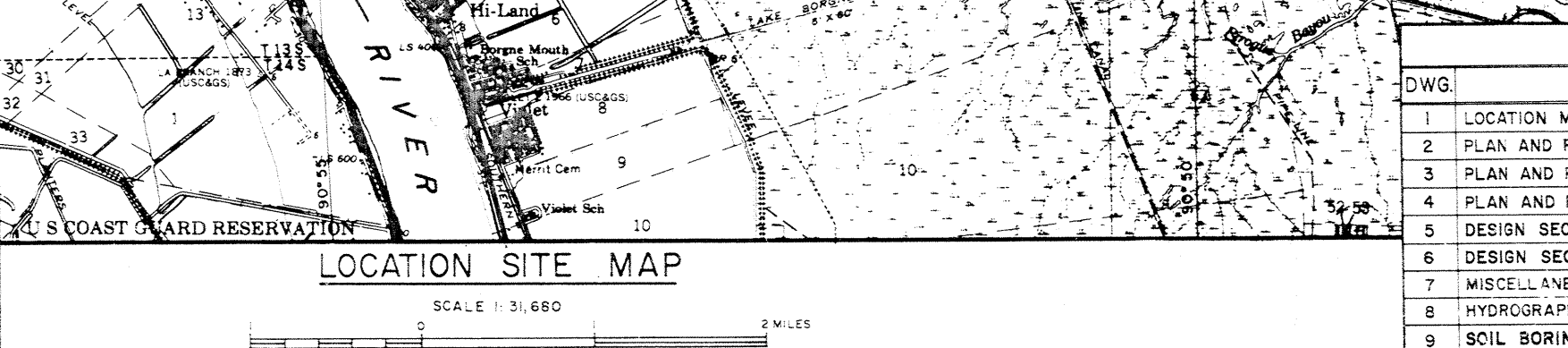


VICINITY MAP
SCALE IN MILES
0 5 10 15 20

TABULATION OF BENCH MARKS

B.M.	ELEVATION	LOCATION AND DESCRIPTION
T.B.M. 470+00	5.75	T.B.M. 470+00 is a brass cap on top of a 1" pipe, 1' above ground, located on range 470+00. The 1" pipe is joined together and set in the ground 44" deep. The T.B.M. is located -257' from the M.R.G.O. Baseline and 341' from the levee C/L. A witness post and sign is set 1' landside of the T.B.M. A wooden post with brass top "STA.-260" is located 3' landside of T.B.M.
T.B.M. 510+00	5.60	T.B.M. 510+00 is a brass cap on top of a 1" pipe 1' above ground, located on Range 510+00. The pipe is joined together and set in the ground 38" deep. There is a witness post 1' landside of the P.B.M., -298' from the M.R.G.O. Baseline and 299' from the levee C/L. A 23' landside of P.B.M. is another brass cap 1' above ground marked "510+00 O/S 275", 1981.



LOCATION SITE MAP

SCALE 1:31,680
2 MILES

INDEX TO DRAWINGS

DWG.	DESCRIPTION	DWG.	DESCRIPTION
1	LOCATION MAP, VICINITY MAP AND INDEX TO DRAWINGS	10	SOIL BORINGS (UNDISTURBED)
2	PLAN AND PROFILE	11	SOIL BORING LEGEND
3	PLAN AND PROFILE		
4	PLAN AND PROFILE		
5	DESIGN SECTIONS		
6	DESIGN SECTIONS		
7	MISCELLANEOUS DETAILS		
8	HYDROGRAPHS		
9	SOIL BORING (BORROW)		

REVISION	DATE	DESCRIPTION	BY

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN

HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT

M.R.G.O. B/L STA. 380 + 50 TO STA. 692 + 50
ST. BERNARD PARISH LA.

Safety is a Part of Your Contract

YOUR KEY TO HIGHER PROFITS

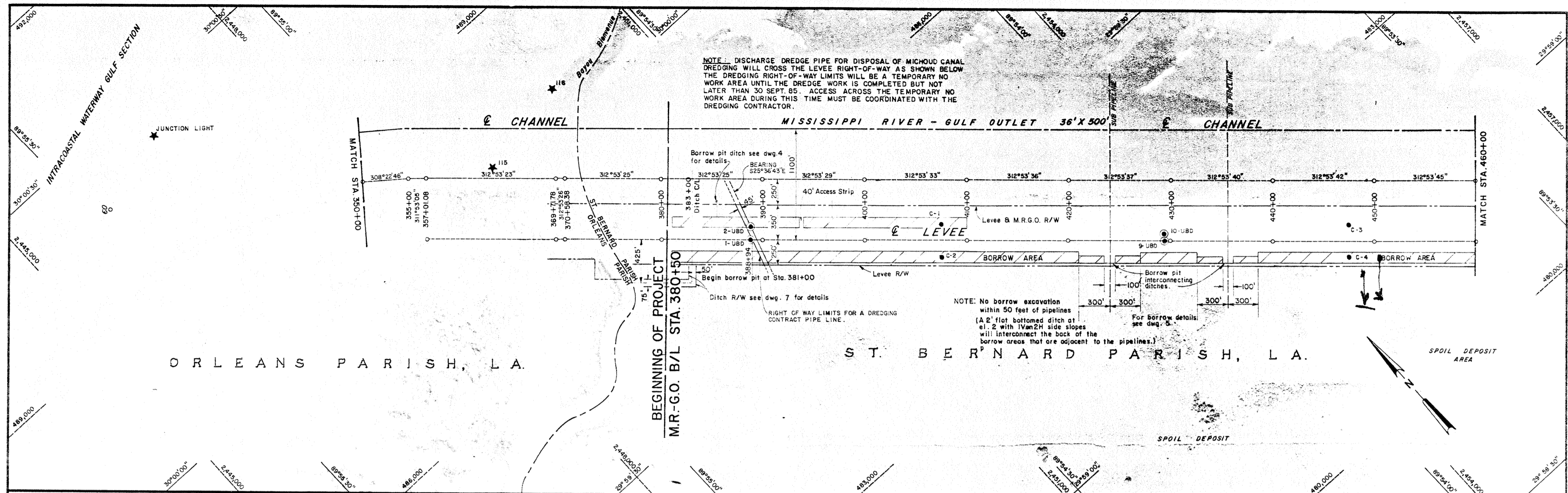
NOTE:
DRAWINGS IN THIS FOLIO
HAVE BEEN REDUCED ONE
HALF THE ORIGINAL SCALE

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

SUBMITTED: *Walter J. Smith*
APPROVED: *Walter J. Smith*
APPROVED: *Walter J. Smith*

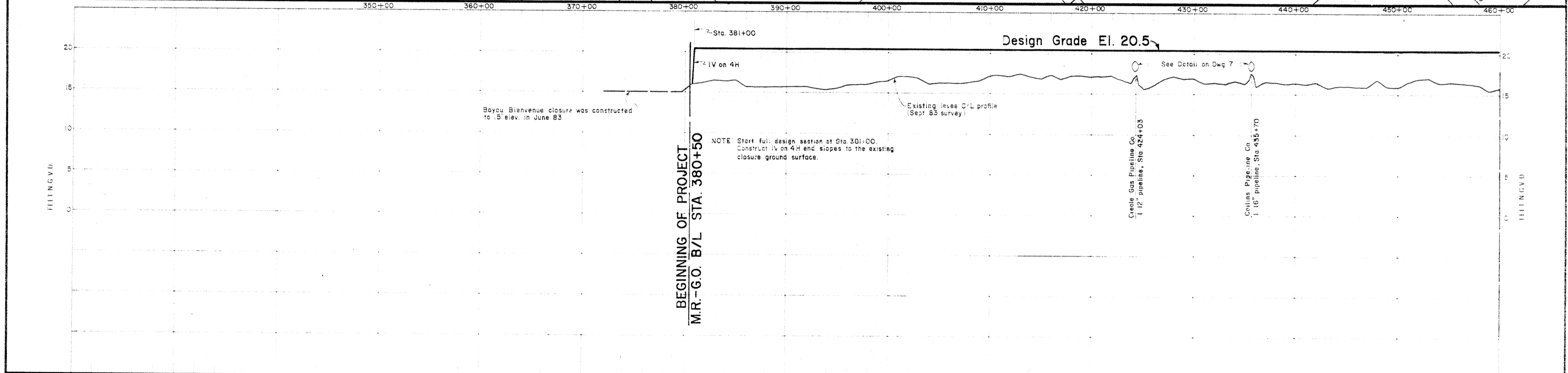
DESIGNED: R.W. P.P.M. CHECKED: R.P.L. DATE: MAY 1985 SCALE: AS SHOWN FILE NO: H-8-29808

SUBMITTED: *Walter J. Smith* SPEC NO: DACH2985-E-0073



NOTE: DISCHARGE DREDGE PIPE FOR DISPOSAL OF MICHoud CANAL DREDGING WILL CROSS THE LEVEE RIGHT-OF-WAY AS SHOWN BELOW THE DREDGING RIGHT-OF-WAY LIMITS WILL BE A TEMPORARY NO WORK AREA UNTIL THE DREDGE WORK IS COMPLETED BUT NOT LATER THAN 30 SEPT. 85. ACCESS ACROSS THE TEMPORARY NO WORK AREA DURING THIS TIME MUST BE COORDINATED WITH THE DREDGING CONTRACTOR.

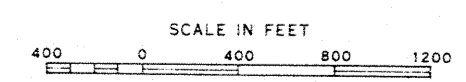
NOTE: No borrow excavation within 50 feet of pipelines (A 2' flat bottomed ditch at el. 2 with 1V on 2H side slopes will interconnect the back of the borrow areas that are adjacent to the pipelines.) For borrow details see dwg. 5.



- GENERAL NOTES:
- All elevations are referenced to National Geodetic Vertical Datum (N.G.V.D.).
 - Azimuths are measured in a clockwise direction from the south.
 - See Dwg. 1 for "Bench Mark" descriptions.
 - Borrow excavation shall start at the back side of the borrow area and shall be excavated in such a manner that no area of borrow will be bypassed or isolated. After construction is complete, the remaining borrow will be left in a uniform alignment that will be easily accessible for future work. The Contractor's plan and sequence of borrow excavation shall be submitted to the CO for approval prior to any excavation.
 - The 40-foot access strips that traverse the borrow area are to be field located by the Contracting Officer (CO). (Access strips on floodside only).
 - Ditches from the floodside borrow area on Dwgs. 2, 3, & 4 are to be field located by the CO. See Dwg. 7 for details and profiles of the landside ditches.
 - For limits of available borrow, see Dwgs 5 & 6.
 - Settlement Plate Details are on Dwg. 7.
 - A foreshore protection contract will be ongoing in the area covered by this contract. Access for equipment and personnel from the MR-GO (across the foreshore protection construction area) to the levee enlargement area is provided for. However, time and place of access will be coordinated thru the COR.

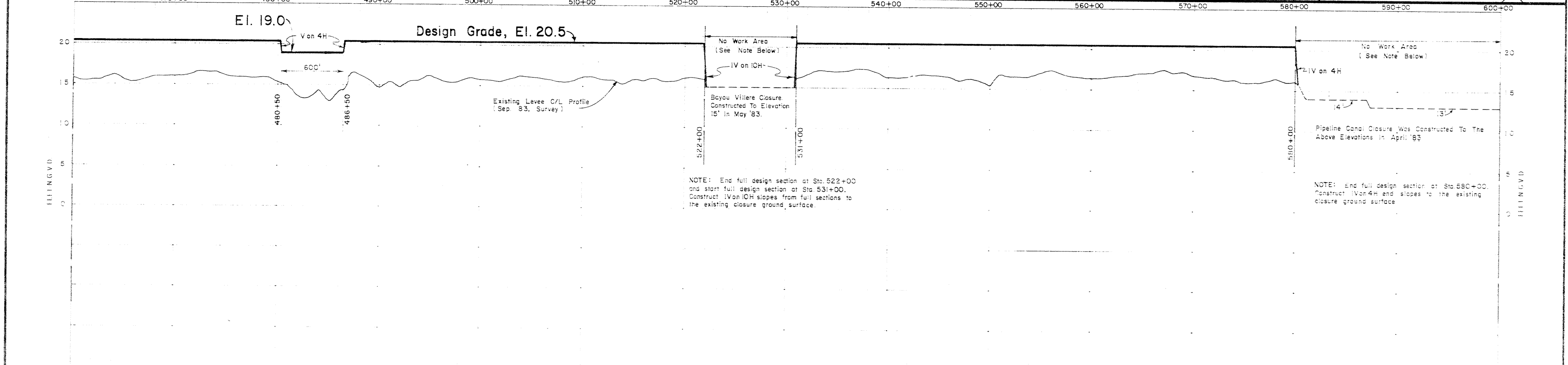
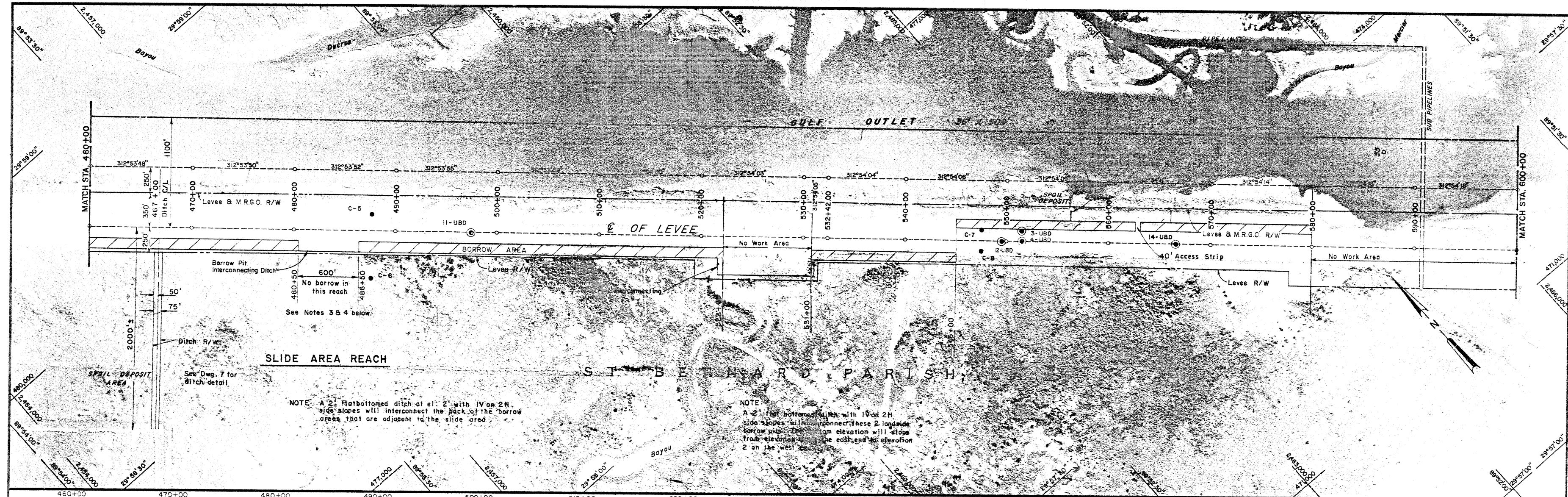


- LEGEND
- UNDISTURBED SOIL BORINGS
 - SETTLEMENT GAGE
 - LEVEE CENTER LINE
 - RIGHT OF WAY LINE
 - BORROW BORINGS



NOTES:
 INSIDE THE PLAN AREA POLYCONIC PROJECTION-1927
 NORTH AMERICAN DATUM IS SHOWN BY SOLID TICKS AND
 LAMBERT CONFORMAL CONIC PROJECTION IS SHOWN BY
 DASHED TICKS
 PREPARED FROM AERIAL PHOTOS FLOWN AUG 82

REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA. LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT MRGO. B/L STA. 380+50 TO STA. 462+50 ST. BERNARD PARISH, LA.			
PLAN AND PROFILE STA. 380+50 TO STA. 460+00			
DESIGNED	DRAWN	CHECKED	DATE
R.W.	PPM	R.P.L.	MAY 1985
SUBMITTED			SCALE
DACW29-85-B-0073			H-8-29808
			2



NOTES:

1. For general notes and legend, see dwg. 2

2. Pipeline Canal closure extends into dwg. 4.

3. Make a 1V on 10H transition from the slide area reach to the adjacent typical sections. (This will require an upward slope at the levee crown and a downward slope on the berm sections.)

4. Slide Area Detail Section is on Dwg. 6

SCALE IN FEET

0 400 800 1200

NOTES:

INSIDE THE PLAN AREA POLYCONIC PROJECTION-1927
 NORTH AMERICAN DATUM IS SHOWN BY SOLID TICKS AND
 LAMBERT CONFORMAL CONIC PROJECTION IS SHOWN BY
 DASHED TICKS
 PREPARED FROM AERIAL PHOTOS FLOWN AUG '82

- NOTES:
- For general notes and legend, see dwg. 2
 - Pipeline Canal closure extends into dwg. 4.
 - Make a 1V on 10H transition from the slide area reach to the adjacent typical sections. (This will require an upward slope at the levee crown and a downward slope on the berm sections.)
 - Slide Area Detail Section is on Dwg. 6

REVISION	DATE	DESCRIPTION

U S ARMY ENGINEER DISTRICT, NEW ORLEANS
 CORPS OF ENGINEERS
 NEW ORLEANS, LA

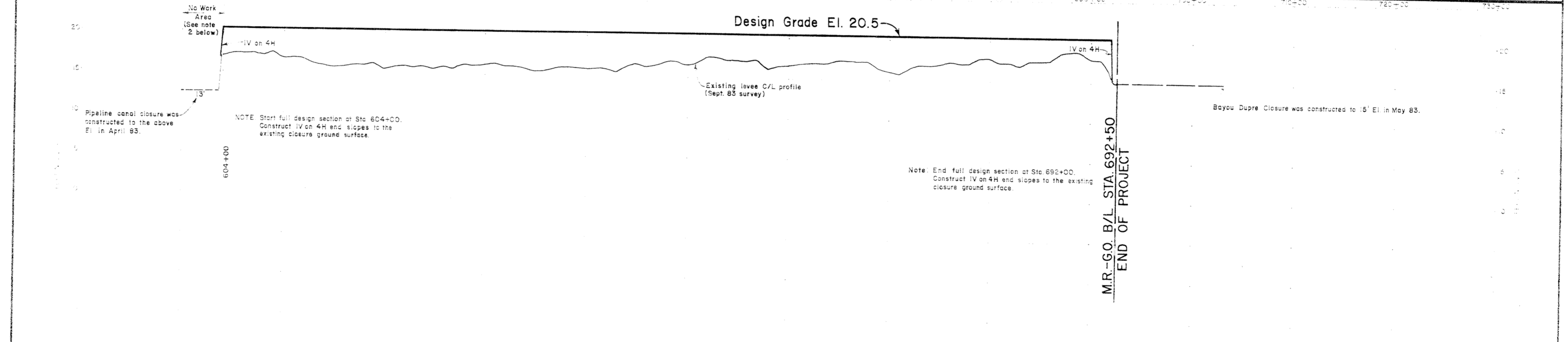
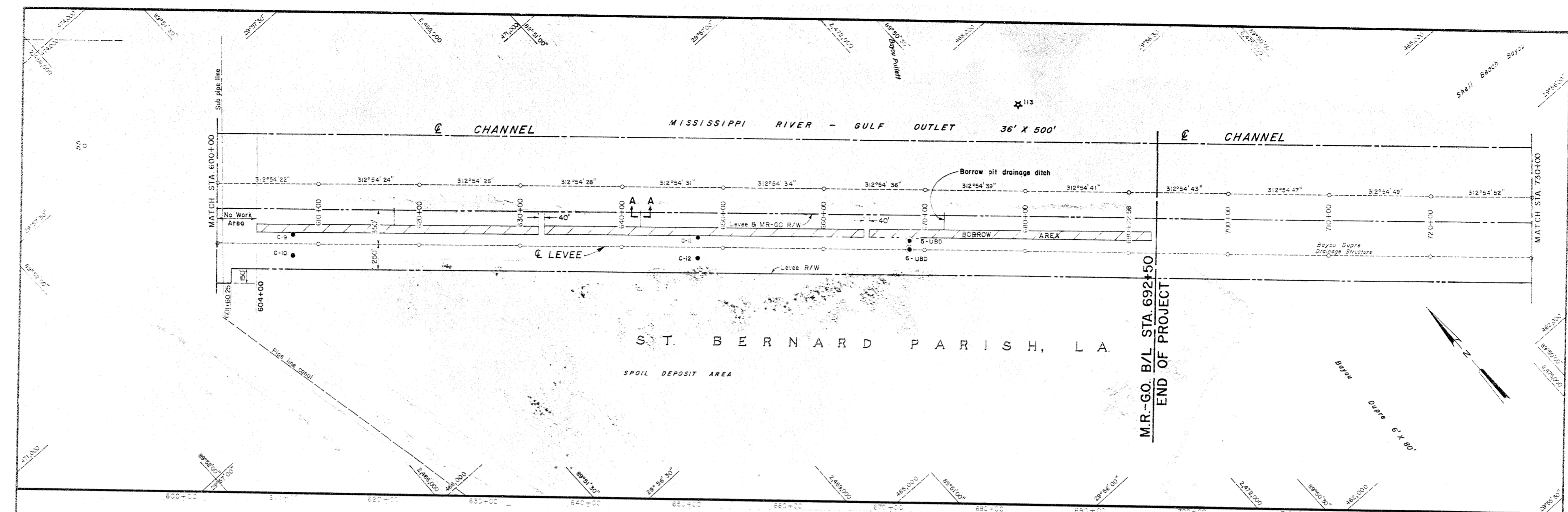
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
CHALMETTE AREA PLAN
HURRICANE PROTECTION, LEVEE SECOND ENLARGEMENT,
M.R.G.O. B/L STA. 330+50 TO STA. 632+50
 ST. BERNARD PARISH, LA.

PLAN AND PROFILE
STA. 460+00 TO STA. 600+00

DESIGNED: RPL
 DRAWN: RPL
 CHECKED: RPL
 DATE: May 1985

NO. H-8-29808

DAC/2625-B-0073 3



SECTION A-A
DRAINAGE DITCH

Existing ground elevation varies

10' min. Waste dump no steeper than 1V on 5H

El. 4.0 at borrow pit, sta. 545+00 to 692+00
El. 2.0 at borrow pit, sta. 381+00 to 410+00

NOTES:
1. Slope ditch 0.2% from borrow pit to existing drain.
2. Excavated material may be piled on either side, or both sides of the ditch.

SCALE IN FEET
0 400 800 1200

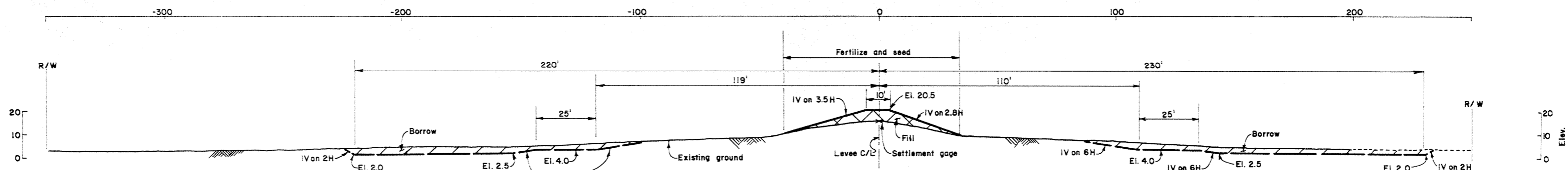
NOTES:
INSIDE THE PLAN AREA POLYCONIC PROJECTION 1927 NORTH AMERICAN DATUM IS SHOWN BY SOLID TICKS AND LAMBERT CONFORMAL CONIC PROJECTION IS SHOWN BY DASHED TICKS.
PREPARED FROM AERIAL PHOTO PLOWN AUGUST 1982

NOTES:
1. For General Notes and Legend, see Dwg. 2.
2. The largest part of the pipeline canal closure is shown on Dwg. 3.
3. For limits of borrow, see Dwg. 6.

U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, LA.
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
CHALMETTE AREA PLAN
HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT
MRGO, B/L STA. 380+50 TO STA. 692+50
ST. BERNARD PARISH, LA.
PLAN AND PROFILE
STA. 600+00 TO STA. 692+50
MAY 1985 H-8-29808
DACW29-258-0073 4 11

FLOODSIDE (MR-GO)

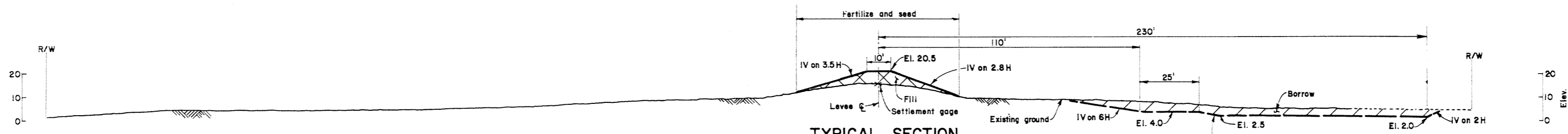
LANDSIDE



TYPICAL SECTION

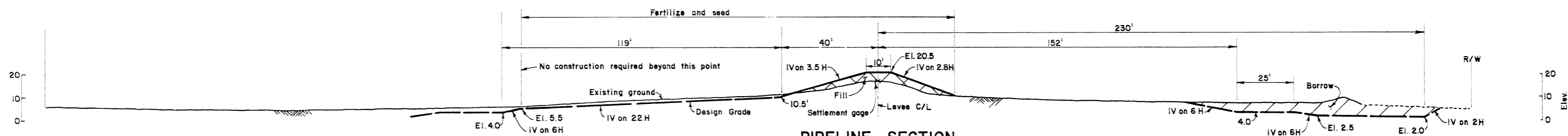
381+00 TO 410+00
(SECTION SHOWN IS 392+00)

NOTE: Use adjacent "Landside" borrow first. To lessen multiple casting and eliminate the need for hauling, the "Floodside" borrow is also available in this reach.



TYPICAL SECTION

410+00 TO 421+03
427+03 TO 432+70
438+70 TO 480+50
486+50 TO 522+00
(SECTION SHOWN IS 500+00)



PIPELINE SECTION

421+03 TO 427+03
432+70 TO 438+70
(SECTION SHOWN IS 423+03)

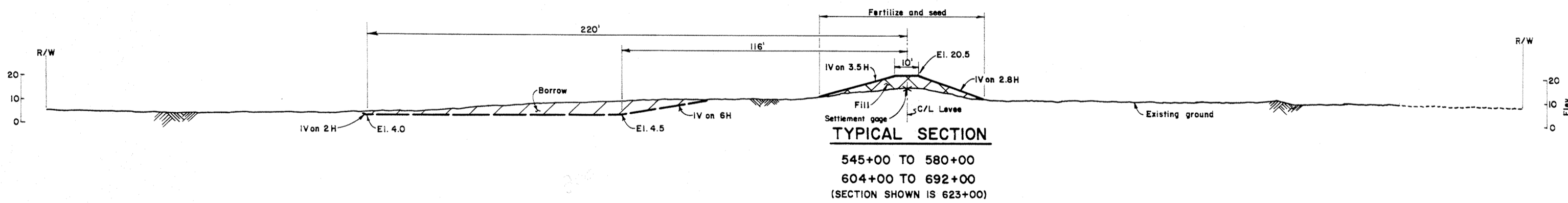
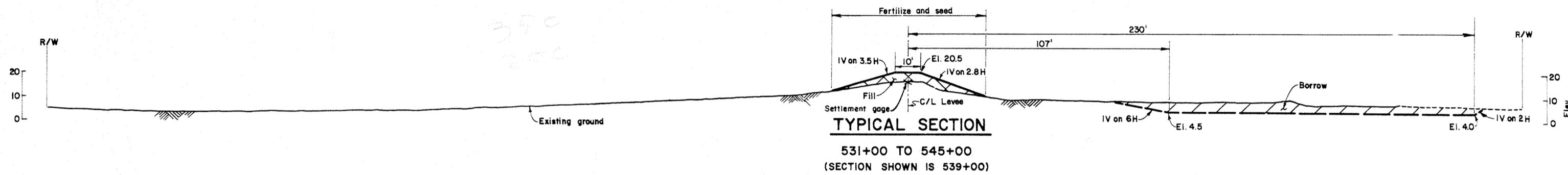
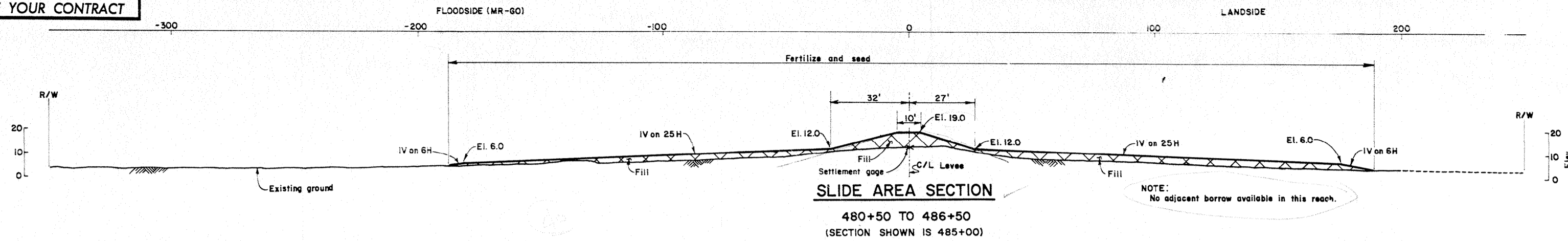
NOTE: Areas within the floodside berm that are below Design Grade will be brought up to grade. The entire berm, in addition to the levee fill area, will be fertilized and seeded.

NOTE: See Dwg. 7 For Pipeline Crossing Details.

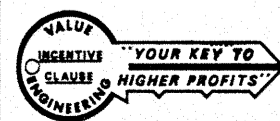


REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA.			
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT M.R.G.O. B/L STA. 380+50 TO STA. 692+50 ST. BERNARD PARISH, LA.			
DESIGN SECTIONS			
DESIGNED:	DRAWN:	CHECKED:	DATE:
R.W.W.	P.P.M.	R.P.L.	MAY 1985
SCALE:		FILE NO.:	
AS SHOWN		H-8-29808	
SUBMITTED:		SPEC NO.:	
DACW29-85-B-0073		DWG 5 of 11	

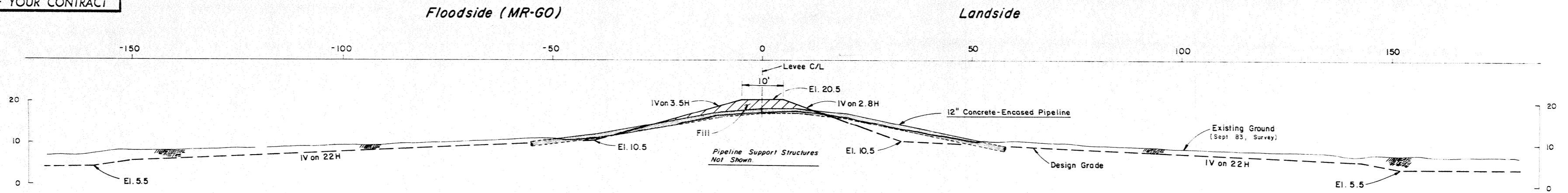
**SAFETY IS A PART
OF YOUR CONTRACT**



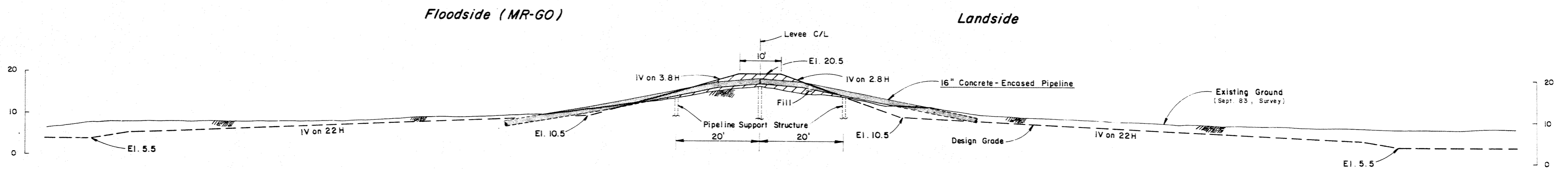
REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA.			
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT M.R.G.O. B/L STA. 380+50 TO STA. 692+50 ST. BERNARD PARISH, LA.			
DESIGN SECTIONS			
DESIGNED:	DRAWN:	CHECKED:	DATE:
R.W.W.	PPM.	R.P.L.	MAY 1965
SUBMITTED:		SPEC. NO.:	SCALE: AS SHOWN
		DACW29-85-B-0073	FILE NO. H-8-29808
			DWG. 6 of 11



SAFETY IS A PART OF YOUR CONTRACT

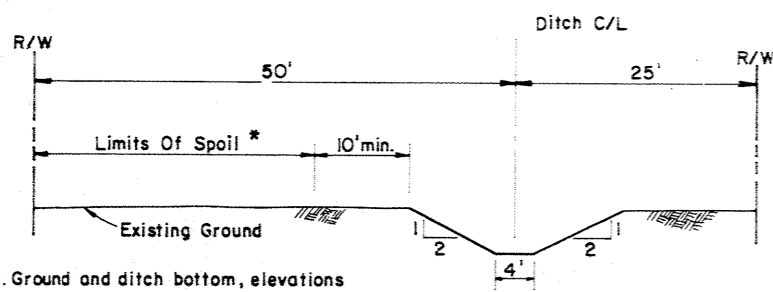


CREOLE GAS PIPELINE CO. PIPELINE CROSSING
STA. 424 + 03



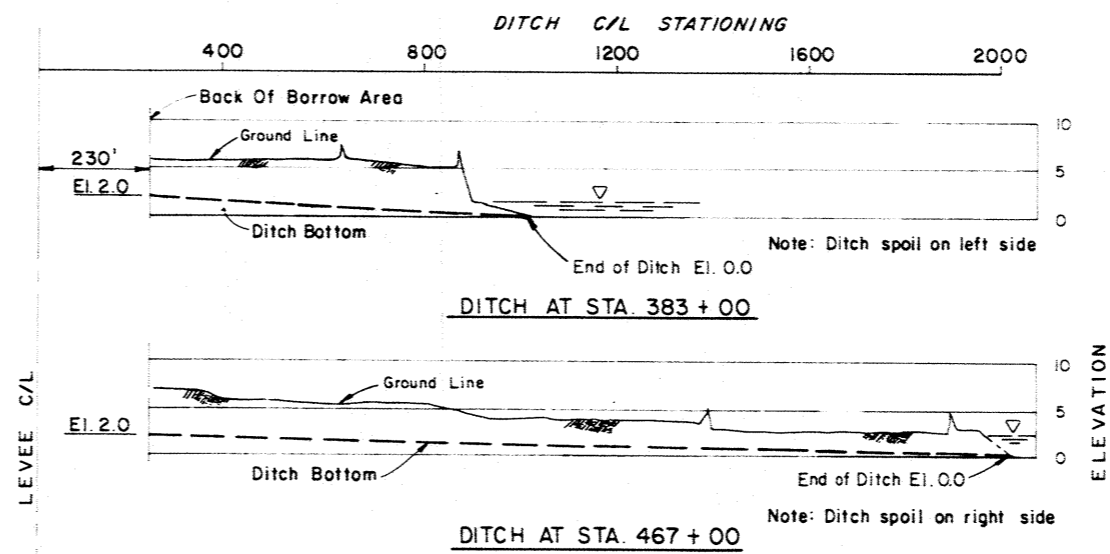
COLLINS PIPELINE CO. PIPELINE CROSSING
STA. 435 + 70

- NOTES:
- FOR GENERAL NOTES AND LEGEND, SEE DWG. 2
 - FERTILIZING AND SEEDING REQUIREMENTS FOR THE PIPELINE CROSSINGS ARE SHOWN ON DWG. 5.
 - FILL ADJACENT TO PIPELINES AND PIPELINE SUPPORT STRUCTURES.
 - THE CONTRACTOR SHALL SUBMIT A PLAN OF OPERATION AND CONSTRUCTION FOR FILL ADJACENT TO THE PIPELINES AS SPECIFIED IN PARAGRAPH 5C-25 OF THE SPECIFICATIONS.
 - CARE SHALL BE EXERCISED IN PLACING FILL ADJACENT TO PIPELINES AND PIPELINE SUPPORT STRUCTURES TO PREVENT UNBALANCED SIDE PRESSURE. THE DIFFERENCE IN FILL HEIGHT BETWEEN ONE SIDE OF THE PIPE AND THE OTHER SIDE SHALL NOT EXCEED 2 FEET.
 - ALL FILL PLACED WITHIN 2 FEET OF THE PIPELINES AND PIPELINE SUPPORT STRUCTURES (UNDER, ALONGSIDE, OR ON TOP OF) SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES.



- NOTES: 1. Ground and ditch bottom, elevations vary, see ditch profiles.
* 2. Spoil is on the left or right as indicated on the ditch profiles.

LANDSIDE DITCH CROSS SECTION



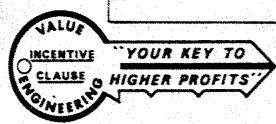
PROFILE OF LANDSIDE DITCHES

SETTLEMENT GAGE SPECIFICATIONS

SHOULD THE CONTRACTOR DESIRE PAYMENT FOR PLACING ADDITIONAL FILL DUE TO FOUNDATION SETTLEMENT DURING CONSTRUCTION HE SHALL FURNISH AND INSTALL SETTLEMENT GAGES AT THE LOCATIONS SHOWN ON THE DESIGN SECTION IN CONFORMANCE WITH THE PROVISIONS OF SECTION 3 OF THE SPECIFICATIONS.

THE SETTLEMENT MEASUREMENT RANGE FOR EACH SETTLEMENT GAGE SHALL BE FOR A DISTANCE OF 250 FEET IN EACH DIRECTION FROM EACH SETTLEMENT GAGE MEASURED ALONG THE CENTERLINE OF THE LEVEE, EXCEPT WHERE SETTLEMENT GAGES ARE PLACED AT LESS THAN 500 FEET INTERVALS, IN WHICH CASE, THE SETTLEMENT MEASUREMENT RANGE SHALL BE TO A POINT 1/2 THE DISTANCE BETWEEN SETTLEMENT GAGES.

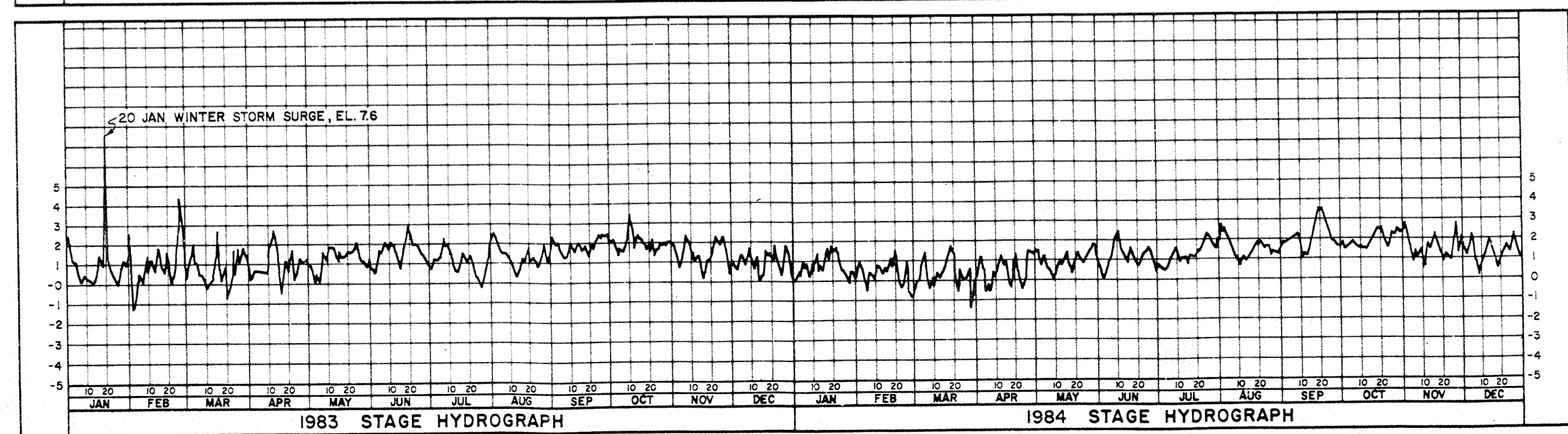
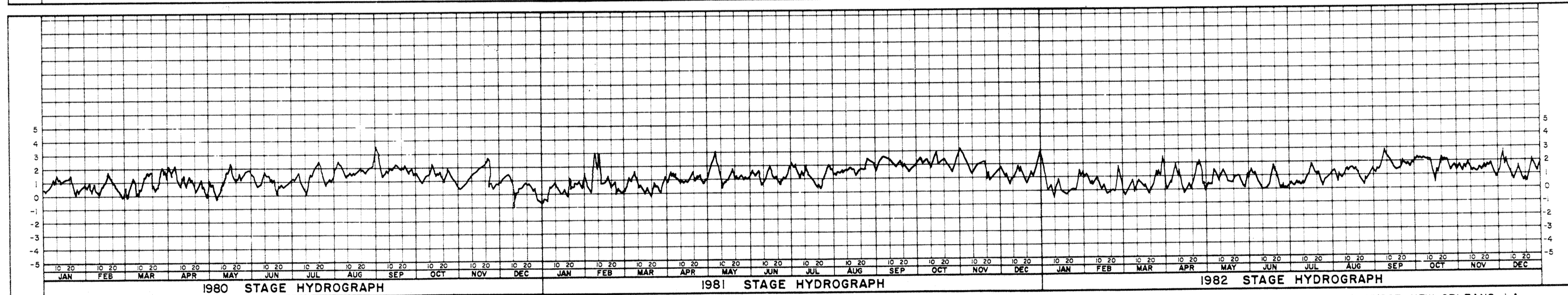
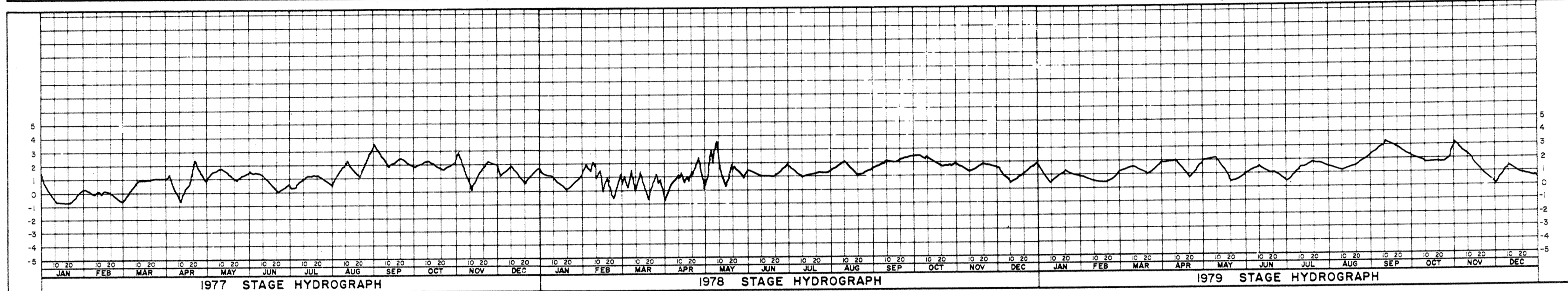
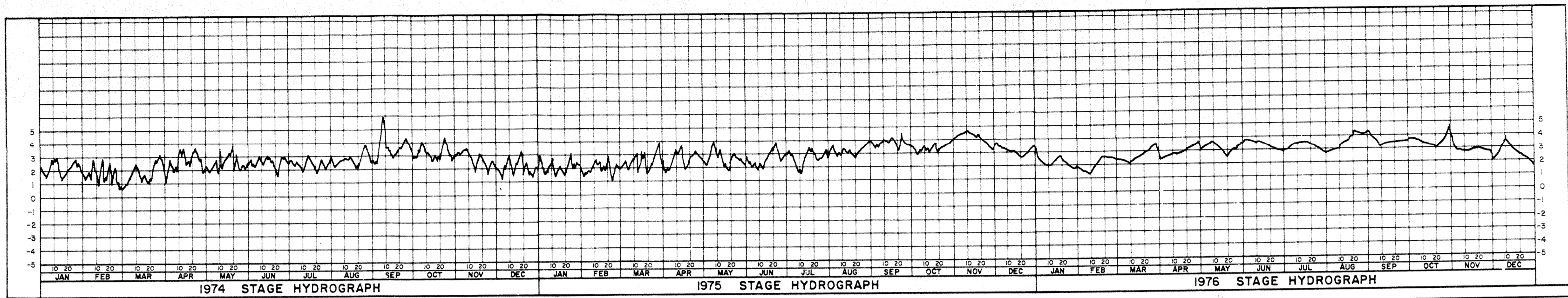
Settlement Gage Plate
1/8" (10 Gage) Square
Steel Plate
2' x 2' Minimum



REVISION	DATE	DESCRIPTION	BY
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA. LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT MRGO. B/L STA. 380+50 TO STA. 692+50 ST. BERNARD PARISH, LA. MISCELLANEOUS DETAILS			
DESIGNED	DRAWN	CHECKED	DATE
R.W.W.	L.A.H.	R.P.L.	MAY 1985
SUBMITTED	DATE	SPEC. NO.	SCALE
		DACW29-85-B-0073	AS SHOWN
FILE NO. H-8-29808			DWG. 7 OF 11

GAGE READINGS IN FEET

GAGE READINGS IN FEET



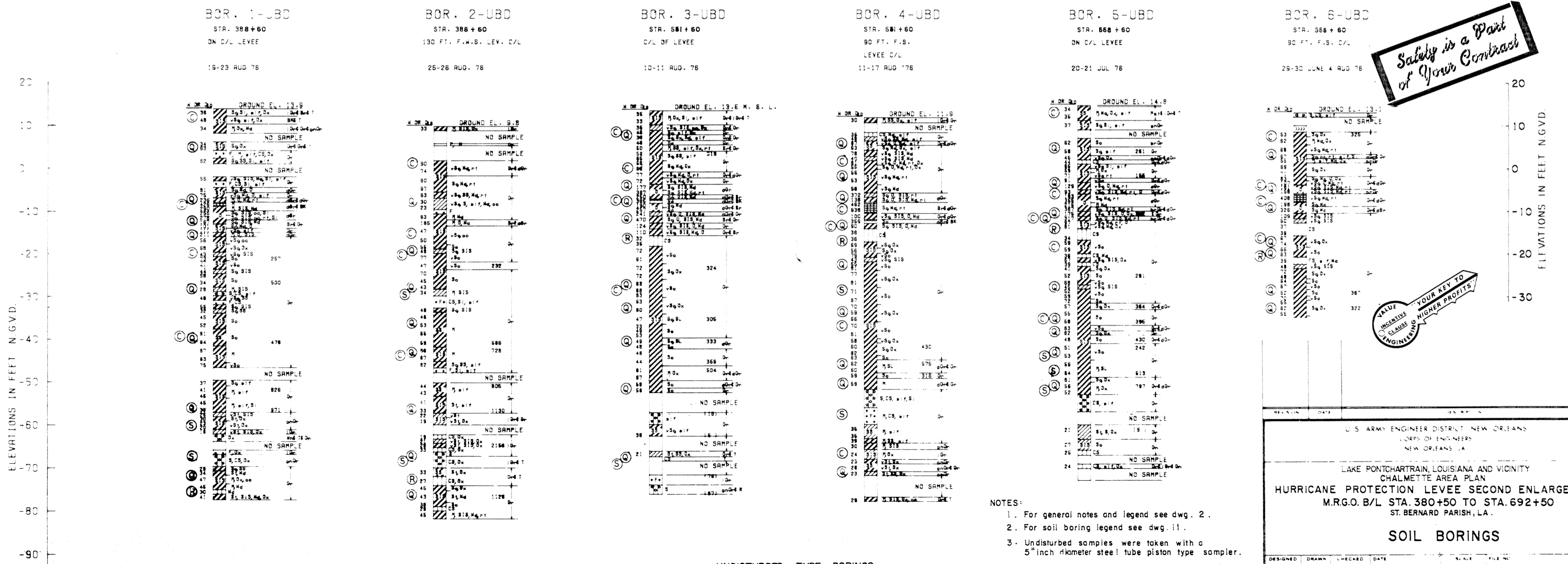
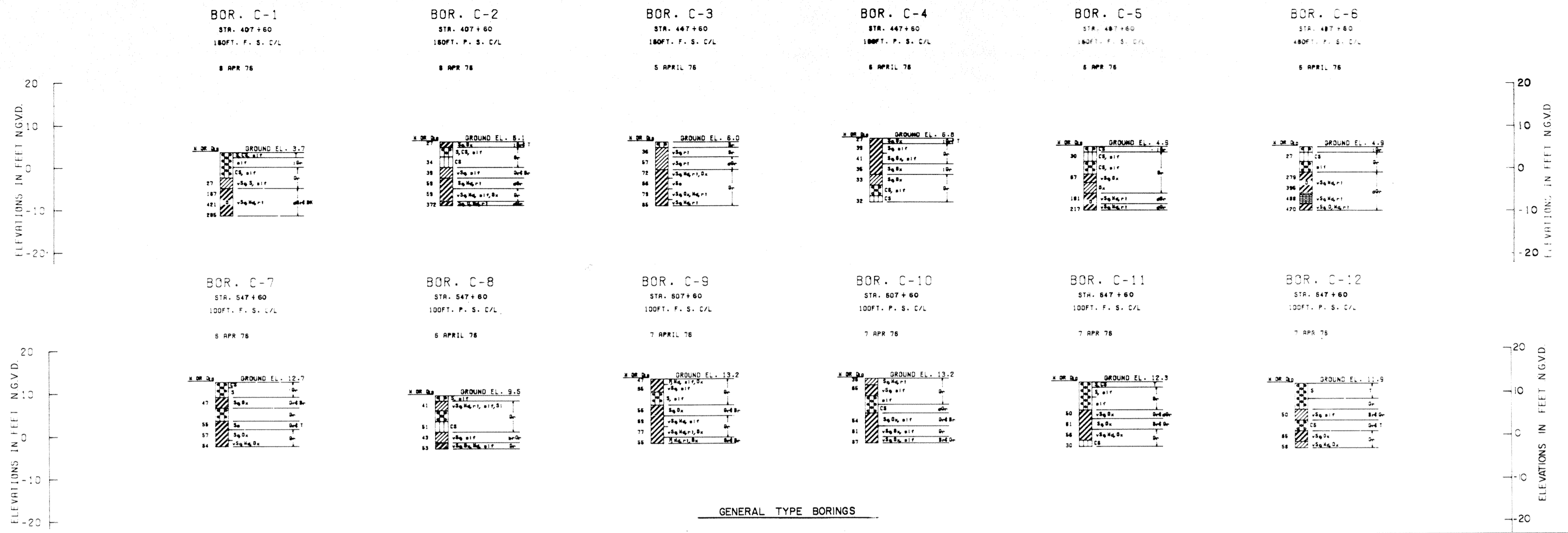
INTRACOASTAL WATERWAY NEAR PARIS ROAD BRIDGE, NEW ORLEANS, LA.
 PRIOR TO 1 JAN 77, GAGE ZERO IS M.L.G. AFTER 1 JAN. 77, GAGE ZERO
 IS N.G.V.D.

DESIGNED	DRAWN	CHECKED	DATE	SCALE	FILE NO.
R.W.W.	P.P.M.	R.P.L.	MAY 1985	AS SHOWN	H-8-29808
SUBMITTED			SPEC. NO.	DWG 8 OF 11	
[Signature]			DACW29-85-B-0073		

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

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
 CHALMETTE AREA PLAN
 HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT
 M.R.G. B/L STA. 380+50 TO STA. 692+50
 ST. BERNARD PARISH, LA.

STAGE HYDROGRAPHS



- NOTES:**
1. For general notes and legend see dwg. 2.
 2. For soil boring legend see dwg. 11.
 3. Undisturbed samples were taken with a 5" inch diameter steel tube piston type sampler.
 4. Elevations shown on the borrow borings may be incorrect as some of the material has been removed for previous levee lifts.

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MAKE US A MEMBER OF THE SOCIETY OF PROFESSIONAL ENGINEERS TO OBTAIN HIGHER PROFITS

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

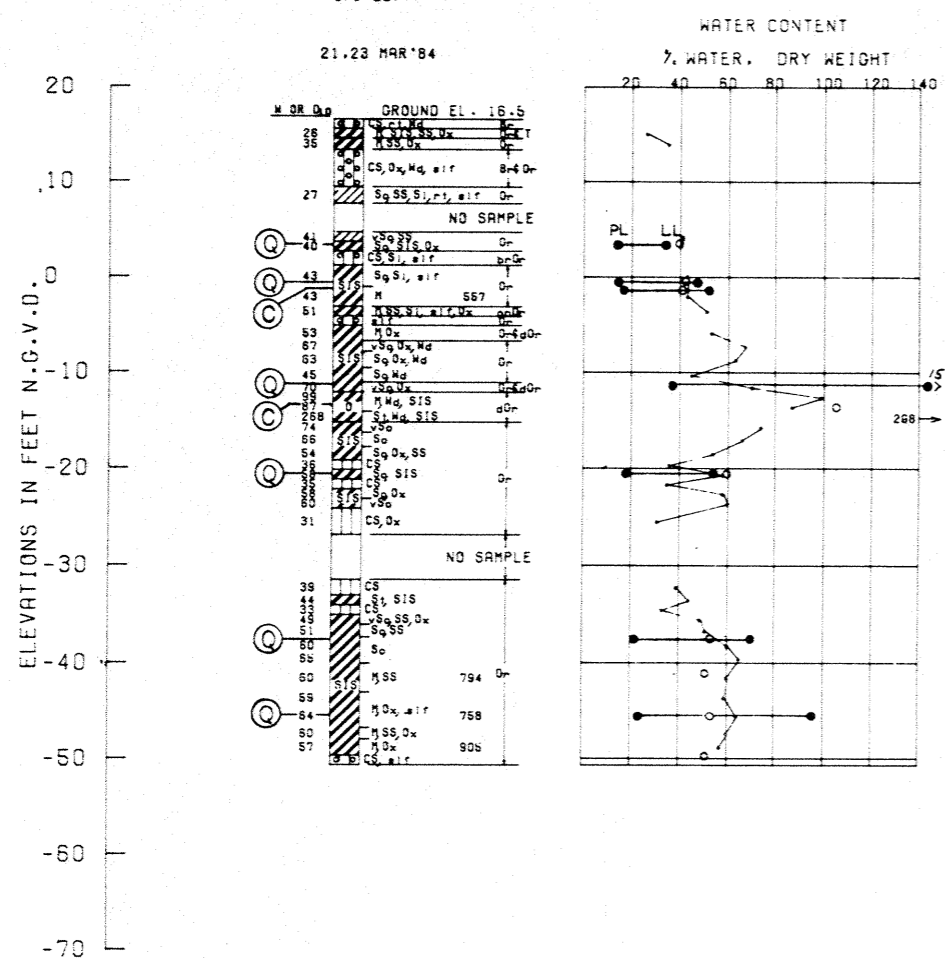
LAKE PONCHARTRAIN, LOUISIANA AND VICINITY
 CHALMETTE AREA PLAN
HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT
 M.R.G.O. B/L STA. 380+50 TO STA. 692+50
 ST. BERNARD PARISH, LA.

SOIL BORINGS

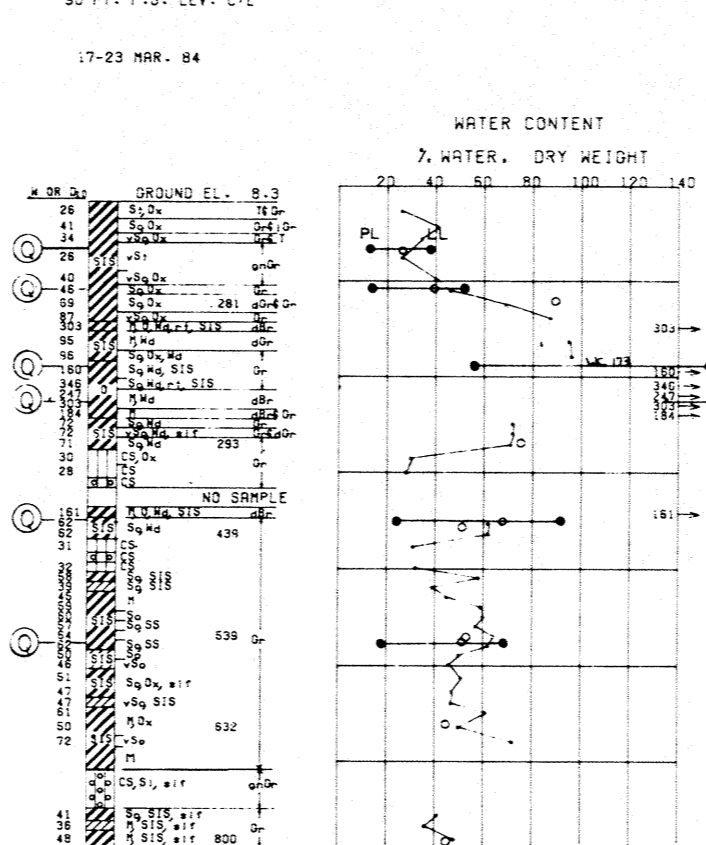
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R.W.W.	P.P.M.	R.P.L.	MAY 1985	AS SHOWN	H-8-28796
SUBMITTED	BY	DATE	SPEC NO.	DWG NO.	SHEET NO.
Donald P. Lee			DACW29-85-R-0072	9	11

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OF YOUR CONTRACT**

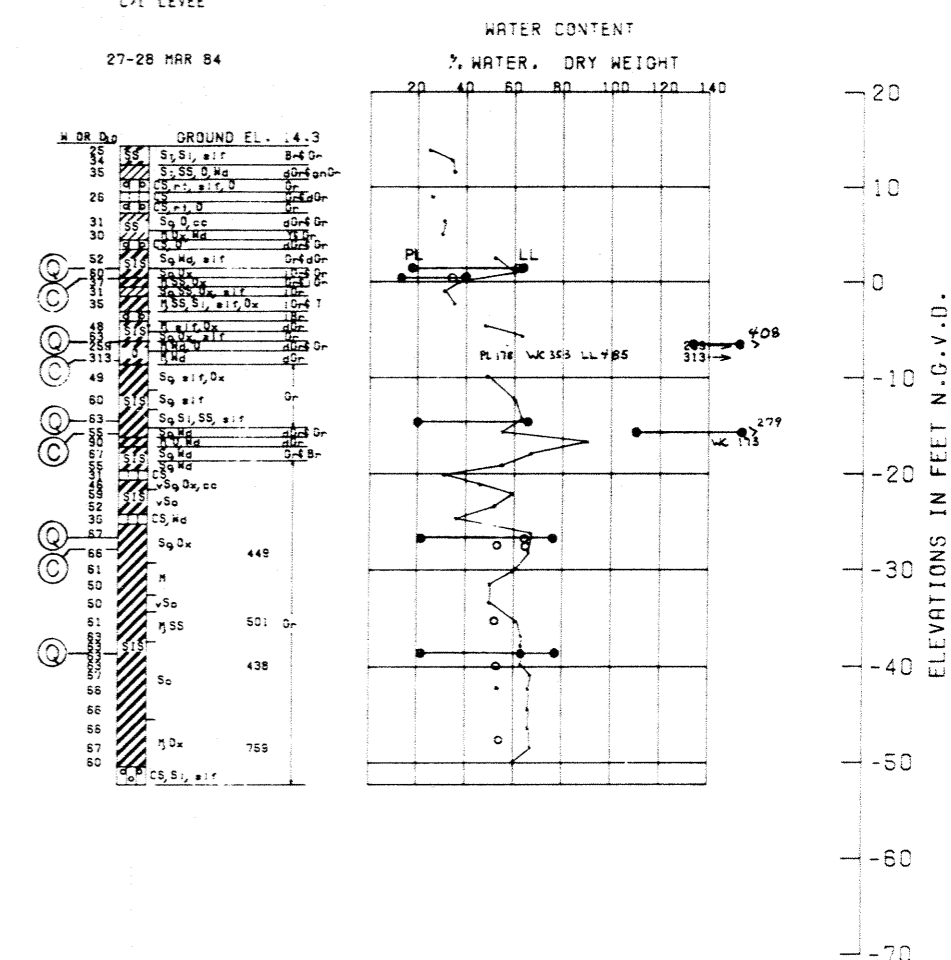
BOR. 9-UBD
STA. 429+60
C/L LEV.



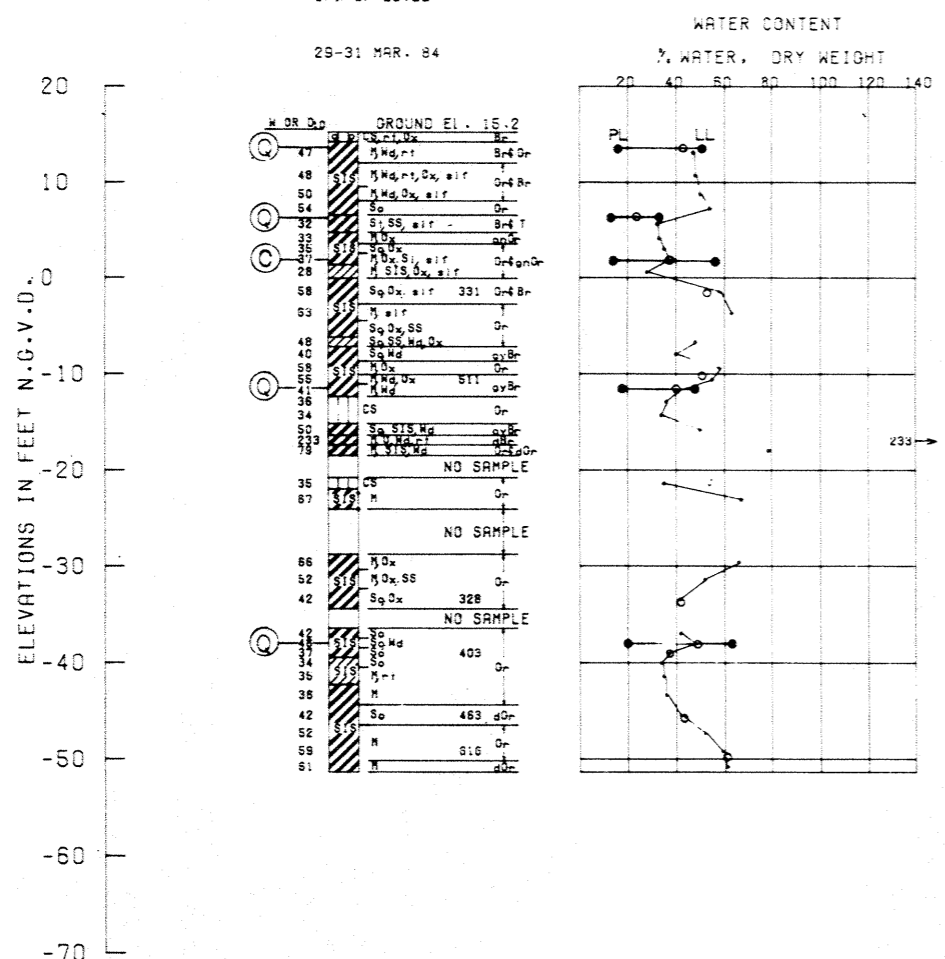
BOR. 10-UBD
STA. 429+60
50 FT. F.S. LEV. C/L



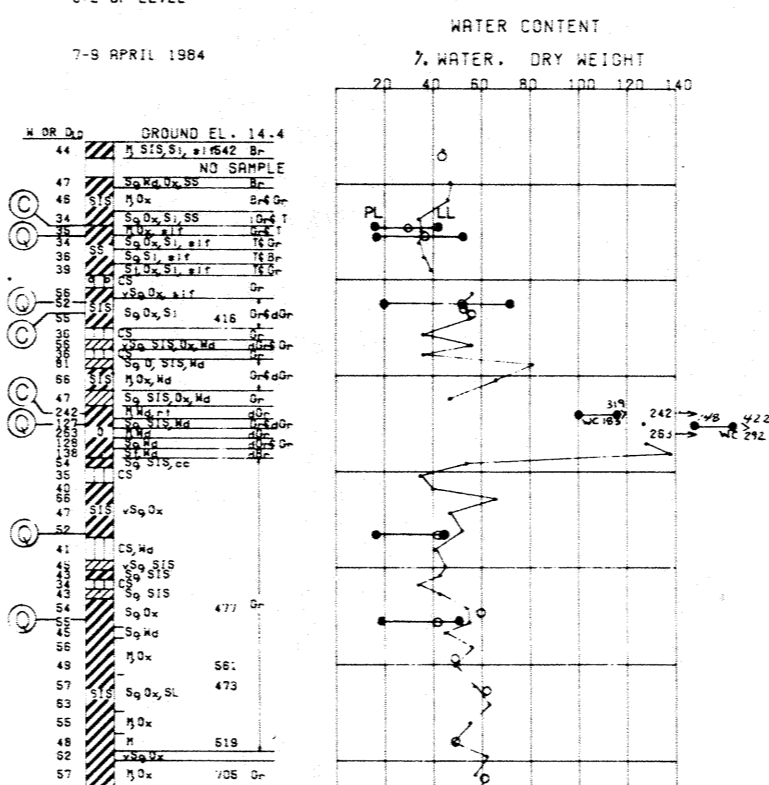
BOR. 11-UBD
STA. 497+60
C/L LEV



BOR. 12-UBD
STA. 549+60
C/L OF LEV



BOR. 14-UBD
STA. 557+60
C/L OF LEV



- NOTES:**
1. For general notes and legend see dwg. 2.
 2. For soil boring legend see dwg. 11.
 3. Undisturbed samples were taken with a 5" inch diameter steel tube piston type sampler.

REVISION	DATE	DESCRIPTION	BY

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

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
CHALMETTE AREA PLAN
HURRICANE PROTECTION LEVÉE SECOND ENLARGEMENT
M.R.G.O. B/L STA. 380+50 TO STA. 692+50
ST. BERNARD PARISH, LA.

SOIL BORINGS

DESIGNED:	DRAWN:	CHECKED:	DATE:	SCALE:	FILE NO.:
R.W.W.	P.P.M.	R.P.L.	MAY 1985	AS SHOWN	H-8-29808
SUBMITTED:	SPEC NO.:		DWG 10 OF 11		
<i>Ronald R. Lee</i>	DACW29-85-B-0073				



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

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

DESCRIPTIVE SYMBOLS						
COLOR		CONSISTENCY FOR COHESIVE SOILS			MODIFICATIONS	
COLOR	SYMBOL	CONSISTENCY	COHESION IN LBS./SQ. FT. FROM UNCONFINED COMPRESSION TEST	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	br Gr				Organic matter	O
GRAYISH-BROWN	gy Br				Clay strata or lenses	CS
GREENISH-GRAY	gn Gr				Silt strata or lenses	SIS
GRAYISH-GREEN	gy Gn				Sand strata or lenses	SS
GREEN	Gn				Sandy	S
BLUE	Bl				Gravelly	G
BLUE-GREEN	Bl Gn				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 D ₁₀ "	
Are natural water contents in percent dry weight	
When underlined denotes D ₁₀ 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 tests**	
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 D ₁₀ size of a soil is the grain diameter in millimeters of which 10% of the soil is finer, and 90% coarser than D ₁₀	
**Results of these tests are available for inspection in the U.S. Army Engineer District Office, if these symbols appear beside the boring logs on the drawings	

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 clause 44 of the contract.

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.

REVISION	DATE	DESCRIPTION	BY
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS CORPS OF ENGINEERS NEW ORLEANS, LA.			
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY CHALMETTE AREA PLAN HURRICANE PROTECTION LEVEE SECOND ENLARGEMENT M.R.G.O. B/L STA. 380+50 TO STA. 692+50 ST. BERNARD PARISH, LA.			
SOIL BORING LEGEND			
DESIGNED R.W.W.	DRAWN E.M.V.	CHECKED R.P.L.	DATE MAY 1985
SCALE AS SHOWN		FILE NO. H-8-29808	
SUBMITTED Donald W. Lee		SPEC. NO. DACW29-85-B-0073	
DWG		11 of 11	