March 15, 2000

Operations Division Technical Support Branch

Benny Rousselle, Parish President Plaquemines Parish Government Buras Levee District 106 Avenue G Belle Chasse, Louisiana 70037

Dear Mr. Rousselle:

You are hereby informed that our contract (#99-C-0052) for New Orleans to Venice, Louisiana, Reach A, Vicinity of Port Sulphur Hurricane Protection Levee, Final Levee Enlargement and Freeport Canal Closure 2nd Lift, baseline station 238+00.4 to baseline station 298+00, in Plaquemines Parish, Louisiana, has been completed by the United States under Public Law 874, 87th Congress, approved October 23, 1962.

A final inspection was conducted on January 19, 2000, and all contract work was found to be satisfactorily completed. In accordance with the acts of assurance furnished prior to commencement of work, Plaquemines Parish Government, Buras Levee District becomes responsible for the operation and maintenance of completed features of the New Orleans to Venice, Louisiana, Hurricane Protection Project in Plaquemines Parish. In this connection, maintenance has been construed as keeping all completed works in first-class condition to serve the purpose for which they were designed.

CERTIFIED MAIL NO.______RETURN RECEIPT REQUESTED

If there are any questions concerning your operations and maintenance responsibilities, please call Brian Keller or Amy E. Powell at $(504)\ 862-2344$ and 862-2241, respectively.

Sincerely,

Dale A. Knieriemen

Lieutenant Colonel, U.S. Army Acting Deputy District Engineer for Project Management

Copies Furnished:

LA DOTD, Baton Rouge
LA DOTD, New Orleans
CEMVN-ET-CO
Area Engr, NOAO
Const Div (contract #99-C-0052)
C/Engr Div
C/RE
C/PPPMD
Comptroller
Mail Room

CELMN-CD-NO-Q 21 Jan 2000

MEMORANDUM FOR Chief, Construction Division

SUBJECT: Contract DACW29-99-C-0052, New Orleans to Venice, LA, Reach A, Vicinity of Port Sulphur Hurricane Protection Levee, B/L Sta. 238+00.4 to B/L Sta. 298+00, Final Levee Enlargement & Freeport Canal Closure 2nd Lift, Plaquemines Parish, LA

1. All work was completed in accordance with the contract specifications and final acceptance was made on 19 January 2000.

Dom Elguezabal Area Engineer

New Orleans Area Office

CF:

Team Leader (Sensebe)

Const Rep (Dufrechou)

Proj Insp (Camarillo)

Ofc Engr (Thurmond)

CEMVN-RE-A

CEMVN-PA

CEMVN-SS

CEMVN-CT-R

CEMVN-CD-CS

CEMVN-CD-QS

CEMVN-PM

CEMVN-ED

MEMORANDUM FOR Chief, Construction Division

SUBJECT: Contract No. DACW29-99-C-0052, New Orleans to Venice, Louisiana, Hurricane Protection Project, Reach A, Station 238+00.4 to 298+00, Final Levee Enlargement and Freeport Canal Closure 2nd Lift, Plaquemines Parish, Louisiana

The subject contract was substantially completed on 8 January 2000.

CHESTER ASHLEY

Area Engineer

New Orleans Area Office

Met and

CF:

Team Leader (Sensebe)

Const Rep (Dufrechou)

Proj Insp (Camarillo)

Ofc Engr (Thurmond)

CEMVN-RE-A

CEMVN-PA

CEMVN-SS

CEMVN-CT-R

CEMVN-CD-CS

CEMVN-CD-QS

CEMVN-PM

CEMVN-ED

MEMORANDUM THRU Area Engineer, NewOrleans Area Office C/Const Div ATTN: Contr Admin Br

FOR C/Engr Div

SUBJECT: Narrative Completion Report for Contract No. DACW29-99-C-0052, New Orleans to Venice, LA, Reach A, Vicinity of Port Sulphur Hurricane Protection Levee, B/L 238+00.4 to 298+00, Final Levee Enlargement & Freeport Canal Closure 2nd Lift, Plaquemines Parish, LA

- 1. The subject contract dated 22 July 1999 was awarded to Circle, Inc. 1204 Engineers Road Belle Chasse, Louisiana 70037. The Notice to Proceed was issued on 5 August 1999 with construction to commence not later than 15 August 1999. The date set for completion was 02 January 2000. The original contract length was 150 calendar days. The original contract amount was \$1,205,762.00.
- 2. The Preconstruction Conference on the above subject contract was held on 05 August 1999 at 11:00 a.m. in the New Orleans Area Office. Minutes of the Preconstruction Conference are on file in the New Orleans Area Office. On 9 August 1999, both the Prework Safety and Prework Coordination (Mutual Understanding) Meetings were held at the job site. The purpose of the Prework Safety Meeting was to develop a mutual understanding of hazards existing in this type of work, to review the requirements of the current Safety Manual (EM 385 1-1, Sept 1996), and to develop an acceptable level of safety awareness in the employees. The Job Hazard Analysis, approved Accident Prevention Plan, weekly Safety Meeting requirements, and equipment inspections were also covered. The Coordination Meeting was held to develop a mutual understanding of the Contractors Quality Control System and to discuss the proper procedure for recording the results of CQC inspections, control activities, and testing. The minutes of both meetings are in the contract file.
- 3. The contract consisted of thirteen major definable features of work: mobilization and demobilization, clearing and grubbing, embankment (uncompacted fill) and (semicompacted fill), surfacing, fertilizing and seeding (Canal Closure Area), fertilizing, seeding and mulching (Levee), turf reinforcement mat, chain link fencing and gate, geotextile separator, erosion control, 24" drainage culvert and access roads.
- 4. The following is a summary of the items of work during this contract:
 - a. The Three Phase System was utilized during the operation of all definable features of work.

SUBJECT; Narrative Completion Report for Contract No. DACW29-99-C-0052, New Orleans to Venice, LA, Reach A, Vicinity of Port Sulphur Hurricane Protection Levee, B/L 238+00.4 to 298+00, Final Levee Enlargement & Freeport Canal Closure 2nd Lift, Plaquemines Parish, LA

- (1) <u>Mobilization and Demobilization</u>: The contractor began mobilizing equipment to the job site on 06 August 1999, one D58 dozer and one 300 Komatsu excavator. Over the next 2 months, more equipment was mobilized to the project site. The project was completely demobilized as of 21 January 2000.
- (2) <u>Clearing and Grubbing</u>: The preparatory inspection meeting was held for this item of work on 09 August 1999. The contractor began this phase of work on the same day with the clearing ang grubbing the designated borrow pit area at Boothville, LA. Trees felled during this operation were stockpiled in the borrow area for future burning. The clearing and grubbing of the construction site started on 07 September 1999 at B/L 238+00 to 266+00.

These phases of work were ongoing throughout the contract and equipment used was one D37 dozer, one D58 dozer, one PC200 Komatsu excavator, and one farm tractor W/disk. All clearing and grubbing was completed by 18 November 1999. The minutes of the preparatory meeting for clearing and grubbing are on file in the New Orleans Area Office.

(3) Embankment: Semicompacted and Uncompacted fill.

The preparatory inspection meeting for this item was held on 07 September 1999. Operations began on the same day. All fill material used for this project was taken from the government furnished borrow pit. Designed excavation depth of 20 ft within the designated borrow pit was achieved by completion of the project. Material excavated from the borrow pit was a lean CL and had a optimum moisture range of (18-28%). Required moisture and density tests were performed as per contract specifications (every 2,000 cy). Semicompacted fill material was placed in layers. The first layer was not more than 6 inches in thickness and the succeeding layers were not more than 12 inches in thickness prior to compaction. Uncompacted fill material was placed in a 3ft layer as per contract specifications. Settlement plates were placed as per contract specifications and verified by government personnel.

Work for the embankment phase was performed by the prime contractor Circle Inc of Belle Chasse, Louisiana. Equipment used for excavation and embankment operations were three excavators, five dozers, two motor graders, one farm tractor W/disk, one water truck, two motorized brooms, two 6 inch pumps, one rubber tired backhoe, and a average of 28 tandem haul trucks. All embankment and excavation was completed on 17 December 1999. The contractor was issued one deficiency with regards to this item of work. This deficiency was for placing haul trucks into service without required Safety Inspection. Correction of this deficiency was made in a timely manner, and the excavation and embankment phases of work were completed in accordance with the plans and specifications. The borrow pit was left in a orderly manner. The contractor used 90% of the surface area provided for borrow excavation under this contract.

SUBJECT; Narrative Completion Report for Contract No. DACW29-99-C-0052, New Orleans to Venice, LA, Reach A, Vicinity of Port Sulphur Hurricane Protection Levee, B/L 238+00.4 to 298+00, Final Levee Enlargement & Freeport Canal Closure 2nd Lift, Plaquemines Parish, LA

- (4) <u>Surfacing and Geotextile Separator</u>: The preparatory inspection meeting for these items was held on 27 October 1999. Operations began the following day 28 October 1999. The contractor constructed ramps throughout the project site for a total of (5). Prior to placement of surfacing material, the contractor anchored down a geotextile separator fabric as per contract specifications. This was followed up with a 7 inch layer of stone over each ramp. Over the next 2 months the contractor placed surfacing material throughout the Freeport Facility as per contract specifications to include a 12 layer of stone only on the crossover road within the Canal Closure. All surfacing was completed on 28 December 1999 and the minutes of the preparatory meeting are on file.
- (5) Fertilizing, Seeding, Mulching, and Turf Reinforcement: The preparatory inspection meeting for these items was held on 16 December 1999. Work began immediately following the meeting which was conducted by Economy Grass of Ethel, Louisiana. The levee surface was tilled as required by the contract and than seeded, fertilized, and mulched. The canal closure was only seeded and fertilized. No mulch was required by contract. Turf Reinforcement Mat was place within 24 hours of seeding, fertilizing and mulching between B/L stations 270+00 to 280+00 as per contract specifications. All seeding, fertilizing, mulching, and placement of reinforcement mat was completed on 30 December 1999 totaling 24.38 acres.
- (6) Chain Link Fencing and Gate: The preparatory meeting for these items was held on 07 January 00. Work started immediately following the meeting. The existing fence at B/L 238+00 was removed and replaced. At B/L 298+00 a gate was installed and the existing fence was also replaced. No gate was installed at station 238+00 as per contract specifications. All work was completed on 14 January 00.
- (7) <u>Erosion Control</u>: The preparatory meeting was held on 27 October 1999. The contractor used silt fencing for erosion control along the landside TOE of the levee between stations 238+00 to 298+00 and completely around the canal closure area. Silt fencing was originally placed on 28 October 1999 and was maintained by the contractor throughout the duration of the contract. A total of 7,568 linear feet of silt fencing was used on the project.
 - (8) 24" Drainage Culvert: The preparatory meeting for this item was held on 27 October 1999.

SUBJECT: Narrative Completion Report for Contract No. DACW29-99-C-0052, New Orleans to Venice LA, Reach A, Vicinity of Port Sulphur Hurricane Protection Levee, B/L 238+00.4 to 298+00, Final Levee Enlargement & Freeport Canal Closure 2nd Lift, Plaquemines Parish, LA

Work started immediately following the meeting. The 24" drainage culvert was placed as per contract specifications at (3) locations The first culvert was placed at B/L station 250+00 followed up with another at station 255+00 and at station 13+00 (Canal Crossover Road), throughout the duration of the contract. The bedding surface for the drainage culvert was firm along the entire length. Backfill was brought up evenly on both sides of culvert not exceeding 6 inches in compaction depth. Each layer was compacted with a mechanical tamper. The method of filling and compacting continued until fill was at least 12 inches above the culvert. This phase of work was completed on 10 December 1999.

- (9) Access Roads: The preparatory inspection meeting for this item was held on 09 August 1999. On this date the contractor began constructing required truck wash down pads at the designated access roads at the embankment construction area and borrow pit area. Prior to placement of crushed stone, the locations were verified by the COE QAR. Maintenance of access roads was performed with one 65B motor grader, one water truck, and two motorized brooms. This phase of work continued throughout the duration of the contract and was completed on 17 December 1999.
- 5. There were seven modifications to the original contract, and a summary of each follows:
- a. Contract modifications P00001, P00002, P00003, P00004 provided funding adjustment to the contract.
 - b. Contract modification A00001 provides a time extension to the contract.
- c. Contract modification P00005 and P00006 provides variations in contract estimated quantities adjustments.
- 6. A copy of as-builts drawings is attached.
- 7. The project was accepted as substantially completed on 08 January 2000. All work was accepted as complete in accordance with the contract plans and specifications. Representatives of the Contracting Officer (USACE) made the acceptance. The final inspection was performed on 19 January 2000.
- 8. Included herewith is a comparison of the contract quantities versus actual quantities.

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Item Number	Description	Estimated Quantity	Unit Price	Estimated Amount	Actual Quantity	Actual Amount
0001	Mobilization & Demobilization	Lump Sum	LS	81,061.00	100%	81,061.00
0002	Clearing and Grubbing	Lump Sum	LS	103,935.00	100%	103,935.00
0003	Embankment Semicompacted fill	30,600 CY	9.07	277,542.00	40,196.00	364,577.72
0004	Embenkment Uncompacted Fill	44,800 CY	7.68	344,064.00	72,919.00	560,017.92
0005	Surfacing					
0005AA 0005AB	First 3,900 Cubic Yards All Over 3,900 Cubic Yards	3,900 CY 1,000 CY	31.38 31.38	122,382.00 31,380.00	3,900.00 573.33	122,382.00 17,991.10
0006	Fortilizing and Seeding (Canal)	11 AC	308.00	3,388.00	11.24 AC	3,461.92
0007	Fertilizing Seeding & Mulch Levee	12 AC	1,460.00	17,520.00	13.14 AC	19,184.40
0008	Turf Reinforcement Mat	4,250 SY	4.60	19,550.00	4,259.5	19,593.70
0009	Chain Link Fencing and Gate	Lump Sum	LS	13,485.00	100%	13,485.00
0010	Geotextile Separator	1,700 SY	1.88	3,196.00	2,994.68	5,630.00
0011	Erosion Control	8,875 LF	2.48	22,010.00	7,568.00	18,768.64
0012	24" Drainage Culvert	Lump Sum	LS	15,880.00	100%	15,880.00
0013	Access Roads	Lump Sum	LS	150,369.00	100%	150,369.00
	TOTALS			\$1,205,762.00		\$1,496,337,40

9. In summary, the contractor was proficient in the performance of work. Equipment used was of satisfactory working condition. Quality Control was satisfactory throughout the duration of th contract.

Project Inspector New Orleans Office

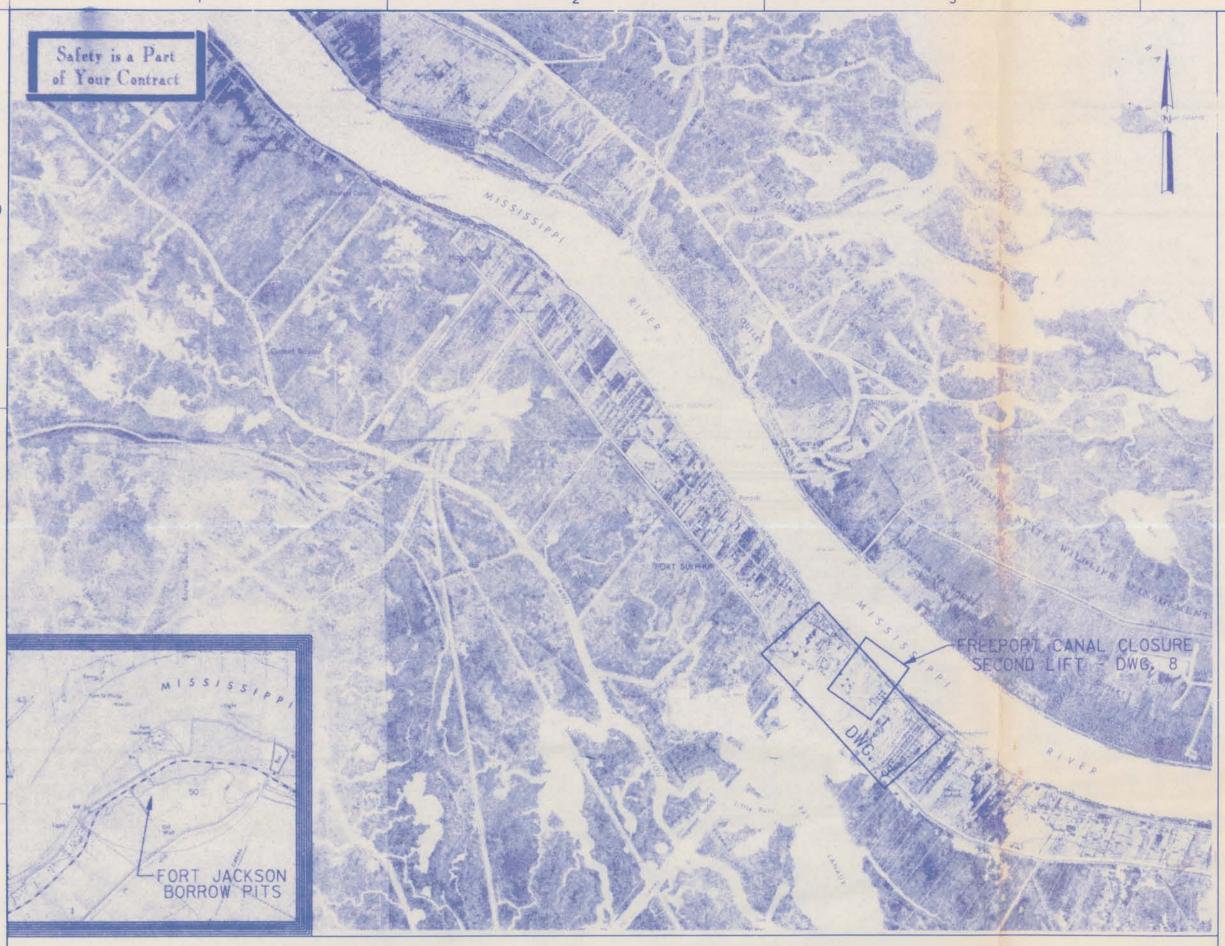
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SUBJECT; Narrative Completion Report for Contract No. DACW29-99-C-0052, New Orleans to Venice, LA, Reach A, Vicinity of Port Sulphur Hurricane Protection Levee, B/L 238+00.4 to 298+00, Final Levee Enlargement & Freeport Canal Closure 2nd, Plaquemines Parish, LA

CF:

Proj Engr (Dufrechou)
Proj Insp (Camarillo)
Ofc Engr (w/as-built)
CEMVN-CD-Q
CEMVN-CT
CEMVN-ED-C
CEMVN-CD-CS
CEMVN-CD-B
CEMVN-PP

CEMVN-OD-ON



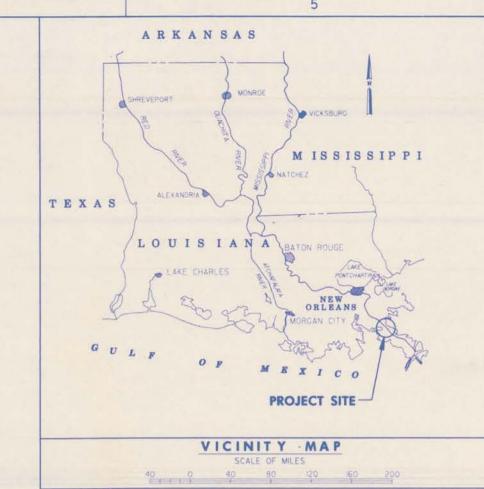
LOCATION MAP - SCALE 1"=2000'

NEW ORLEANS TO VENICE, LA.

REACH A - VICINITY PORT SULPHUR

HURRICANE PROTECTION LEVEE B/L STA. 238 + 00.40 TO 298 + 00 FINAL LEVEE **ENLARGEMENT & FREEPORT CANAL CLOSURE 2ND LIFT**

PLAQUEMINES PARISH, LA.



	INDEX TO DRAWINGS
DWG.	DESCRIPTION
1	INDEX TO DRAWINGS, VICINITY AND LOCATION MAPS
2	TABULATION OF OFFSETS AND GENERAL NOTES
3	PLAN AND PROFILE, BENCHMARK
4	TYPICAL SECTIONS
5	LANDSIDE DITCH, TEMPORARY BERM AND MISCELLANEOUS DETAILS
6-7	MISCELLANEOUS DETAILS
8	FREEPORT CANAL CLOSURE SECOND LIFT
9	SOIL BORINGS AND BORROW BORINGS
10	SOIL BORING LEGEND
11	FORT JACKSON BORROW PIT
12	TRAFFIC CONTROL PLAN AND SETTLEMENT GAGE DETAIL
-	CROSS SECTIONS

AS BUILT DRAWING acion NE

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

> THIS PROJECT WAS DESIGNED BY THE NEW ORLEANS DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152.



FILE NUMBER H-8-45128

DWG. 1 OF 20



Safety is a Part of Your Contract

TA	ABULATION OF	FXISTING	R/W OFFSETS
P. I	-T	OFFSET DISTANCE	OFFSET AZIMUTHS
1	238+00.40	100.004	•
2	243+20.52	172.20′	343*41′57*
3	244+67.74	142.10′	•
4	264+59.80	124.65′	•
5	266+46.80	166.07′	55*11'28*
6	268+33.97	I63.85'	•
7	279+33.91	242.18′	88*54′19*
8	280+22.45	147.29'	51°44′07°
9	281+10.96	35.65′	•
9	285+17.33	23.11′	•
R	286+16.01	134.73′	•
12	292+80.57	133.04'	•
13	297+33.34	127.74'	•
14	298+00.00	74.17′	•
15	298+00.00	47.87′	•
16	292+84.43	42.01′	•
17	279+70.30	4.02	•
18	278+52.16	38.55′	•
19	269+68.39	232.86′	237*55′12*
20	265+31.19	137.74′	231°34′13°
21	265+31.19	88.16′	238*33′18*
22	254+30.19	67.11′	•
23	246+00.65	91.97′	180°10′22"
24	241+66.18	Ю0.00′	•
25	238+00.40	100-00,	•

•	AZIMUTHS	ARE	90°	TO	THE	B/L	UNLESS	OTHERWISE	SHOWN

			ANAL CLOS I EASEMEN	
P. I.	CANAL B/L STATION	OFFSET DIST. RIGHT	OFFSET DIST. LEFT	OFFSET AZIMUTH
1	0+00	63.91′		156°09′20.5°
2	1+02.62	40.09'		•
3	1+97.24	31.28′		•
4	2+02.32	89.98′		•
⑤	4+07.29	89.96′		•
6	5+07.30	60. 00′		•
7	12+10.10	36.61'		•
8	15+06.61	27.69′		•
9	16+50.23		6.74′	•
(D)	16+48.87		360.14′	•
(I)	11+96.17		360.10′	•
(2)	11+04.63		360.08′	•
(3)	5+77.72		359.70′	•
(4)	4+77.56		250.00′	•
(5)	0+19.06		249.05′	•
(€)	0+00		149.76′	265°22′11.9"

2

3

TABULATION OF C/L OFFSETS OFFSET DISTANCE

-7.0'

-7.0'

-9.9'

-7.0'

-3.0'

-3.0'

-9.0'

-9.0'

-6.0'

-3.0'

-3.0

0.0

-7.5'

-7.0'

-7.0'

~5.5′

0.0

0.0'

0.0'

7.0'

9.0'

9.0'

. AZIMUTHS ARE 90° TO THE B/L UNLESS OTHERWISE SHOWN

P. I. B/L STATION

(3)

4

(5)

6

(8)

(12)

20)

238+23.00

243+27.29

246+00.65

252+00.00

252+56.94

253+00.00

255+00.00

262+00.00

263+00.00

263+59.94

265+27.94

266+36.98

269+67.27

271+12.55

275+30.98

278+39.11

279+41.73

280+22.45

285+07.00

286+86.16

292+96.06

297+37.00

OFFSET AZIMUTHS

174°51'46"

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GENERAL NOTES:

- I. ALL AZIMUTHS ARE TRUE SOUTH PLANE AZIMUTHS TURNED IN A CLOCKWISE DIRECTION FROM 0°00'00' (DUE SOUTH).
- 2. UNLESS OTHERWISE NOTED, ALL ELEVATIONS ARE EXPRESSED IN FEET AND REFER TO NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.).
- 3. ALL B/L P.I.'S ARE BRASS DISCS ON C/L OF LEVEE.
- 4. FOR LOGS OF BORINGS TAKEN ALONG THE LEVEE SHOWN IN PLAN VIEW, SEE DRAWING 9.
- 5. FOR LOCATION OF BORROW AREA, SEE DRAWING II.
- 6. FOR EXISTING CONDITIONS/CROSS SECTIONS WITH THE DESIGN SECTION TEMPLATES SUPERIMPOSED, SEE DWG.S 13 THRU 20.
- 7. AS NOTED IN PLAN VIEW, DWG. 3, A PARALLEL POWERLINE EXISTS THROUGHOUT THE LANDSIDE R/W BETWEEN STATIONS 246+00 AND 264+00 (DO NOT DISTURB).
- 8. THE CONTRACTOR SHALL RESTRICT HIS OPERATIONS TO WORKING AROUND OBSTRUCTIONS (I.E. FENCES, TREES, POWER POLES, GUY WIRES, SHEDS, BUILDINGS, ETC.) THAT FALL OUTSIDE OF THE FILL SECTION BUT ARE WITHIN THE R/W. HOWEVER THERE ARE AREAS WHERE FILL MUST BE PLACED AROUND POWER POLES, GUY WIRES, OVER BURIED UTILITIES, AND BENEATH PIPE BRIDGES. MECHANICAL HAND TAMPING WILL BE REQUIRED IN THESE AREAS.
- 9. THE CONTRACTOR IS RESTRICTED TO ONLY THOSE ACCESS ROADS (WITHIN THE FREEPORT COMPLEX AND ADJACENT COMMUNITY) SHOWN IN PLAN VIEW OF DWG. 3, WITHOUT WRITTEN APPROVAL FROM FREEPORT SULPHUR CO. AND THE CONTRACTING OFFICER.
- 10. ACCESS ROUTES SHOWN IN PLAN VIEW ON DWG 3 WILL ALSO BE USED BY FREEPORT SULPHUR COMPLEX AND THEIR SUB-CONTRACTORS. THESE ROADS SHALL BE MAINTAINED SMOOTH, FREE OF POTHOLES AND RUTS, AND ACCESSIBLE FOR STANDARD STREET TYPE VEHICLES.
- II. CONTRACTOR SHALL MAINTAIN CONTINUOUS ACCESS TO FREEPORT SULPHUR CO. THROUGHOUT CONSTRUCTION, TO INCLUDE THE CONSTRUCTION OF TEMPORARY ACCESS ROADS, RAMPS (WHERE NECESSARY) AND MAINTENANCE OF THE ROADS AS DIRECTED BY THE CONTRACTING OFFICER.
- 12. ONCE EMBANKMENT CONSTRUCTION IS COMPLETE, CONTRACTOR SHALL SURFACE ACCESS ROADS WITHIN THE FREEPORT COMPLEX, AS SHOWN ON DWG. 3 (LESS THE ASPHALTED AREAS) WITH 7" OF CRUSHED STONE IN ACCORDANCE WITH THE SPECIFICATIONS. THE CANAL CLOSURE NEW CROSSOVER ACCESS ROAD SHALL BE SURFACED WITH 12' OF CRUSHED STONE.
- 13. CONTRACTOR SHALL CONSTRUCT A NEW PARALLEL DITCH ON THE SOUTHEASTERLY SIDE OF ACCESS ROAD *2 FROM HWY. 23 TO THE CARPENTERS SHOP. ALL EXISTING DITCHES AND CULVERTS ALONG ACCESS ROAD *2 SHALL BE CLEANED OUT AND MAINTAINED SO AS TO DIRECT DRAINAGE INTO THE EXISTING BORROW PIT. NEW DITCHES PARALLELING ROADWAYS SHALL BE 18" DEEP, HAVE 2' BOTTOM WIDTHS, IV ON 2H SIDE SLOPES AND LOCATED 3' FROM THE EDGE OF THE ROADWAY. THE SECTION SHALL BE MODIFIED AS NECESSARY SO AS NOT TO CUT INTO THE MAIN ROOT SYSTEM OF ADJACENT OAK TREES.
- 14. THE EXISTING FENCE ALONG THE UPSTREAM PROPERTY LINE OF THE FREEPORT COMPLEX SHALL BE REPLACED WITH A NEW FENCE IN ITS FINAL LOCATION, IN ACCORDANCE WITH DETAILS SHOWN ON DWG. 6.
- 15. THE EXISTING FENCE ALONG THE DOWNSTREAM PROPERTY LINE OF THE FREEPORT SULPHUR COMPLEX SHALL BE REMOVED AS NECESSARY TO CONSTRUCT THE LEVEE. ONCE HAUL OPERATIONS ARE COMPLETE A NEW FENCE SHALL BE CONSTRUCTED WITH A GATE & LOCK INSTALLED AT THE LEVEE CROWN. FENCED SECURITY TO THE FREEPORT SULPHUR COMPLEX SHALL BE MAINTAINED AT BOTH UPSTREAM AND DOWNSTREAM LOCATIONS AT ALL TIMES THROUGHOUT CONSTRUCTION OF THE LEVEE.

I.E

US Army Corps of Engineers New Orleans District

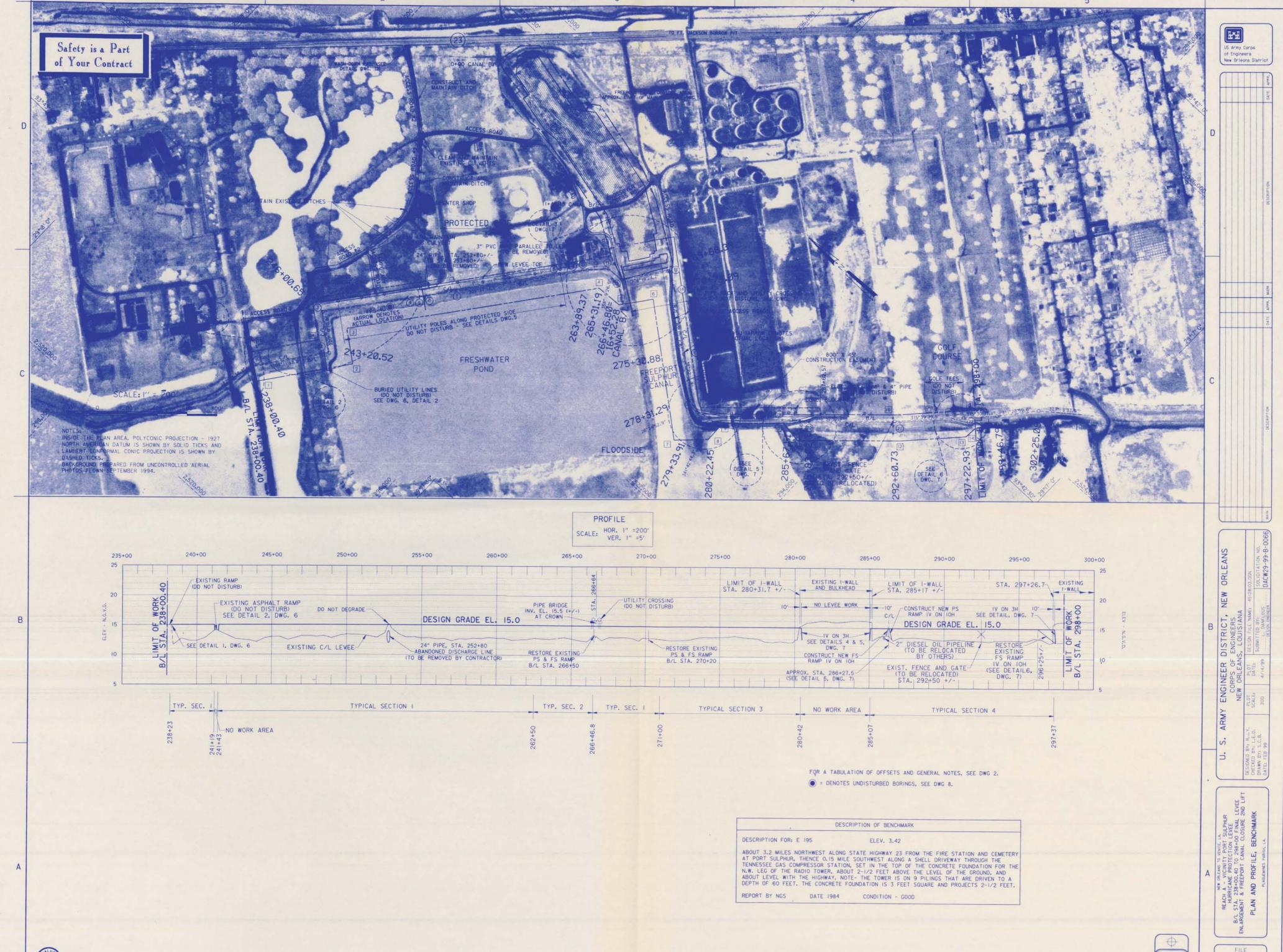
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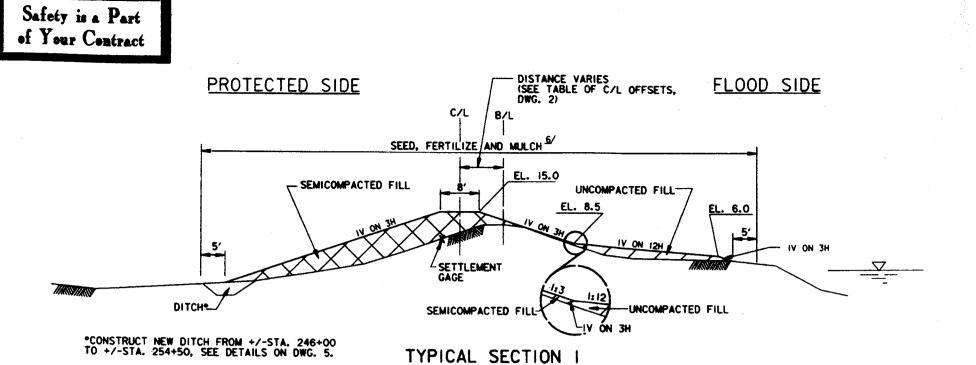
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AZIMUTHS ARE 90° TO THE B/L UNLESS OTHERWISE SHOWN



⊕ C·A·D

FILE NUMBER H-8-45128 DWG. 3 OF 20



STA. 238+23.00 $-/+\frac{17}{10}$ TO STA. 241+19.00 $-/+\frac{27}{10}$

STA. 266+46.80 TO STA. 271+00.00 1/

STA. 241+43.00 $-/+^{2/}$ TO STA. 262+50.00 $^{1/}$

NOT TO SCALE

FLOOD SIDE - DISTANCE VARIES (SEE TABLE OF C/L OFFSETS) (DWG. 2) PROTECTED SIDE SEED, FERTILIZE AND MULCH 5/ UNCOMPACTED FILL-SEMICOMPACTED FILL

5

US Army Corps of Engineers New Orleans District

TYPICAL SECTION 2 STA. 262+50.00 TO STA. 266+46.80 ¹/

NOT TO SCALE

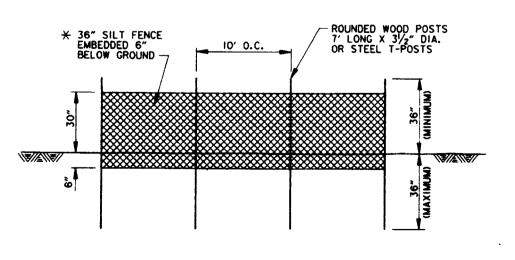
PROTECTED SIDE FLOOD SIDE -DISTANCE VARIES (TABLE OF C/L OFFSETS) (DWG. 2) SEED, FERTILIZE AND MULCH 6/ - SILT FENCE SEMICOMPACTED FILE RESURFACE EXISTING CRUSHED STONE ROAD

> TYPICAL SECTION 3 STA. 271+00.00 TO STA. 280+42.00 -/+ 3/ NOT TO SCALE

DISTANCE VARIES (SEE TABLE OF C/L OFFSETS) (DWG. 2) SEED, FERTILIZE AND MULCH SILT FENCE . RESURFACE EXISTING CRUSHED STONE ROAD-SETTLEMENT -SEMICOMPACTED FILL-*BETWEEN STA. 285+00 AND 289+50 UNCOMPACTED FILL-

TYPICAL SECTION 4 STA. 285+07.00 ⁴/ TO STA. 297+37.00 ⁵/ NOT TO SCALE

FLOOD SIDE



* SEE SPECIFICATIONS FOR REQUIREMENTS OF SILT FENCE FABRIC.

SILT FENCE DETAIL

TYPICAL NOTES :

- TIE INTO EXISTING RAMP (SEE DETAIL I, DWG. 6)
- 2/ TIE INTO ASPHALT RAMP (SEE DETAIL 2, DWG. 6)
- TIE INTO EXISTING I-WALL (SEE DETAIL 4, DWG. 7)
 NO LEVEE WORK BETWEEN STA. 280+42 AND STA. 285+07.
- 1 TIE INTO EXISTING I-WALL (SEE DETAIL 5, DWG. 7)
- 5/ TIE INTO EXISTING I-WALL (SEE DETAIL 6, DWG. 7)
- DO NOT SEED OR FERTILIZE AREAS WHERE THE ACCESS ROAD AND RAMPS ARE TO BE LOCATED.

2

 ${\cal J}$ SMOOTH TRANSITION BETWEEN TYPICALS.

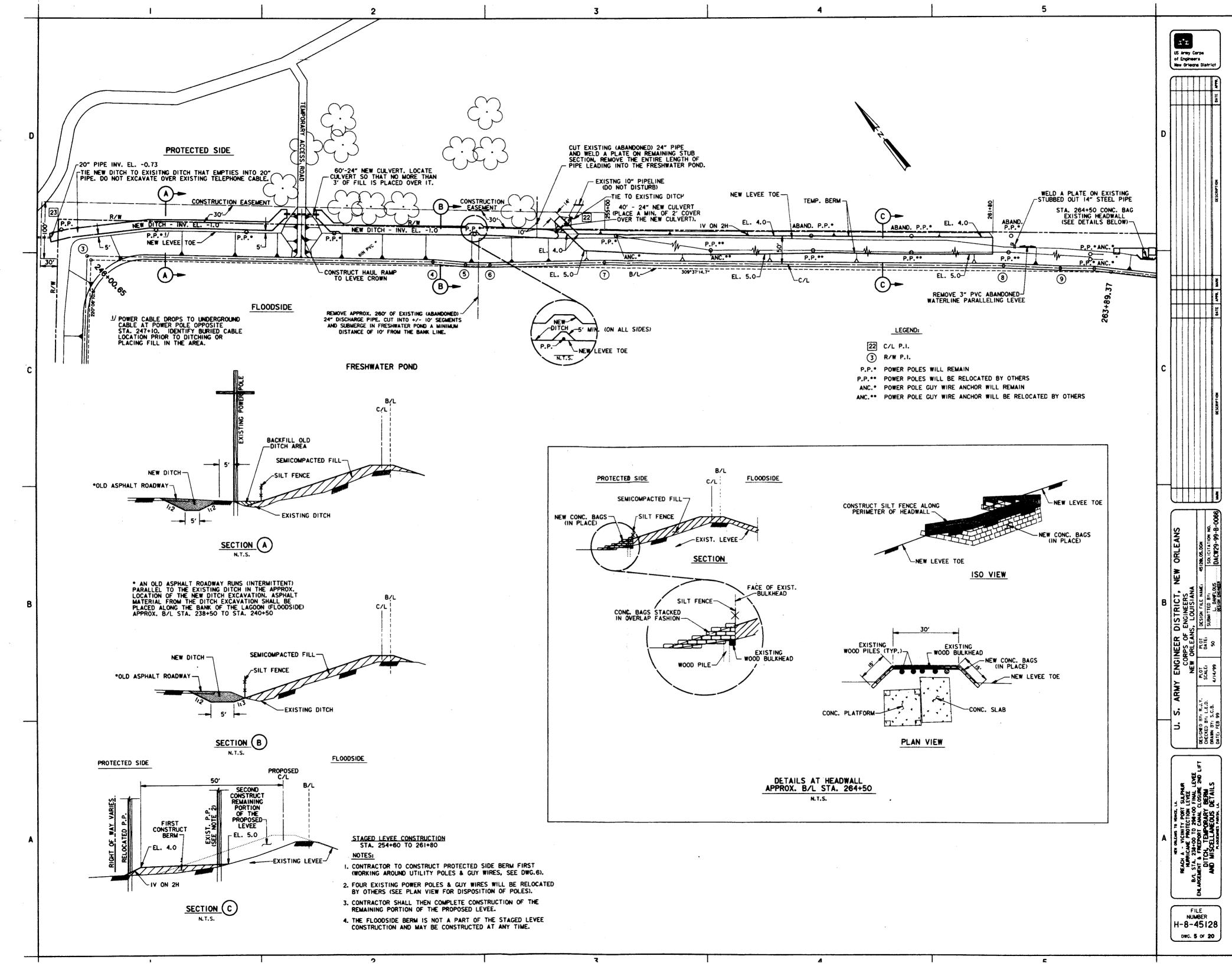


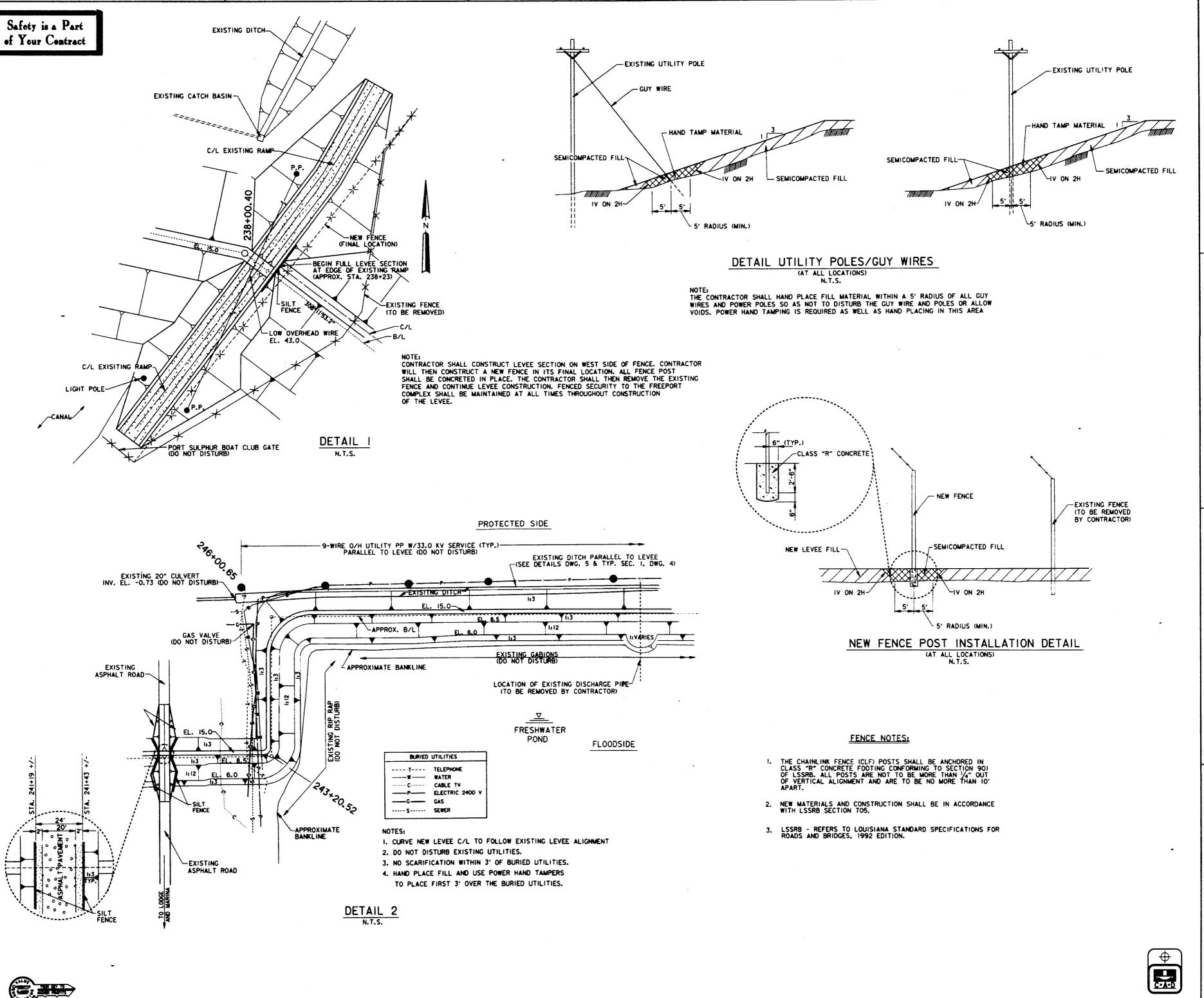


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PROTECTED SIDE

NOT TO SCALE



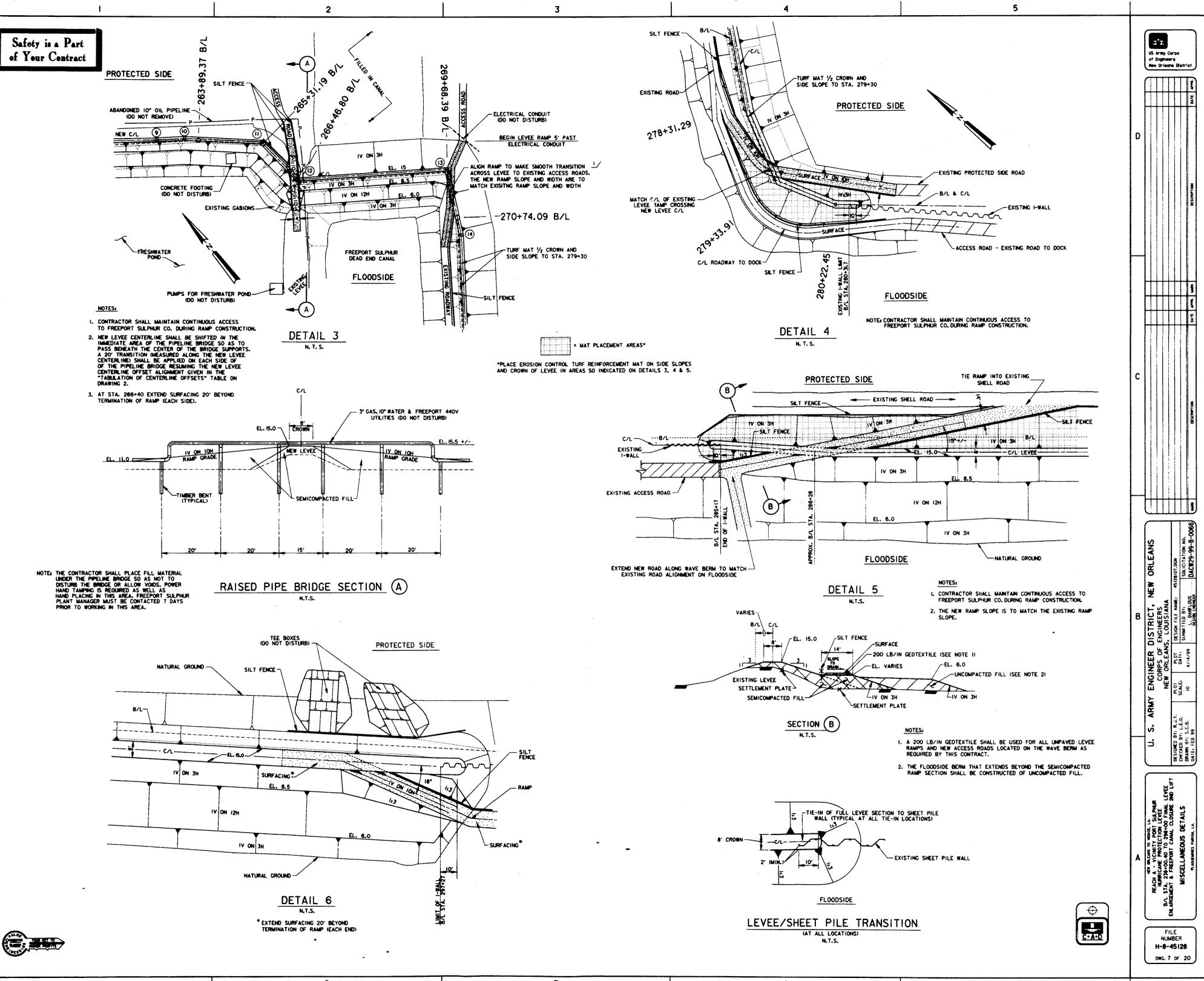


3

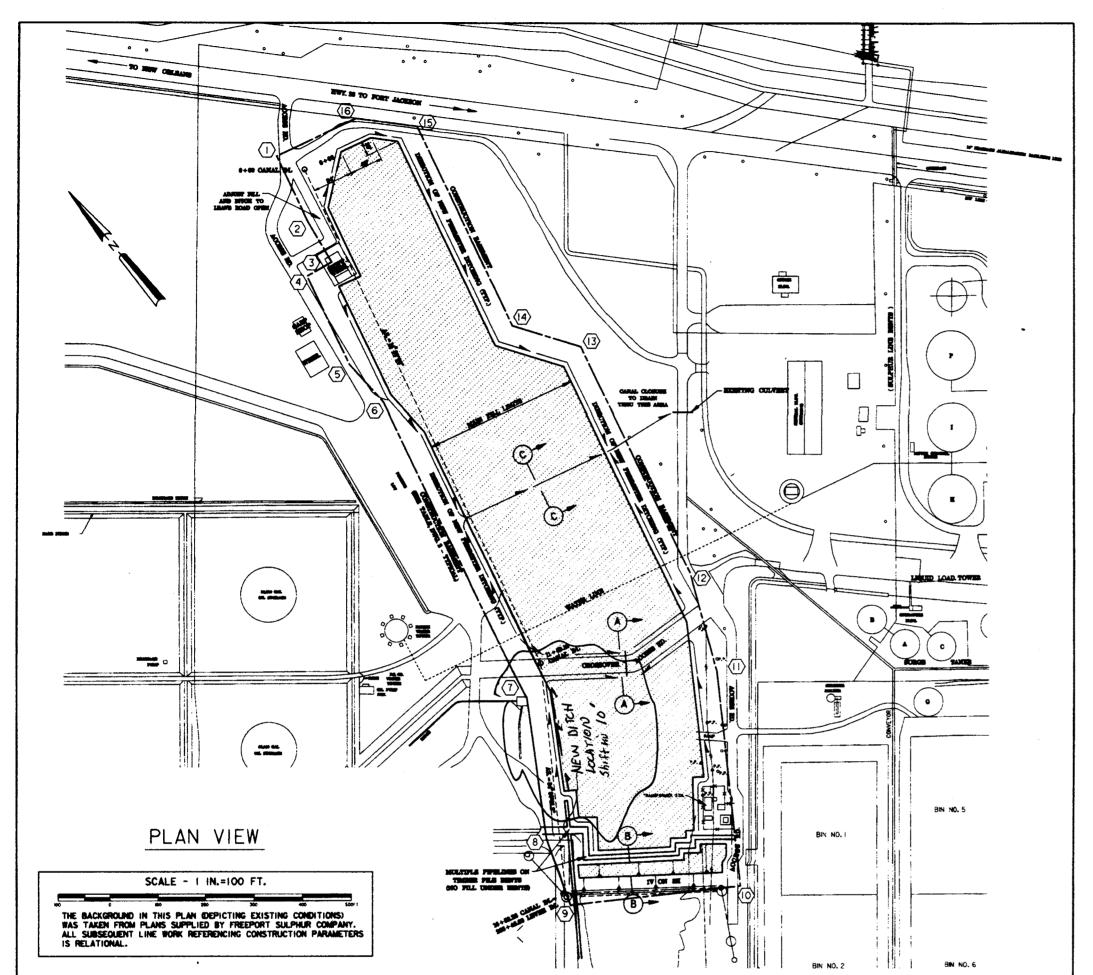
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Safety is a Part of Your Contract



2

"-" OFFSET | "+" OFFSET FERTILIZE AND SEED (TYPICAL) MAIN FILL LIMITS (VARIES) VARIES (SEE PLAN VIEW) UNCOMPACTED FILL? IV ON 3H _EL. 6.0 SILT FENCE -SILT FENCE (TYP.) IV ON 2H YV ON 2H EXISTING GROUND-PERIMETER DITCHING (TYP.)-SEE DITCH LAYOUT TABLE -- 2' (TYP.)

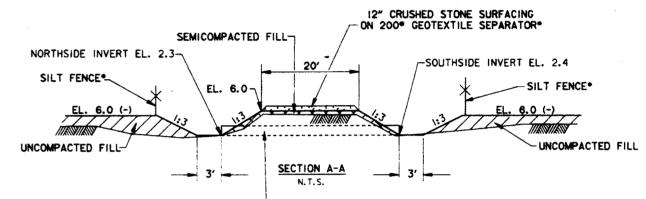
TYPICAL SECTION - SEE TABLE BELOW FOR SPECIFIC TEMPLATE AT ANY LOCATION

NOTE: SEE CANAL SECTIONS ON DWG.'S 18, 19 & 20. FOR TABULATION OF CANAL CLOSURE CONSTRUCTION EASEMENT, SEE DWG. 2.

1	ABLE OF FILL TEMPLATE	OFFSETS AND ELEVATION	S
CANAL B/L STA.	"C" OFFSET/ELEV.	"A" OFFSET/ELEV.	"B" OFFSET/ELEV.
0+00 TO 0+90	SEE PLAN VIEW	SEE PLAN VIEW	SEE PLAN VIEW
0+90 TO 2+50	-200/EL.5.5	-75/EL.6.0	-10/EL.4.0
2+50 TO 5+00	-200/EL.5.5	-75/EL.6.0	+40/EL.4.0
100' TRANSITION			
6+00 TO 11+00	-310/EL.4.0	-150/EL.6.0	+10/EL.4.0
100' TRANSITION FO	R CROSSOVER ACCESS ROA	ND .	
12+00 TO 15+00	-310/EL.4.0 J/	-150/EL.6.0	+10/EL.4.0 2
16+00	SEE	SECTION B-B	

1 TRUNCATE FILL TO ACCOMMODATE DITCH 10' FROM CHAIN LINK FENCE.

2/ TRUNCATE FILL TO ACCOMMODATE DITCH AT TOE OF EXISTING LEVEE OR 10' FROM EXISTING PILE BENTS.



NEW 24" CULVERT AT LOCATION -OF EXISTING CULVERT. EXISTING CULVERT TO BECOME
THE PROPERTY OF FREEPORT SULPHUR. *REQUIRED FOR ENTIRE LENGTH OF ROADWAY CONSTRUCTED WITHIN THE LIMITS OF THE CANAL FILL SECTION

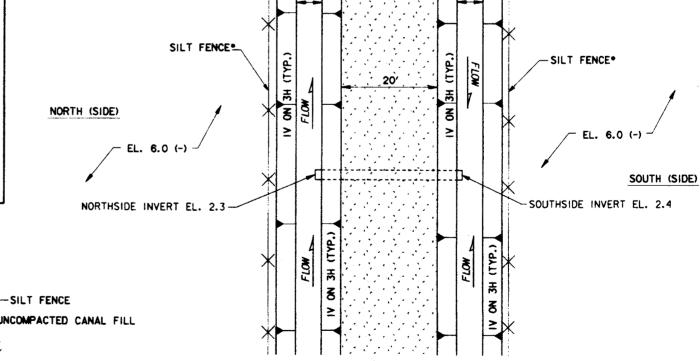


	TABLE OF DITCH C/L OFFSETS AND ELE	VATIONS
CANAL B/L STATION	DITCH C/L OFFSET/ELEV.	DITCH C/L OFFSET/ELEV.
1+00	-7/EL.3.0	-208/EL.3.0
2+00	-7/EL.2.9	-208/EL.2.9
3+00	+44/EL.2.8	-208/EL.2.8
4+00	+44/EL.2.7	-208/EL.2.7
5+00	+44/EL.2.6	208/EL.2.6
6+00	+15/EL.2.5	-315/EL.2.5
7+00	+15/EL.2.4	-315/EL.2.4
8+00	+15/EL.2.3	-315/EL.1.9
CONS	TRUCT CROSSOVER DITCH (W) IN	V. EL.2.3 - (E) INV. EL.1.9
9+00	+15/EL.2.4	-315/EL.2.0
10+00	+15/EL.2.5	-315/EL.2.1
11+00	+15/EL.2.4	-315/EL.2.2
CULVERT	UNDER CROSSOVER ACCESS ROAD (N) INV	/. EL.2.3 - (S) INV. EL.2.4
12+00	TOE OF EXIST. LEVEE/EL.2.5	-315/EL.2.5
13+00	TOE OF EXIST. LEVEE/EL.2.6	-315/EL.2.6
14+00	TOE OF EXIST. LEVEE/EL.2.7	-315/EL.2.7
15+00	10' OFF PILE BENT/NONE-NATURAL CONTOUR	10' OFF CHAIN LINK FENCE/EL.2.8
16+00	NO DITCH (SEE SECTION E	3-8)

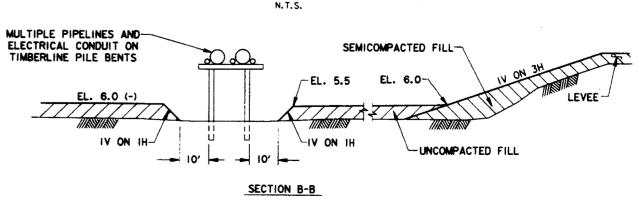
NOTE: THE DITCH LAYOUT TABLE HAS BEEN ADJUSTED TO ENCOMPASS THE DITCH DESIGN SECTION WHILE PROVIDING A 'STRAIGHT DITCH' ALIGNMENT.

EL. VARIES BETWEEN +6.0 AND +4.0 (TYP.)-UNCOMPACTED CANAL FILL -NATURAL GROUND SECTION C-C N.T.S. (SCENARIO WHEN DITCH IS ABOVE NATURAL GROUND) EXCAVATED MATERIAL TO BE USED AS PART OF UNCOMPACTED CANAL FILL SILT FENCE--EL. VARIES -SILT FENCE

--- EL. VARIES

EL. VARIES BETWEEN +6.0 AND +4.0 (TYP.)-- NATURAL GROUND

> SECTION C-C N.T.S. (SCENARIO WHEN DITCH IS BELOW NATURAL GROUND)



DETAIL AT RELOCATED CULVERT

THE CONTRACTOR SHALL PLACE FILL MATERIAL NO CLOSER THAN 10' TO THE PILE BENTS SO AS NOT TO DISTURB THE BENTS. A MINIMUM SAFE DISTANCE OF 10' FROM THE PILE BENTS AND OVERHEAD PIPING SHALL BE MAINTAINED AT ALL TIMES DURING THE FILL OPERATION. NO SILT FENCE REQUIRED FOR THIS AREA.

N.T.S.



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LEVEE 2ND L

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US Army Corps of Engineers New Orleans District

3

Safety is a Part of Your Contract

FT. JACKSON BORROW PIT BORINGS

3

BOR. 37-WB (88-51) WATER TABLE 1.8 FT. 06SEP88 -- -10 - -20

BOR. 38-WB (88-51) WATER TABLE 0.8 FT. 06SEP88 47 ,M,rt,0x (1) ,So,Wd,rt,0x ,VSo,O,0x,Wd ,VSo,Ox ,VSo

2

BOR. 39-WB (88-51) WATER TABLE 0.7 FT. 07SEP88 GROUND

M.rt, Wd, Ox dBr

68

VSo, Ox

VSo, Ox

VSo, Ox

VSo, Ox

VSo, Wd, Ox

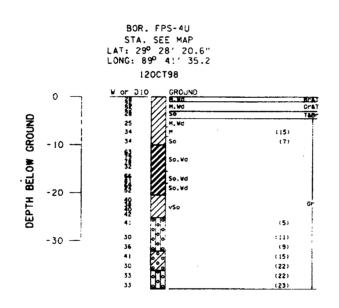
73

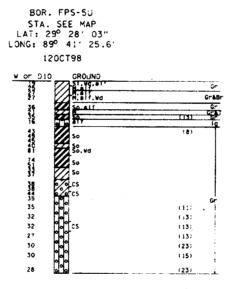
32 CS,0x

BOR. 46-WB WATER TABLE 2.5 FT. 09MAR89 48 73 120 131 116 118 30 35 31 -10 - | 5 -20 — B H1430

ئــ 30-

UNDISTURBED SOIL BORINGS





LEGEND

CH - Fat Clay
CL - Lean Clay
SC - Clayey Sand
SM - Slity Sand

SC - Clayey Sand

- - 10 -- -20 -30

BORING NOTES:

I. SEE DWG.3 FOR LOCATION OF UNDISTURBED BORINGS

2. SEE DWG. II FOR LOCATION OF BORROW BORINGS.

3. SEE DWG. 10 FOR SOIL BORING LEGEND.

4. BORROW BORINGS WERE TAKEN WITH A 4" DIAMETER POSTHOLE TYPE AUGER.

5. DEPTH OF WATER TABLE SHOWN ON THE BORINGS IS INDICATIVE OF THE LEVEL OF THE WATER ON THAT DAY ONLY AND IS SUBJECT TO VARIATION.





FILE NUMBER H-8-45128 DWG. 9 OF 20

MY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
NEW ORLEANS, 'LOUISIANA
PLOT PROT SCALE: SUBMITTED BY: SOLICITATION OF 144/99 ALMON OR STANDARD OR STANDA

US Army Corps of Engineers New Orleans District

2

COLOR			CONSISTENCY			MODIFICATIONS		
COLOR	SYMBOL		FOR COHESIVE SOILS		MODIFICATION	SYMBOL		
TAN	T	CONSISTENCY	COHESION IN LBS./SQ.FT. FROM	SYMBOL	Traces	Tr		
YELLOW	Y		UNCONFINED COMPRESSION TEST		Fine	F		
RED	R	VERY SOFT	< 250	vSo	Medium	М		
BLACK	BK	SOFT	250-500	So	Coarse	С		
GRAY	Gr	MEDIUM	500-1000	м	Concretions	cc		
LIGHT GRAY	IGr	STIFF	1000-2000	St	Rootlets	rt		
DARK GRAY	dGr	VERY STIFF	2000-4000	vSt	Lignite fragments	Ig		
BROWN	Br	HARD	> 4000	н	Shale fragments	sh		
LIGHT BROWN	IBr			,	Sandstone fragments	sds		
DARK BROWN	dBr	60			Shell fragments	sif		
BROWNISH-GRAY	brGr	×	Mary Mary		Organic matter	0		
GRAYISH-BROWN	gyBr	NOEX	in on the		Clay strata or lenses	CS		
GREENISH-GRAY	gnGr	PLASTICITY			Silt strata or lenses	SIS		
GRAYISH-GREEN	gyGn	STIG	Ct.		Sand strata or lenses	SS		
GREEN	Gn	¥ 20	10		Sandy	S		
BLUE	Bt		MH or OH		Gravelly	G		
BLUE-GREEN	BIGn	a ?	CL-ML /// ML on OL		Boulders	В		
WHITE	Wh	32	20 40 60 80 10	0	Slickensides	SL		
MOTTLED	Mot	1	L.LLIQUID LIMIT	•	Wood	₩d		
			C.C. CIGOID CIMIT		0xidized	0×		
		1	PLASTICITY CHART			·		

NOTES:	
FIGUR	ES TO LEFT OF BORING UNDER COLUMN " W OR DIO"
Are r	natural water contents in percent dry weight
When	underlined denotes D ₁₀ size in mm*
FIGUR	ES TO LEFT OF BORING UNDER COLUMNS " LL" AND " P
Are li	guid and plastic limits, respectively
SYMBO	OLS TO LEFT OF BORING
	Ground-water surface and date observed
©	Denotes location of consolidation test**
S	Denotes location of consolidated-drained direct shear test**
®	Denotes location of consolidated-undrained triaxial compression test
0	Denotes location of unconsolidated-undrained triaxial compression te
Φ	Denotes location of sample subjected to consolidation test and each the above three types of shear test**
FW	Denotes free water encountered in boring or sample
FIGUR	ES TO RIGHT OF BORING
Are val	ues of cohesion in lbs./sq.ft. from unconfined compression tests
standar	arenthesis are driving resistances in blows per foot determined with a rd split spoon sampler (1 $\frac{3}{8}$ % 1.D., 2" 0.D.) and a 140 lb. driving hammer 30" drop
	re underlined with a solid line denotes laboratory permeability in cent per second of undisturbed sample
	re underlined with a dashed line denotes laboratory permeability in central per second of sample remoulded to the estimated natural void ratio

**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:

soil is finer, and 90% coarser than D_{10} .

- I. 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.
- 4. Unless otherwise noted:
- a. Undisturbed borings, indicated by the letter "U", are taken with a 5" I.D. Piston Type Sampler.
- b. General type borings are taken with a 1 $7/8^{\prime\prime}$ i.D. Tube Sampler and/or a 1 $3/8^{\prime\prime}$ i.D. Spiit Spoon Sampler.

REACH A - VIC HURRICANE P BAL STA. 238-00.46 EMLARGEMENT & FREEPO

NEW ORLEANS

CORPS OF ENGINEERS
NEW ORLEANS, LOUISIAN,
PLOT PLOT DESIGN FILE NAM
SCALE: DATE: SUBMITTED BY
10 A/14/99 SUBMITTED BY
10 A/14/99 DATE: DAME! OF

ARMY

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US Army Corps

of Engineers New Orleans Distri

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FILE NUMBER H-8-45128 DWG. 11 OF 20



Safety is a Part I'I of Your Contract US Army Corps of Engineers New Orleans Distric SETTLEMENT GAGE SHOULD THE CONTRACTOR ELECT TO PLACE SETTLEMENT GAGES FOR MEASUREMENT SHOULD THE CONTRACTOR ELECT TO PLACE SETTLEMENT GAGES FOR MEASUREMENT OF FOUNDATION SETTLEMENT, INSTALLATION OF GAGES SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AND THE FOLLOWING: THE GAGES SHALL BE LOCATED AS SHOWN ON THE APPLICABLE DESIGN SECTION AND THE LONGITUDINAL DISTANCE BETWEEN GAGES SHALL NOT EXCEED 300 FEET. THE DISTANCE BETWEEN THE LIMITS OF WORK AND THE GAGES NEAREST THE LIMITS OF WORK SHALL NOT EXCEED 150 FEET. IF GAGES ARE SPACED FURTHER APART THAN 300 FT., OR FURTHER THAN 150 FT. FROM THE LIMITS OF WORK, MEASUREMENT AND PAYMENT FOR SETTLEMENT WILL BE LIMITED TO 150 FEET EACH SIDE OF EACH GAGE CRUSHED STONE SURFACING-NOTES: I. A WASH-DOWN PAD IS TO BE LOCATED AT POINTS OF VEHICULAR EGRESS ONTO HWY. 23
TO REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO THE HIGHWAY. AN OPERATIONAL MECHANICAL
SWEEPER SHALL BE ON STANDBY AT THE HIGHWAY ENTRANCE SITE DURING ALL HAUL OPERATION
TIMES TO ASSIST IN KEEPING THE HIGHWAYS CLEAN. WHEN THE MECHANICAL SWEEPER FAILS
TO REMOVE CLUMPS OF MATERIAL, THE CLUMPS SHALL BE PHYSICALLY REMOVED WITH HAND TOOLS. WASH-DOWN PAD-THE SETTLEMENT MEASUREMENT RANGE FOR EACH SETTLEMENT GAGE SHALL BE FOR A DISTANCE OF 150 FEET IN EACH DIRECTION FROM EACH SETTLEMENT GAGE, OR TO THE LIMIT OF WORK, AS APPLICABLE, MEASURED ALONG THE CENTERLINE OF THE LEVEE, EXCEPT WHERE SETTLEMENT GAGES ARE PLACED AT LESS THAN 300 FEET INTERVALS, IN WHICH CASE, THE 2. THE CONTRACTOR WILL BE REQUIRED TO KEEP THE WASH-DOWN PAD AREA FREE OF MUD. 3. A 6' (6 INCH) MINIMUM CRUSHED STONE SURFACING SHALL BE MAINTAINED ON THE HAUL ROAD LANE BETWEEN THE WASH-DOWN PAD LANE AND THE HWY, AND THE FULL WIDTH OF THE HAUL ROAD (30' SETTLEMENT MEASUREMENT RANGE SHALL BE TO A POINT 1/2 THE DISTANCE BETWEEN SETTLEMENT GAGES. MINIMUM) AND 30' RADIUS AREAS WITHIN 30' OF THE EDGE OF THE HIGHWAY. TO LEVEE CONSTRUCTION OR BORROW PIT SETTLEMENT GAGE PLATE I/8"(IO GAGE) PLATE 2'× 2' MINIMUM 45° OR 30'RADIUS-WASH-DOWN PAD CONSTRUCTION HIGHWAY ENTRANCE NEW HWY. 23 AT FT. JACKSON PITS-(4 LANE) -WASH DOWN PAD -WASH-DOWN PAD TRAFFIC PLAN NOT TO SCALE GENERAL NOTES: I. ALL SIGNS ARE REFERENCED TO THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. 2. FLAGMAN SHALL DIRECT TRAFFIC AT ALL TIMES DURING HAUL OPERATIONS. FLAGMAN SIGNS SHALL BE POSTED WITH THE SPEED LIMIT SIGNS. THE FLAG SHALL BE COVERED OR REMOVED WHEN FLAGMEN ARE NOT DIRECTING TRAFFIC. 3. ALL WASH DOWN PADS, CULVERTS AND SILT FENCING THAT MAY HAVE BEEN PLACED IN THE AREA SHALL BE REMOVED UPON COMPLETION OF HAUL OPERATIONS. THE AREA IS TO BE DRESSED SO AS NOT TO POND WATER AND ALL DISTURBED UNSURFACED AREAS SHALL BE SEEDED AND FERTILIZED. 6'-12'----SIGN LEGEND EDGE OF TRAFFIC LANE SPEED ZONE AHEAD R2-5C 24" × 30" SPEED LIMIT FLAGMEN EDGE OF SHOULDER 45 NOTES: I. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY. 2. FLASHING WARNING LIGHTS AND/OR FLAGS MAY BE USED TO CALL ATTENTION TO THE EARLY WARNING SIGNS. FILE NUMBER H-8-45128 DWG.12 OF 20

