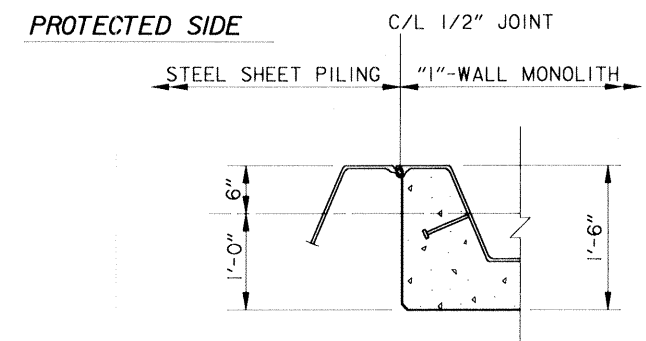
SECTION C

SCALE: 1" = 1'-0"



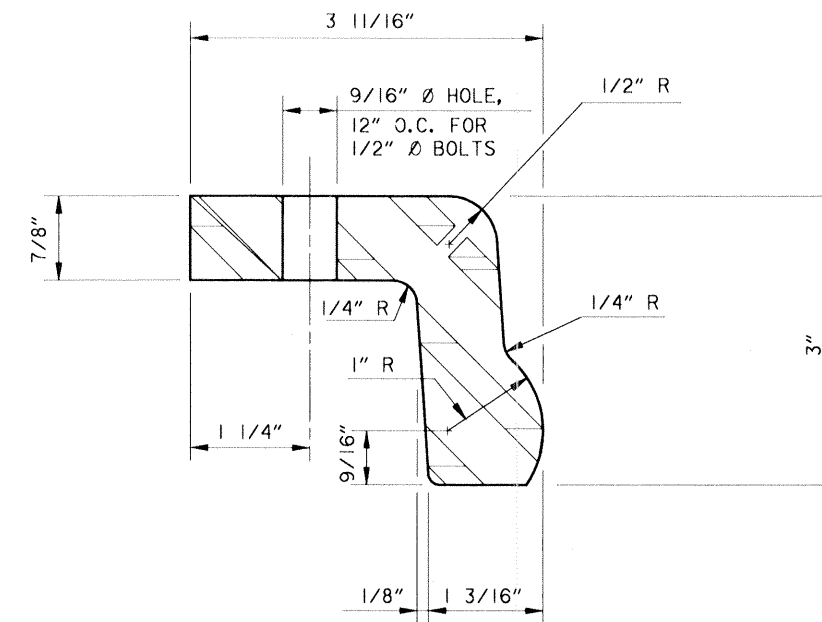
SECTION B

SCALE: 1" = 1'-0"



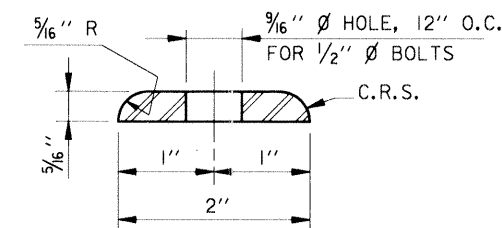
SECTION D

SCALE: 1" = 1'-0"



MODIFIED "L" TYPE WATERSTOP

SCALE: 12" = 1'-0"

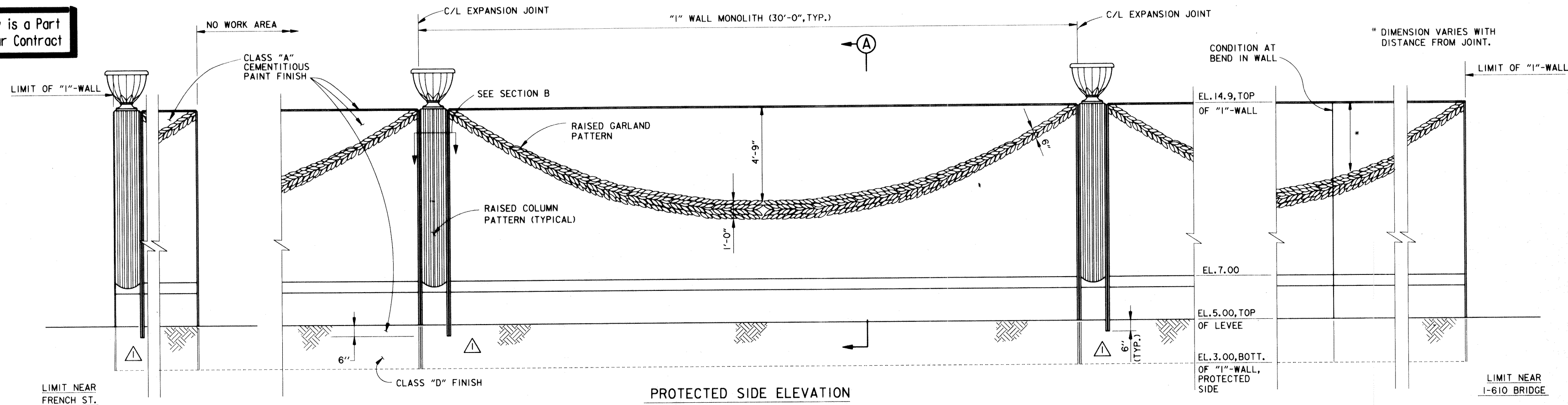


SEAL RETAINING BAR

SCALE: 12" = 1' - 0"

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
<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: 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.	SOLICITATION NO. DACW29-93-B-0042	DWG. 12Q OF 24	

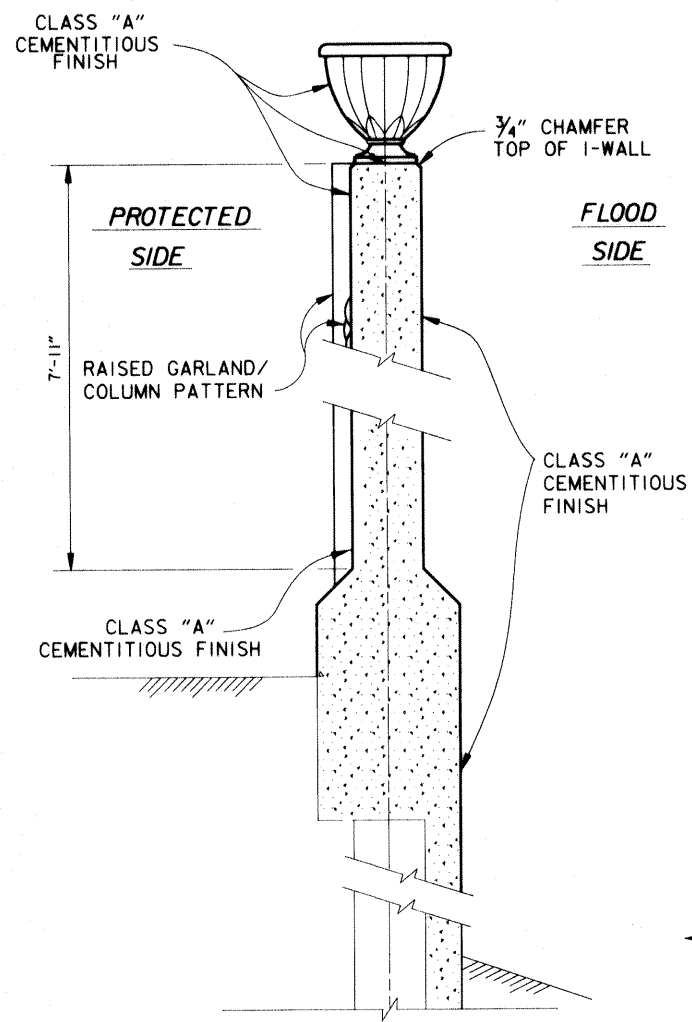
Safety is a Part of Your Contract



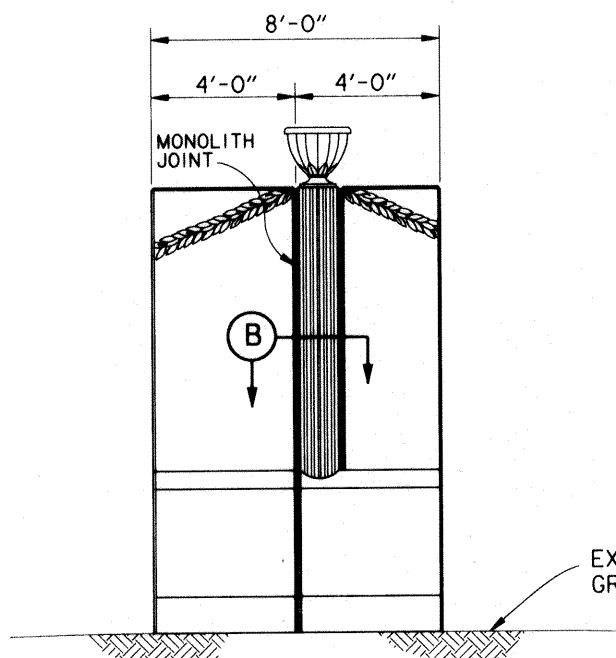
**PROTECTED SIDE ELEVATION
TYPICAL "1"-WALL TREATMENT**

1/2"=1'-0"

THIS PLAN ACCOMPANIES
MODIFICATION P0005
TO CONTRACT NUMBER
DACW29-93-C-0077



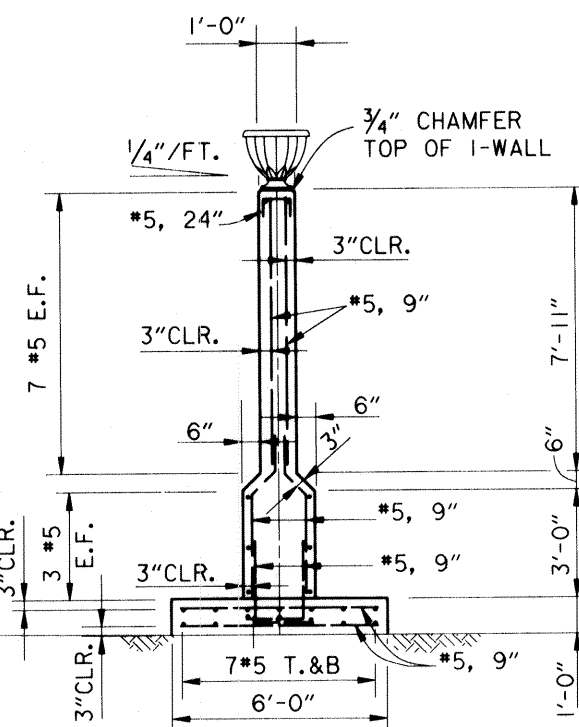
SECTION A
3/4"=1'-0"



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

"1"-WALL MOCK-UP

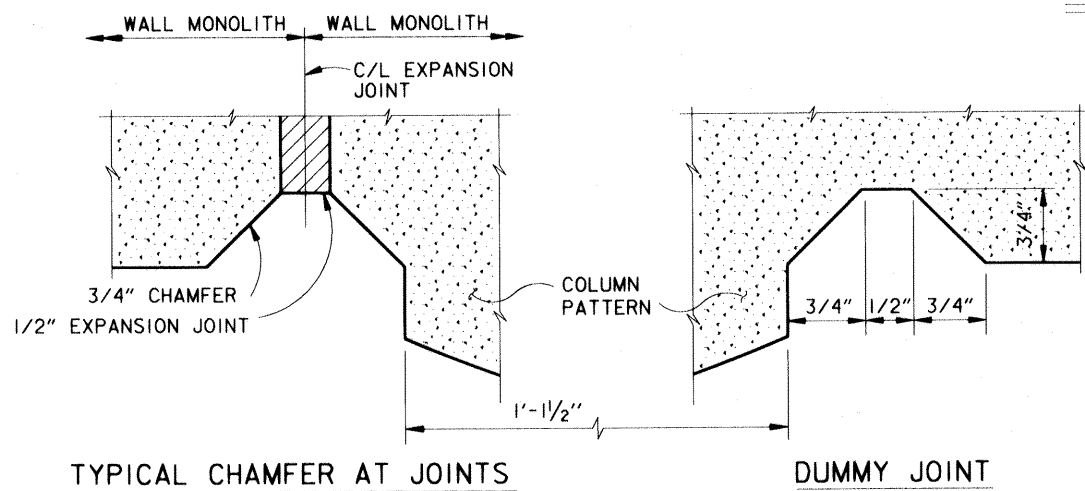
3/8"=1'-0"



WALL SECTION

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.



TYPICAL CHAMFER AT JOINTS

DUMMY JOINT

SECTION B
FULL SIZE

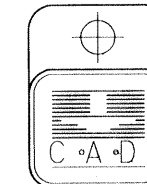
SCALE: 12" = 1' - 0"

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

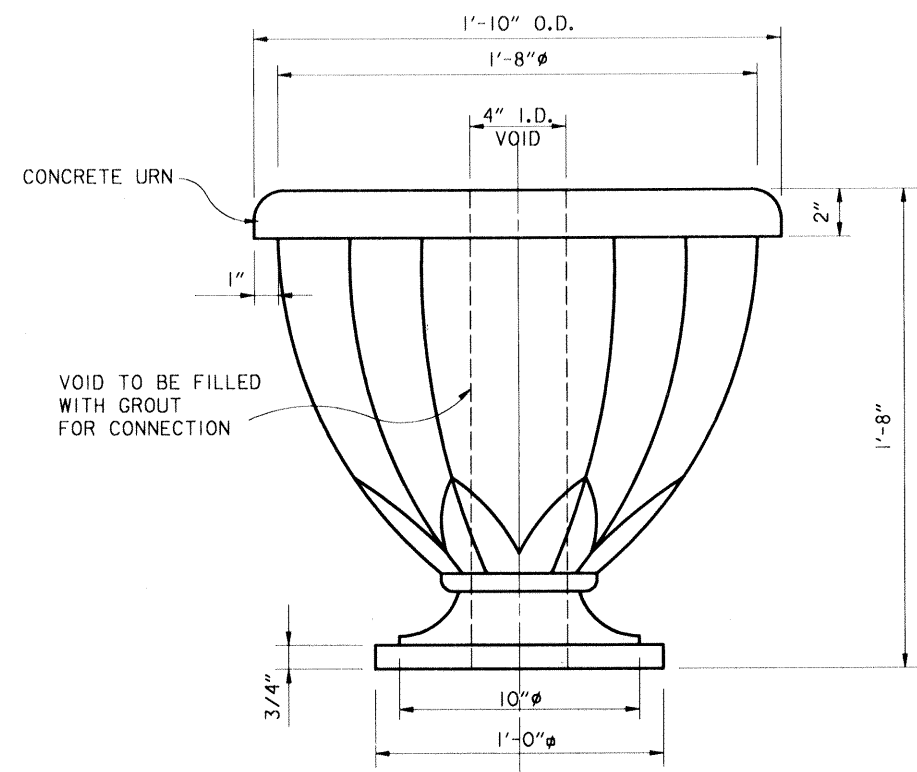
SCALE: 1/2" = 1' - 0"

SCALE: 3/8" = 1' - 0"

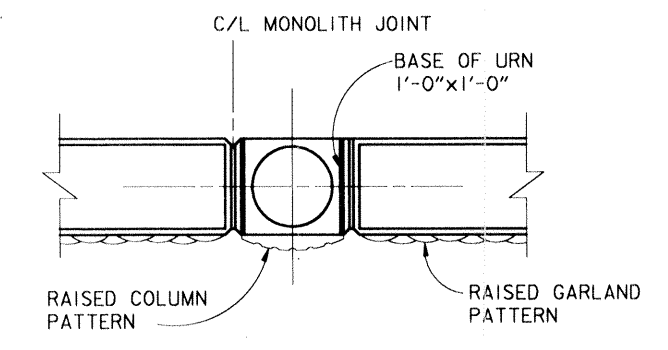
△	MODIFIED DUMMY JOINT LENGTH, MOD. NO. 5	12-14-93	M.D.
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 N. ESPERANDE 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			
"1"-WALL ARCHITECTURAL TREATMENT			
DESIGNED BY: V. PANNELL	DATE: FEB. 1993	PLOT SCALE: 24	PLOT DATE: MARCH 1993
DRAWN BY: K.A. WOJTLA	CHECKED BY: T.M. SMITH	CADD FILE: 11-D13	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 13 OF 24	



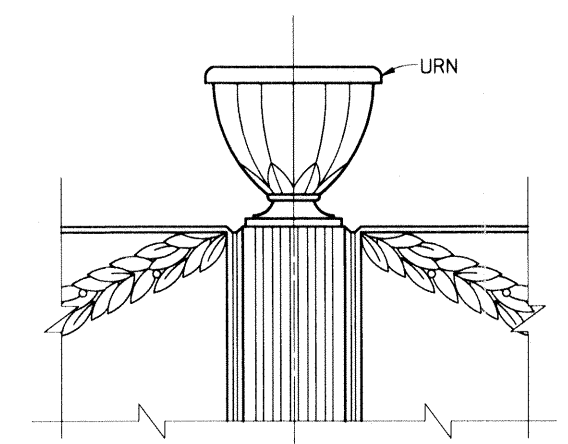
Safety is a Part of Your Contract



URN



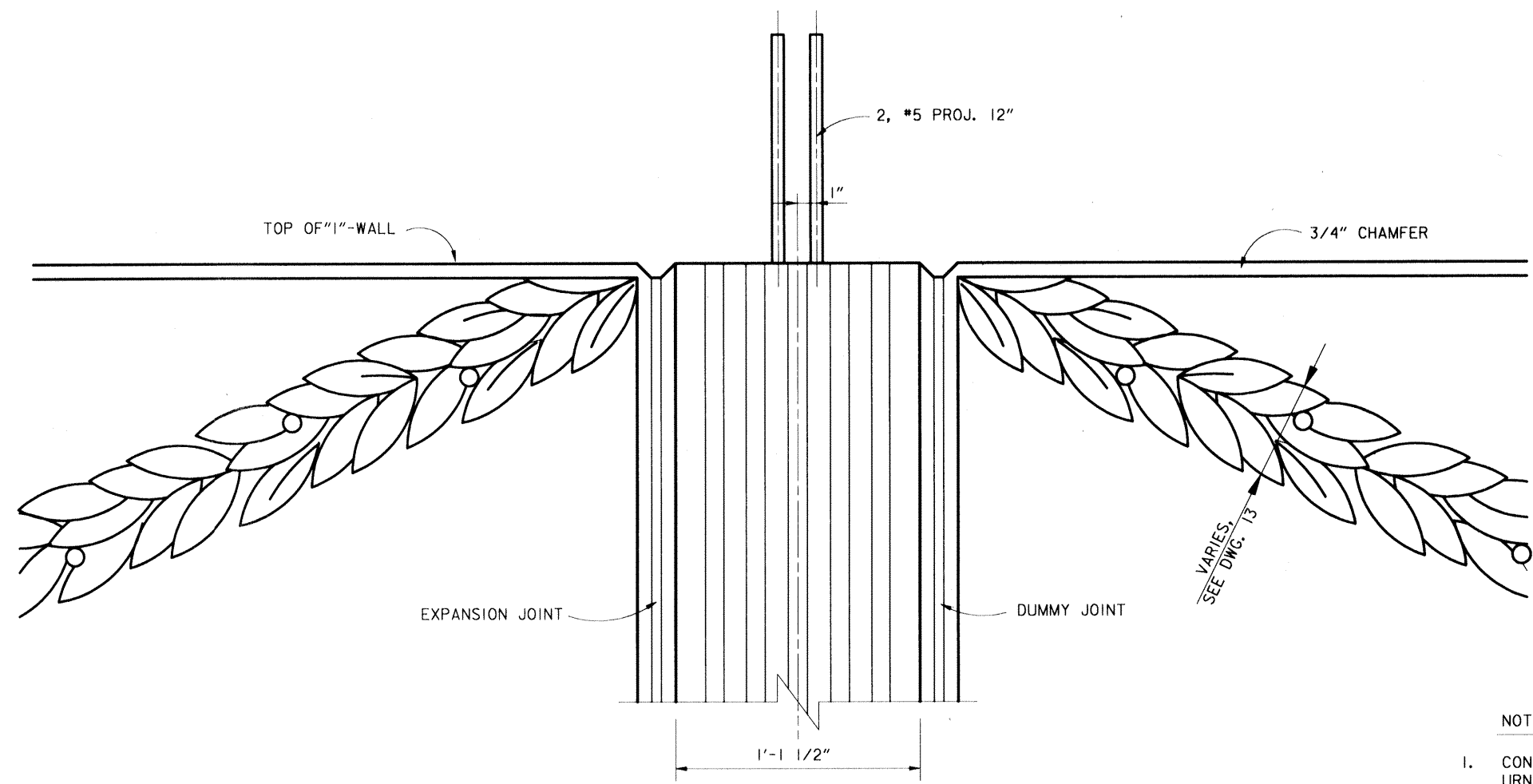
PLAN



ELEVATION

ASSEMBLED VIEWS

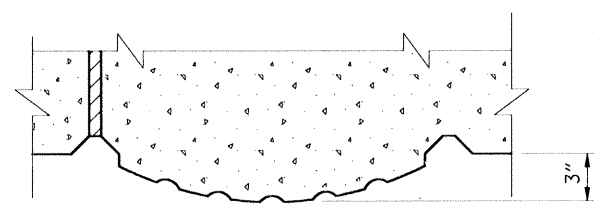
SCALE: 1" = 1'-0"



COLUMN AND GARLAND

DETAIL VIEWS

SCALE: 3" = 1'-0"

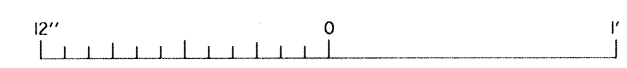


COLUMN PLAN

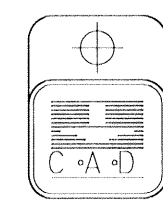
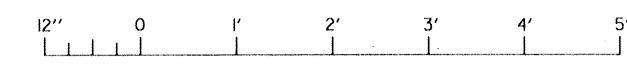
NOTES:

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"



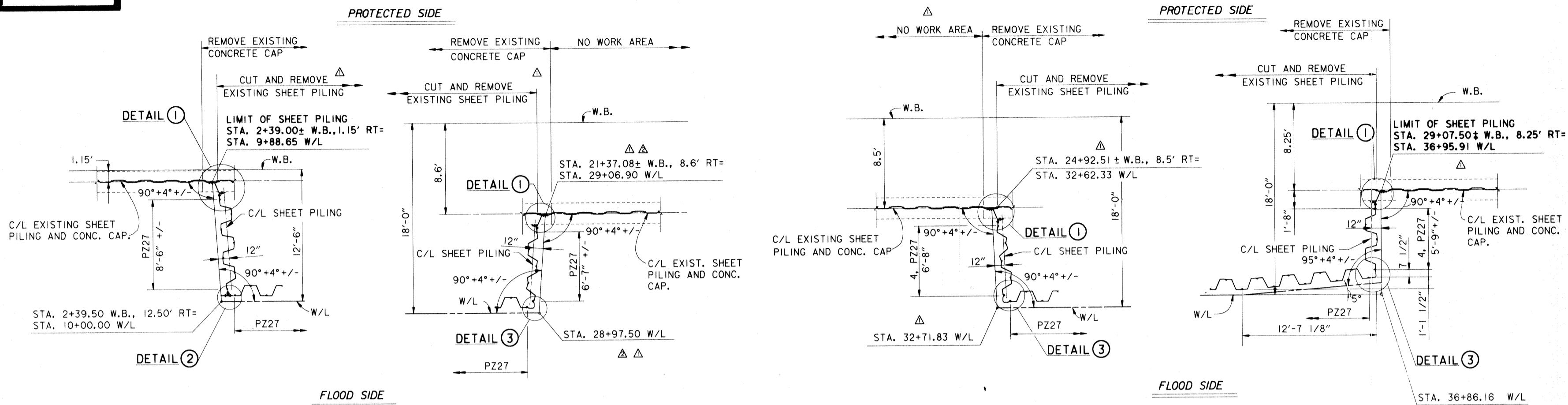
SCALE: 1" = 1'-0"



SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
<small>BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA</small>		<small>DESIGN ENGINEERING, INC. 3330 W. SPANLADE AVE., S. METAIRIE, LOUISIANA 70002</small>	
LAKE PONTCHARTRAIN, L.A. 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			
"I"-WALL ARCHITECTURAL TREATMENT			
DESIGNED BY: E. ALFIEREZ	DATE: FEB., 1993	PLOT SCALE: 4	PLOT DATE: MARCH 1993
DRAWN BY: K.A. WJUTALA	CHECKED BY: T.M. SMITH	CADD FILE: 11-D13A	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 13a OF 24	

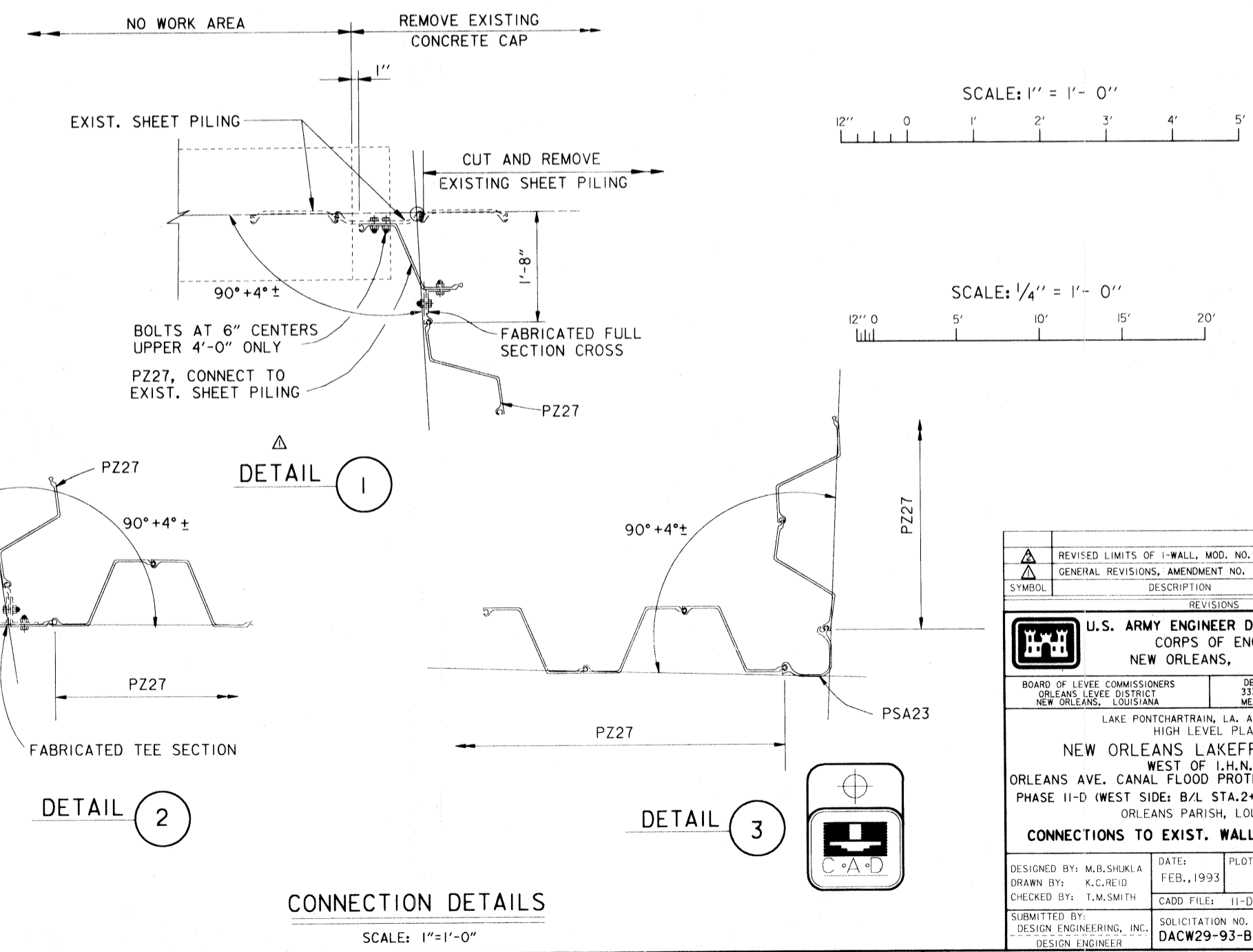
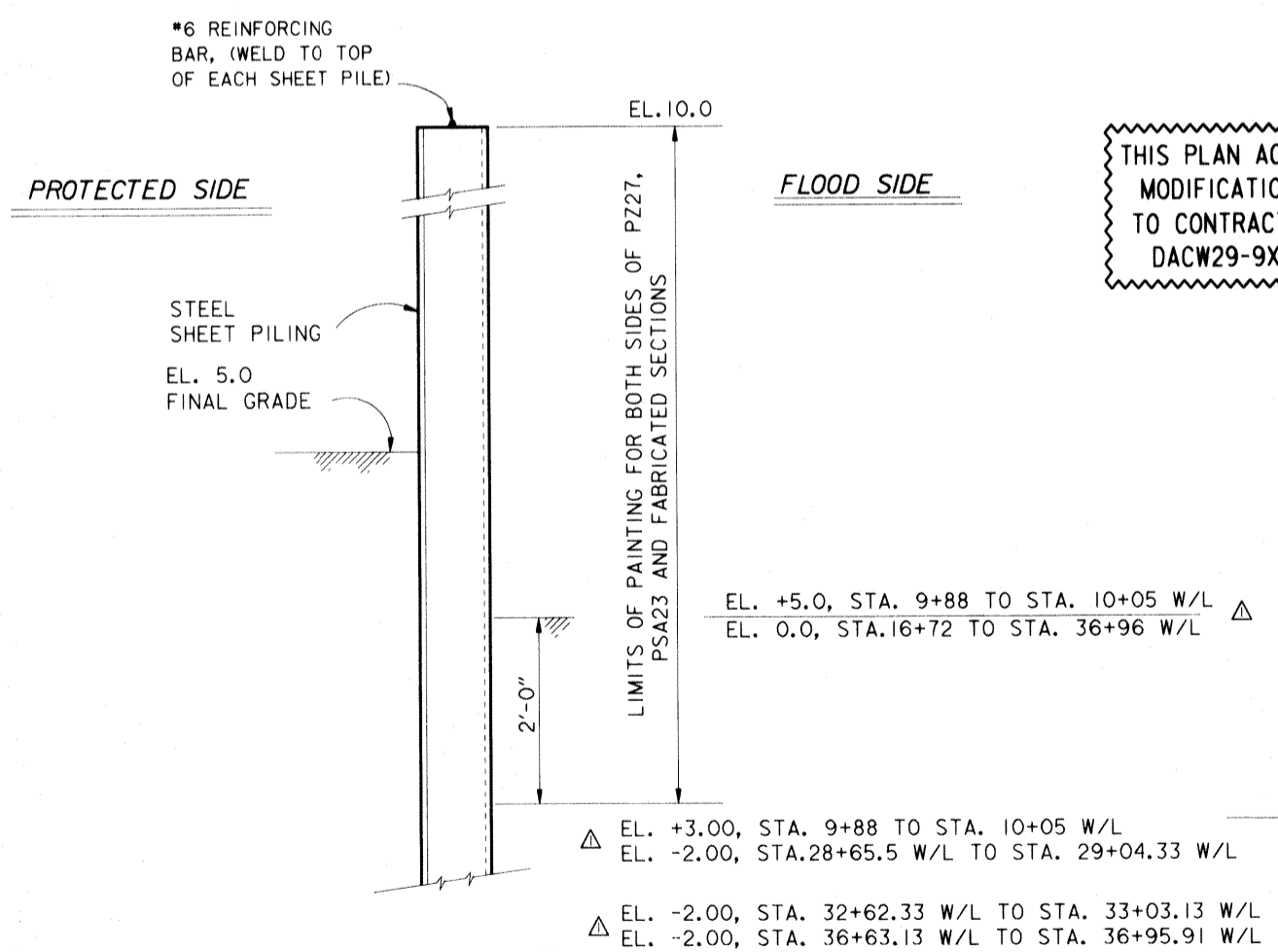


Safety is a Part
of Your Contract



CONNECTIONS TO EXISTING FLOODWALL
SCALE: 1/4" = 1'-0"

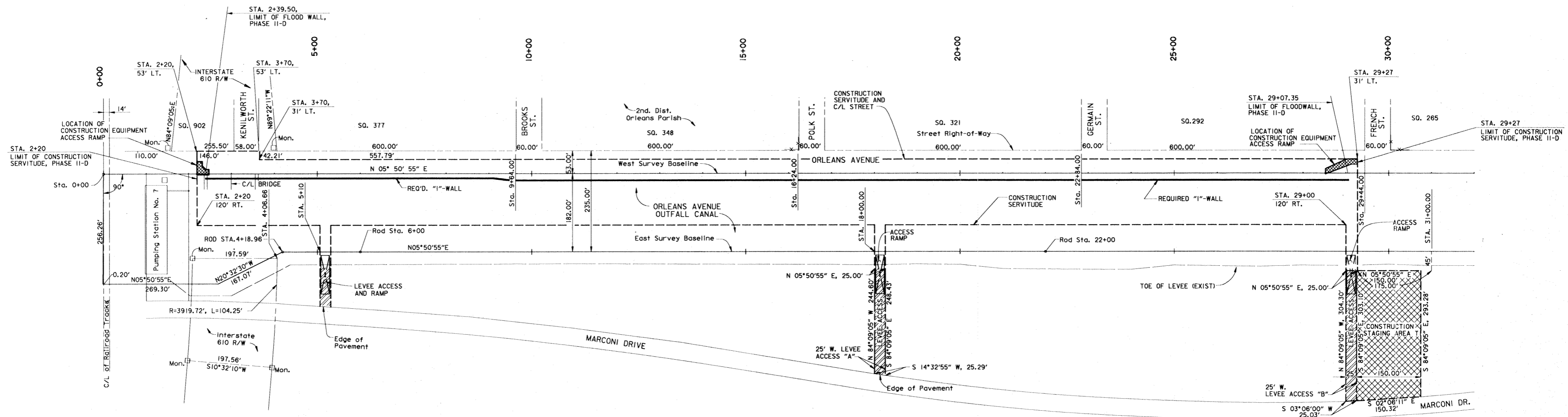
NOTE:
FOR GENERAL NOTES, SEE DWG. 2.



REVISIONS			
SYMBOL	DESCRIPTION	DATE	APPROVED
△	REVISED LIMITS OF I-WALL, MOD. NO. 3	11-5-93	J.A.R.
△	GENERAL REVISIONS, 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. 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			
CONNECTIONS TO EXIST. WALL AND MISC. DETAILS			
DESIGNED BY: M.B. SHUKLA	DATE: FEB. 1993	PLOT SCALE: 48	PLOT DATE: MAY 1993
DRAWN BY: K.C. REID	CADD FILE: 11-D14	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042		
DESIGNED BY: DESIGN ENGINEERING, INC.	DWG. 14 OF 24		

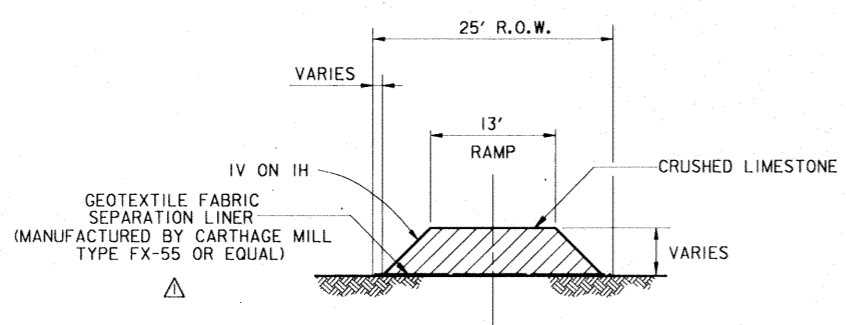
Safety is a Part of Your Contract



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

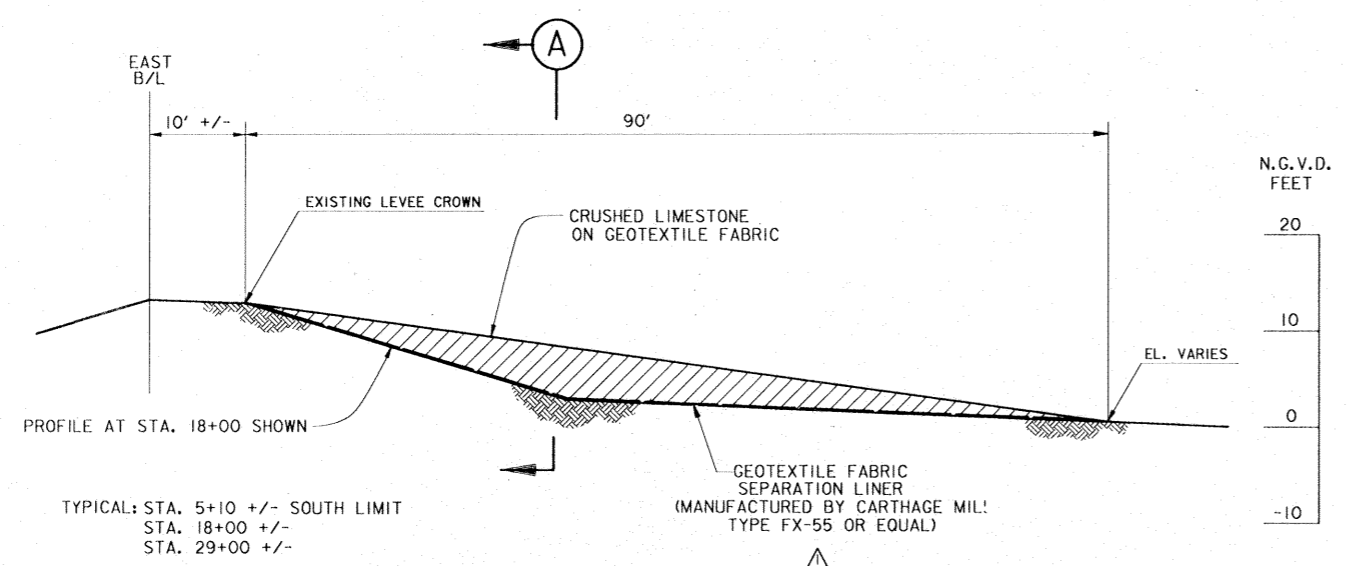
SCALE: 1" = 10'

LEGEND

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

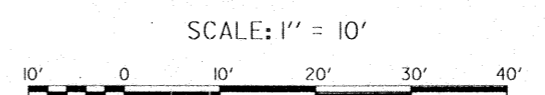
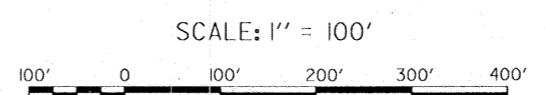
NOTES:

1. EXISTING TREES IN THE WAY OF STAGING AREAS AND LEVEE ACCESS SHALL BE REMOVED BY CONTRACTOR.
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

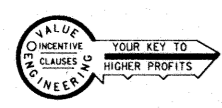
SCALE: 1" = 10'



SYMBOL	DESCRIPTION	DATE	APPROVED
△	CHANGED TYPE GEOTEXTILE FABRIC, AMENDMENT NO. 1.	5-11-93	M.D.

REVISIONS			
△	CHANGED TYPE GEOTEXTILE FABRIC, 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. 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 RIGHTS-OF-WAY AND STAGING AREA	
DESIGNED BY: T.M.SMITH DRAWN BY: G.F.GEYER CHECKED BY: T.M.SMITH	DATE: FEB., 1993 CADD FILE: r11-D15
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042 DWG. 15 OF 24
PLOT SCALE: 100 FILE NO. H-4-40205	PLOT DATE: MAY 1993



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
OLB Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, Louisiana
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

REMARKS:

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
OLB Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, Louisiana
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 See Text

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 50-6"
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

REMARKS:

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
OLB Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, Louisiana
Design Engineering, Inc. Metairie, Louisiana

Boring No. 6 Soil Technician A. J. Mayeux Date 21 September 1985
Ground Elev. -5.60 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

REMARKS:

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
OLB Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, Louisiana
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 See Text

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	28.5	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	38.5	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	

REMARKS:

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
OLB Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, Louisiana
Design Engineering, Inc. Metairie, Louisiana

Boring No. 10 Soil Technician A. J. Mayeux Date 21 September 1985
Ground Elev. -5.60 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

REMARKS:

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
OLB Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, Louisiana
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	

REMARKS:

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
OLB Project No. 2048-0304, New Orleans, Louisiana
For: The Board of Levee Commissioners of the Levee District, New Orleans, Louisiana
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	

REMARKS:

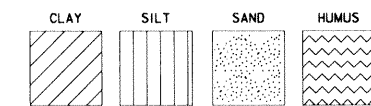
Notes:

1. 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.

2. 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: II-D16	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, 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	SYM BOL	TYPICAL NAMES		
COARSE - GRAINED SOILS More than half of material is larger than No. 200 sieve size.	GRAVELS More than half of coarse fraction is larger than No. 4 sieve size.	CLEAN GRAVEL (Little or No Fines)	GW	GRAVEL, Well Graded, gravel-sand mixtures, little or no fines		
		GRAVEL (Little or No Fines)	GP	GRAVEL, Poorly Graded, gravel-sand mixtures, little or no fines		
		GRAVEL WITH FINES	GM	SILTY GRAVEL, gravel-sand-silt mixtures		
		CLAYEY GRAVEL, gravel-sand-clay mixtures	GC			
		CLEAN SAND (Little or No Fines)	SW	SAND, Well-Graded, gravelly sands		
	SANDS More than half of coarse fraction is larger than No. 4 sieve size.	SANDS WITH FINES (Appreciable Amount of Fines)	SAND, Poorly-Graded, gravelly sands	SP		
			SILTY SAND, sand-silt mixtures	SM		
		CLAYEY SAND, sand-clay mixtures	SC			
		FINE - GRAINED SOILS More than half the material is smaller than No. 200 sieve size.	SILTS AND CLAYS (Liquid Limit < 50)	SILT & very fine sand, silty or clayey fine sand or clayey silt with slight plasticity	ML	
				LEAN CLAY, Sandy Clay, Silty Clay, of low to medium plasticity	CL	
ORGANIC SILTS, and organic silty clays of low plasticity	OL					
SILTS AND CLAYS (Liquid Limit > 50)	SILT, fine sandy or silty soil with high plasticity		MH			
	FAT CLAY, inorganic clay of high plasticity		CH			
	ORGANIC CLAYS of medium to high plasticity, organic silts		OH			
	PEAT, and other highly organic soil		PT			
HIGHLY ORGANIC SOILS						
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	SYMBOL	MODIFICATION	SYMBOL
TAN	T	VERY SOFT	< 250	vSo	Traces	Tr
YELLOW	Y	SOFT	250-500	So	Fine	F
RED	R	MEDIUM	500-1000	M	Medium	M
BLACK	BK	STIFF	1000-2000	St	Coarse	C
GRAY	Gr	VERY STIFF	2000-4000	vSt	Concretions	cc
LIGHT GRAY	lGr	HARD	> 4000	H	Rootlets	rt
DARK GRAY	dGr				Lignite fragments	lg
BROWN	Br				Shale fragments	sh
LIGHT BROWN	lBr				Sandstone fragments	sds
DARK BROWN	dBr				Shell fragments	sif
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.

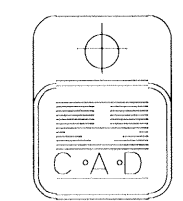
*The D₁₀ size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D₁₀.

**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. 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			
SOIL BORING LEGEND			
DESIGNED BY: J. RICHARDSON	DATE: FEB., 1993	PLOT SCALE: 1	PLOT DATE: MARCH 1993
DRAWN BY: U.S.A.C.E.	CADD FILE: H-D16A	FILE NO. H-4-40205	
CHECKED BY: J. ROMERO	SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 16a OF 24



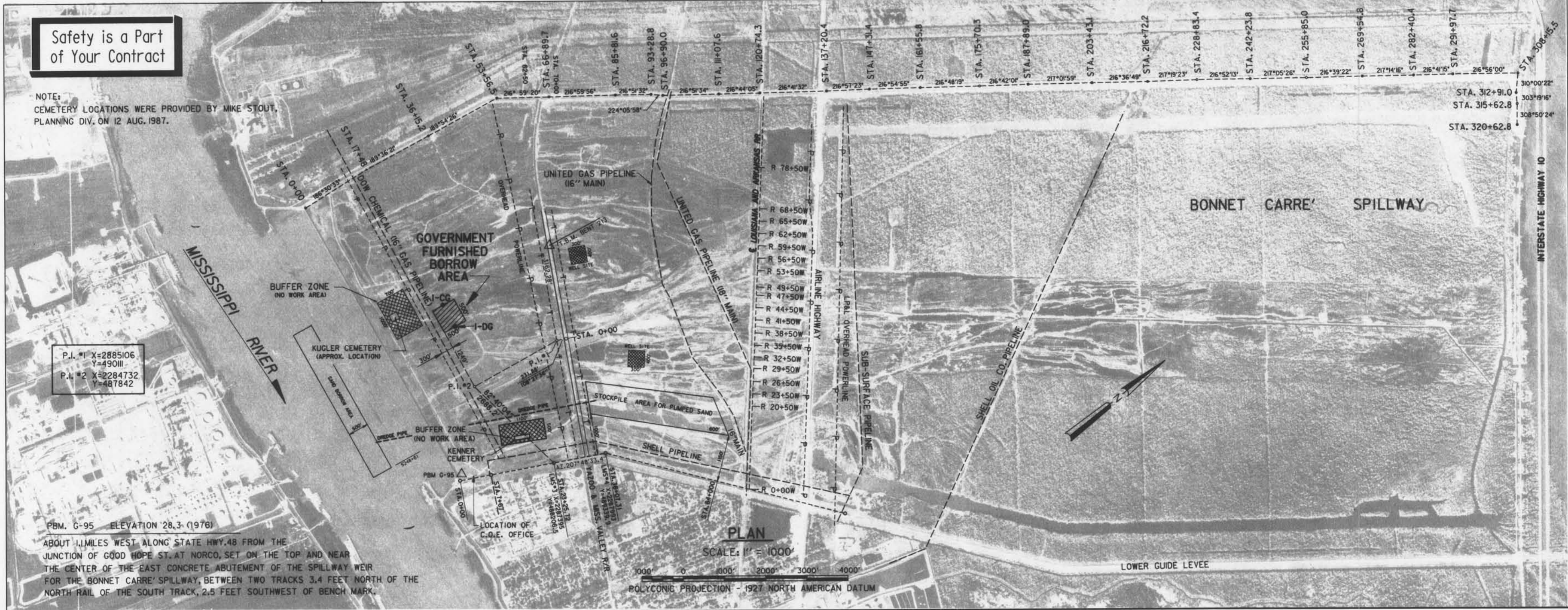
Safety is a Part of Your Contract

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 1.1 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.

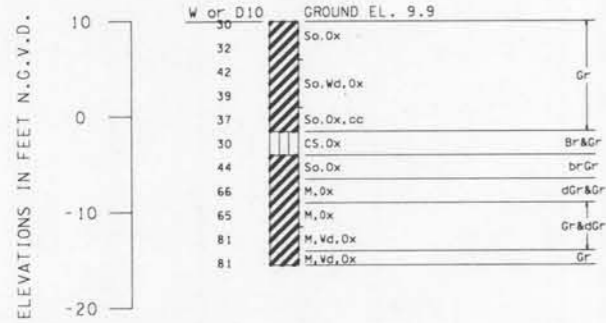


PLAN

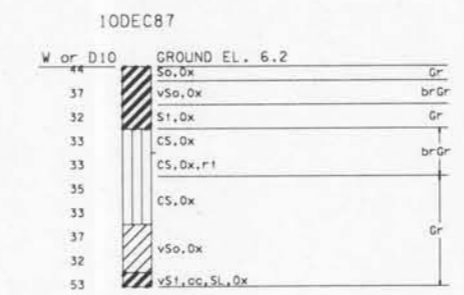
SCALE: 1" = 1000'

POLYCONIC PROJECTION - 1927 NORTH AMERICAN DATUM

BOR. 1-CG (88-01)
STA. 18+87
2884 FT. SOUTH OF R.R.
WATER TABLE 6.0 FT.
06NOV87



BOR. 1-DG (88-01)
STA. 13+60
2720 FT. SOUTH OF R.R.

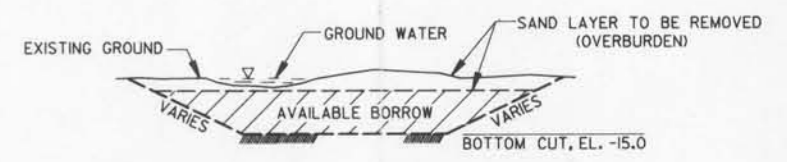


NOTE:
BORINGS WERE TAKEN WITH A HAND AUGER
OR SPLIT SPOON.
FOR SOIL BORING LEGEND, SEE DWG. 23A.



EXCAVATION IN VICINITY OF FLAGGED OAK TREES

NOT TO SCALE



TYPICAL EXCAVATION SECTION

NOT TO SCALE

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.

SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS 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			
BORROW AREA LOCATION			
DESIGNED BY: T.M.SMITH	DATE: FEB., 1993	PLOT SCALE: 1000	PLOT DATE: MARCH 1993
DRAWN BY: P.M.K.	CHECKED BY: T.M.SMITH	CADD FILE: II-D17	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.		SOLICITATION NO. DACW29-93-B-0042	DWG. 17 OF 24



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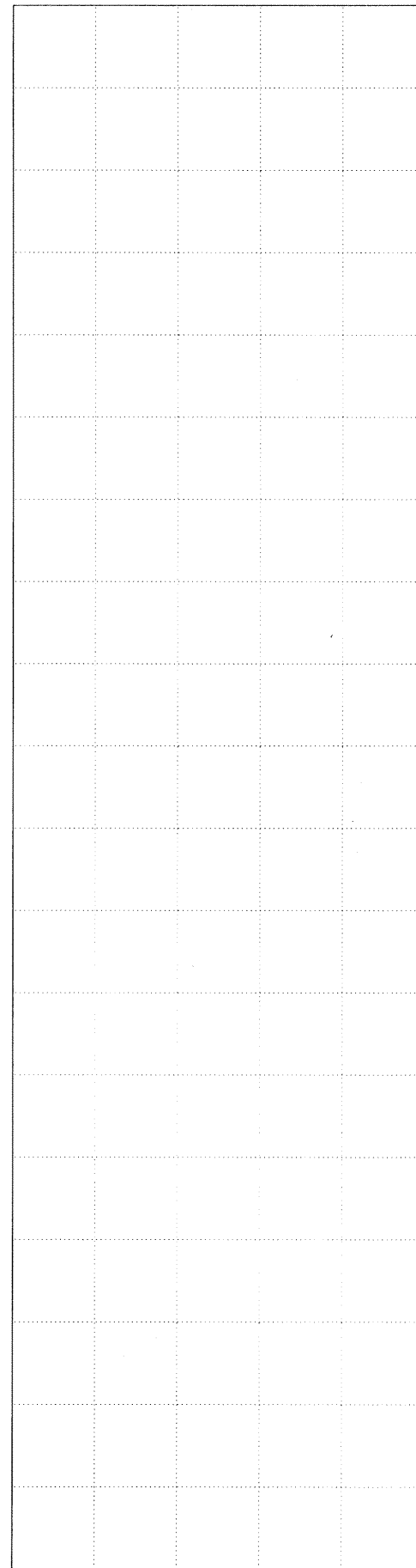
ELEVATIONS IN FEET - N.G.V.D.

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5
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-5
-10



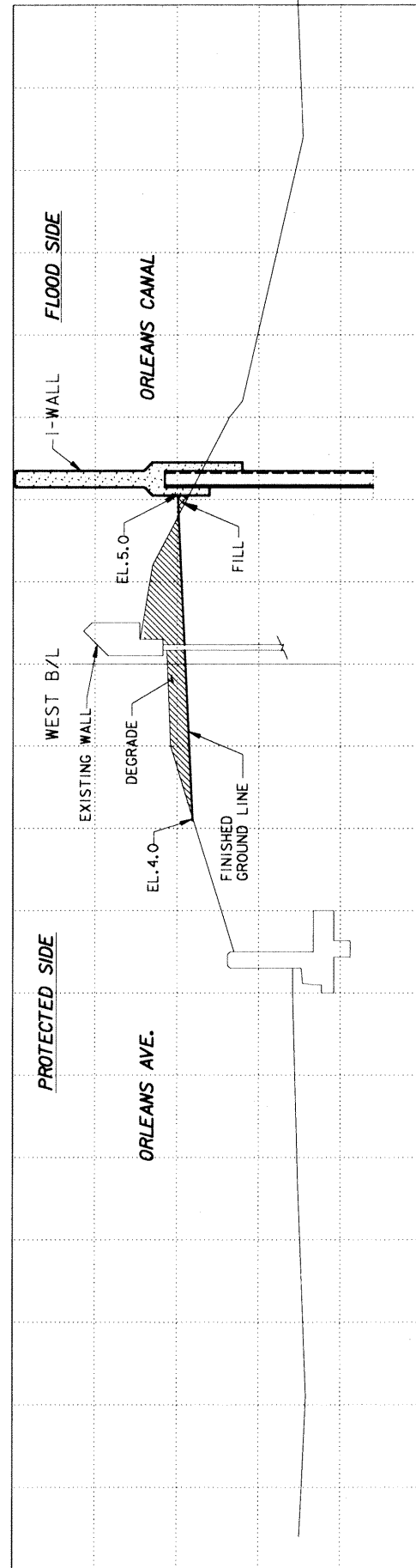
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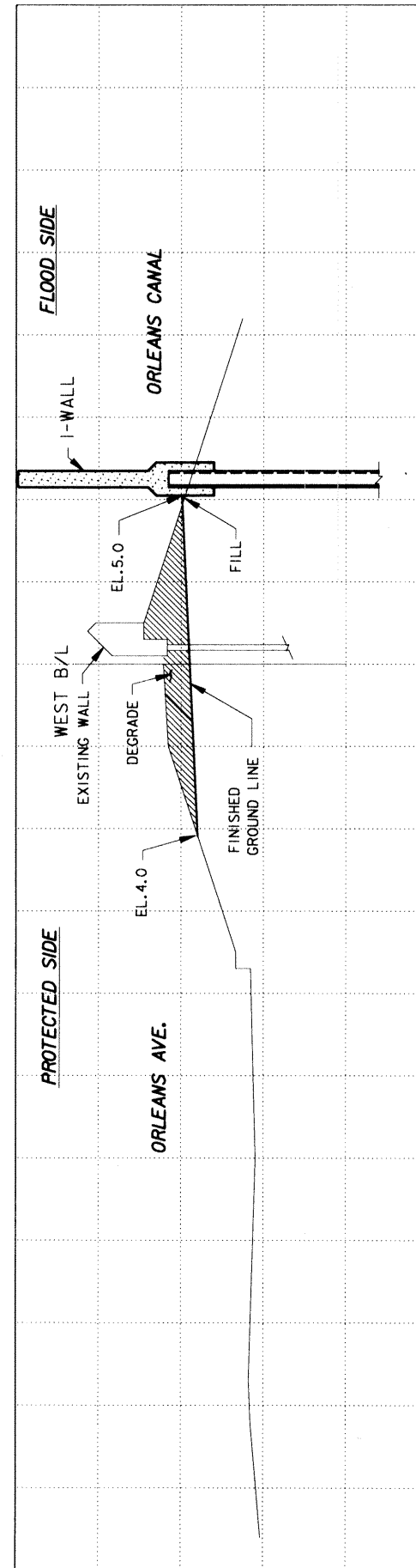
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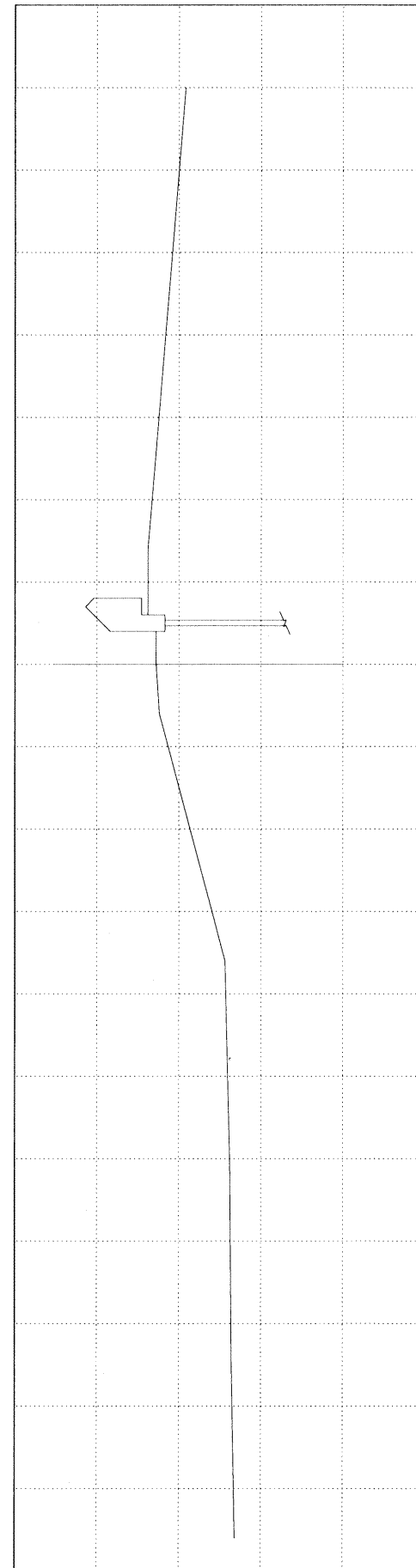
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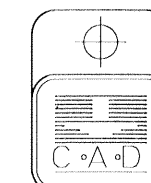
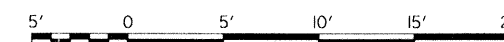
DISTANCE IN FEET


STA. 2+00 W.B.

STA. 4+00 W.B.

STA. 2+69.30 W.B.

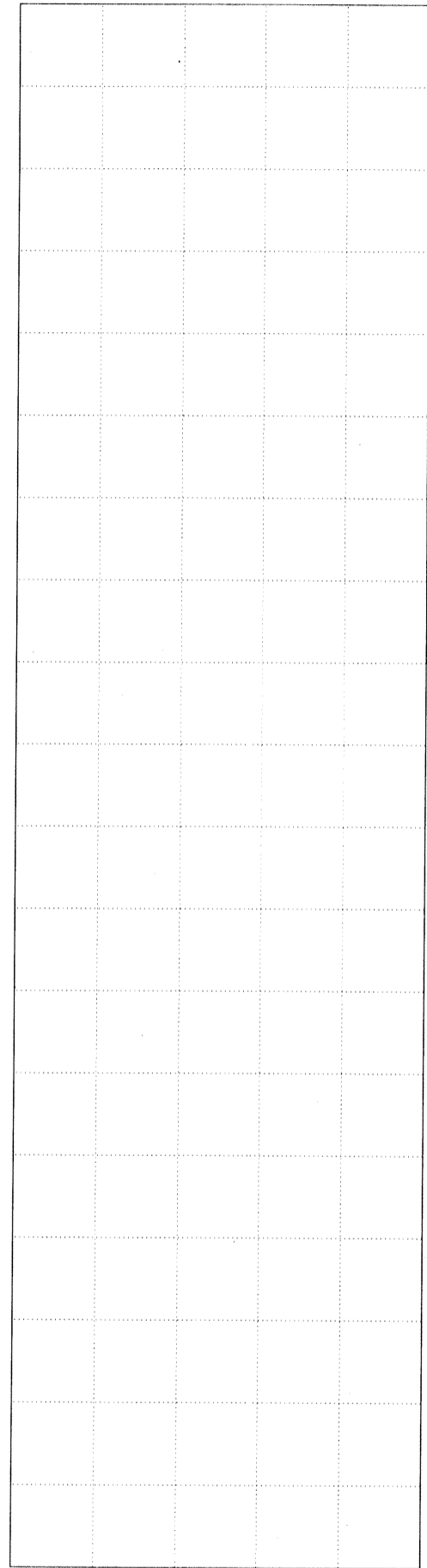
SCALE: 1" = 5'



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 N. 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 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-D1B	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC.	SOLICITATION NO. DACW29-93-B-0042	DWG. 18 OF 24	

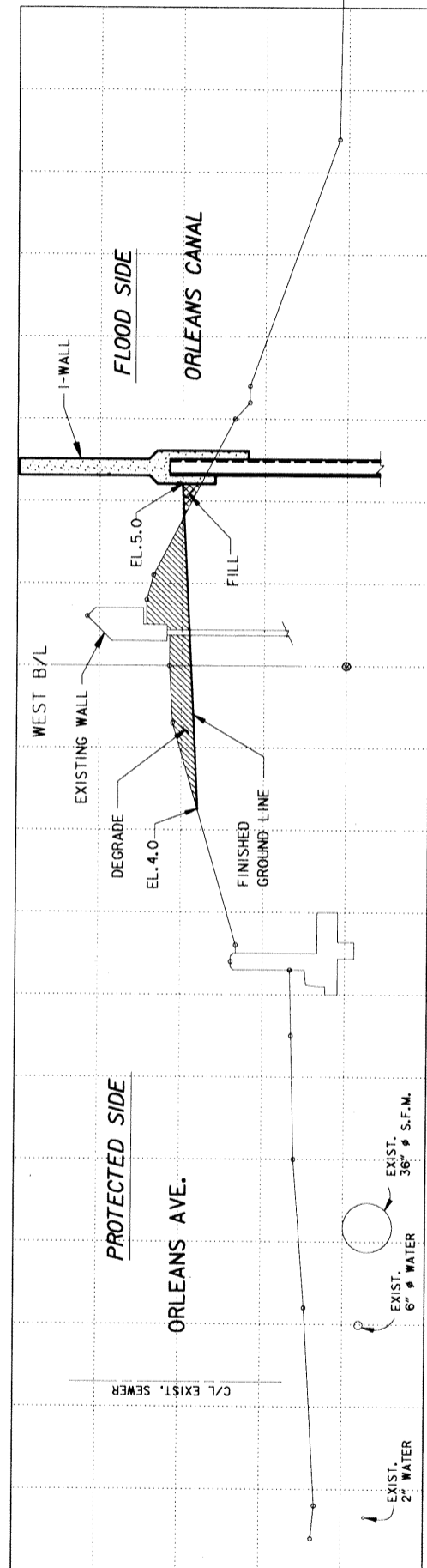
Safety is a Part of Your Contract

15
10
5
0
-5
-10



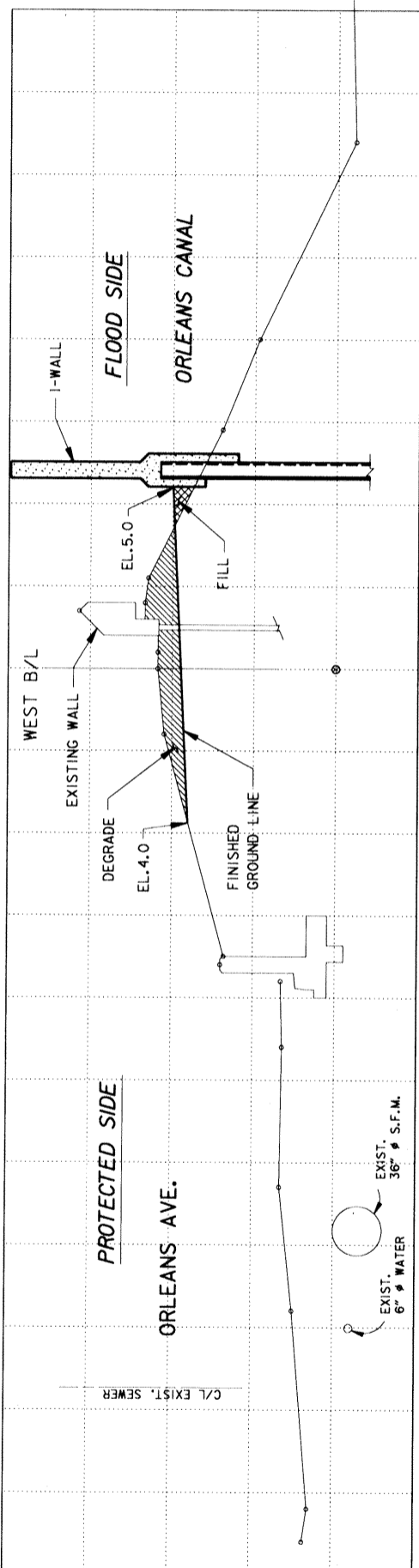
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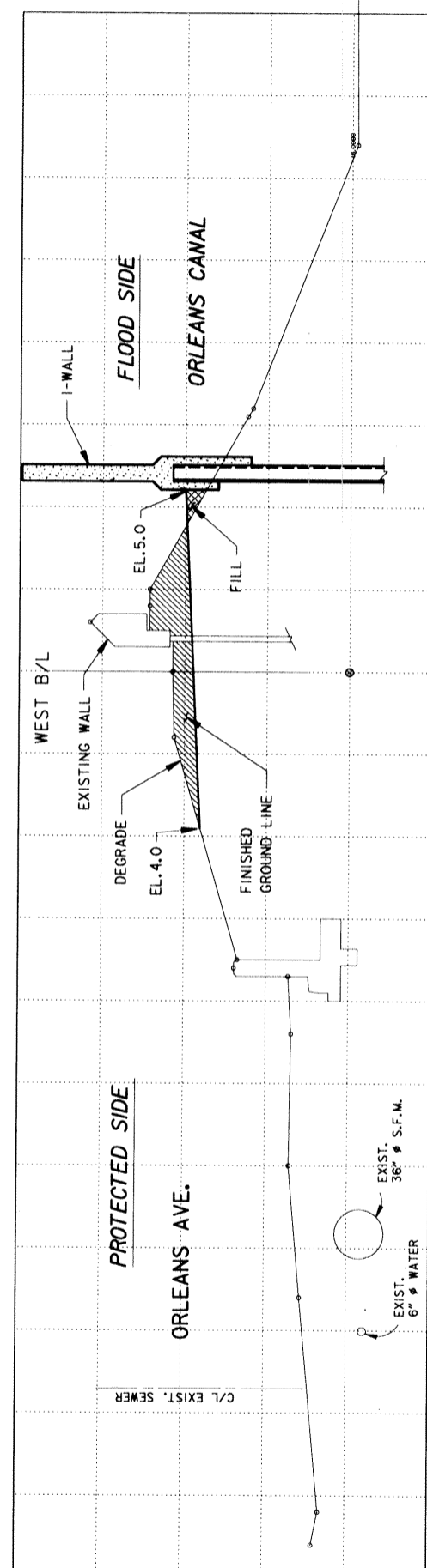
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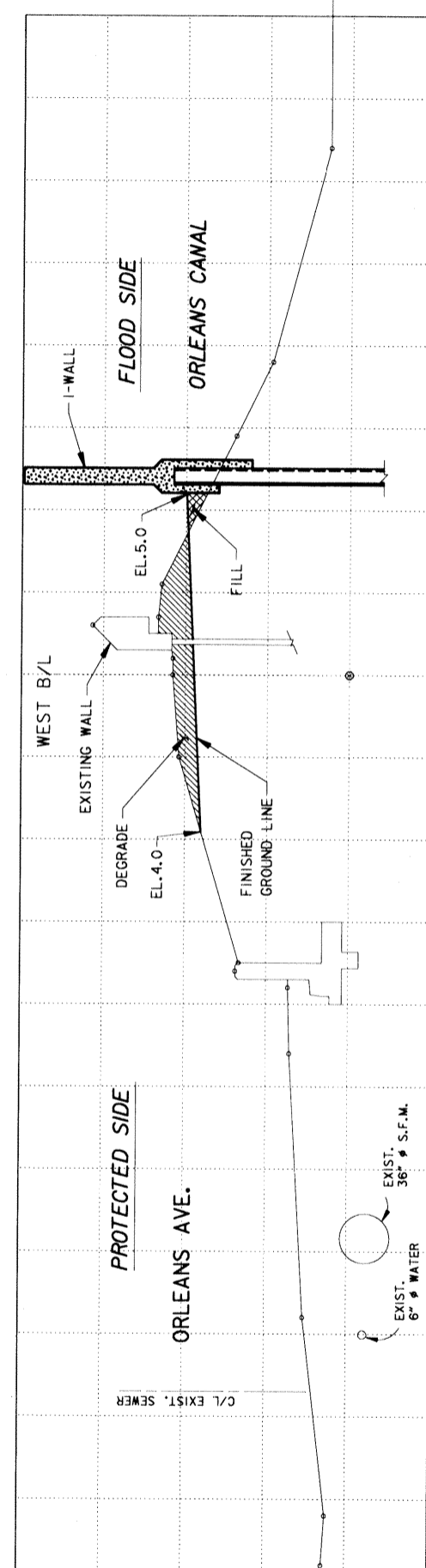
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15
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-5
-10



15
10
5
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-5
-10

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

DISTANCE IN FEET

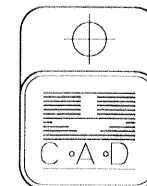
STA. 5+00 W.B.

STA. 6+00 W.B.

STA. 7+00 W.B.

STA. 8+00 W.B.

SCALE: 1" = 5'



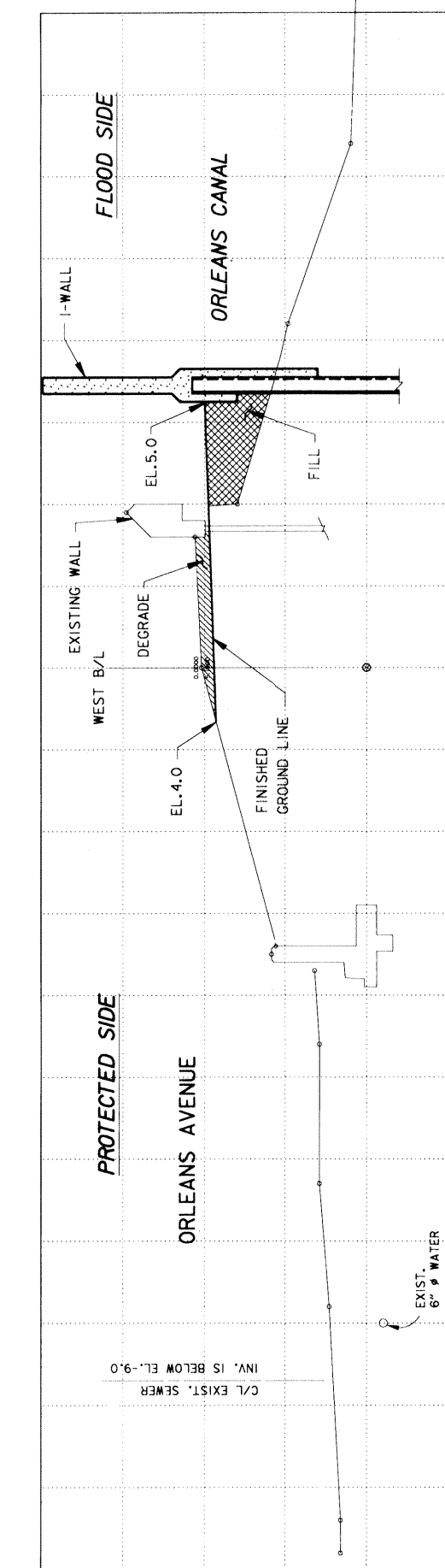
SYMBOL	DESCRIPTION	DATE	APPROVED
REVISIONS			
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LOUISIANA			
BOARD OF LEVEE COMMISSIONERS ORLEANS LEVEE DISTRICT NEW ORLEANS, LOUISIANA		DESIGN ENGINEERING, INC. 3330 W. ESPLANADE AVE., S. METAIRIE, LOUISIANA 70002	
LAKE PONTCHARTRAIN, 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. NORQUERA	DATE: FEB., 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CADD FILE: 11-D19	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042		
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		DWG. 19 OF 24	



Safety is a Part of Your Contract

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

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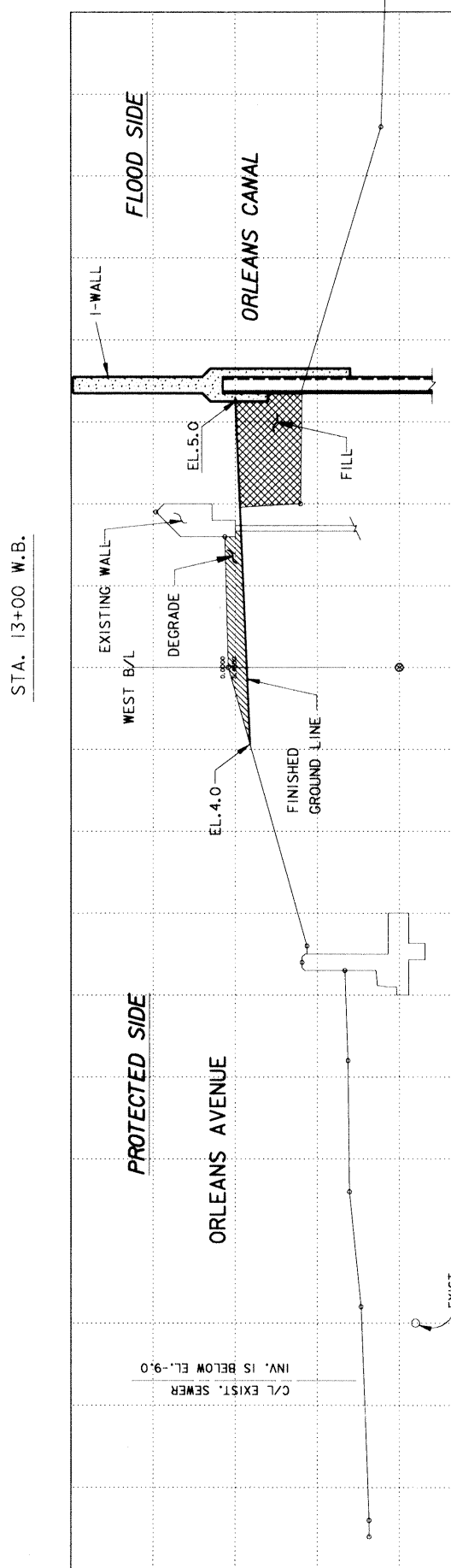


ELEVATIONS IN FEET - N.G.V.D.

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

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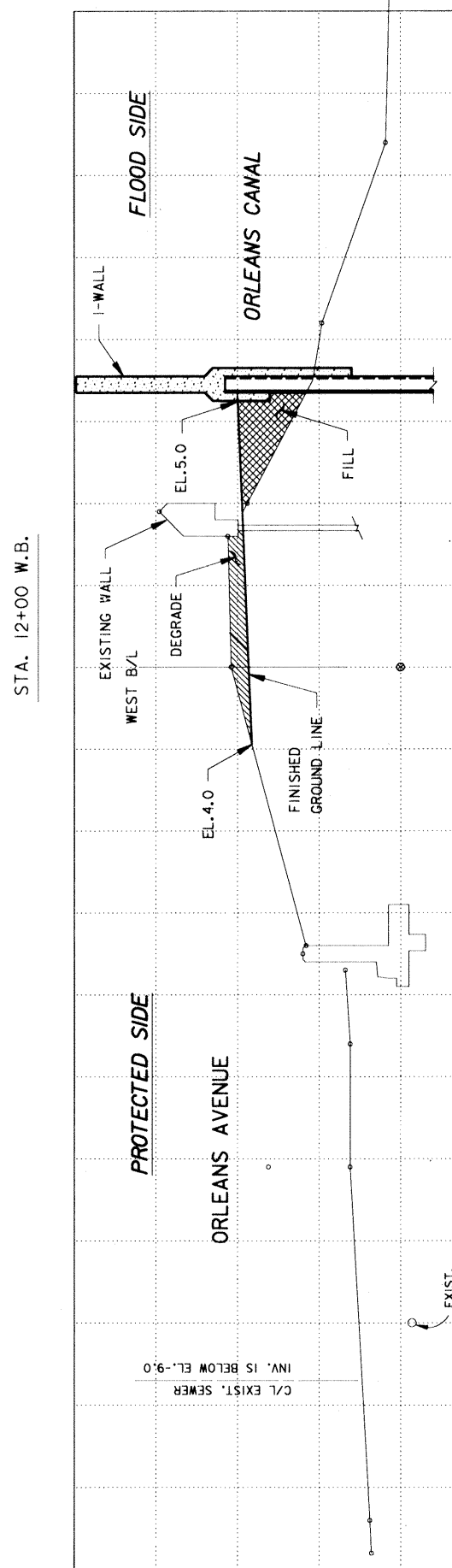


ELEVATIONS IN FEET - N.G.V.D.

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

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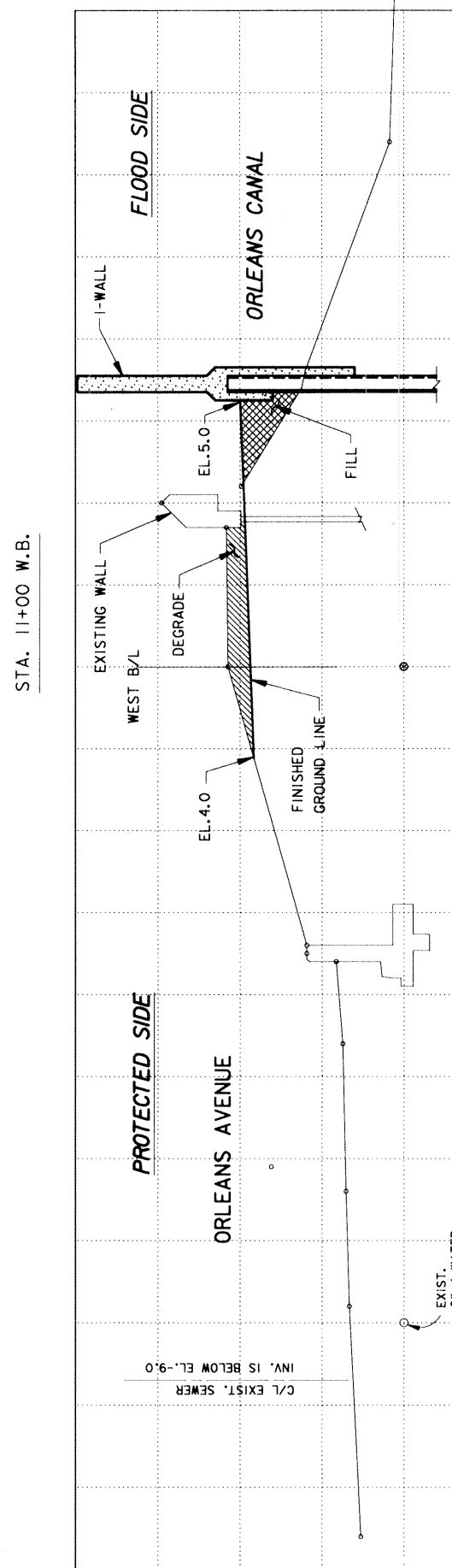


ELEVATIONS IN FEET - N.G.V.D.

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

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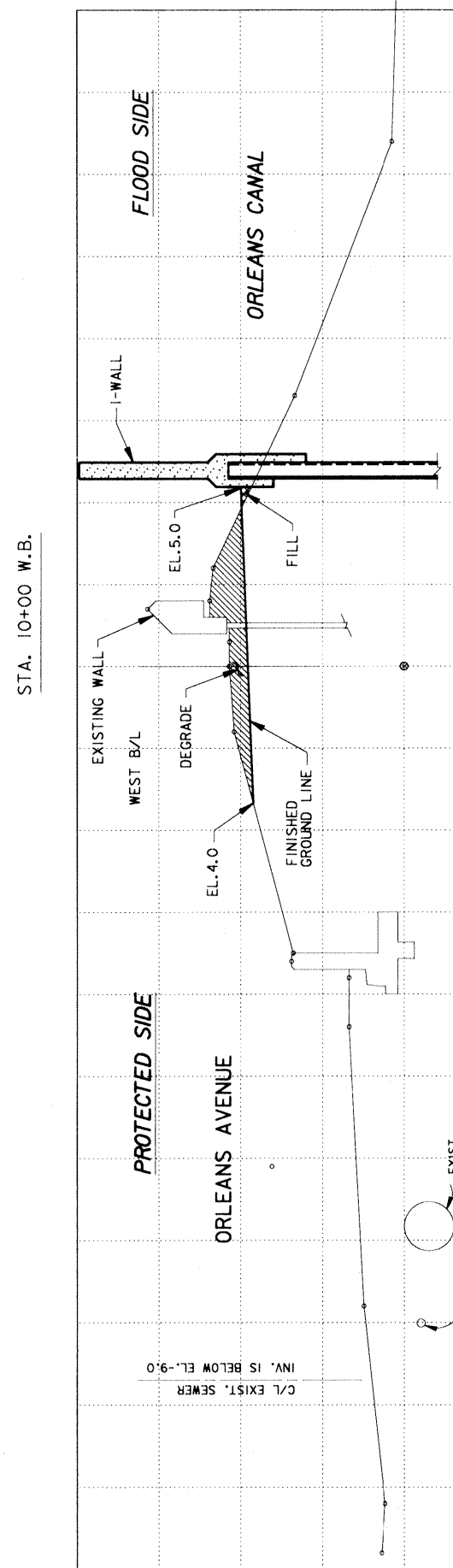


ELEVATIONS IN FEET - N.G.V.D.

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

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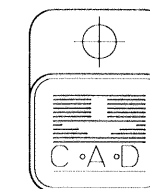
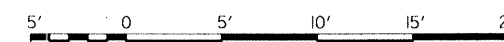
ELEVATIONS IN FEET - N.G.V.D.

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DISTANCE IN FEET

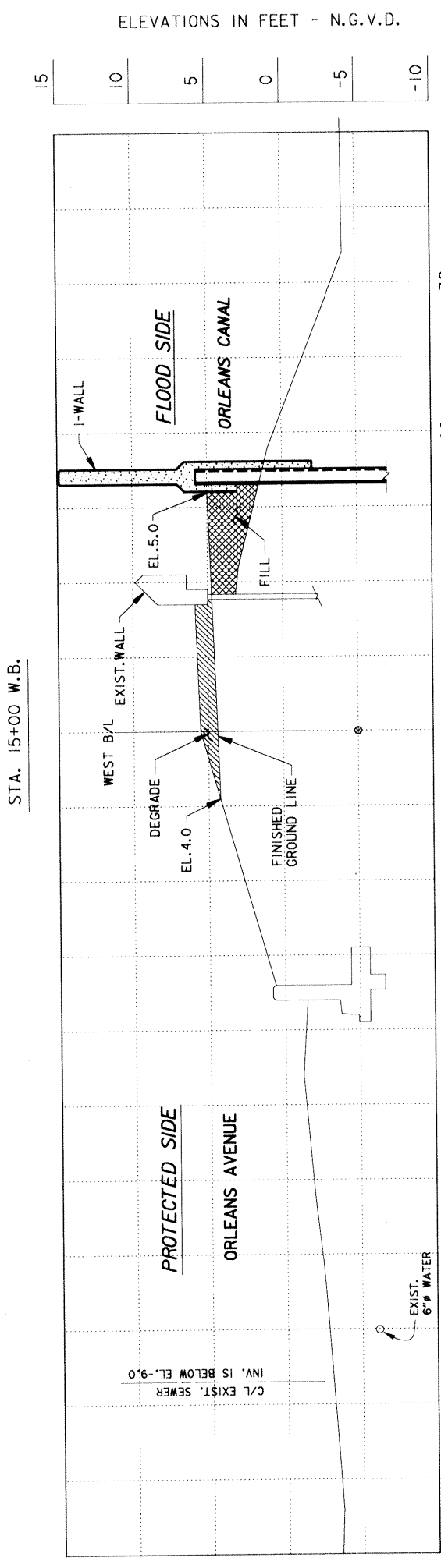
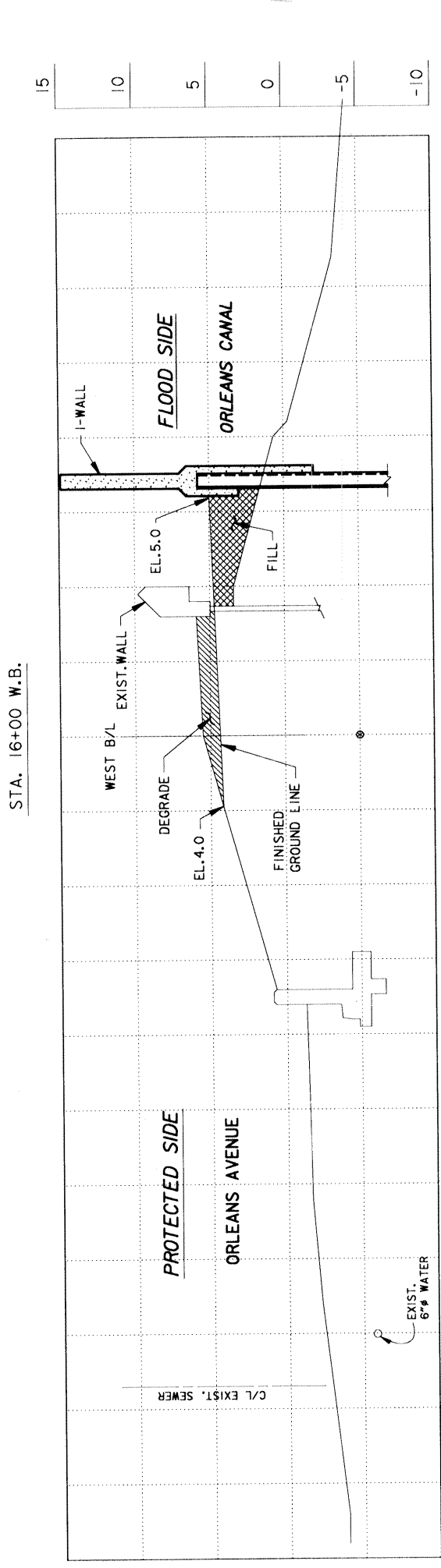
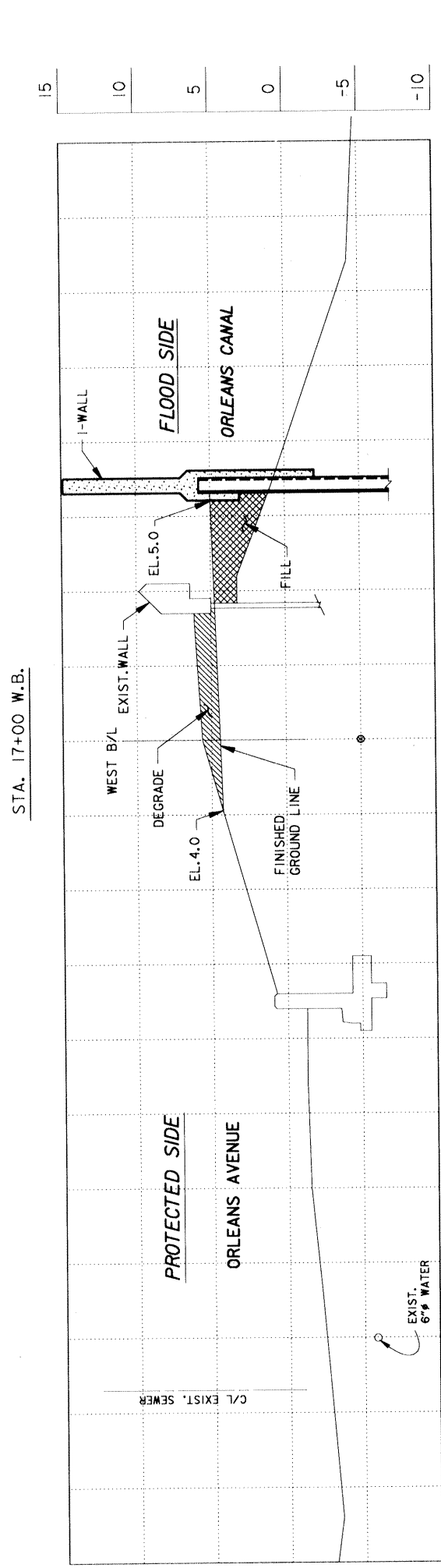
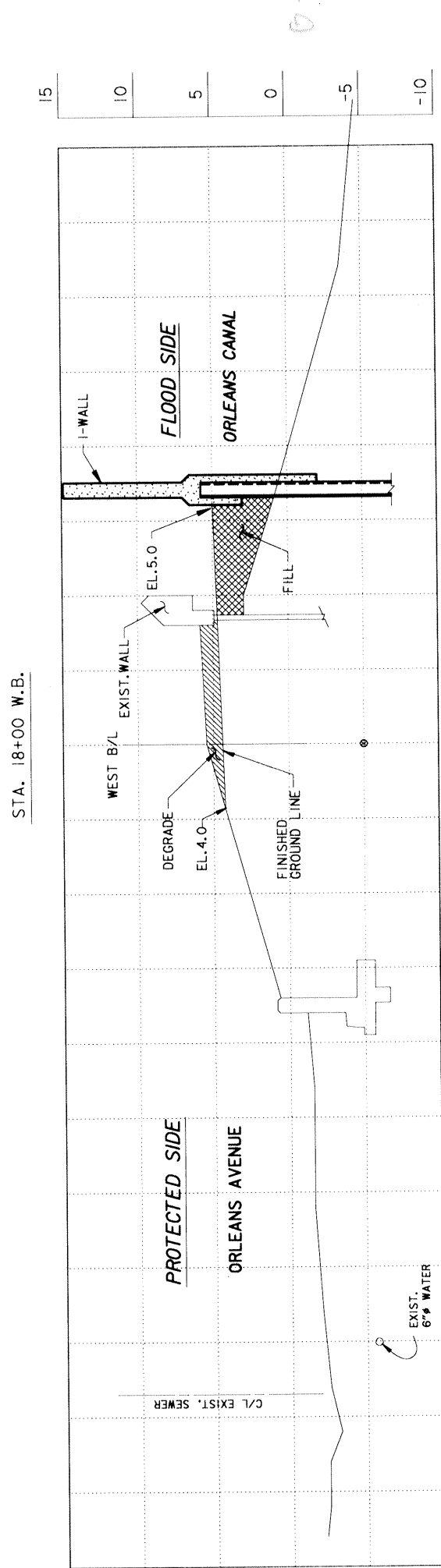
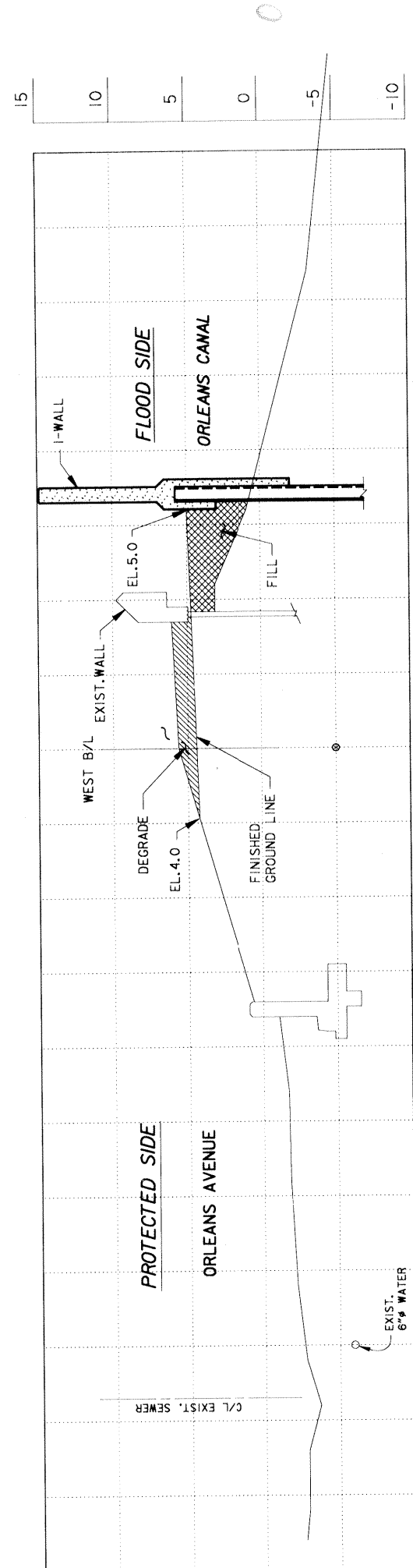
STA. 9+00 W.B.

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. MOGUEIRA	DATE: FEB., 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CADD FILE: 11-D20	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042	DWG. 20 OF 24	
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER			

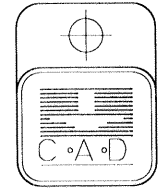
Safety is a Part of Your Contract



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

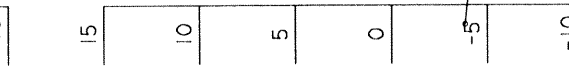
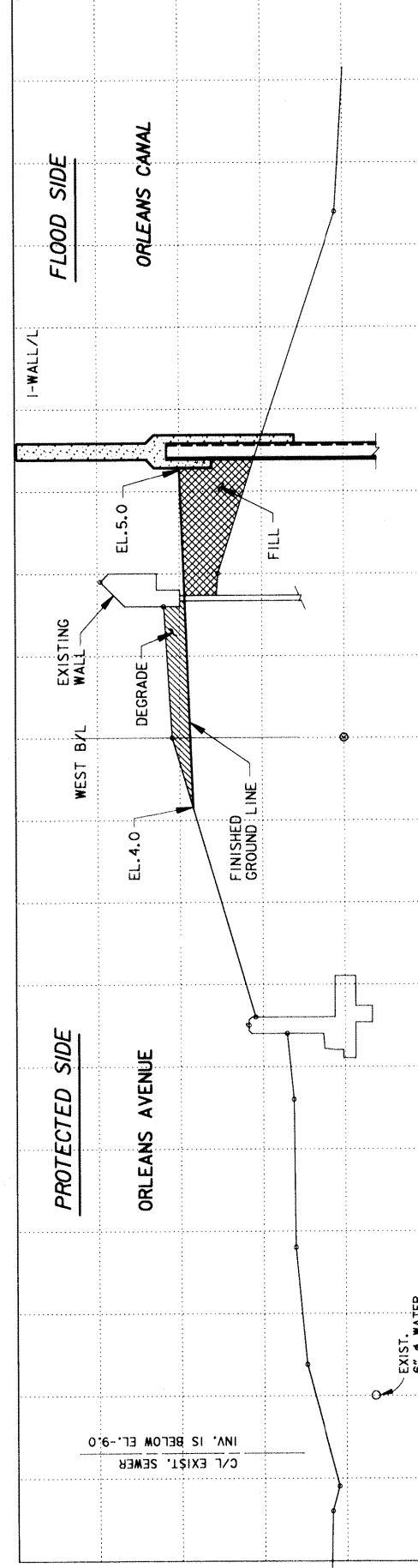
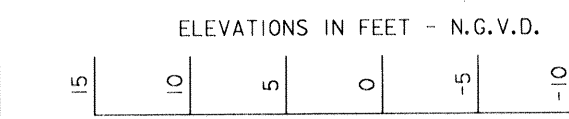
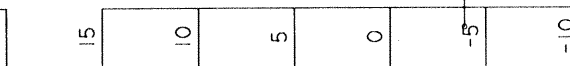
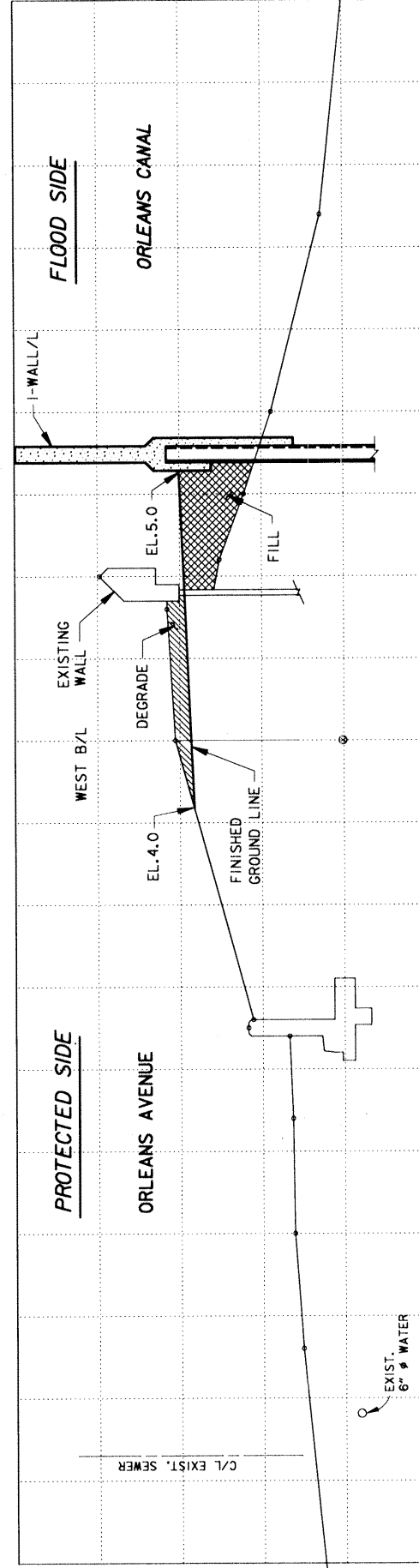
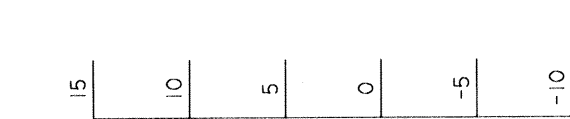
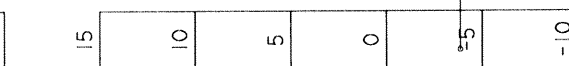
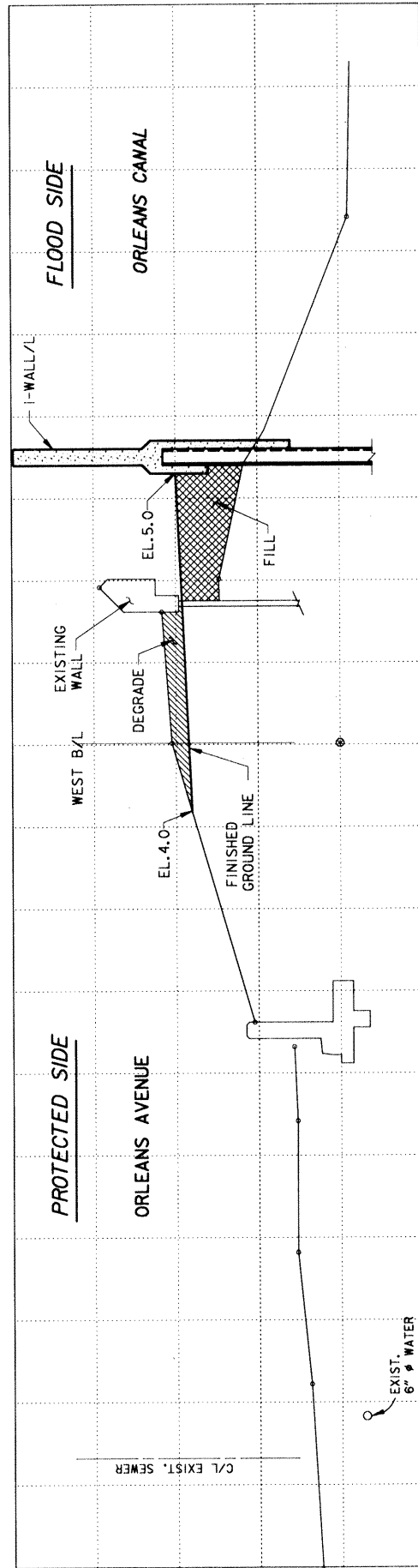
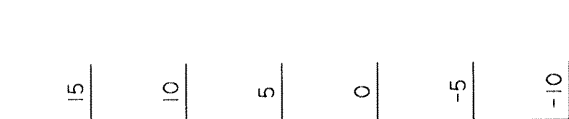
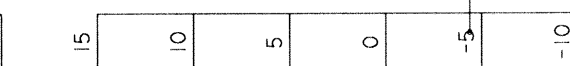
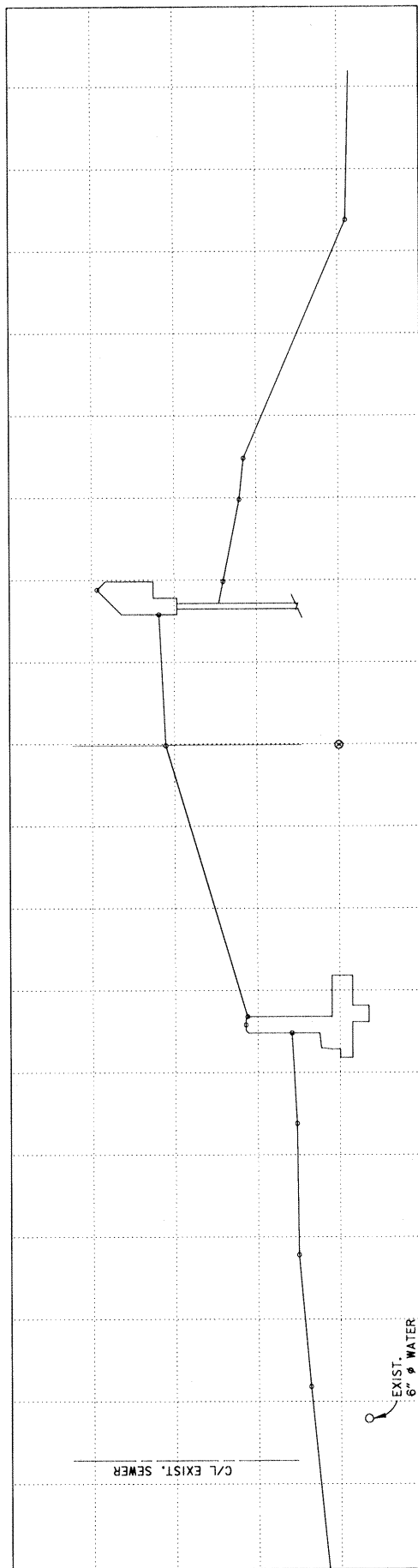
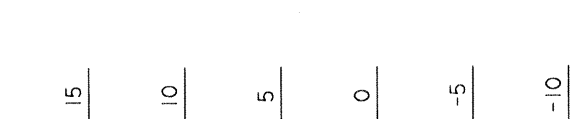
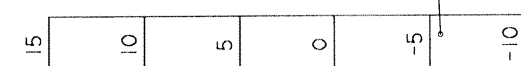
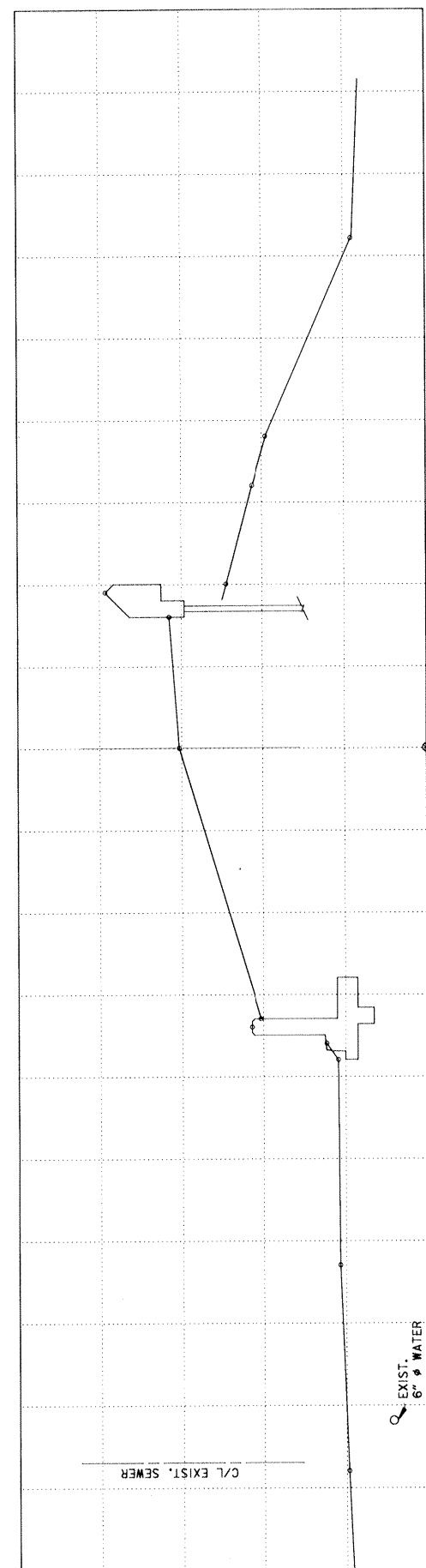
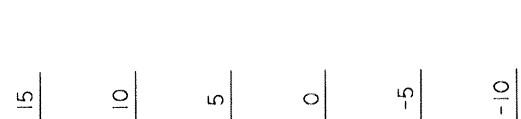
DISTANCE IN FEET

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. 5. 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	CADD FILE: 11-D21	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			

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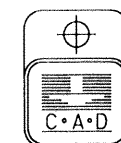



ELEVATIONS IN FEET - N.C.V.D.

DISTANCE IN FEET

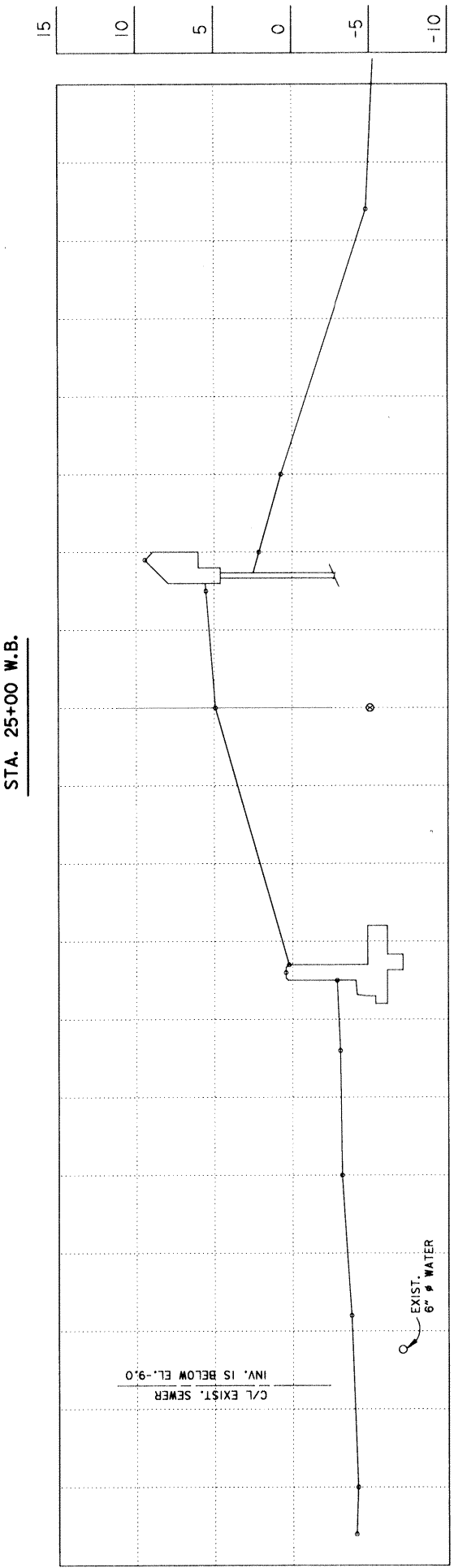
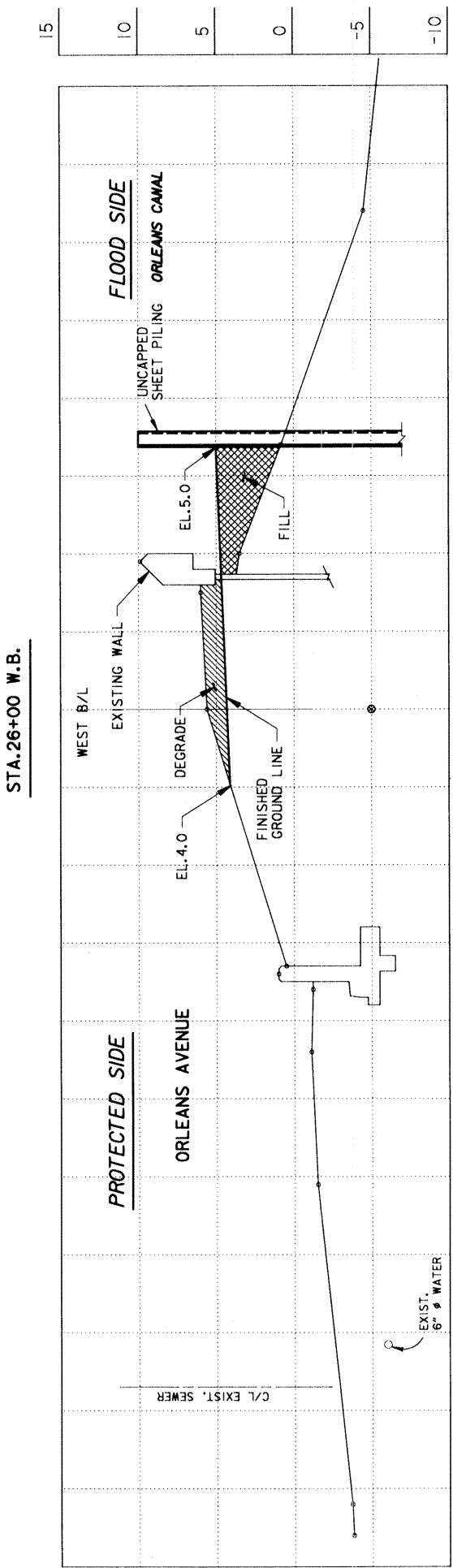
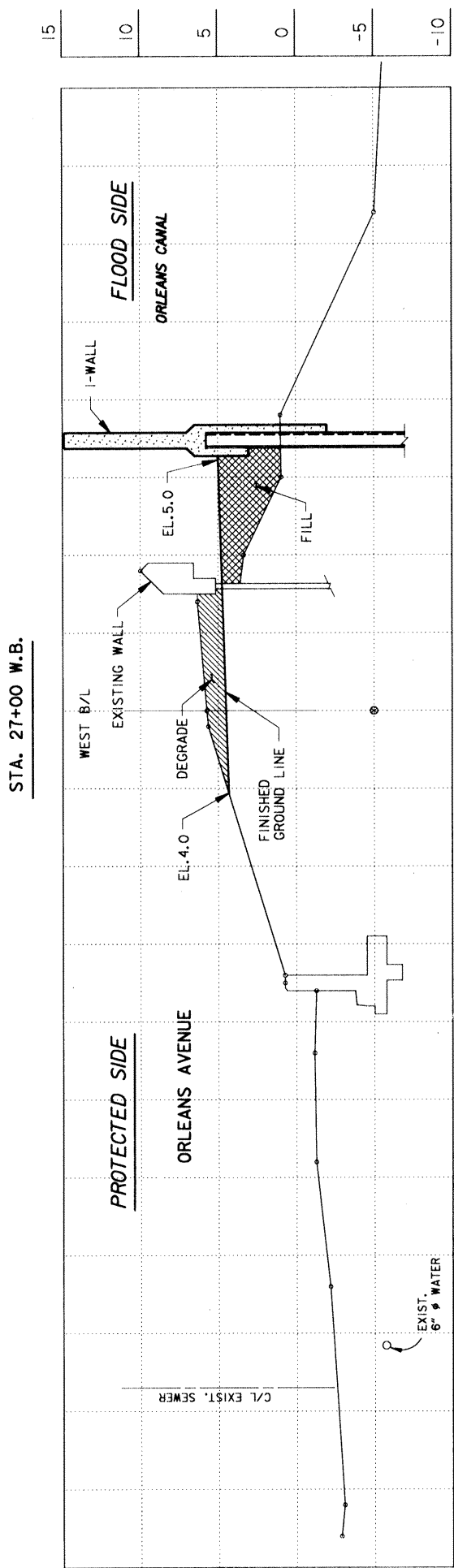
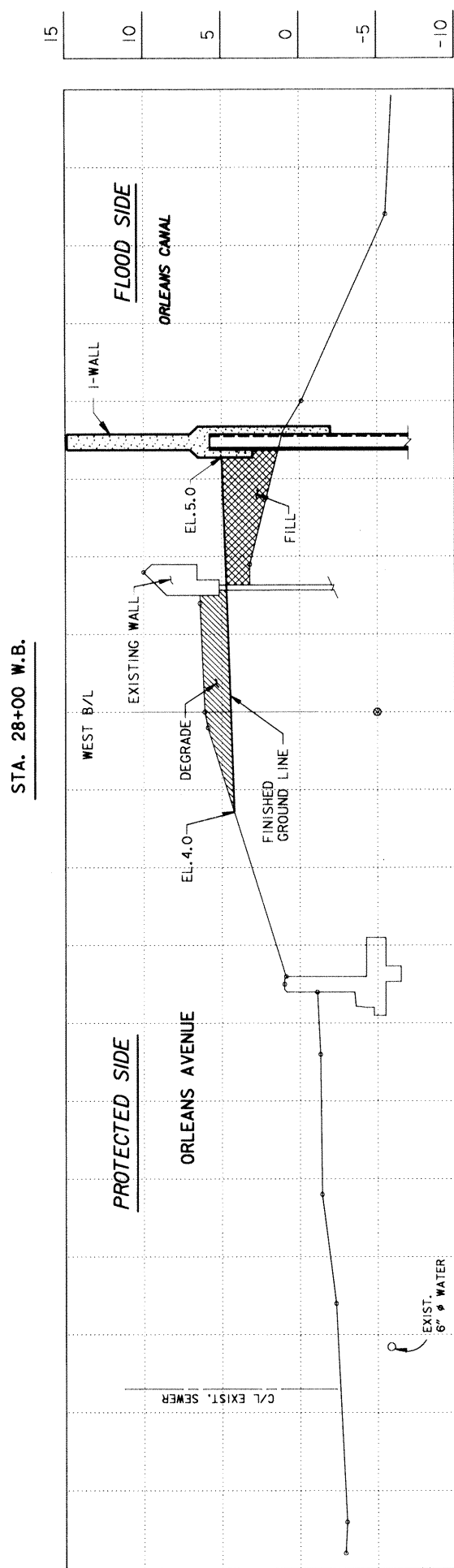
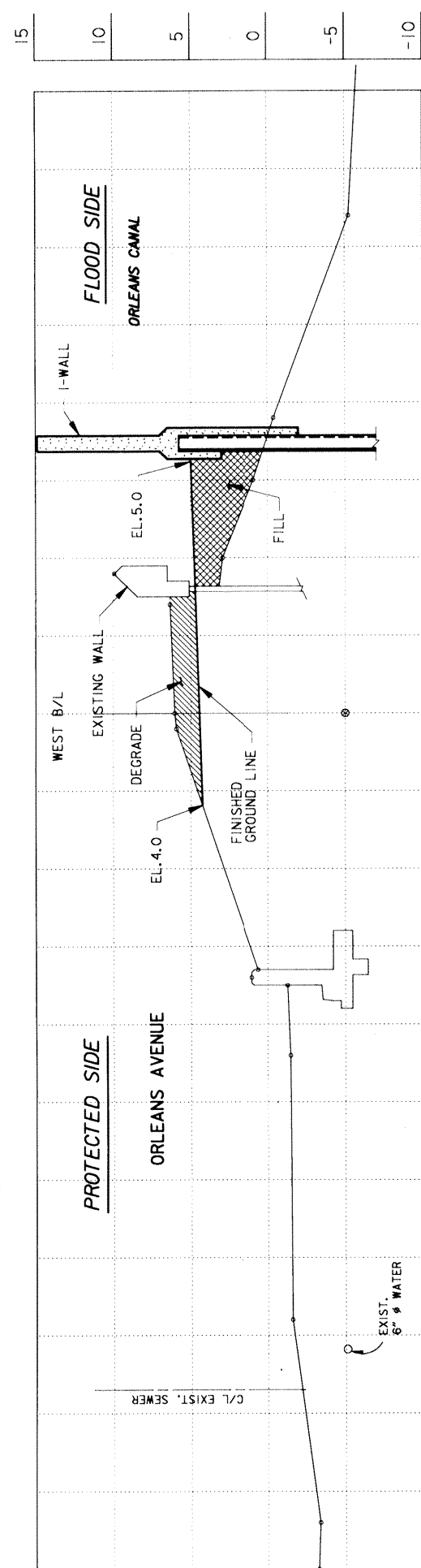
STA. 19+00 W.B.

SCALE: 1" = 5'



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 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. NOGUEIRA	DATE: FEB. 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CADD FILE: 11-D22	FILE NO. H-4-40205	
CHECKED BY: T.M. SMITH	SOLICITATION NO. DACW29-93-B-0042		
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		DWG. 22 OF 24	

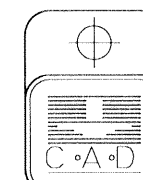
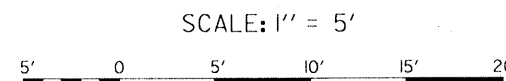
Safety is a Part of Your Contract



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

DISTANCE IN FEET

STA. 24+00 W.B.



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. 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			
CROSS SECTIONS			
DESIGNED BY: J.C. NORGUEIRA	DATE: FEB. 1993	PLOT SCALE: 60	PLOT DATE: MARCH 1993
DRAWN BY: C.K. CAPRERA	CHECKED BY: T.M. SMITH	CADD FILE: 11-D23	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER		SOLICITATION NO. DACW29-93-B-0042	
			DWG. 23 OF 24

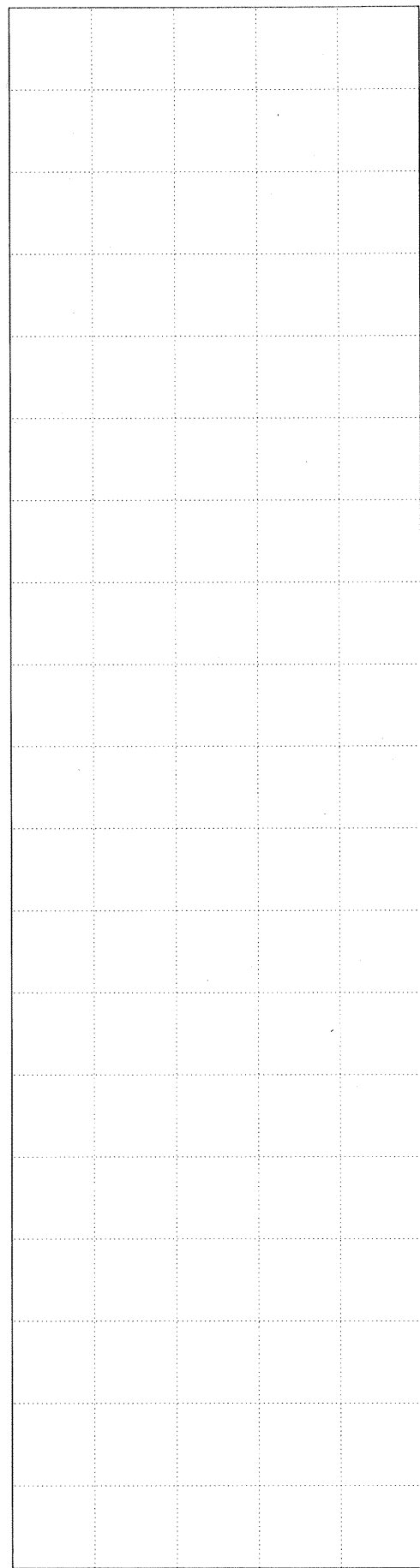
Safety is a Part of Your Contract

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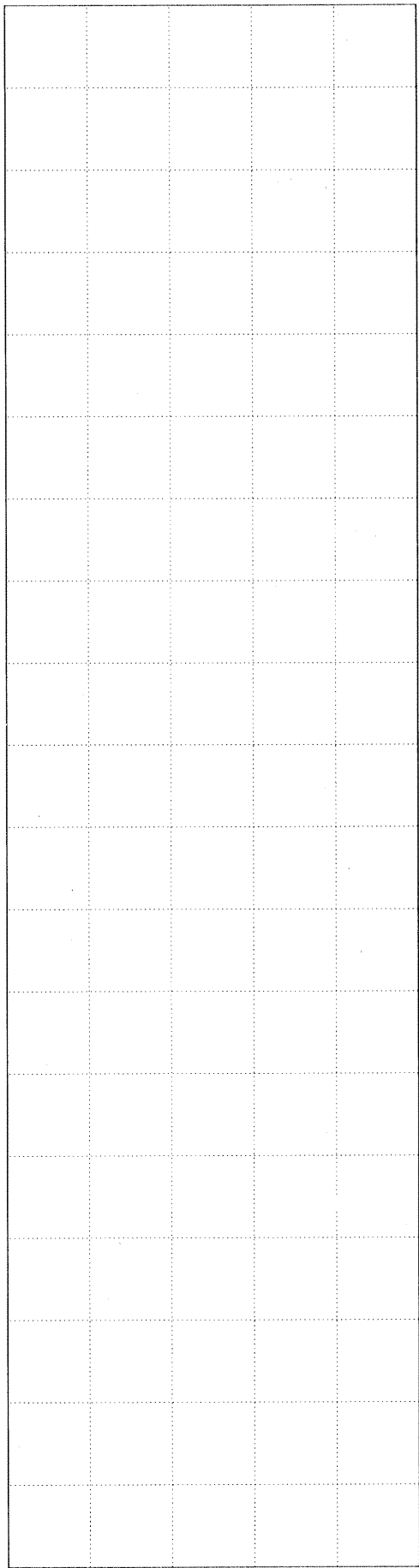
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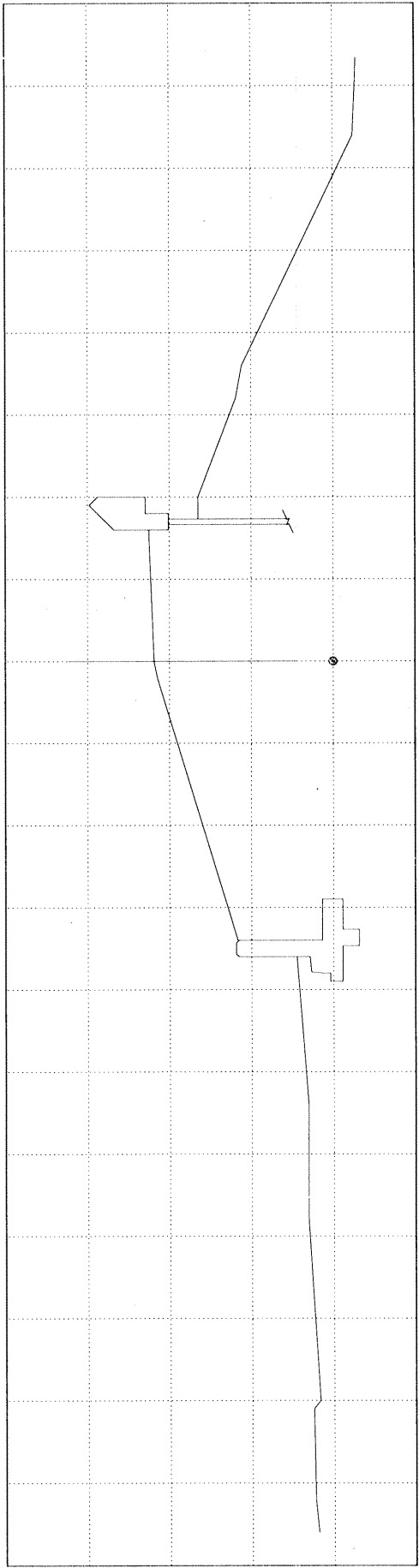
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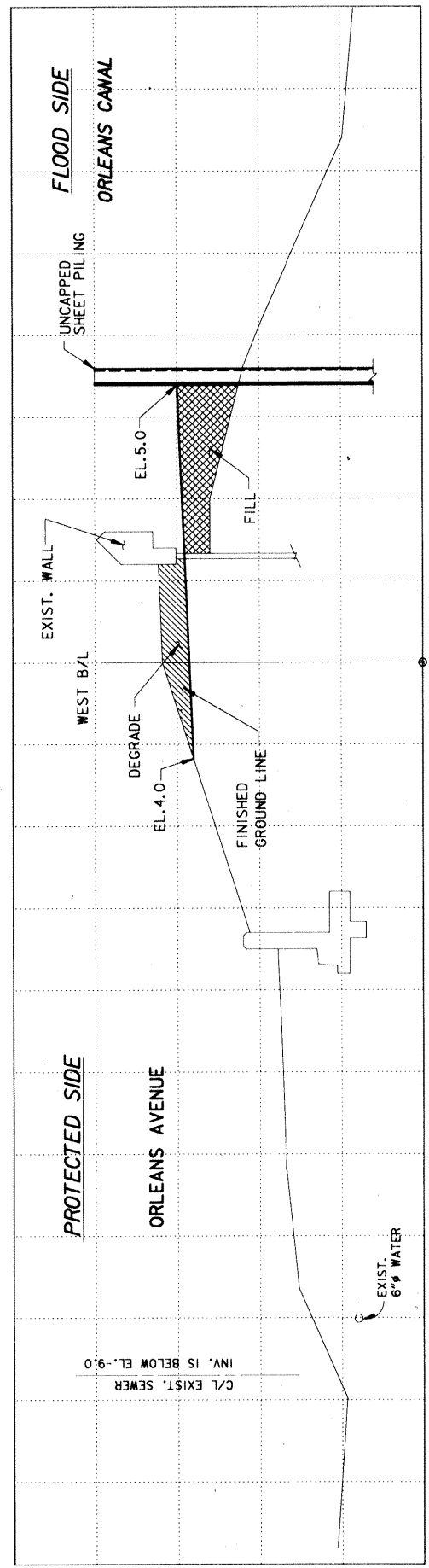
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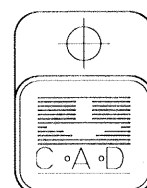
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STA. 30+00 W.B.

DISTANCE IN FEET

STA. 29+00 W.B.



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. NOGUEIRA	DATE: FEB., 1993	PLOT SCALE: 10	PLOT DATE: MARCH 1993
DRAWN BY: C.A. CAPRERA	CHECKED BY: T.M. SMITH	CADD FILE: 11-024	FILE NO. H-4-40205
SUBMITTED BY: DESIGN ENGINEERING, INC. DESIGN ENGINEER	SOLICITATION NO. DACW29-93-B-0042	DWG. 24 OF 24	