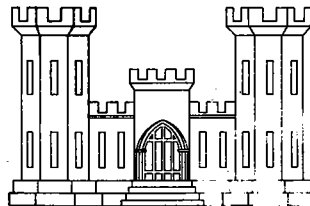


Library

FLOOD CONTROL
MISSISSIPPI RIVER AND TRIBUTARIES
MISSISSIPPI RIVER LEVEES

ITEM M-10.4-R
LOWER VENICE LEVEE
ENLARGEMENT AND SETBACK

PLAQUEMINES PARISH, LOUISIANA
RELOCATION OF FACILITIES
DESIGN MEMORANDUM NO. 7



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
NEW ORLEANS, LOUISIANA

August 1971

+ DYNIX 271983

Serial No. 14

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1971

LMVED-TD (NOD 27 Aug 72) 5th Ind
SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi
River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and
Setback, Plaquemines Parish, La., Relocation of Facilities,
Design Memorandum No. 7

DA, Mississippi River Commission, Corps of Engineers, Vicksburg, Miss.
39180 13 Sep 72

TO: District Engineer, New Orleans, ATTN: LMNED-DG

The actions described in the 4th Ind are satisfactory.

FOR THE PRESIDENT:

wd all incl

Robert J Kaufman
for HOMER B. WILLIS
Chief, Engineering Division

LMNED-DG (27 Aug 71) 4th Ind

SUBJECT: Flood Control, Mississippi River and Tributaries,
Mississippi River Levees, Item M-10.4-R, Lower Venice
Levee Enlargement and Setback, Plaquemines Parish, Louisiana
Relocation of Facilities, Design Memorandum No. 7

DA, New Orleans District, Corps of Engineers, P.O. Box 60267,
New Orleans, Louisiana 70160 28 August 1972

TO: President, Mississippi River Commission, ATTN: LMVED-TD

1. The paragraph numbers referenced below refer to those in the
3d indorsement of this chain of correspondence. Proposed disposition of
the 3d indorsement comments is as follows:

a. Paragraph a. Concur. In anticipation of approximately 2 feet of
settlement in ramp 1, the roadway atop ramp 1 will be constructed of
bituminous materials. Plates 6 and 7 have been revised as shown in
inclosures 23 and 24, respectively.

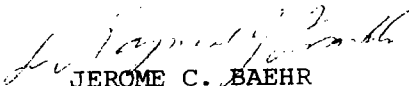
b. Paragraph b. Concur. Plate 12 (inclosure 25) has been revised
to show the riverside berms as MR&T berms.

2. Subsequent to the 2d indorsement, the stations for the retaining wall,
as shown on Plate 7A, were found to be in error and have been corrected
(see inclosure 26).

3. Approval of the disposition of the 3d indorsement comments in
paragraph 1 above and the correction noted in paragraph 2 above is
recommended.

FOR THE DISTRICT ENGINEER:

26 Incl
Added 4 Incl (11 copies)
23. Revised Plate 6
24. Revised Plate 7
25. Revised Plate 12
26. Revised Plate 7A


JEROME C. BAEHR
Chief, Engineering Division

LMVED-TD (NOD 27 Aug 71) 3d Ind
SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi
River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and
Setback, Plaquemines Parish, La., Relocation of Facilities,
Design Memorandum No. 7

DA, Mississippi River Commission, Corps of Engineers, Vicksburg,
Miss. 39180 9 Aug 72

TO: District Engineer, New Orleans, ATTN: LMNED-DG

The information furnished and actions proposed in the 2d indorsement are
satisfactory subject to the following comments:

a. Para 1c. The difference between overbuild (Para 1c) and design
(Section FF, Plate 7) elevations indicate approximately 2 ft of settlement
is anticipated at ramp 1. If this is the case, flexible pavement should
also be used for the roadway surfacing for ramp 1.

b. Para m. The berms referred to as "hurricane berms" are actually
somewhat larger stability berms required to construct the levee to MR&T grade
with a 2' to 2.5' overbuild to compensate for anticipated settlement.

FOR THE PRESIDENT:

wd all Incl

for Robert J Kaufman
HOMER B. WILLIS
Chief, Engineering Division

LMNED-DG (27 Aug 71) 2d Ind
SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi
River Levees, Item M-10.4-R, Lower Venice Levee Enlargement
and Setback, Plaquemines Parish, Louisiana, Relocation of
Facilities, Design Memorandum No. 7

DA, New Orleans District, Corps of Engineers, P. O. Box 60267,
New Orleans, Louisiana 70160 27 July 1972

TO: President, Mississippi River Commission, ATTN: LMVED-TD

1. The paragraph numbers referenced below refer to those in the 1st indorsement of this chain of correspondence. Proposed disposition of the 1st indorsement comments is as follows:

a. Paragraph 2. The comments contained in paragraph 2 were resolved by discussions with representatives of Mississippi River Commission during a 16 February 1972 meeting at this District and by LMNED-DG radiogram (see inclosure 2) dated 6 March 1972. These actions resulted in establishing final alignments for all the road relocations between Fort Jackson and Venice which were then approved by LMVED-TD-5 radiogram (see inclosure 3) dated 10 March 1972. The approved alignments in the Lower Venice Reach require the following modifications to the Design Memorandum:

(1) Paragraph 8a(3)(b) should be rewritten as follows: "'Back Levee' Phase. The 'back levee' phase of the relocation of Highway 23 will provide for a double lane road extending southwest, generally at existing ground elevations, from Highway 23 to a point opposite main line levee station 3791+01. At this point, the relocated roadway will ramp up to the existing back levee, cresting at elevation 17.0 atop the back levee and opposite main line levee station 3796+31. From this point, the road will proceed southeast atop the existing back levee, taking maximum advantage of the favorable foundation conditions afforded by the back levee, and will ramp down to a point of intersection with the 'Tideland Road' phase at elevation 6.6, main line levee station 3797+78.17. The ramp up to the back levee and down to Tideland Road will be constructed as an item under the proposed levee contract. Access to the existing Tideland Road will be maintained during construction of the levee and the 'back levee' phase of the relocated road by leaving a gap in the proposed levee at Highway 23 and by construction of temporary shell bypasses as required."

(2) Paragraph 8a(3)(c) should be rewritten as follows: "The 'Tideland Road' phase of the relocation of Highway 23 will provide for a double lane road extending northeast from approximate main line levee base line station 3801+30 generally parallel and adjacent to the floodside of the proposed levee to the area of the existing three-way intersection of Highway 23,

LMNED-DG (27 Aug 71) 2d Ind 27 July 1971
SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi
River Levees, Item M-10.4-R, Lower Venice Levee Enlargement
and Setback, Plaquemines Parish, Louisiana, Relocation of
Facilities, Design Memorandum No. 7

Parish Road 325 and Tideland Road, levee station 3781+78. In this area, the 'Tideland Road' phase will intersect the 'Riverside' phase to complete the relocation of Highway 23. The approximately 352 linear foot extension of the 'Tideland Road' phase from 3797+78.17 to 3801+30 is required as transition from the 24 foot wide roadway proposed into the 20 foot wide roadway existing. Vehicle access during construction will be maintained by construction of temporary shell roads as required."

(3) Table 1 has been revised as indicated in inclosure 4.

(4) Appendix IV has been revised as indicated in inclosure 5.

(5) Plates 2, 4, 5, 8, 9, 10, and 11 have been revised as shown in inclosures 6, 7, 8, 9, 10, 11, and 12 respectively to indicate the new levee right-of-way limits and the revised road alignment.

(6) Plates 6 and 7 have been revised to reflect the revised right-of-way and road cross sections (inclosure 13 and 14, respectively). Plate 7A has been added to show the revised cross section of ramp 2 (inclosure 15).

b. Paragraph 3a. Ramp No 1 and Ramp No 2 are designed to elevation 16.0 and elevation 17.0 respectively, as overbuild to allow for anticipated settlement; therefore, local interest will not be required to participate in the construction of the ramps.

c. Paragraph 3b. Concur. The embankments and ramps to be used as the highway embankment will be constructed by controlled fill method and because of the inferior foundation condition afforded by the back levee as opposed to the main line levee, the roadway atop Ramp 2 will be constructed of bituminous materials. Plates 6 and 7 (inclosures 13 and 14 respectively) have been changed to include these revisions and Plate 7A (inclosure 15) has been added to show the cross section (section G-G) for the relocated roadway atop Ramp 2.

d. Paragraph 4. The select fill material (item 4) provided for in the cost estimate (Appendix IV) for Highway 23 was to be placed as shown on Plate 7 in sections E-E and F-F; mucking of subgrade was not intended. A new Appendix IV is provided as inclosure 5 and reflects the changes necessitated by the selection of the Modified Proposed Plan (Including Louisiana 23) as the final alignment. The select fill material item has

LMNED-DG (27 Aug 71) 2d Ind 27 July 1972
SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi
River Levees, Item M-10.4-R, Lower Venice Levee Enlargement
and Setback, Plaquemines Parish, Louisiana, Relocation of
Facilities, Design Memorandum No. 7

been deleted in conforming to the latest anticipated bid item schedule for the road construction contract; fill is now provided for by item 5: Embankment. Sections E-E and F-F have been changed accordingly. It is noted that fill will be required in excess of that shown on Plate 7 in areas where pockets of no drainage would otherwise develop between the levee and the proposed roadway; this fill is also classified as item 5: Embankment.

e. Paragraph 5a. Concur. Reference Attorney's Report, Appendix I, Exhibit A, paragraph a and b and Supplement to Attorney's Report, Appendix I, Exhibit B. The Attorney's Report and Supplement have determined that the roads are governmentally owned and the road authorities have a compensable interest throughout the areas to be affected; this is to include roadway and roadway right-of-way.

f. Paragraph 5b. As pertains to Louisiana Power and Light Company, South Central Bell Telephone Company and Delta Gas Company, we concur; commitments have been made to the affected owners. As pertains to Plaquemines Parish water line, reimbursement for the relocation of the subject line should include related rights-of-way cost inasmuch as this was the procedure followed for portions of this same system in the Childress and Commander reaches and inasmuch as the Attorney's Opinion (Appendix I, Exhibit A) finds that Plaquemines Parish has a compensable interest in the water line and its rights-of-way. Attorney's Reports referenced in Exhibit A are provided as inclosures 16 and 17.

g. Paragraph 5c. Concur. Reference paragraph 6c of the Design Memorandum and Attorney's Report (Appendix I, Exhibit A) paragraph g. Ellzey Marine Supplies, Inc. is not classified as a public utility and the relocation or adjustment of the facility will be handled as part of the rights-of-way acquisition cost of the project.

h. Paragraph 6. Concur. A cost for temporary shell roads has been incorporated into the revised detailed cost estimate for roads (see item 40, inclosure 5).

i. Paragraph 7. Concur. Profiles for the relocated roads are forwarded as Plates 13 and 14 (inclosures 18 and 19, respectively).

j. Paragraph 8. Concur. Additional information on the storm drain system is forwarded as Plate 15 (inclosure 20).

LMNED-DG (27 Aug 71) 2d Ind 27 July 1972

SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and Setback, Plaquemines Parish, Louisiana, Relocation of Facilities, Design Memorandum No. 7

k. Paragraph 9. A stability analysis of the retaining wall on section F-F, Plate 7 has been made and the wall, with a designed cross section as shown on Plate 7A (inclosure 15), has been determined to be stable. Elimination of the retaining wall has been determined to be not feasible due to the necessarily close proximity of the road to the proposed levee.

l. Paragraph 10a. Concur. Plate 12 (inclosure 21) has been revised to indicate the stability control line.

m. Paragraph 10b. Concur. Plate 12 (inclosure 21) has been revised to indicate which berms are designed for MR&T and which are designed for hurricane protection. It is noted that hurricane berms will be provided under the proposed levee contract since the floodside levee slope will be protected by riprap (not shown on Plate 12) and it would be necessary to remove this riprap to accommodate the hurricane berms if constructed at a later date. Local interest will not participate in the cost of constructing these berms.

n. Paragraph 10c. Concur. All abandoned facilities in the new levee right-of-way will be removed by the levee contractor.

o. Paragraph 11. Concur. A revised paragraph 15 is provided in inclosure 22. The comparison reflects the revisions to Table 1

p. Paragraph 12. The following changes are required:

(1) Pages 2 and 3. Change reference to "Appendix I, Exhibit A" in paragraphs 4a(1), 4a(2), and 4a(3) to read "Appendix II, Exhibit A."

(2) Page 13. Station 3763+00 is the point where the ramp over the levee begins. Station 3771+57 is the approximate station where the ramp will cross the levee centerline at elevation 16 feet.

(3) Page 18. The approximate station of the junction of the 8-inch diameter and 12-inch diameter water main should be changed to read station "3782+00."

(4) Plate 6. First underlying base course beneath the 9-inch P C C Pavement should be indicated as 6-inch Base Course (inclosure 13).

LMNED-DG (27 Aug 71) 2d Ind

SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and Setback, Plaquemines Parish, Louisiana, Relocation of Facilities, Design Memorandum No. 7

2. Paragraph 16a has been rewritten due to the revision in the estimated cost for road relocation. The paragraph should read:

"a. Roads. The current working estimate includes \$43,800 in construction funds for the relocation of Parish Road 325 and \$839,200 in maintenance funds for the relocation of Louisiana State Highway 23. The increase in the estimated cost is based on the revised section for Parish Road #325 and an expanded detailed cost estimate (inclusion 5) which has been prepared subsequent to receipt of bid schedules since the design memorandum was submitted reflecting actual bids for road work in the Commander and Childress reaches."

3. Approval of the disposition of the 1st indorsement comments in paragraph 1 above and the modifications to design memorandum in paragraph 2 above is recommended.

FOR THE DISTRICT ENGINEER:


JEROME C. BAEHR
Chief, Engineering Division

22 Incl

Added 21 Incl (11 copies)

2. LMNED-DG Radiogram dtd 6 Mar 72
3. LMVED-TD-5 Radiogram dtd 10 Mar 72
4. Revised Table 1
5. Revised Appendix IV
6. Revised Plate 2
7. Revised Plate 4
8. Revised Plate 5
9. Revised Plate 8
10. Revised Plate 9
11. Revised Plate 10
12. Revised Plate 11
13. Revised Plate 6
14. Revised Plate 7
15. Plate 7A
16. Attorney's Report - Commander Levee Enlargement
17. Revised Attorney's Report - Childress Levee Enlargement
18. Plate 13
19. Plate 14
20. Plate 15
21. Revised Plate 12
22. Rewrite Paragraph 15

LMVED-TD (NOD 27 Aug 71) 1st Ind

SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and Setback, Plaquemines Parish, La., Relocation of Facilities, Design Memorandum No. 7

DA, Mississippi River Commission, Corps of Engineers, Vicksburg, Miss.
39180 9 Dec 71

TO: District Engineer, New Orleans, ATTN: LMNED-DG

1. The subject design memorandum is returned for revision and resubmission in accordance with the following comments.

2. General Plan for Road Relocations. a. Parish Road No. 325. Para 7a states that relocation of this road will be accomplished to a design standard of C System, Class 6. The entire length of reconstructed road should have a 20-ft-wide pavement, as shown on Section A-A on Plate 6, in lieu of the proposed 24-ft-wide concrete pavement.

b. Louisiana State Highway 23. (1) The "Riverside" phase of this relocation should be performed as a relocation of Parish Road No. 325 as discussed in para 2a above.

(2) The segment of Parish Road No. 325 running northeast from existing Highway 23 to the levee at Station 3751+80 should be eliminated.

(3) The "Back Levee" phase should be deleted and Highway 23 ramped over the new levee to intersect Tideland Road as discussed in para 1a, Appendix V. The ramp should have the same number of lanes as the existing connection.

(4) Tideland Road. Consideration should be given to moving the levee alignment landward, where required, to prevent encroaching on the existing road. If this proves to be feasible, the Tideland Road phase could be deleted. The drawings indicate that very little additional right-of-way would be required.

3. Para 8a(3)(a), Page 13. a. It is not apparent in the DM why the elevation of the ramp is 16 ft when the typical levee sections on Plate 12 shows the maximum levee crown to be elevation 12.7 ft. We understand the 16-ft elevation was used to accommodate the additional levee enlargement and raise in grade which is required for hurricane protection. The reason for using this high crossover elevation should be discussed, including whether local interests will be required to share in the cost of these higher ramps, as required in hurricane protection project.

LMVED-TD (NOD 27 Aug 71) 1st Ind 9 Dec 71

SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and Setback, Plaquemines Parish, La., Relocation of Facilities, Design Memorandum No. 7

b. The embankments and ramps to be used as the highway embankment should be constructed using controlled fill method of construction; or else consideration should be given to constructing the roadway of bituminous materials which would conform to differential movements more readily than concrete pavement.

4. Para 8a(3)(b). The cost estimate (Appendix IV) for Highway 23 shows an item for select fill material. It is not apparent where this material is to be used as Section C-C on Plate 6 does not show a select fill material to be used beneath this roadway. It was learned from personnel in NOD that prior to constructing some of the roadways in this area, it is necessary to muck out 2 to 3 ft of the subgrade and backfill with sand. If this is the intended use for the select fill material, the estimated amount, which is only slightly more than the amount estimated for the 6-in. base course, would be inadequate and should be checked. The roadway design for this relocation should be reexamined to determine if any foundation excavation and backfilling will be necessary and this information presented in the DM.

5. In view of the above, the Attorney's Report should be modified as necessary. In preparation of the Attorney's Report, consideration should be given to the following:

a. Roads and Highways. Parish Road 325, Tideland Road, and Louisiana Highway 23 are Governmentally-owned and will be relocated at Federal expense except costs of any new rights-of-way for relocation, where it has been determined that the road authority does not have a compensable interest.

b. Public Utility Lines. Louisiana Power & Light Company, South Central Bell, and the Delta Gas Lines will be relocated at Federal expense if commitments have been previously made to the owners by Plaquemines Parish that reimbursement of costs would be made by the United States, but no new right-of-way will be furnished at Federal expense, representing that portion of the facilities located on existing levee rights-of-way. Plaquemines Parish water line is a Governmentally-owned facility and will be relocated at Federal expense, but no new right-of-way should be furnished at Federal expense for that portion of the water line which occupies existing levee right-of-way.

c. The Ellzey Marine Supply fuel storage tanks and pipelines should not be classified as a public utility, and the rearrangement of these facilities should be handled as a right-of-way matter.

LMVED-TD (NOD 27 Aug 71) 1st Ind 9 Dec 71

SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and Setback, Plaquemines Parish, La., Relocation of Facilities, Design Memorandum No. 7

6. Paras 8a(3)(a), (b), and (c), Pages 13 and 14. These paragraphs refer to constructing temporary shell roads. Para 14, page 24, states that temporary access roads will be reimbursed out of the contingency estimate for the roads. If the cost will be a significant amount, it should be included in the estimate rather than considered a contingency.
7. Plate 2. The profiles of the proposed relocated highways should be shown.
8. Plate 6, Typical Section C-C. More detail should be presented for the storm drain system shown on the typical section B-B.
9. Plate 7. The stability of the retaining wall on Section F-F should be checked. Consider eliminating the wall by revising the ramp details to improve levee stability and reduce costs.
10. Plate 12. a. The dashed line on the riverside of the typical levee setback section for Station 3778+08.25 to Station 3706+05.5 should be identified as the stability control line for the West Bank Hurricane Protection Grade.

b. A note should be added to this plate indicating which berms were designed for MR&T grade and which berms were designed for hurricane protection grade.

c. This plate indicates that some pipes within the levee foundation will be abandoned. Pipes which cross under the levee, if any, should be removed rather than abandoned.
11. Para 15, Page 33. This comparison should be between the subject DM and the latest approved Project Cost Estimate (PB-3).
12. Refer to minor comments marked in red on pages 2, 3, 13, and 18, and Plate 6.

FOR THE PRESIDENT:



A. J. DAVIS
Chief, Engineering Division

1 Incl (10 cy)
wd ~~X~~ cy
2



DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P. O. BOX 60267
NEW ORLEANS, LOUISIANA 70160

LMNED-DG

27 August 1971

SUBJECT: Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and Setback, Plaquemines Parish, La., Relocation of Facilities, Design Memorandum No. 7

President
Mississippi River Commission
ATTN: LMVED-TD

1. The subject design memorandum is submitted herewith for review in accordance with the provisions of ER 1110-2-1150 dated 19 June 1970.
2. Approval of the subject design memorandum is recommended.

1 Incl
DM No. 7 (11 cys)

A handwritten signature in cursive script, reading "Richard L. Hunt", is positioned above the typed name.

RICHARD L. HUNT
Colonel, CE
District Engineer

RADIOGRAM

6 March 1972

PRESIDENT, MRC
ATTN: LMVED
VICKSBURG, MISS

LMVED-DG

REFERENCE IS MADE TO THE FOLLOWING:

A. MEETING HELD AT NOD 16 FEB 72 ATTENDED BY REPRESENTATIVES OF LMVED,
SUBJECT: RELOCATION OF PARISH RD #325 BETWEEN FT. JACKSON-BOOTHVILLE AND
LOWER VENICE AND THE RELOCATION OF LA. STATE ROUTE 23 AT LOWER VENICE.

B. TELEPHONE CONVERSATION OF 28 FEB 72 BETWEEN MR. HART OF LMVED-DL AND
MR. MISKELLEY OF LMVED-TD SUBJECT: RELOCATION OF LA. 23 AT LOWER VENICE.

C. TELEPHONE CONVERSATION OF 29 FEB 72 BETWEEN MR. MISKELLY AND MR. HART
SUBJECT: RELOCATION LA. 23 AT LOWER VENICE.

D. LTR DATED 6 DEC 71 TO MOD FROM MR. C. O. PEREZ, PRESIDENT, PLAQ.
PARISH COMMISSION COUNCIL, SUBJECT: AN OFFER TO QUIT CLAIM TITLE TO PARISH RD
325 BELOW FT. JACKSON AND LA 23 AT THE JUMP IN RETURN FOR CONCURRENCE IN THE
PROPOSED ALIGNMENT FOR THE RELOCATION OF SAME.

2. AS PRESENTED DURING THE REFERENCED MEETING, THE PLAQUEMINES PARISH COMMISSION
COUNCIL ENJOYS A COMPENSABLE INTEREST IN 45,208 LINEAR FEET OF PARISH ROAD #325.
ALL OF THIS ROAD WILL BE DISLOCATED BY THE ENLARGEMENT OF THE MAIN LINE MISSISSIPPI
RIVER LEVEE AND THE FEDERAL GOVERNMENT IS OBLIGATED TO RELOCATE IT. A STRAIGHT
FORWARD RELOCATION OF RD # 325 WOULD BE ALIGNED PARALLEL AND ADJACENT TO THE NEW
LEVEE R/W FROM FT. JACKSON TO THE JUMP (THE INTERSECTION OF LA. 23 AND TIDELAND

LMV Form 7-R
1 Aug 60 (Replaces edition of 1 Mar 59 which may be used)

Incl 2

R A D I O G R A M

ROAD) AT LOWER VENICE WITH A SINGLE LATERAL ROAD OUT TO LA. STATE ROUTE 23 AT FT. JACKSON (THE THEORETICAL PLAN PRESENTED DURING THE REFERENCED FEB MEETING). IN ADDITION, THE LA. DEPARTMENT OF HIGHWAYS ENJOYS A COMPENSABLE INTEREST IN LA. STATE ROUTE 23 AT ITS INTERSECTION WITH TIDELAND ROAD AND PARISH ROAD #325 AT THE JUMP. THIS PORTION OF LA 23 WILL BE DISLOCATED BY THE ENLARGEMENT OF THE MAIN LINE MISSISSIPPI RIVER LEVEE. A STRAIGHTFORWARD RELOCATION OF LA 23 WOULD INVOLVE RAMPING THE FOUR LANES OF LA 23 OVER THE PROPOSED LEVEE AND DOWN TO THE PREVIOUS INTERSECTION WITH RD # 325 AND TIDELAND ROAD. LOCAL INTERESTS HAVE DEFINITELY STATED THAT THEY DO NOT WANT AN INDEPENDENT RELOCATION OF LA. 23. LOCAL INTERESTS PREFER TO RELOCATE RD #325 BY CONSTRUCTING THREE LOOPS CONNECTING TO LA 23 AND TO INCORPORATE THE RELOCATION OF LA. 23 INTO THE THIRD LOOP (THE PROPOSED PLAN PRESENTED DURING THE FEB MEETING).

3. AT THE SUGGESTION OF LMVED, NOD ATTEMPTED TO DEVELOP A PLAN OF RELOCATION OF LA 23 IN LOWER VENICE WHICH WOULD BE INDEPENDENT OF THE RELOCATION OF RD #325. THIS PLAN IN SIMPLE TERMS INVOLVED RAMPING THE FOUR LANES OF LA. 23 OVER THE MAIN LINE LEVEE TO INTERSECT A RAMPED TIDELAND RD AND A RAMPED RD # 325 AT THE JUMP. A STABILITY ANALYSIS OF THE CONFIGURATION DETERMINED THAT AT THE INTERSECTION OF THE LA 23 RAMP AND TIDELAND RD RAMP THE PROPOSED LEVEE WOULD HAVE TO BE SETBACK AN ADDITIONAL 25 FEET ^{OVER THAT IN THE ORIGINAL PLAN.} AN ESTIMATE WAS PREPARED FOR THIS ALIGNMENT (USING 5% SLOPE ON THE RAMPS) AND WAS DETERMINED TO COST APPROXIMATELY \$276,000 MORE THAN THE ALIGNMENT IN THE ORIGINALLY PROPOSED PLAN. THIS INCREASE IS DUE TO RELATED RELOCATIONS COSTS ON EITHER SIDE OF LA 23 (APPROXIMATELY \$370,000) NECESSITATED BY THE LA 23 RAMP. A REDUCTION IN THE % GRADE ON THIS RAMP WAS CHECKED WITH THE

R A D I O G R A M

LA. DEPARTMENT OF HIGHWAYS AND WAS REJECTED BY THAT AGENCY. THIS REJECTION WILL BE CONFIRMED BY A LETTER FROM THE DEPT OF HWYS AND WILL BE INCORPORATED INTO THE 2D IND TO THE LOWER VENICE DESIGN MEMORANDUM.

4. THE INFORMATION IN PARA 3 WAS RELAYED TO LMVED-TP BY THE TELEPHONE CONTACT REFERENCED IN 1B. SUBSEQUENTLY, MR. HART WAS ADVISED BY MR. MISKELLEY (REFERENCE 1C) THAT NOD SHOULD PROCEED WITH PLANNING FOR THE RELOCATION OF LA 23 AS ORIGINALLY PRESENTED IN THE LOWER VENICE RELOCATIONS DESIGN MEMORANDUM WITH THE EXCEPTION THAT THE NEW ROAD FROM THE EXISTING LA 23 TO THE BACK LEVEE AND THENCE TO TIDELAND RD SHOULD BE ALIGNED ATOP THE BACK LEVEE TO THE MAXIMUM EXTENT FEASIBLE (THE MODIFICATION SUGGESTED BY MR. FRANK WEAVER OF LMVED). THIS MODIFIED PROPOSED PLAN HAS BEEN DISCUSSED WITH LOCAL INTERESTS AND THEY HAVE AGREED TO THE ALIGNMENTS INVOLVED.

5. COMPARATIVE ESTIMATES OF COST FOR THE THEORETICAL PLAN (W/O THE RELOCATION OF LA 23), THE THEORETICAL PLAN (INCL THE RELOC OF LA 23), AND THE MODIFIED PROPOSED PLAN (INCL LA 23) ARE AS FOLLOWS:

I THEORETICAL PLAN (W/O LA 23).....	\$3,200,000
II THEORETICAL PLAN (MODIFIED TO INCL LA 23).....	\$3,770,000
III MODIFIED PROPOSED PLAN (INCL LA 23).....	\$2,525,000

BACK UP DATA

I THEORETICAL PLAN (w/o LA 23)

A. RD #325 ADJACENT TO LEVEE

44038 LF @ 36.00.....1,587,000

LAFERAL AT FT. JACKSON

1170 LF @ 54.00.....63,000

R A D I O G R A M

	SUBTOTAL	1,650,000
	CONTING (25%+)	<u>390,000</u>
		\$2,040,000
B. RIGHT-OF-WAY		
	2,700,780 SF @ 0.16.....	430,000
	CONTING(100%).....	<u>430,000</u>
		\$860,000
C. MODIFY PLAQ PARISH WATER RESERVOIR		
	LUMP SUM.....	<u>300,000</u>
TOTAL		\$3,200,000

II. THEORETICAL PLAN (MODIFIED TO INCL LA 23)

A. PARISH RD 325:		
PARISH RD 325 ADJACENT TO MAIN		
LINE LEVEE	42,400 LF@36.00.....	1,526,000
LATERAL RD	1,170 LF@54.00.....	63,000
	CONTING(25%)+.....	397,000
R/W	2,599,780SF@0-16.....	416,000
	CONTING (100%).....	416,000
B.	MODIFY PLAQ PARISH WATER RESERVOIR	LS.....300,000
C.	LA HWY 23 (INCORPORATING LMV SUGGESTIONS - REF LA & 1B above)	
	PORTION FROM EXIST LA 23 TO	
	MAIN LINE LEVEE THENCE ALONG	
LE	LEVEE TO THE JUMP	2363 LF@ 54.00.....127,600

LMV Form 7-R
 1 Aug 60 (Replaces edition of 1 Mar 59 which may be used)

RADIOGRAM

PORTION FROM EXIST LA 23 TO		
BACK LEVEE THENCE ALONG BACK		
LEVEE TO TIDELAND RD.	1900LP@ 54.00.....	102,600
PORTION ALONG TIDELAND RD		
FROM BACK LEVEE TO THE JUMP	1500LP@ 54.00.....	81,000
RAMP CONSTRUCTION	LUMP SUM.....	150,000
	CONTING(25%)+	117,200
R/W	229,968 SP@ 0.16	36,800
	CONTING(100%)	36,800
	TOTAL.....	\$3,770,000

III MODIFIED PROPOSED PLAN (INCL LA 23)

A. RELOCATION OF RD #325 (3 "LOOPS")

LOOP I

PARISH RD #325	18,833 LP@ 36.00	678,800
LATERAL RDS	2,056 LP@ 54.00	111,000
	CONTING (25%+)	197,000
R/W	1,192,640 SP@ 0.16	191,000
	CONTING (100%)	<u>191,000</u>
		\$1,368,000

LOOP II

PARISH RD #325	1,491 LP@ 36.00	54,000
LATERAL RDS	1,570 LP@ 54.00	85,000
	CONTING (25%+)	35,000

R A D I O G R A M

R/W	145,460 SF @ 0.16	23,000
	CONTING (100%)	<u>23,000</u>
		\$220,000
LOOP III A		
PARISH RD # 325	3469 LF @ 36.00	125,000
LATERAL RD	760 LF @ 54.00	41,000
	CONTING (25%+)	41,000
R/W	246,140 SF @ 0.16	39,000
	CONTING (100%)	<u>39,000</u>
		\$285,000
RELOC OF RD # 325	SUBTOTAL.....	\$1,873,000
B.	RELOCATION OF LA ²³ #	
	(SAME AS II C, ABOVE).....	652,000 ✓
TOTAL		\$2,525,000

6. A COMPARISON OF THE THEORETICAL PLAN (MODIFIED TO INCLUDE LA 23) AT \$3,770,000 AND THE MODIFIED PROPOSED PLAN (INCLUDING LA 23) AT \$ 2,525,000 INDICATES A SAVINGS TO THE FEDERAL GOVERNMENT OF \$1,245,000 IF AN AGREEMENT ON THE MODIFIED PROPOSED PLAN CAN BE ACHIEVED WITH LOCAL INTERESTS.

7. WE REQUEST MRC CONCURRENCE IN NOD ACCOMPLISHING THIS BY NOD RESPONDING TO MR. C. O. PEREZ'S LETTER OF 6 DEC 71 (REFERENCE 1D). THIS RESPONSE WOULD AGREE TO THE TOTAL ALIGNMENT CONCEPT FOR THE RELOCATION OF RD #325 AND LA 23 AS DISCUSSED IN THE MODIFIED PROPOSED PLAN (INCL LA 23) PRESENTED HEREIN; THE DETAILS OF ROAD SECTION AND COST WOULD BE SUBJECT TO APPROVAL OF THE RESPECTIVE DESIGN MEMORANDUMS.

J. C. BAHR

[Handwritten Signature]
WES

R A D I O G R A M

DISTENGR, New Orleans
ATTN: LMNED-DG

10 Mar 72

LMVED-TD-5

WDA
Ammon/sf/250

Subj: Relocations - Mississippi River - Fort Jackson to Venice

References:

- a. Your Radiogram LMNED-DG, 6 Mar 72.
- b. DM 7, Relocation for Item M-10.4 R, Lower Venice.

RSK
KAUFMAN

Your proposed action to resolve our comments on DM 7 (reference b) is satisfactory.

Thp
TORREY

Authority is granted to proceed with discussion with Plaquemines Parish Commission Council regarding road relocations based on their letter of 6 Dec 71.

GBD
GBDAVIS

DIVENGR, LMVD

out R's
AJDAVIS

OFFICIAL: *George B. Davis*
GEORGE B. DAVIS
Acting Chief, Engineering Division

mail
~~LMVD Radio Room (Dupe)~~
Mr. Ammon
MRC Files

STATUS OF DESIGN MEMORANDA

<u>Design Memo No.</u>	<u>Title</u>	<u>Actual (A) or Scheduled (S) Submission Date</u>
1	Flood Control, Mississippi River and Tributaries, Item M-25.0-R, Buras Levee Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	23 Nov 70 (A)
2	Flood Control, Mississippi River and Tributaries, Item M-26.0-R, Upper Buras Levee Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	21 Jan 71 (A)
3	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-14.9-R, Commander Levee Enlargement, Plaquemines Parish, Louisiana, Relocation of Facilities	11 Jun 71 (A)
4	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.7-R, Venice Levee Enlargement and Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	6 Apr 71 (A)
5	Lower Red River - South Bank Red River Levees, Item R-117.0-R (1957 Mileage), Levee Enlargement, Rapides-Cotton Bayou Levee, Rapides Parish, Louisiana, Relocation of Facilities	22 Jan 71 (A)
6	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-31.3-R, Tropical Bend Levee Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	30 Mar 71 (A)
7	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-10.4-R, Lower Venice Levee Enlargement and Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	27 Aug 71 (A)

STATUS OF DESIGN MEMORANDA (cont'd)

<u>Design Memo No.</u>	<u>Title</u>	<u>Actual (A) or Scheduled (S) Submission Date</u>
8	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-18.9-R, Fort Jackson-Boothville Levee Enlargement, Plaquemines Parish, Louisiana, Relocation of Facilities	Jan 72 (S)
9	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-21.5-R, Childress Levee Enlargement, Plaquemines Parish, Louisiana, Relocation of Facilities	Nov 71 (S)
10	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-23.2-R, Buras-Triumph Levee Enlargement and Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	Apr 72 (S)
11	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-55.3-R, Upper Junior Levee Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	21 Jun 71 (A)
12	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-51.0-L, Gravolet Levee Enlargement and Setback, Plaquemines Parish, Louisiana, Relocation of Facilities	Not Scheduled
13	Flood Control, Mississippi River and Tributaries, Lower Red River - South Bank Red River Levees, Item R-123.5-R (1957 Mileage), Scott Home-Bertrand Levee Enlargement, Rapides Parish, Louisiana, Relocation of Facilities	Not Scheduled
14	Flood Control, Mississippi River and Tributaries, Mississippi River Levees, Item M-96.9-R, Amelia Street Levee, Jefferson Parish, Louisiana, Relocation of Facilities	Aug 71 (S)

FLOOD CONTROL
MISSISSIPPI RIVER AND TRIBUTARIES
MISSISSIPPI RIVER LEVEES
ITEM M-10.4-R
LOWER VENICE LEVEE
ENLARGEMENT AND SETBACK
PLAQUEMINES PARISH, LOUISIANA
RELOCATION OF FACILITIES
DESIGN MEMORANDUM NO. 7

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PERTINENT DATA

General

Location:

The Lower Venice Levee Enlargement and Setback, Item M-10.4-R, herein referred to as the Lower Venice Reach, is located in Plaquemines Parish, Louisiana, on the west bank of the Mississippi River Main Line Levee between levee base line stations 3744+00 and 3797+64.2 (approximate river miles 11 to 10.0 above the Head of Passes).

Purpose:

The project purpose is to increase MR&T grade and to increase freeboard on the Mississippi River Main Line Levees, thereby increasing flood protection.

Authorization:

The Flood Control Act of 15 May 1928 (P.L. 391, 70th Congress), as amended provides authorization for the project.

Description:

The Lower Venice Reach is located at the downriver terminus of the Mississippi River Main Line Levees in an essentially commercial and industrial area of Plaquemines Parish. This area is protected from flooding by the main line levee and by the back levee which come together on Grand Bayou. This point of juncture is the lower limit of the Lower Venice Reach. The proposed improvement to the main line levee consists of raising the levee an average of 5.0 feet. This increase in height will require approximately 96,000 cubic yards of semicompacted fill, 3,000 cubic yards of uncompacted fill for berms, 22.9 acres of fertilizing and seeding, and 15.7 acres of clearing, grubbing, and stripping. Three levee setbacks will be required.

1. PURPOSE OF DESIGN MEMORANDUM. This memorandum is submitted in compliance with Part 3, Section LXXIII, ER 1180-1-1, dated 1 December 1969 and DIVR 1110-2-1, dated 29 January 1968. It establishes the necessity for the relocation of the facilities and the legal obligations of the Government. It will also provide the basis for reimbursing the Plaquemines Parish Commission Council and, where appropriate, the owner for costs incurred in accomplishing the relocations herein described.

2. PROJECT AUTHORIZATION.

a. Levee Setbacks, Mississippi River Main Line Levees.

Authority for construction of levee setbacks of Mississippi River Main Line Levees is contained in the Flood Control Act of 15 May 1928, as amended. Payment or reimbursement of costs to local cooperating agencies for rights-of-way furnished, including necessary relocation or alteration of public roads, highways, railroads, public utilities and pipelines is authorized by the Flood Control Act of 18 August 1941, as amended by the Flood Control Act of 22 December 1944.

b. Construction, Enlargement, or Improvement of Mississippi River Main Line Levees. Authority for construction, enlargement, or improvement of Mississippi River Main Line Levees, including berms, is contained in the Flood Control Act of 15 May 1928, as amended. The furnishing of right-of-way for levee foundations and levees on the main stem Mississippi River, except levee setbacks, is an obligation of local interests (see section 3, Act of 15 May 1928). The replacement or relocation of public roads, highways, railroads, public utilities, and pipelines required for the construction of Mississippi River Main Line Levees will be accomplished at Federal expense. Reimbursement of costs to local cooperating agencies for perfecting relocations of interfering facilities may be made pursuant to the Flood Control Act of 23 April 1934.

3. AUTHORITY FOR ACCOMPLISHING RELOCATIONS. The authority for accomplishing the relocations necessitated by this project is provided by DIVR 1110-2-1. The legal obligations of the Federal Government regarding the affected facilities and the extent of authority for the relocations are as established in the Attorney's Reports which are attached as appendix I.

4. DESCRIPTION OF EXISTING FACILITIES.

a. Roads.

(1) Parish Road #325. A Plaquemines Parish road, designated as #325 by the Louisiana Department of Highways, was located atop the existing Mississippi River Main Line Levee between Fort Jackson, Louisiana, and Venice, Louisiana, where it terminated at a junction with Highway 23 and Tideland Road (see plate 2). Through the use of Royalty Road Funds, Parish Road #325 was improved to a 20-foot wide bituminous roadway with a base course of approximately 22 inches of shell. This improvement was completed in 1958 and the road was classified as C System, Class 6 (see appendix I, exhibit A). The most recent traffic count available for Parish Road #325 is from a 1966 traffic flow map prepared for the Plaquemines Parish roads by the Louisiana Department of Highways. This flow map indicates a 24-hour annual average traffic count of 530 vehicles per day for Parish Road #325 in the Lower Venice Reach (see plate 2) supporting a higher classification of C System, Class 5. Due to damage sustained during Hurricane Camille (17 August 1969), the road is in poor condition. After the hurricane, the Louisiana Department of Highways queried the New Orleans District as to the advisability of making permanent repairs to the roadway and was dissuaded from doing so on the basis of the anticipated levee construction (see appendix III, exhibit B). It is noted that a portion of Parish Road #325 has since been destroyed to allow for the construction of Item M-14.9-R, Commander Levee

Enlargement and further, that another portion will be destroyed by the construction of Item M-10.7-R, Venice Levee Enlargement and Setback.

(2) Tideland Road. A Plaquemines Parish road designated as Tideland Road extends southwest from a junction with Louisiana State Highway 23 and Parish Road #325, generally following Grand Pass, to a deadend. Within the Lower Venice Reach, Tideland Road is a two-lane concrete road approximately 4 miles long. The road was paved in 1953 and is in fair condition. It is aligned atop the main line levee to the point of juncture with the back levee (see plates 2, 4, and 5). The 1966 traffic flow map prepared for the Plaquemines Parish roads by the Louisiana Department of Highways indicates the following 24-hour annual average traffic counts for Tideland Road: 4,720 vehicles per day in the area of the intersection with Highway 23 and Parish Road #325, 1,210 vehicles per day at the halfway point along its length, and 750 vehicles per day in the vicinity of the deadend. The traffic count of 4,720 vehicles per day for that portion of Tideland Road within the Lower Venice Reach supports a classification of A System, Class 2 (see appendix I, exhibit A) which would dictate design standards greatly in excess of those existing.

(3) Louisiana State Highway 23. Highway 23 which extends from New Orleans, Louisiana, to Venice, Louisiana, serves as primary access to Plaquemines Parish and is classified as A System, Class 2 by the Louisiana Department of Highways (see appendix I, exhibit A). In the Lower Venice Reach (see plates 2, 3, and 4), Highway 23 is a four-lane concrete roadway which was constructed in 1970 and which is in excellent condition. A recent traffic count (1970) taken near the terminus of Highway 23 indicates a 24-hour annual average traffic count of 4,900 vehicles per day. This supports the A System, Class 2 classification. The

Louisiana Department of Highways and the Plaquemines Parish Commission Council plan to improve Highway 23 to a four-lane concrete roadway throughout its length and several contracts for this work are presently underway.

b. Utilities.

(1) Louisiana Power and Light Company. The Louisiana Power and Light Company, a Florida corporation domiciled in Tallahassee, Florida, owns and operates numerous distribution lines in the area of the Lower Venice Reach (see plate 8). The following facilities will be dislocated by the levee construction: 3,520 linear feet of 24 KV distribution line along Parish Road #325, 220 linear feet of 24 KV distribution line along Highway 23, 1,882 linear feet of 24 KV distribution line along Tideland Road, 713 linear feet of 24 KV distribution line along the back levee, and approximately 3,500 linear feet of various size local service lines. These Louisiana Power and Light Company facilities average about 2 years in age and are in good condition. Approximately 50 percent of the existing facilities are located within the existing levee right-of-way.

(2) South Central Bell Telephone Company. The South Central Bell Telephone Company, a Delaware corporation domiciled in Wilmington, Delaware, owns and operates a number of facilities in the area of the Lower Venice Reach (see plate 9). The following facilities will be dislocated by the levee construction: 2,600 linear feet of 50 pair, 26 gauge underground cable adjacent to Parish Road #325, 10 percent of which is in the existing levee right-of-way; 400 linear feet of 600 pair, 22 gauge underground cable adjacent to Highway 23, 16 percent of which is in the existing levee right-of-way; 250 linear feet of 600 pair, 22 gauge underground cable adjacent to Tideland Road, all of which is in the existing levee right-of-way; and 720 linear feet of 200 pair,

26 gauge underground cable crossing and adjacent to Tideland Road, 8 percent of which is in the existing levee right-of-way. The road relocations as described in paragraph 8a of this memorandum will dislocate 500 linear feet of 50 pair, 24 gauge underground cable adjacent to Parish Road #325, 60 percent of which is in the existing levee right-of-way, and 1,750 linear feet of 600 pair, 22 gauge underground cable adjacent to Tideland Road, 74 percent of which is in the existing levee right-of-way. These facilities were installed in 1969 and are in good condition.

(3) Plaquemines Parish. Plaquemines Parish owns and operates a potable water supply system; a portion of which was installed in 1969 and is in good condition and the balance of which was installed in 1959 and is in fair condition. The following portions of the system will be affected by the levee construction (see plate 10): 330 linear feet of 12-inch diameter main adjacent to Highway 23, 20 percent of which is in the existing levee right-of-way; 2,020 linear feet of 8-inch diameter main adjacent to Tideland Road, all of which is in the existing levee right-of-way; and 3,700 linear feet of 6-inch diameter main adjacent to Parish Road #325, 50 percent of which is in the existing levee right-of-way.

(4) Delta Gas Company, Inc. The Delta Gas Company, Inc., a Louisiana corporation domiciled in New Orleans, Louisiana, owns and operates a gas distribution system; a portion of which will be affected by the levee construction (see plate 11). The following segments of the system will be affected: 3,350 linear feet of 1-inch diameter main adjacent to Parish Road #325, 80 percent of which is in the existing levee right-of-way; 1,730 linear feet of 3/4-inch diameter service connections (not shown) adjacent to Parish Road #325, 10 percent of which is in the existing levee right-of-way; 250 linear feet of 3-inch diameter main on the north side of Highway 23, all of which is outside the existing levee

right-of-way; 300 linear feet of 2-inch diameter service main which extends northeast from the 3-inch diameter main alongside Highway 23, 20 percent of which is in the existing levee right-of-way; 100 linear feet of 1-inch diameter service main which crosses Tideland Road, all of which is in the existing levee right-of-way; 300 linear feet of 2-inch diameter main on the south side of Highway 23, all of which is outside the existing levee right-of-way; 1,850 linear feet of 2-inch diameter main adjacent to Tideland Road, all of which is in the existing levee right-of-way; 400 linear feet of 1-inch diameter service line adjacent to the back levee, all of which is outside the existing levee right-of-way; and 2,000 linear feet of 3/4-inch diameter service connections (not shown) adjacent to Tideland Road, 80 percent of which is in the existing levee right-of-way. In addition, the road relocations will affect 250 linear feet of 1-inch diameter service line normal to the levee at approximate station 3800+50, all of which is outside the existing levee right-of-way. These facilities are about 3 years old and are in good condition.

c. Ellzey Marine Supplies, Inc. Ellzey Marine Supply, Inc. owns and operates a 210,000-gallon diesel fuel storage tank and two 18,000-gallon gasoline storage tanks at approximate levee station 3780+40 (see plate 4). These tanks have a 4-inch diameter diesel fuel pipeline and a 3-inch diameter gasoline pipeline, respectively, both of which cross the levee at approximate levee station 3780+40. The entire facility will be dislocated by the levee construction. The facility was constructed in 1956 and is in good condition.

5. FIELD RECONNAISSANCE. Field surveys, field inspections, and consultation with the affected facility owners and with the engineers and other representatives of the Plaquemines Parish Commission Council and the Louisiana Department of Highways provided the basic information from which this design memorandum was prepared.

6. OWNERS' COMPENSABLE INTEREST.

a. Roads.

(1) Parish Road #325. The Attorney's Report which considers the compensable interest of Plaquemines Parish (see appendix I, exhibit A) in Parish Road #325 indicates that the parish has a compensable interest in the subject road and that the United States is authorized and obligated to pay for the relocation thereof.

(2) Tideland Road. The Attorney's Report which considers the compensable interest of Plaquemines Parish (see appendix I, exhibit B) in Tideland Road indicates that the parish has a compensable interest in the subject road and that the United States is authorized and obligated to pay for the relocation thereof.

(3) Louisiana State Highway 23. The Attorney's Report which considers the compensable interest of the Louisiana Department of Highways (see appendix I, exhibit A) in Louisiana State Highway 23 indicates that the Department has a compensable interest in the subject road and that the United States is authorized and obligated to pay for the relocation thereof.

b. Utilities.

(1) Louisiana Power and Light Company. The Attorney's Report which considers the compensable interest of Louisiana Power and Light Company (see appendix I, exhibit A) indicates that the company has a compensable interest in as much of the subject facilities as exist outside the existing levee right-of-way and inside the proposed project rights-of-way and that the United States is authorized and obligated to assume the cost including rights-of-way of the relocation of any such facility as may be required by the project. For the portions of the Louisiana Power and Light facilities which are within the existing levee right-of-way, the Attorney's Report finds that the company does not have a

compensable interest; however, the report finds that these facilities may be relocated at the expense of the Government excluding right-of-way cost, pursuant to paragraph 73-701 of ER 1180-1-1.

(2) South Central Bell Telephone Company. The Attorney's Report which considers the compensable interest of South Central Bell Telephone Company (see appendix I, exhibit A), indicates that the company has a compensable interest in as much of the subject facilities as exist outside the existing levee right-of-way and inside the proposed project rights-of-way and that the United States is authorized and obligated to assume the cost including rights-of-way of the relocation of any such facility as may be required by the project. For the portions of the South Central Bell Telephone Company facilities which are within the existing right-of-way, the Attorney's Report finds that the company does not have a compensable interest; however, it continues to state that these facilities may be relocated at the expense of the Government excluding right-of-way cost, pursuant to paragraph 73-701 of ER 1180-1-1.

(3) Plaquemines Parish. The Attorney's Report which considers the compensable interest of Plaquemines Parish (see appendix I, exhibit A) indicates that the parish has a compensable interest in the potable water supply system, a portion of which is to be dislocated by the project, and that the United States is authorized and obligated to assume the cost including rights-of-way of any relocation of this system which may be required by the project.

(4) Delta Gas Company, Inc. The Attorney's Report which considers the compensable interest of Delta Gas Company, Inc. (see appendix I, exhibit A) indicates that the corporation has a compensable interest in the facilities existing outside the

existing levee right-of-way and inside the proposed project right-of-way and that the United States is authorized and obligated to assume the cost including rights-of-way of the relocation of any such facility as may be required by the project. For the portions of the gas facilities which are within the existing levee right-of-way, the Attorney's Report finds that the corporation does not have a compensable interest; however, the report finds that these facilities may be relocated at the expense of the Government, excluding right-of-way cost, pursuant to paragraph 73-701 of ER 1180-1-1.

c. Ellzey Marine Supplies, Inc. The Attorney's Report which considers the compensable interest of Ellzey Marine Supplies, Inc. (see appendix I, exhibit A) indicates that the corporation is neither a common carrier nor a public utility and that the facilities in question are not public pipelines. It follows, therefore, that the United States has no legal obligation to relocate or adjust the facilities but rather that the facilities should be handled as part of the rights-of-way acquisition cost of the project.

7. CRITERIA FOR RELOCATED FACILITIES.

a. Roads.

(1) Parish Road #325. The Louisiana Department of Highways Minimum Design Standards for Rural Highways and Roads (see appendix II) and a 1966 traffic flow map prepared for the Plaquemines Parish road system by the Louisiana Department of Highways were consulted in establishing a design criteria for Parish Road #325. The 1966, 24-hour annual average daily traffic count of 530 vehicles for Parish Road #325 in the Lower Venice Reach places it as B System, Class 5; however, the relocation will be accomplished to a design standard of C System, Class 6. The differences in the criteria of the two classes lie primarily in

controls which are of little consequence when applied to the topography of Plaquemines Parish. An exception to this is the total width of right-of-way. In consideration of the limited usable land in the project area, it was determined that a right-of-way width of 60 feet, as opposed to 80 feet for a Class 6 road and 100 feet for a Class 5 road, would serve satisfactorily. The Plaquemines Parish Commission Council consulted with the Louisiana Department of Highways in the matter of rights-of-way and the 60-foot width was approved.

(2) Tideland Road. The Louisiana Department of Highways Minimum Design Standards for Rural Highways and Roads (see appendix II) and a 1966 traffic flow map prepared for the Plaquemines Parish road system by the Louisiana Department of Highways were consulted in establishing a design standard for the relocation of Tideland Road. The 1966, 24-hour annual average daily traffic count of 4,720 vehicles for Tideland Road places it as A System, Class 2; however, the relocation of Tideland Road will be accomplished to a design standard of A System, Class 3. As in the instance of Parish Road #325, the right-of-way width dictated by the design criteria is too great for the Plaquemines Parish situation and will be reduced from 150 feet to approximately 60 feet.

(3) Louisiana State Highway 23. The Louisiana Department of Highways Minimum Design Standards for Rural Highways and Roads (see appendix II) and a recent 24-hour annual traffic count of 4,900 vehicles per day for Highway 23 in the project area were utilized in establishing a design standard of A System, Class 2 for the existing Highway 23; this agrees with the classification assigned by the Department of Highways. Attempts to apply this design standard to a plan for the relocation of Highway 23 were abandoned as impractical due to the close proximity of the relocation to Grand Pass; therefore, the development of the recommended plan presented herein was guided by the provisions

Louisiana Department of Highways' Minimum Design Standard, sound engineering and engineering economics, and by the preferences of Plaquemines Parish, where these preferences were concurred in by the Louisiana Department of Highways. The resulting design standard is approximately A System, Class 3 with a right-of-way width of approximately 60 feet, reduced from 150 feet.

b. Utilities.

(1) Louisiana Power and Light Company. The Louisiana Power and Light Company facilities will be designed in accord with the standard procedures of that company and in a manner which will eliminate interference with the project.

(2) South Central Bell Telephone Company. The South Central Bell Telephone Company facilities will be designed in accord with the standard procedures of that company and in a manner which will eliminate interference with the project.

(3) Plaquemines Parish. The Plaquemines Parish facilities will be relocated to parish standards and in a manner which will eliminate interference with the project.

(4) Delta Gas Company, Inc. The Delta Gas Company, Inc. facilities will be designed in accord with the standard procedures of that corporation and in a manner which will eliminate interference with the project.

8. DESCRIPTION OF PROPOSED RELOCATIONS.

a. Roads. The recommended plan for the relocation of the roads to be dislocated by the project consists of four elements: (1) the relocation of Parish Road #325; (2) the "Tideland Road" phase of the relocation of Highway 23; (3) the "riverside" phase of the relocation of Highway 23; and (4) the "back levee" phase of the relocation of Highway 23. Other plans which were considered and rejected are presented briefly in appendix V.

(1) Parish Road #325. The relocation of Parish Road #325 in the Lower Venice Reach will be a continuation of the relocation of Parish Road #325 in the Venice Reach. The Venice Reach adjoins the Lower Venice Reach at levee station 3744+00 and extends upriver to levee station 3644+50.2. Relocations for this reach were covered in Design Memorandum No. 4, Venice Levee Enlargement and Setback, Item M-10.7-R, Relocation of Facilities; however, the relocation of Parish Road #325 in the Venice Reach (see plate 3) is a recent development and will be added to Design Memorandum No. 4 as a supplement. A complete discussion of the circumstances of this change will be a part of that supplement. The continuation of Parish Road #325 in the Lower Venice Reach (see plate 3) will be aligned parallel and adjacent to the new levee to approximate levee station 3751+80, at which point it will intersect the "riverside" phase of the relocation of Highway 23 (see paragraph 8a(3)). Vehicular access during construction will be maintained by utilizing existing lateral roads which connect Parish Road #325 to Highway 23 and by temporary shell roads as required.

(2) Tideland Road. The relocation of Tideland Road will be accomplished in conjunction with and as an integral portion of the relocation of Louisiana State Highway 23. This relocation will represent the "Tideland Road" phase of the relocation of Highway 23 and is discussed in paragraph 8a(3).

(3) Louisiana State Highway 23. As discussed in paragraph 4, Highway 23 provides four-lane access to the commercial center of Plaquemines Parish: the area on the Grand Pass side of the main line levee which is known as the Jump. The levee construction proposed in this area will sever that connection and will isolate the extensive developments along Grand Pass. The intent of the relocation of Highway 23 is to reestablish that connection in three phases: the "riverside" phase; the "back levee" phase; and the "Tideland Road" phase.

(a) "Riverside" Phase. The "riverside" phase will provide for a double-lane road extending northeast from Highway 23 to a point opposite the landside toe of the proposed levee at approximate levee station 3751+80 and the intersection with the relocation of Parish Road #325, thence parallel and adjacent to the new levee landside right-of-way to approximate levee station 3763+00. At this point, the road will cross over the levee at elevation 16.0 and continue parallel and adjacent to the new levee floodside right-of-way to termination in close proximity to the existing three-way intersection of Highway 23, Parish Road #325, and Tideland Road (see plates 2 through 5). The ramp over the levee as required by the "riverside" phase will be constructed as a portion of the levee contract. Access will be maintained by leaving a gap in the levee at Highway 23 and by the construction of temporary shell roads as required.

(b) "Back Levee" Phase. The "back levee" phase of the relocation of Highway 23 will provide for a double-lane road extending southwest from Highway 23, ramping over the back levee at elevation 16.0 and continuing southeast to approximate levee station 3800+14.2 at which point it will intersect the existing Tideland Road (see plates 4 and 5). The ramp over the back levee as required by the "back levee" phase will be constructed as a portion of the levee contract. Access will be maintained by leaving a gap in the levee at Highway 23 and by the construction of temporary shell roads as required.

(c) "Tideland Road" Phase. The "Tideland Road" phase of the relocation of Highway 23 will provide for a double-lane road extending from a junction with the "back levee" phase at approximate levee station 3800+14.2, parallel and adjacent to the floodside of the new levee to the area of the existing three-way intersection of Highway 23, Parish Road #325 and Tideland Road. In this area, the "Tideland Road" phase will intersect the

"riverside" phase to complete the relocation of Highway 23. Vehicle access during construction will be maintained by construction of temporary shell roads as required.

b. Utilities.

(1) Louisiana Power and Light Company.

(a) Powerline Adjacent to Parish Road #325. This facility represents 3,520 linear feet of 24 KV distribution line and 1,400 linear feet of secondary distribution and local service lines which the project will dislocate from alongside the existing Parish Road #325. The relocation of the 24 KV distribution line will involve 3,750 linear feet of 24 KV distribution line which will be aligned generally parallel to the landside of the new levee right-of-way between approximate levee stations 3744+00 and 3774+00. In the vicinity of station 3774+00, the distribution line will cross over the new levee and new road rights-of-way and will be aligned generally parallel and adjacent to the floodside of the new levee and new road rights-of-way to the vicinity of the existing Highway 23 junction (see plate 8). The requirement for secondary distribution and local service lines will be reduced by the project so that the 1,400 linear feet existing will be relocated utilizing approximately 400 linear feet of secondary line throughout the same general area.

(b) Powerline Adjacent to Highway 23. This facility represents 220 linear feet of 24 KV distribution line which the project will dislocate from alongside the existing Highway 23. The relocation of this facility will involve 370 linear feet of 24 KV distribution line aligned generally parallel and adjacent to the existing facility but constructed in a manner to avoid interference with the project (see plate 8).

(c) Powerline Adjacent to Tideland Road. This facility represents 1,882 linear feet of 24 KV distribution line

and approximately 2,100 linear feet of secondary distribution and local service lines which the project will dislocate from alongside the existing Tideland Road. The relocation of the 24 KV distribution line will involve 1,915 linear feet of 24 KV distribution which will be aligned parallel to the floodside of the new levee rights-of-way between approximate levee stations 3781+00 and 3801+00. In the vicinity of station 3801+00, the distribution line will cross over the "Tideland Road" phase of the relocation of Highway 23 and will connect into the existing, undisturbed 24 KV line (see plate 8). The severing of the landside secondary distribution and service lines by the project necessitates the construction of a second 24 KV distribution line aligned parallel and adjacent to the "back levee" phase of the relocation of Highway 23 for a distance of 1,135 linear feet; in addition, 300 linear feet of secondary distribution line will be required to connect to the undisturbed service lines.

(d) Powerline Adjacent to the Back Levee. This facility represents 713 linear feet of 24 KV distribution line which the project will dislocate in the vicinity of the back levee. The relocation of this facility will require 650 linear feet of 24 KV distribution line aligned parallel and adjacent to the "back levee" phase of the relocation of Highway 23 as it ramps over the existing back levee.

(2) South Central Bell Telephone Company.

(a) Telephone Cables Adjacent to Parish Road #325. These facilities represent 2,600 linear feet of 50 pair, 26 gauge buried telephone cable and 500 linear feet of 50 pair, 24 gauge buried telephone cable all of which will be dislocated from alongside the existing Parish Road #325. The relocation of the 50 pair, 26 gauge facility will involve replacing part of the facility (800 linear feet) and abandoning the rest (1,800 linear feet). The abandoned portion will be removed from the project area.

The 800 linear feet to be replaced will require constructing a 50 pair, 26 gauge buried cable aligned within and parallel to the right-of-way for the relocation of Parish Road #325 between approximate levee stations 3744+00 and 3752+00 and the construction of 500 linear feet of 50 pair, 24 gauge buried cable aligned generally within and parallel to the right-of-way for the "riverside" phase of the relocation of Highway 23 in the vicinity of its junction with the "Tideland Road" phase of the relocation of Highway 23 (see plate 9).

(b) Telephone Cable Adjacent to Highway 23. This facility represents 400 linear feet of 600 pair, 22 gauge buried telephone cable which the project will dislocate from alongside the existing Highway 23. The relocation of this facility will require the construction of 500 linear feet of 600 pair, 22 gauge buried telephone cable in the vicinity of the existing Highway 23 junction.

(c) Telephone Cables Adjacent to Tideland Road. These facilities represent 2,000 linear feet of 600 pair, 22 gauge buried telephone cable and 720 linear feet of 200 pair, 26 gauge buried telephone cable which the project will dislocate from alongside the existing Tideland Road. The relocation of the first facility will require the construction of 1,900 linear feet of 600 pair, 22 gauge buried telephone cable to be aligned within and parallel to the right-of-way for the "Tideland Road" phase of the relocation of Highway 23 (see plate 9). The 720 linear feet of 200 pair, 26 gauge buried telephone cable will be abandoned and removed due to the project.

(3) Plaquemines Parish.

(a) Water Main Adjacent to Parish Road #325. This facility represents 3,700 linear feet of 6-inch diameter water main which the project will dislocate from alongside the existing Parish

Road #325. The Plaquemines Parish Commission Council proposes to replace the existing facility with a combination of 12-inch diameter main on the landside of the proposed levee and 8- and 4-inch diameter main on the floodside of the proposed levee. The alignment of the 12-inch diameter main will extend from approximate levee station 3744+00 to station 3763+00 at which point it will turn away from the levee and extend to a point of intersection with the existing 12-inch diameter water main which is parallel and adjacent to the existing Highway 23 (see plate 10). The alignment of the 8-inch and 4-inch diameter portions of the relocation will be generally parallel to the proposed levee between approximate levee stations 3768+40 and 3782+00 (see plate 10). This plan will require the construction of 2,425 linear feet of 12-inch, 605 linear feet of 8-inch, and 675 linear feet of 4-inch diameter main. The betterments in these relocations are discussed in paragraph 10 of this design memorandum.

(b) Water Main Adjacent to Highway 23. This facility represents 330 linear feet of 12-inch diameter water main which the project will dislocate from alongside the existing Highway 23. The relocation of this facility will require the construction of 640 linear feet of 12-inch diameter water main which will be connected to the existing main and aligned under Highway 23 and under the "back levee" phase of the relocation of Highway 23. From this point it will be ramped over the proposed levee and under the "Tideland Road" phase of the relocation of Highway 23 at which point it will intersect a relocated 8-inch diameter water main to be aligned adjacent to the "Tideland Road" phase of the relocation of Highway 23 (see plate 10). The relocation of this 12-inch diameter facility will require the installation of a temporary facility consisting of about 100 linear feet of 8-inch diameter water main. As soon as the temporary facility is in place, the 8-inch diameter main existing between approximate levee stations 3781+55 and 3801+00 will be removed to

facilitate construction of the proposed levee up to approximate levee station 3782+00 thereby facilitating construction of the permanent water main crossing and removal of the temporary facility.

(c) Water Main Adjacent to Tideland Road. This facility represents 2,020 linear feet of 8-inch diameter water main which the project will dislocate from alongside the existing Tideland Road. The relocation of this facility will require the construction of 1,885 linear feet of 8-inch diameter water main which will extend from a junction with the proposed 12-inch diameter water main at approximate levee station 3282+50 generally parallel and adjacent to the proposed levee and within the right-of-way for the "Tideland Road" phase of the relocation of Highway 23 to approximate levee station 3800+80. At this point, the proposed 8-inch diameter main will cross under the road and tie into the existing undisturbed 8-inch diameter main (see plate 10).

(4) Delta Gas Company, Inc. The existing facility consists of 1-, 2-, and 3-inch diameter gas distribution lines with 3/4-inch diameter service connections. A 1-inch diameter line (3,350 linear feet) with 3/4-inch diameter service connections (1,730 linear feet) all parallel and/or adjacent to the existing Parish Road #325 will be abandoned by the owner, removed by the levee contractor and not replaced (see plate 11). A 3-inch diameter line (250 linear feet) parallel and adjacent to the existing Highway 23 with a 2-inch diameter service main (300 linear feet) extending northeast from it, a 1-inch diameter service main (100 linear feet) across the existing Tideland Road and a 2-inch diameter line (300 linear feet) parallel and adjacent to Highway 23 and extending alongside Tideland Road (1,850 linear feet) with two 1-inch diameter laterals (total of 650 linear feet) and with 3/4-inch diameter service connections (2,000 linear feet) will be relocated. This relocation will require the installation of 2,800

linear feet of 2-inch diameter line, 600 linear feet of 1-inch diameter laterals and 2,000 linear feet of 3/4-inch diameter service connection. The alignment of the 2-inch and 1-inch diameter lines will be as shown on plate 11. It is noted that the 300 linear feet of 2-inch diameter service main alongside Highway 23 and the 100 linear feet of 1-inch diameter service main leading from it across Tideland Road will serve as a temporary facility connecting to the 2-inch diameter line to be constructed alongside the "Tideland Road" phase of the relocation of Highway 23. As soon as the temporary facility is connected to the relocated 2-inch diameter line, the balance of the existing facility will be removed. This will allow construction of the proposed levee up to approximate station 3782+00 and will facilitate construction of the permanent 2-inch diameter gas main crossing and removal of the temporary facility.

9. INTERFERENCE AMONG RELOCATIONS.

a. South Central Bell Telephone Company. The "riverside" and "back levee" phases of the relocation of Highway 23 will necessitate the relocation of 500 linear feet of 50 pair, 24 gauge and 1,750 linear feet of 600 pair, 22 gauge underground telephone cable, respectively, from existing positions alongside the respective roads.

b. Delta Gas Company, Inc. The "back levee" phase of the relocation of Highway 23 will necessitate the relocation of 250 linear feet of 1-inch diameter service line.

10. BETTERMENTS. Plaquemines Parish proposes to upgrade the existing potable water system in the project area by the installation of 12-inch diameter pipe to replace a portion of the 6-inch diameter pipe presently adjacent and parallel to the landside toe of the main line levee and by the installation of 8-inch diameter pipe to replace the approximate balance of the 6-inch diameter facility presently adjacent and parallel to the landside

toe of the main line levee and the existing Parish Road #325. In addition, the Parish intends to increase the number of fire hydrants by seven from the four existing to the eleven proposed. The total cost of these betterments is estimated at \$12,000 and will be deducted from the Government cost (see table 4).

11. PROCEDURE FOR ACCOMPLISHING RELOCATIONS.

a. General. The procedure to be followed in effecting reimbursement for the relocations necessitated by the Lower Venice project has been discussed with representatives of the Plaquemines Parish Commission Council and the Louisiana Department of Highways and no difficulties are anticipated. Upon approval of this design memorandum and related Real Property Appraisal Reports where applicable, the Louisiana Department of Highways will be requested to accomplish the relocation of Highway 23 as described herein and the Plaquemines Parish Commission Council will be requested to accomplish the remainder of the relocations as described herein, all in accordance with the approved design memorandum and all subject to reimbursement of actual cost not to exceed a given dollar amount. The dollar limit provided will be based on the approved design memorandum; however, reimbursement will be based on actual cost (less depreciation and salvage and plus removal cost as applicable). Upon completion of the relocations, the Louisiana Department of Highways and the Plaquemines Parish Commission Council will furnish this District with reimbursement assemblies consisting of: a copy of any contracts (including plans and specifications) covering work performed by others or itemized billings for labor and materials if the work was performed by the owner, and a copy of all canceled checks covering related payments. Further, all records related to the reimbursement request will be subject to audit by the Government and original time cards or payrolls, material records, and accounts for all charges and expenditures for which reimbursement will be claimed from the Government will be available

at all reasonable times for Government inspection. Finally, so far as practicable, separate records will be maintained for all items and accounts constituting the basis of information from which the reimbursement assembly is prepared.

b. Roads. The Louisiana Department of Highways has proceeded with the preparation of preliminary plans for the relocation of Highway 23 in accordance with the plan presented in this design memorandum and intends to effect the relocation upon approval of this design memorandum. The Plaquemines Parish Commission Council is proceeding with the preparation of the plans for the relocation of Parish Road #325 and intends to effect the relocation upon notification of approval of this design memorandum. In order to allay future difficulties in reimbursing local interest for work to be accomplished, this project has been closely coordinated and all phases of local interest plans have been reviewed by this District with the understanding that final approval and subsequent reimbursement would be contingent upon and subsequent to review and approval of the design memorandum for relocations by higher authority.

c. Utilities.

(1) Louisiana Power and Light Company. The Plaquemines Parish Commission Council has accepted the responsibility for effecting the powerline relocations required by the project. These relocations will be accomplished in accordance with the provisions of this design memorandum and subject to reimbursement by this District as authorized by the Flood Control Act of 1938.

(2) South Central Bell Telephone Company. The Plaquemines Parish Commission Council has accepted the responsibility for effecting the relocation of the telephone cables as required by the project in accord with the provisions of this design memorandum and subject to reimbursement by this District as

authorized by the Flood Control Act of 1938. By the same authority, the damages for those portions of the telephone cables which are to be abandoned as a result of the project will also be reimbursed to the Commission Council.

(3) Plaquemines Parish. The Plaquemines Parish Commission Council will accomplish the relocation of the water mains as required by the project. This relocation will be accomplished in accord with the provisions of this design memorandum and subject to reimbursement by this District as authorized by the Flood Control Act of 1938.

(4) Delta Gas Company, Inc. The Plaquemines Parish Commission Council has accepted the responsibility for effecting the relocation of the gas mains as required by the project in accord with the provisions of this design memorandum and subject to reimbursement by this District as authorized by the Flood Control Act of 1938. By the same authority, the damages for those portions of the gaslines which are to be abandoned as a result of the project will also be reimbursed to the Commission Council.

12. ATTITUDE OF OWNERS.

a. Roads. The proposal for the relocation of Highway 23 has been the subject of intensive coordination with local interests throughout the concurrent preparation of the preliminary construction plans for the road by local interest and the preparation of this design memorandum by this District. The Louisiana Department of Highways and the Plaquemines Parish Commission Council recognize that the recommended plan provides four circuitous lanes to replace the four direct and two circuitous presently enjoyed but accept it as the best plan considered (see appendix III, exhibit A). The proposal for the relocation of Parish Road #325 between approximate levee stations 3744+00 and 3751+80 of the Lower Venice Reach and extending into the Venice

Reach (Item M-10.7-R, DM No. 4) is a recent development; prior to which, all coordination with local interests indicated that the Venice and Lower Venice Reaches bound areas in which the relocation of Parish Road #325 would not be required. This reversal of position by local interests is due to a reevaluation of the access requirements of certain properties in the Venice Reach. A detailed discussion of these requirements and the resultant proposal to relocate Parish Road #325 in the Venice Reach will be provided by a supplement to Design Memorandum No. 4, Venice Levee Enlargement and Setback, Item M-10.7-R, Relocation of Facilities.

b. Louisiana Power and Light Company. The Louisiana Power and Light Company concurs in the plan for the relocation of the dislocated powerlines as presented in this design memorandum and realizes that reimbursement for these relocations will be in accordance with the design memorandum for relocations as approved by higher authority.

c. South Central Bell Telephone Company. The South Central Bell Telephone Company concurs in the plan for the relocation of the dislocated telephone cables as presented in this design memorandum and realizes that reimbursement for these relocations and for damages for the facilities to be abandoned will be in accordance with the design memorandum for relocations as approved by higher authority.

d. Plaquemines Parish. The Plaquemines Parish Commission Council, the governing body for Plaquemines Parish, concurs in the plan for the relocation of the affected water mains as presented in this design memorandum and realizes that reimbursement for these relocations will be in accordance with the design memorandum for relocations as approved by higher authority.

e. Delta Gas Company, Inc. The Delta Gas Company, Inc. concurs in the plan for the relocation of the gas mains affected

by the project as contained in this design memorandum and realizes that reimbursement for these relocations and for damages for the facilities to be abandoned will be in accordance with the design memorandum for relocations as approved by higher authority.

13. UNAFFECTED FACILITIES. Numerous powerlines, telephone cables, water mains, and gas mains in the project area will be unaffected; these facilities are included on plates 8 through 11.

14. COST ESTIMATES. The Government estimates of cost for the proposed relocations have been computed in accordance with the policy set forth in ER 1180-1-1 and are presented in tables 1-5. It is noted that funds for the provision of the temporary access roads discussed in paragraph 8.a. are anticipated to be nominal and as such will be reimbursed out of the contingency estimate for the roads.

15. Comparison with prior cost estimate. The current working estimates of cost are summarized under the uniform cost classification for comparison with the latest approved cost estimates. The latest approved cost estimates are the Project Cost Estimate (PB-3) for the Mississippi River Levees project, New Orleans District, bearing an effective date of 1 July 1971 as approved 17 August 1971 (for construction funds) and the CYP FY 72, Detailed Project Schedule (PB-4a) for the Mississippi River Levees project bearing an effective date of 1 July 1971 as approved 27 April 1972 (for maintenance funds). Since the PB-3 contains the relocations cost estimates for the entire Mississippi River Levees project, the portion included for Lower Venice Levee Enlargement and Setback has been broken out for a suitable comparison. The CYP FY 72, Detailed Project Schedule (PB-4a) is used in the comparison with prior cost estimate.

a. FCMR&T - Construction.

COST	:	:	:	CURRENT	:	DIFFERENCE
ACCOUNT	:	:	LATEST	WORKING	:	FROM
NO.	:	ITEM	PB-3	ESTIMATE	:	PB-3
02		Relocations				
.1		Roads	0	43.8		+43.8
.3		Cemeteries & Utilities				
		Utilities	75.0	47.0		(-28.0)
30		E&D	4.5	4.8		+0.3
31		S&A	4.5	4.8		+0.3
		TOTAL	84.0	100.4		+16.4

1/ Effective date: 1 July 1971

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b. FCMR&T - Maintenance

COST	:	:	:	CURRENT	:	DIFFERENCE		
ACCOUNT	:	:	LATEST	:	WORKING	FROM		
NO.	:	ITEM	:	PB-4a 1/	:	ESTIMATE	:	PB-4a
627 005 000		Relocations						
	001	Roads	238.0	<u>2/</u>	839.2	-	<u>5/</u>	
	002	Utilities	-		83.8	-	<u>5/</u>	
634 000 000		E&D	4.1	<u>3/</u>	46.2	-	<u>5/</u>	
635 000 000		S&A	<u>4.1</u>	<u>3/</u>	<u>46.2</u>	-	<u>5/</u>	
		TOTAL	246.2	<u>4/</u>	1,015.4	-	<u>5/</u>	

1/ Effective date: 1 July 1971

2/ Included \$238.0 for FY 72. Balance of funds to be programed for FY 73 and FY 74.

3/ Included \$4.1 for FY 72. Balance of funds to be programed for FY 73 and FY 74.

4/ Included \$246.2 TOTAL for FY 72. Balance of funds to be programed for FY 73 and FY 74.

5/ Not applicable as PB-4a funds are only FY 72 phase of the total relocation.

TABLE 1
ESTIMATE OF COST
ROADS 1/

DESCRIPTION	: UNIT :	: QUANTITY :	: UNIT COST :	AMOUNT	
Highway 23	Foot	7,546	\$71.18	\$537,100	<u>2/</u>
Parish Road #325	Foot	780	35.90	28,000	
Relocation Cost				565,100	
Plus Removal Cost				5,400	<u>3/</u>
Subtotal				570,500	
Contingencies (25%+)				142,500	
Subtotal				713,000	
E&D (6%+)				43,000	
S&A (6%+)				43,000	
Subtotal				799,000	
R/W Cost				<u>170,000</u>	
Total				\$969,000	

- 1/ For detailed cost estimate, see Appendix IV.
- 2/ Includes the "riverside," "back levee" and "Tideland Road" phases.
- 3/ Covers only the removal of that portion of Tideland Road which is outside of the proposed levee right-of-way; balance to be included in the contract for levee construction.
- 4/ 5 percent (\$48,500) construction funds and 95 percent (\$920,500) maintenance funds. This does not include the cost for Ramp No. 1 and Ramp No. 2 embankment which are to be accomplished under the contract for levee construction.

incl 4

TABLE 2 (cont'd)

DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
Right-of-way Cost				\$ 800 ^{2/}
TOTAL				\$ 28,400 ^{3/}

^{1/} Louisiana Power and Light Company will reuse the materials in the existing facilities for the relocated facilities.

^{2/} Represents 50 percent of total right-of-way cost.

^{3/} 39 percent (\$11,100) construction funds and 61 percent (\$17,300) maintenance funds.

TABLE 3
ESTIMATE OF COST
SOUTH CENTRAL BELL TELEPHONE COMPANY

DESCRIPTION	: UNIT	: QUANTITY	: UNIT COST	: AMOUNT
Relocate 800 linear feet of 50 pair, 26 gauge buried cable adjacent Parish Road #325	LF	800	\$ 2.15	\$ 1,720
Relocate 500 linear feet of 50 pair, 24 gauge buried cable adjacent Parish Road #325	LF	500	2.20	1,100
Relocate 2,400 linear feet of 600 pair, 22 gauge buried cable adjacent Highway 23 and Tideland Road	LF	2,400	7.95	19,080
Abandon 1,800 linear feet of 50 pair, 26 gauge buried cable adjacent Parish Road #325	LF	1,550	0.75	1,150 <u>1/</u>
Abandon 720 linear feet of 200 pair, 26 gauge buried cable adjacent Tideland Road	LF	660	2.50	1,650 <u>2/</u>
Relocation Cost				24,700
Less Depreciation				1,500 <u>3/</u>
Subtotal				23,200
Less Salvage Value				0
Subtotal				23,200
Plus Removal Cost				800
Subtotal				24,000
Contingencies (25%+)				6,000
Subtotal				30,000

TABLE 3 (cont'd)

DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
E&D (6%+)				\$ 2,000
S&A (6%+)				2,000
TOTAL				\$ 34,000 <u>4/</u>

- 1/ Represents original cost of 86 percent of the affected facility as 14 percent is within the existing levee right-of-way.
- 2/ Represents original cost of 92 percent of the affected facility as 8 percent is within existing levee right-of-way.
- 3/ Based on 32-year life and 2-year average age for facilities.
- 4/ 27 percent (\$9,200) construction funds and 73 percent (\$24,800) maintenance funds.

TABLE 4
ESTIMATE OF COST
PLAQUEMINES PARISH WATER MAINS

DESCRIPTION	:	:	:	:
	: UNIT	: QUANTITY	: COST	: AMOUNT
Relocate 3,700 linear feet of 6-inch diameter water main adjacent Parish Road #325				\$ 27,550
Replace with 4-inch diameter main	Foot	675	\$ 3.60	(2,430)
Replace with 8-inch diameter main	Foot	605	6.85	(4,140)
Replace with 12-inch diameter main	Foot	2,425	8.65	(20,980)
Relocate 330 linear feet of 12-inch diameter water main adjacent Highway 23	Foot	640	23.35	14,950
Relocate 2,020 linear feet of 8-inch diameter water main adjacent Tideland Road	Foot	1,885	8.00	15,080
Temporary relocation through levee	Sum	Job	Sum	3,870
Relocation Cost				61,450
Less Betterments				12,000 <u>1/</u>
Subtotal				49,450
Less Depreciation				4,900 <u>2/</u>
Subtotal				44,550
Less Salvage Value				0
Subtotal				44,550
Plus Removal Cost				0 <u>3/</u>
Subtotal				44,550
Contingencies (25%+)				11,150
Subtotal				55,700

TABLE 4 (cont'd)

DESCRIPTION	UNIT	QUANTITY	UNIT COST	AMOUNT
E&D (6%+)				\$ 3,350
S&A (6%+)				3,350
Subtotal				62,400
R/W Cost				<u>1,200</u>
TOTAL				\$ 63,600 <u>4/</u>

- 1/ Includes increase in cost due to using 12-inch diameter and 8-inch diameter main rather than 6-inch diameter main adjacent to Parish Road #325 and cost of seven additional fire hydrants.
- 2/ Based on 75-year design life. Average age of 6-inch and 8-inch diameter main is 12 years. Age of 12-inch diameter main is 3 years.
- 3/ Removal to be included in contract for levee construction.
- 4/ 41 percent (\$26,100) construction funds and 59 percent (\$37,500) maintenance funds.

TABLE 5
ESTIMATE OF COST
DELTA GAS COMPANY, INC.

DESCRIPTION	:	:	:	UNIT	:
DESCRIPTION	:	:	:	COST	:
DESCRIPTION	:	:	:	COST	:
Relocate gas main	Foot	5,400	\$ 2.34	\$ 12,650	<u>1/</u>
Abandon gas main	Foot	2,220	1.69	3,750	<u>2/</u>
Relocation Cost				16,400	
Less Depreciation				1,650	<u>3/</u>
Subtotal				14,750	
Less Salvage Value				0	
Subtotal				14,750	
Plus Removal Cost				0	<u>4/</u>
Subtotal				14,750	
Contingencies (25%+)				3,750	
Subtotal				18,500	
E&D (6%+)				1,150	
S&A (6%+)				1,150	
TOTAL				\$ 20,800	<u>5/</u>

1/ Represents relocating approximately 2,000 feet of 3/4-inch service line with 2,000 feet of 3/4-inch service line, relocating 650 feet of 1-inch main with 600 feet of 1-inch main and relocating 100 feet of 1-inch main, 2,450 feet of 2-inch main and 250 feet of 3-inch main with 2,800 feet of 2-inch main.

2/ Includes original cost of 670 feet of 1-inch main which represents 20 percent of total 1-inch main or that portion outside the existing levee right-of-way. Also includes original cost of 1,550 feet of 3/4-inch service line which represents 90 percent of total or that portion outside the existing levee right-of-way.

3/ Based on 30-year life with an average age of 3 years.

4/ Removal to be included in contract for levee construction.

5/ 31 percent (\$6,400) construction funds and 69 percent (\$14,400) maintenance funds.

15. COMPARISON WITH PRIOR COST ESTIMATE. The current working estimates of cost are summarized under the uniform cost classification for comparison with the latest submitted cost estimates. The latest submitted estimates are the ICYP FY 72 Budget Program PB-2A and the ICYP FY 72 Budget Program PB-4A.

a. FCMR&T - Construction.

COST ACCOUNT NO.	ITEM	LATEST PB-2A 1/	CURRENT WORKING ESTIMATE	DIFFERENCE FROM PB-2A
02	Relocations			
.1	Roads	0	32.3	+32.3
.3	Cemeteries & Utilities			
	Utilities	75.0	47.0	(-28.0)
30	E&D	4.5	4.2	(- 0.3)
31	S&A	<u>4.5</u>	<u>4.2</u>	<u>(- 0.3)</u>
	TOTAL	84.0	87.7	+ 3.7

1/ Effective date: 1 July 1971.

b. FCMR&T - Maintenance.

COST ACCOUNT NO.	ITEM	LATEST PB-4A 1/	CURRENT WORKING ESTIMATE	DIFFERENCE FROM PB-2A
627 005 000	Relocations			
001	Road	- 2/	613.7	- 4/
002	Utilities	48.0	83.8	+35.8
634 000 000	E&D	8.0 3/	30.8	- 4/
635 000 000	S&A	<u>8.0 3/</u>	<u>30.8</u>	<u>- 4/</u>
	TOTAL	- 4/	759.1	- 4/

(cont'd)

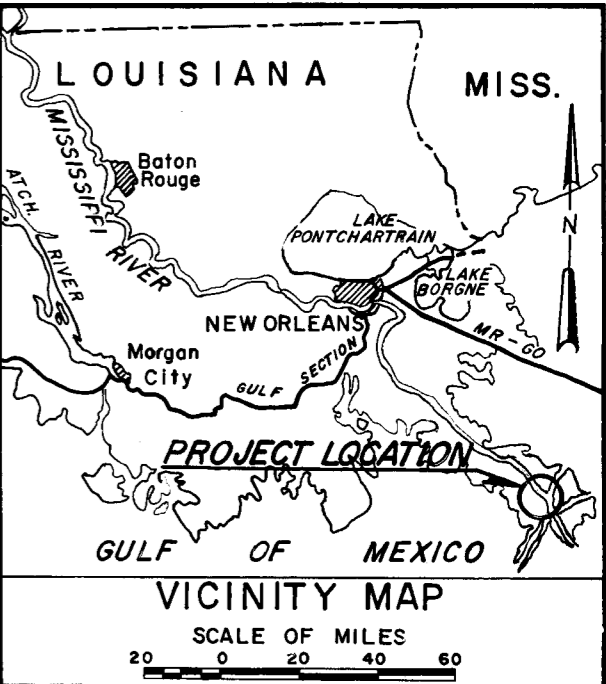
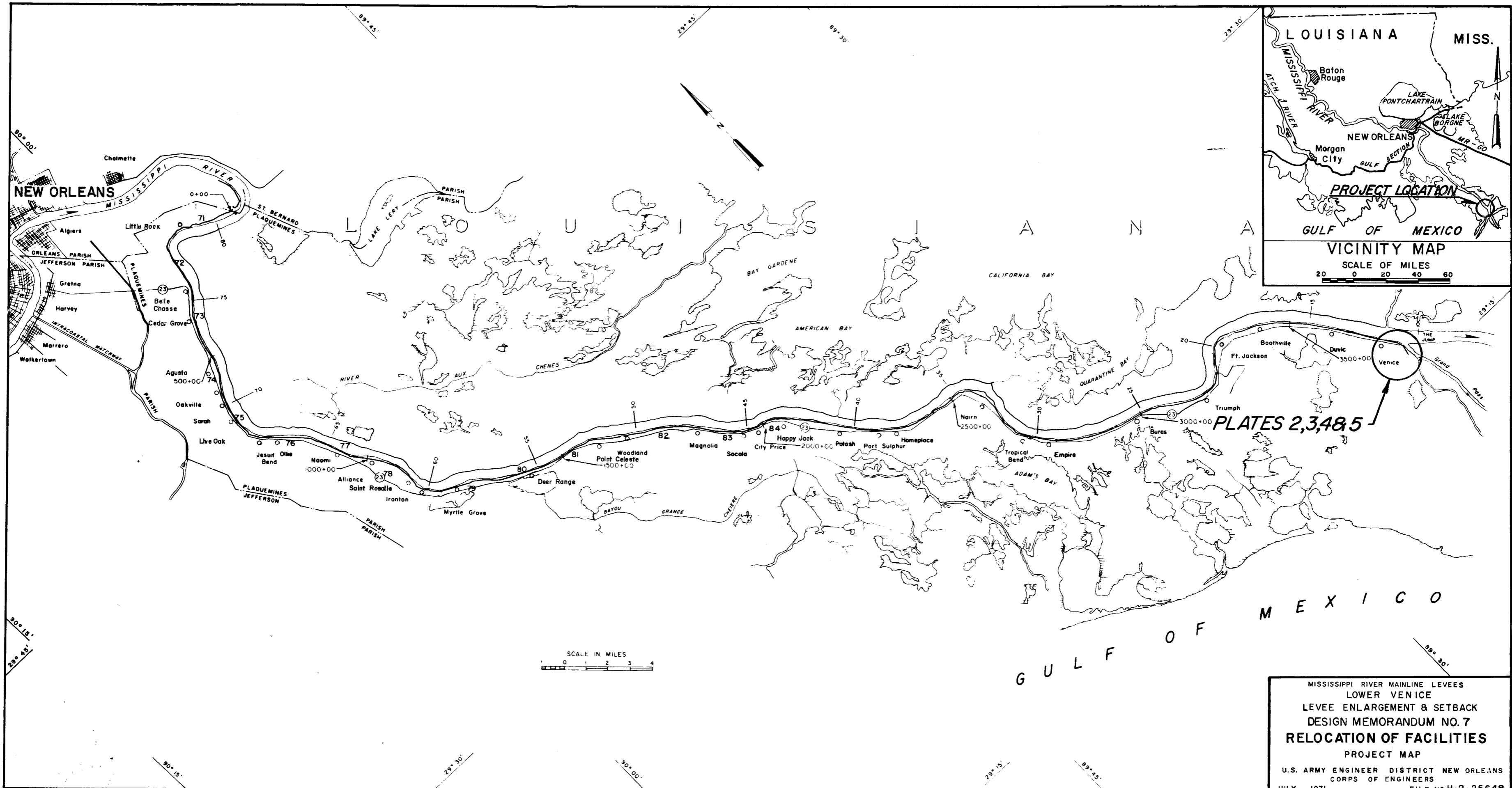
- 1/ Effective date: 1 July 1971.
- 2/ Included \$238.0 for FY 72. Balance of funds to be programed for FY 73 and FY 74.
- 3/ Included \$8.0 for FY 72. Balance of funds to be programed for FY 73 and FY 74.
- 4/ Not applicable as PB-4A funds only FY 72 phase of the total relocation.

16. JUSTIFICATION FOR COST REVISION.

a. Roads. The current working estimate includes \$32,300 in construction funds for the relocation of Parish Road #325. The relocation of this facility was not anticipated at the time the PB-2A was submitted.

b. Utilities. The total funds programed for utility relocations in the PB-2A and the PB-4A (\$123.0) compares favorably with the total current working estimate for utility relocations (\$130.8). The two budget programs do not compare favorably with the current working estimate since the utilities affected by levee enlargements versus utilities affected by levee setbacks could not be accurately determined at the time of programing.

17. RECOMMENDATION. Recommend approval of this memorandum as the basis for reimbursing the State of Louisiana for cost incurred in accomplishing the relocation of Highway 23 as herein described and for reimbursing the Plaquemines Parish Commission Council for cost incurred in accomplishing the balance of the relocations herein described.



PLATES 2,3,4,5

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 PROJECT MAP
 U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648



SEE PLATE 3

SEE PLATE 4

SEE PLATE 5

NOTE: Topography represents pre-Camille conditions.
 ○ Denotes average daily traffic

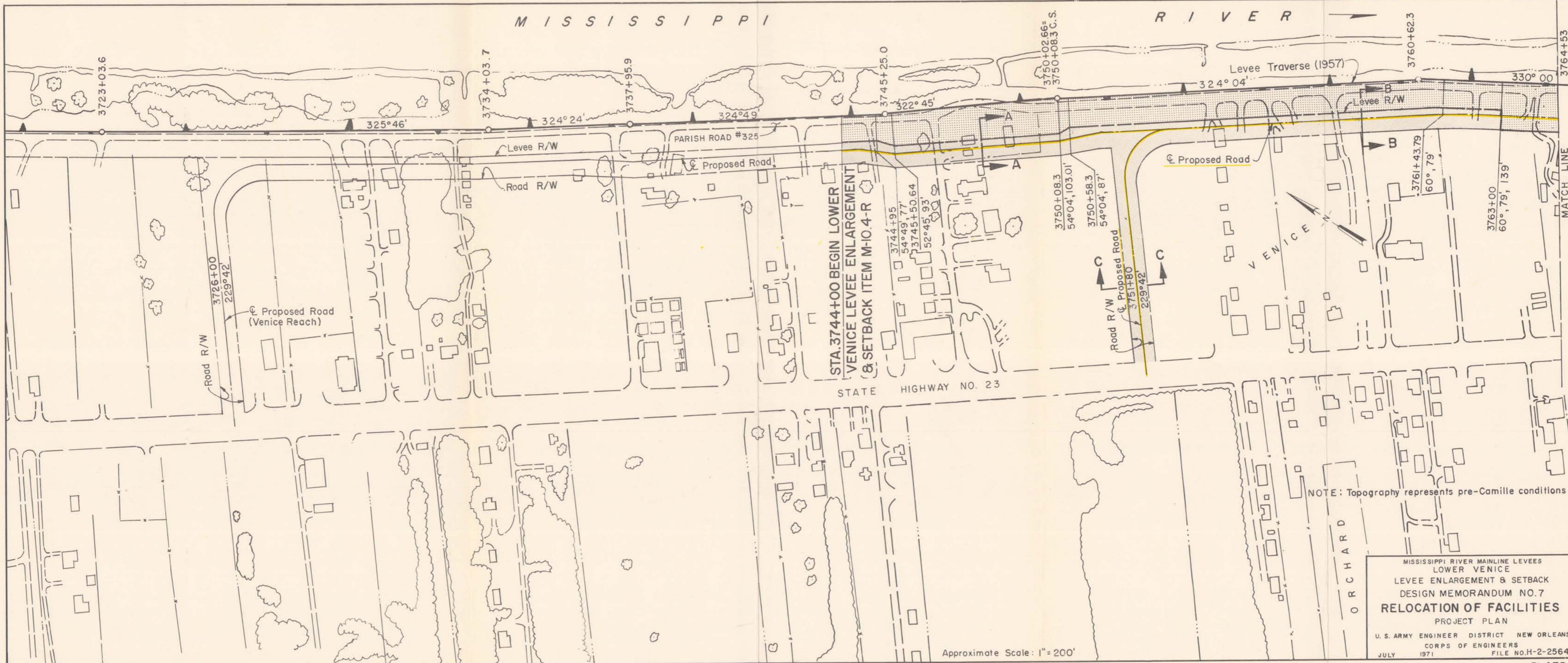
Approximate Scale: 1" = 400'

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 ROAD RELOCATION
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648
 REVISED 6/72

Incl 6

M I S S I S S I P P I

R I V E R



STA. 3744+00 BEGIN LOWER
 VENICE LEVEE ENLARGEMENT
 (& SETBACK ITEM M-10.4-R)

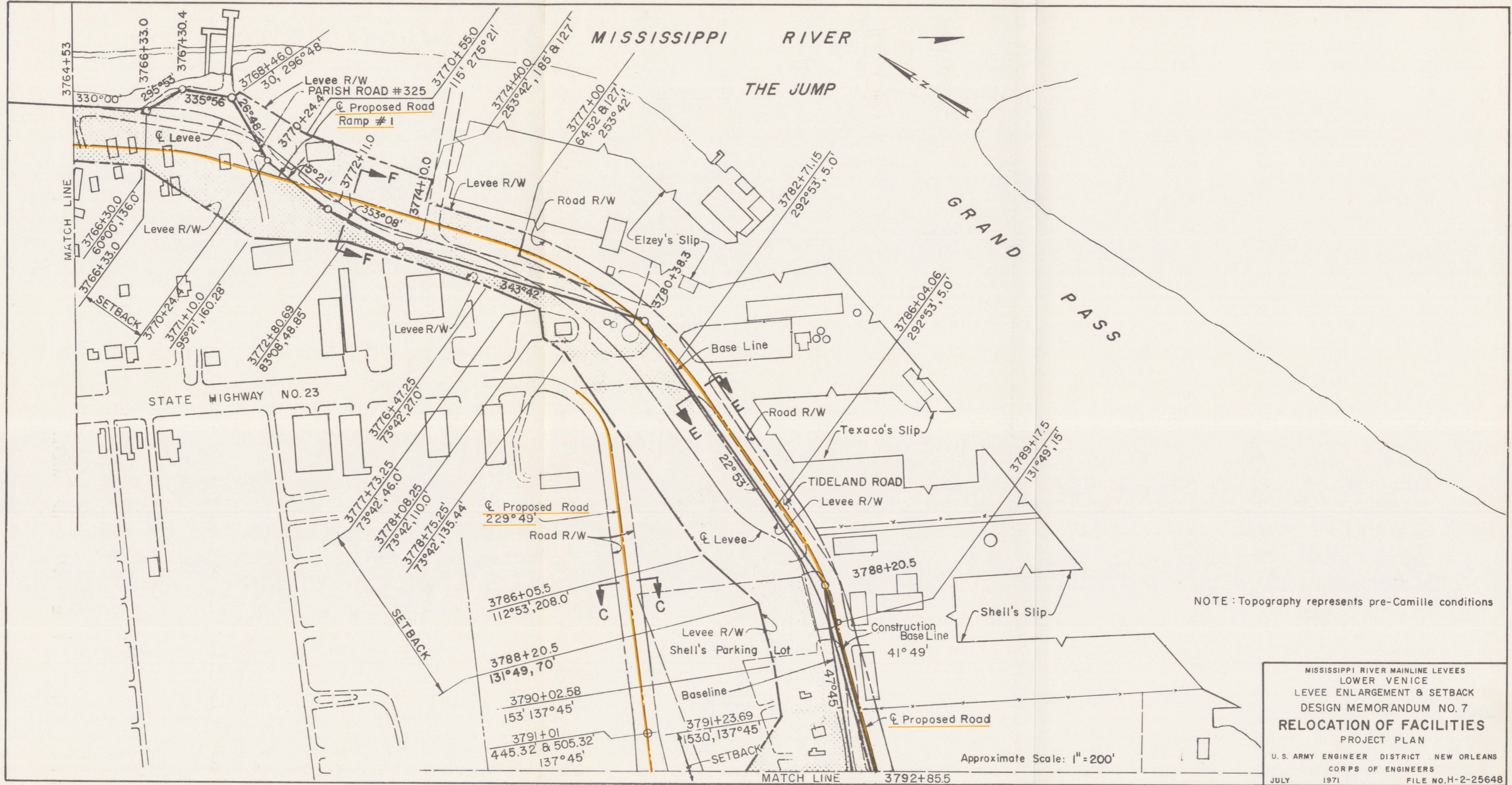
STATE HIGHWAY NO. 23

NOTE: Topography represents pre-Camille conditions

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 PROJECT PLAN

U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648

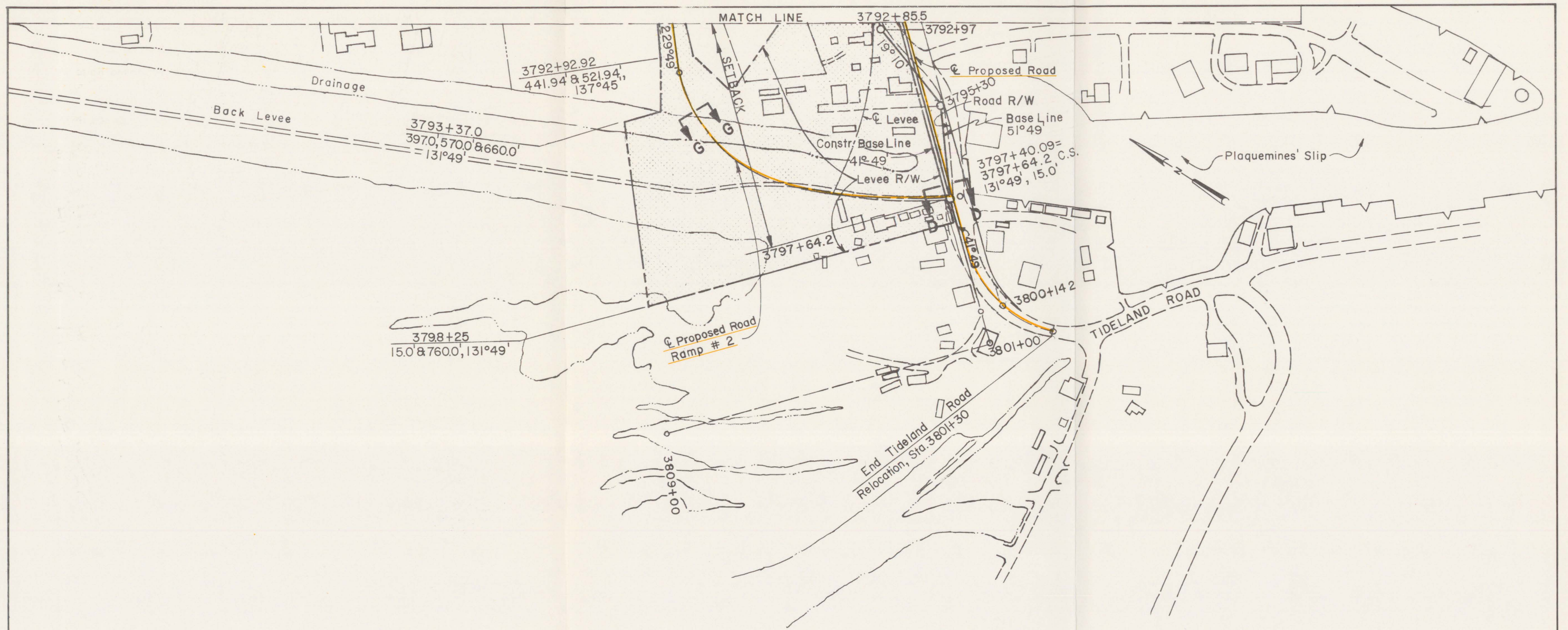
Approximate Scale: 1" = 200'



NOTE: Topography represents pre-Camille conditions

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 PROJECT PLAN
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648

Incl 7



NOTE: Topography represents pre-Camille conditions

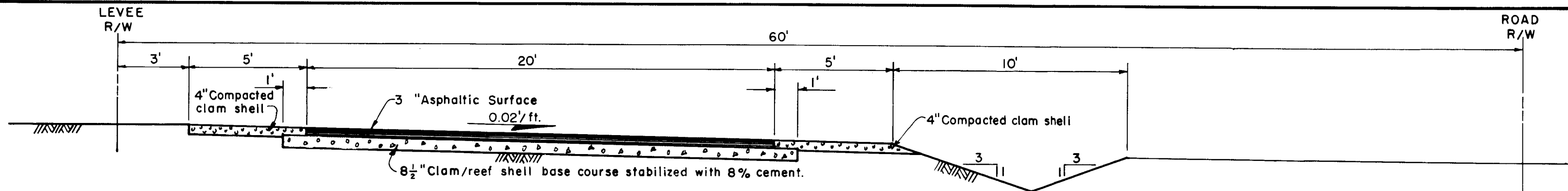
Approximate Scale: 1" = 200'

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 PROJECT PLAN
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648

REVISED 6/2

PLATE 5

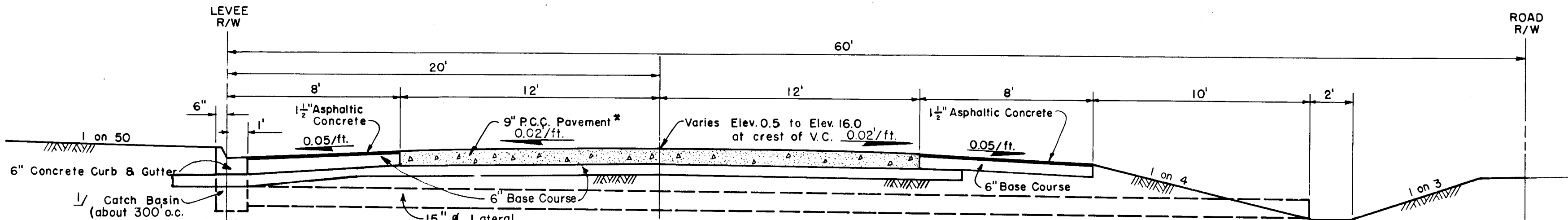
Incl 8



TYPICAL SECTION A-A

Sta. 3744 + 00 to 3752+00

SCALE: 1" = 4'



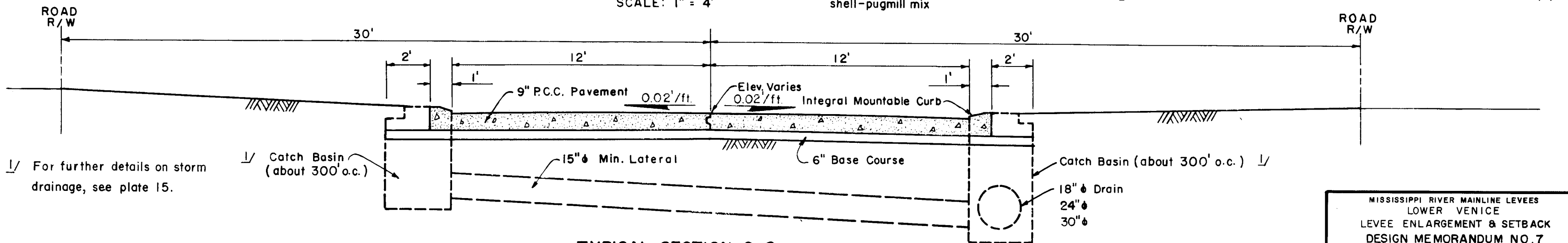
TYPICAL SECTION B-B

Sta. 3753+20 to 3771+80

SCALE: 1" = 4'

* Ramp 1 - Sta. 3763+30 to 3771+80, road surface will be 3 1/2" asphaltic surface; base course will be 8 1/2" shell-pugmill mix

No ditch within limits of Ramp No. 1
Ditch discharges into lateral ditches opposite catch basin cross over pipes.



TYPICAL SECTION C-C

Intersection with Hwy. 23 to Sta. 3753 + 20
Intersection with Hwy. 23 to beginning of Ramp No. 2 (Opposite Sta. 3791+01)

SCALE 1" = 4'



For further details on storm drainage, see plate 15.

Catch Basin (about 300' o.c.)

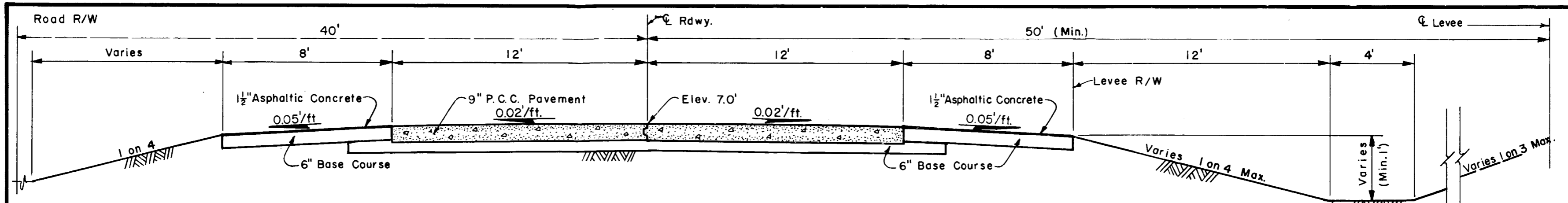
Catch Basin (about 300' o.c.)

18" ϕ Drain
24" ϕ
30" ϕ

MISSISSIPPI RIVER MAINLINE LEVEES
LOWER VENICE
LEVEE ENLARGEMENT & SETBACK
DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
TYPICAL SECTIONS-ROADS
U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS
JULY 1971 FILE NO. H-2-25648

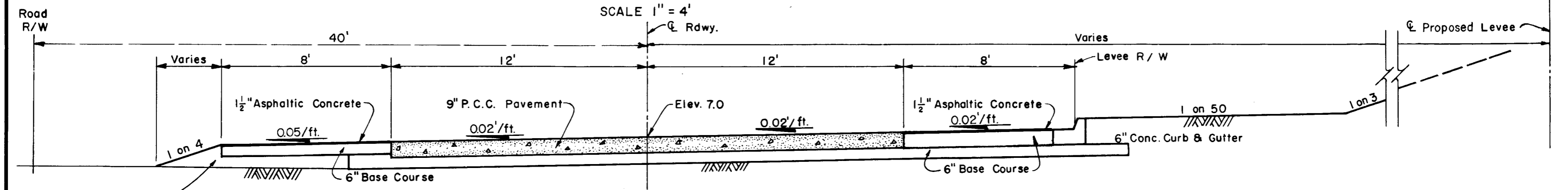
REVISED 6/72, 8/72 **PLATE 6**

Incl 23



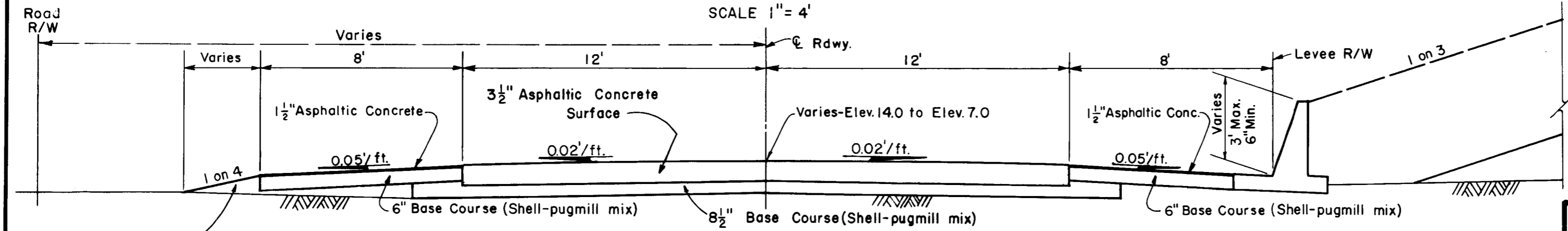
TYPICAL SECTION D-D

Sta. 3792+50 to Sta. 3801+30 (Sta. 3799+79 to 3801+30, Transition from 24' to 20' roadway)
 Ramp No. 2 (Opposite Sta. 3797+34 to 3797+78 (Intersection with "Tideland Road" Phase))



TYPICAL SECTION E-E

Sta. 3778+76 to 3792+50

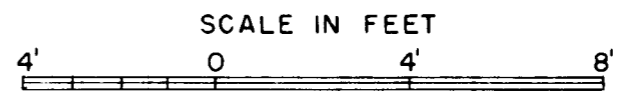


TYPICAL SECTION F-F

Ramp 1 - Sta. 3771+80 to 3778+76

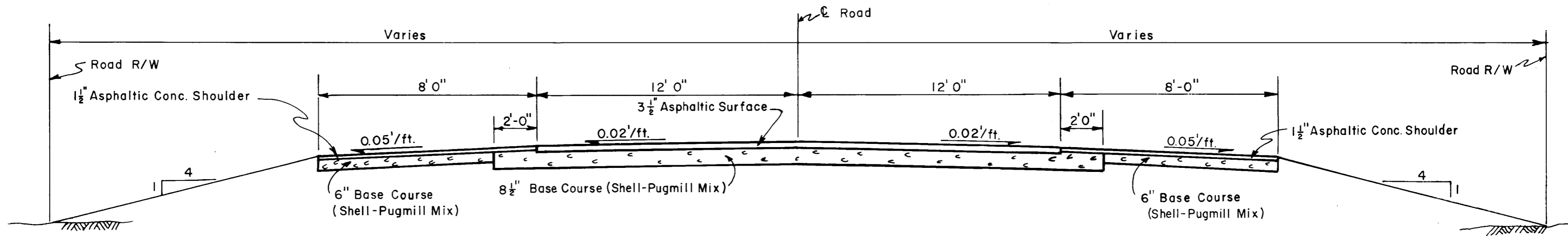
Not to Scale

NOTE:
 For detail of retaining wall, see plate no. 7A.



MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 TYPICAL SECTIONS-ROADS
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648

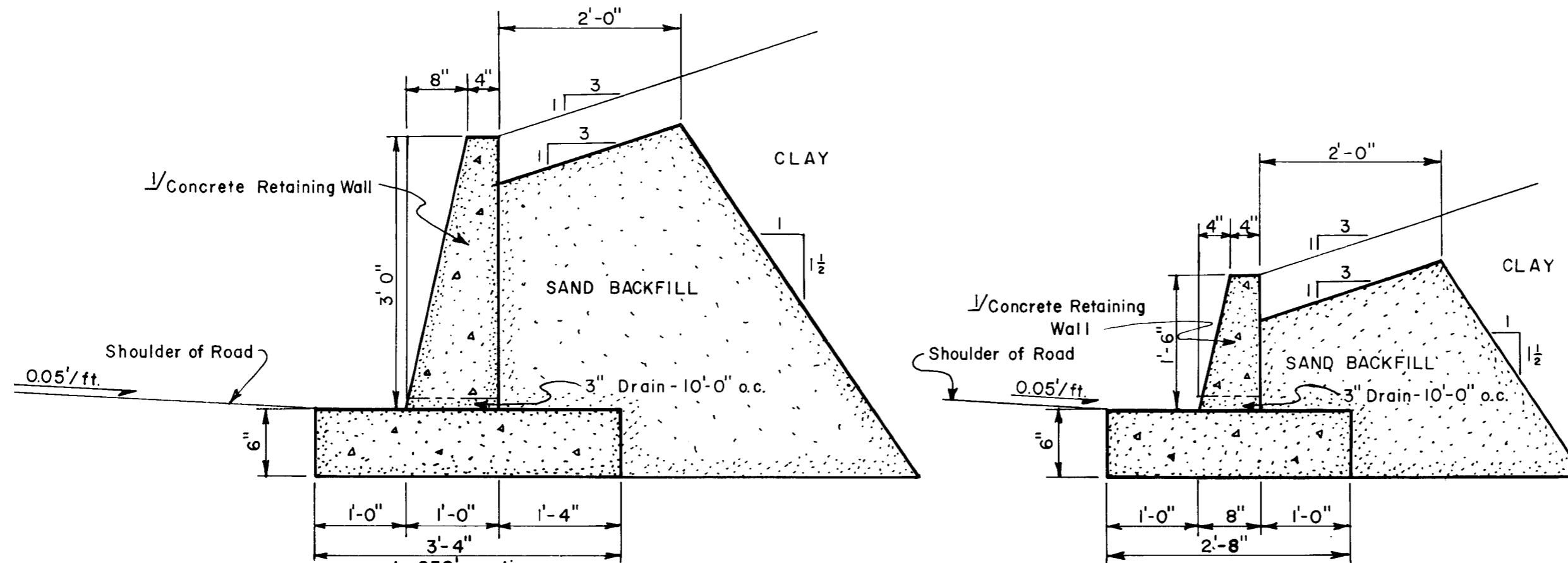
Incl 29



TYPICAL SECTION G-G

Ramp No. 2 (Opposite Sta. 3791+01 to 3797+34)

SCALE: 1" = 4'



RETAINING WALL - DETAIL CROSS-SECTION

SCALE: 3/4" = 1'

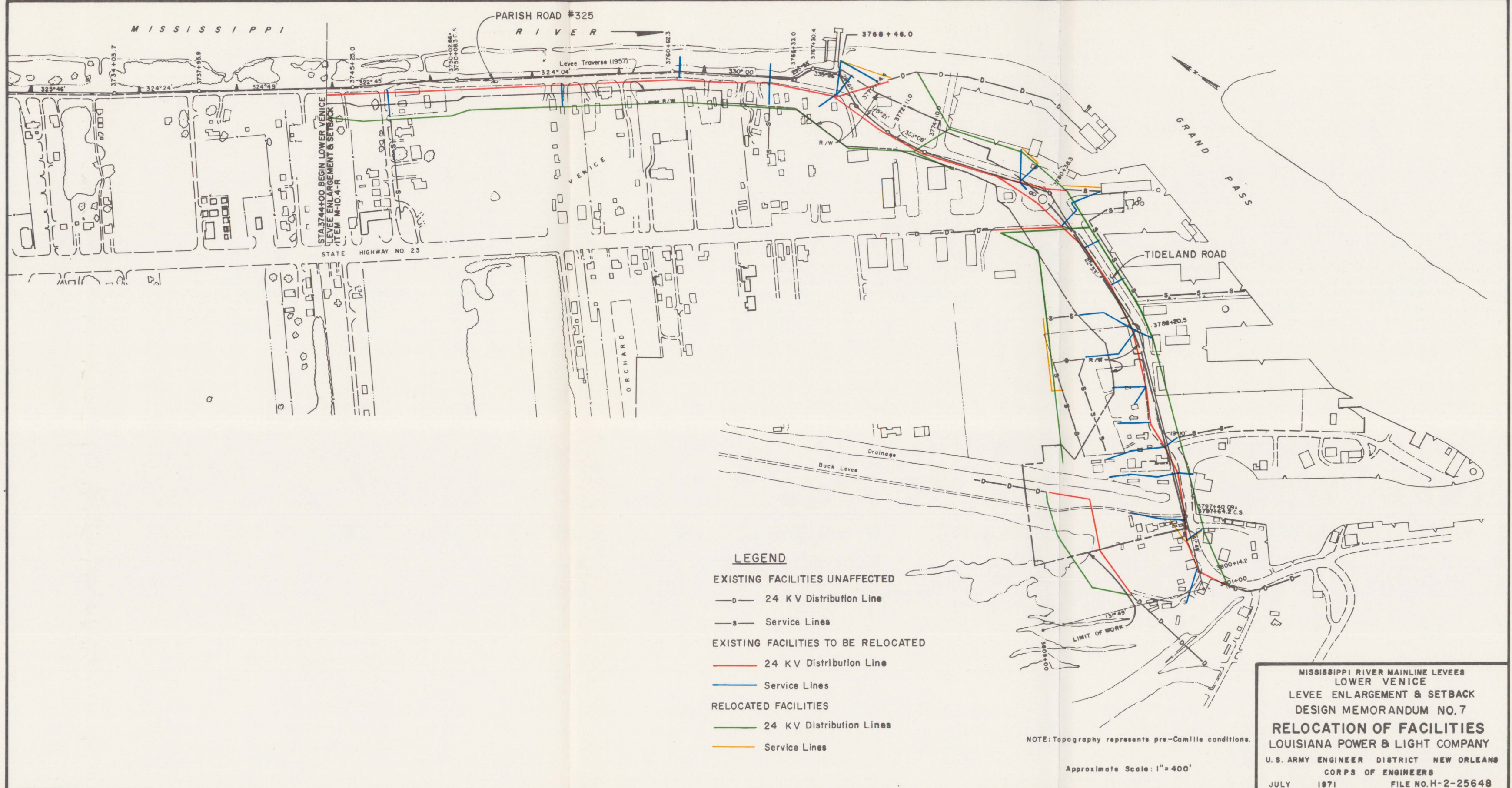
Steel reinforcement not shown, minimum steel will govern

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
 RELOCATION OF FACILITIES
 TYPICAL SECTIONS-ROADS
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1972 FILE NO. H-2-25648

REVISED 8/72

PLATE 7A

Incl 26



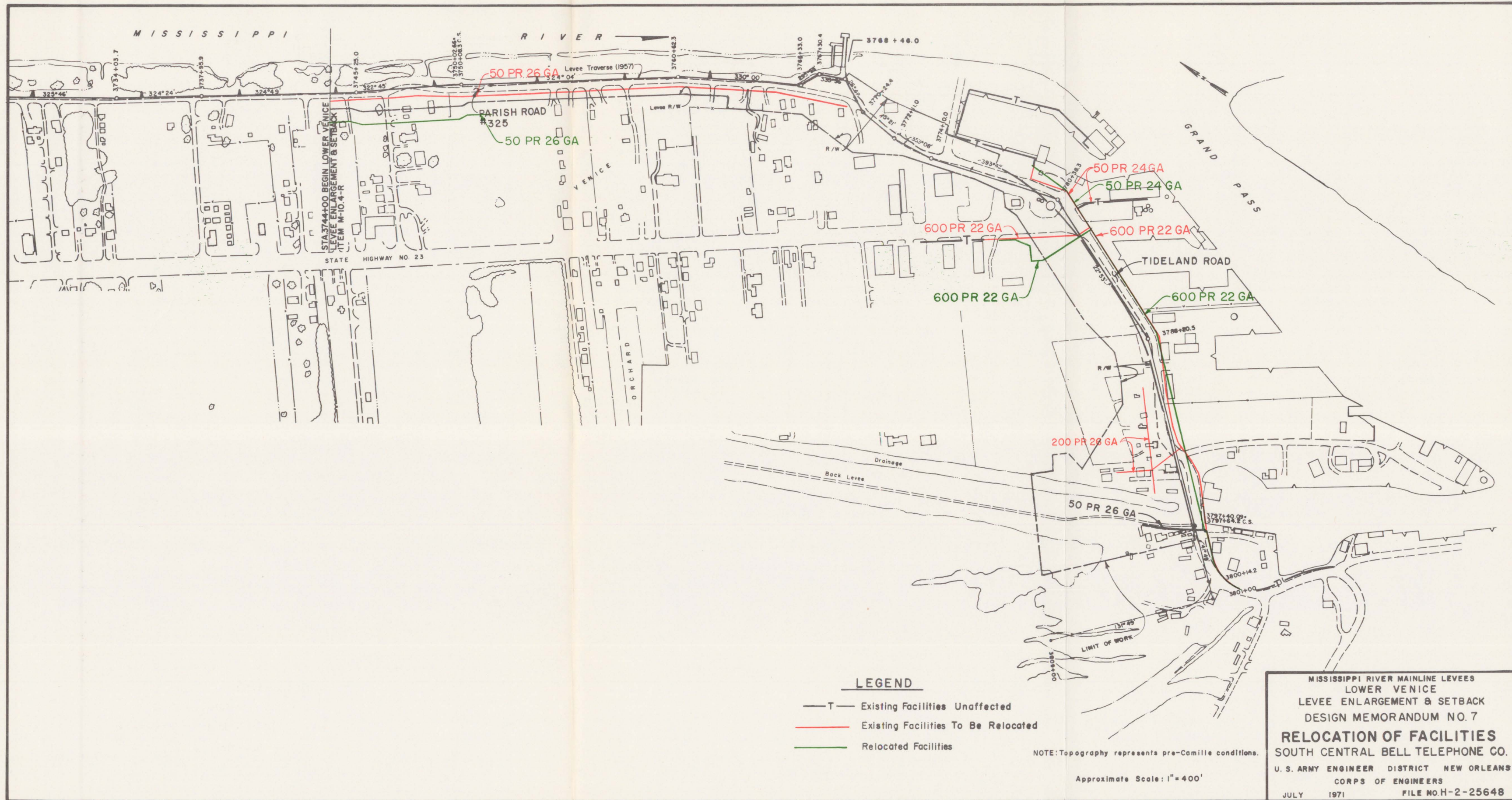
LEGEND

- EXISTING FACILITIES UNAFFECTED
 - d— 24 KV Distribution Line
 - s— Service Lines
- EXISTING FACILITIES TO BE RELOCATED
 - r— 24 KV Distribution Line
 - b— Service Lines
- RELOCATED FACILITIES
 - g— 24 KV Distribution Lines
 - o— Service Lines

NOTE: Topography represents pre-Camille conditions.
 Approximate Scale: 1" = 400'

MISSISSIPPI RIVER MAINLINE LEVES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 LOUISIANA POWER & LIGHT COMPANY
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648
 REVISED 6/72

Incl 9



LEGEND

- T — Existing Facilities Unaffected
- Existing Facilities To Be Relocated
- Relocated Facilities

NOTE: Topography represents pre-Camille conditions.

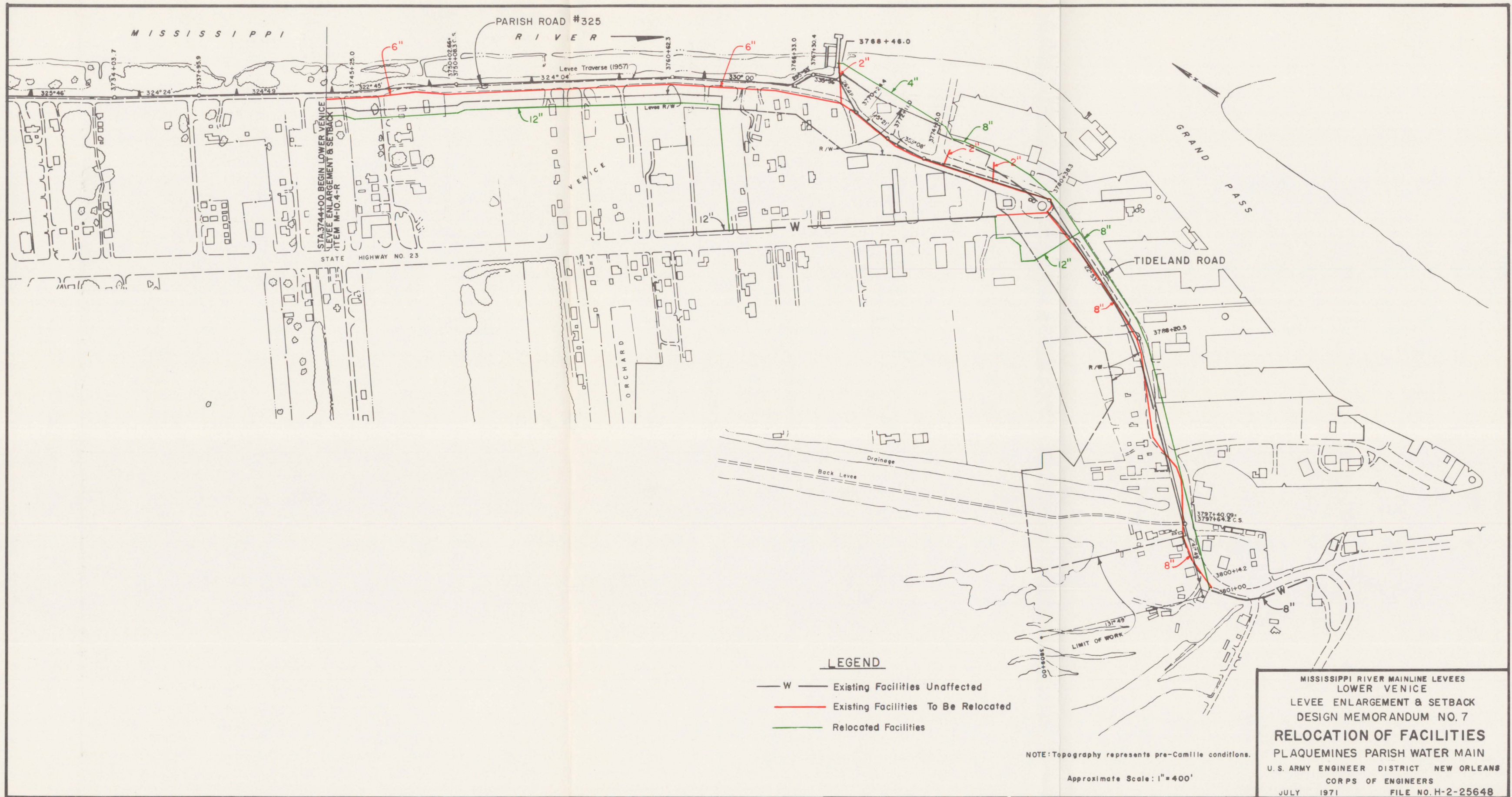
Approximate Scale: 1" = 400'

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 SOUTH CENTRAL BELL TELEPHONE CO.
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648

REVISED 6/72

PLATE 9

Incl 10



LEGEND

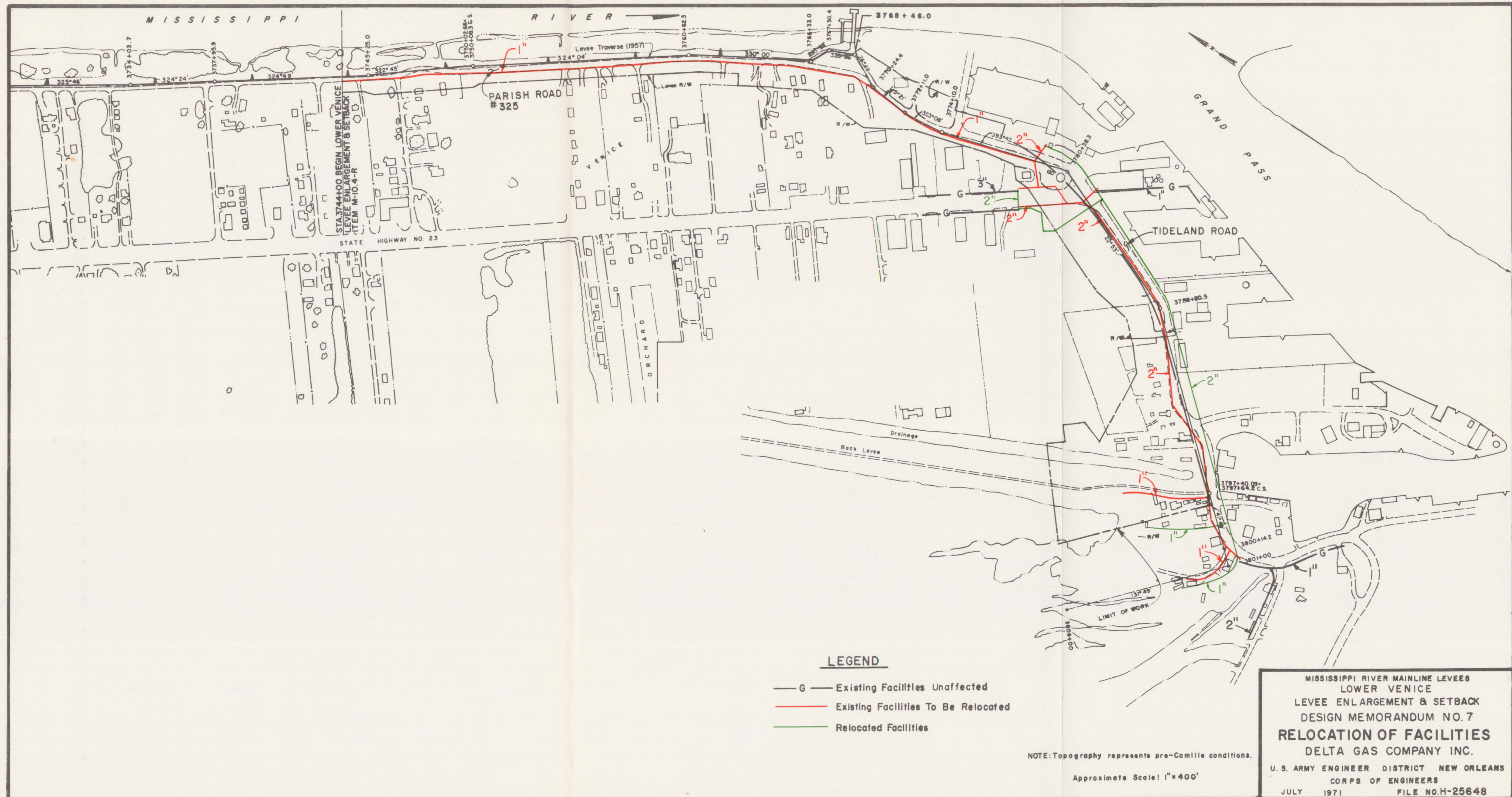
- W — Existing Facilities Unaffected
- Existing Facilities To Be Relocated
- Relocated Facilities

NOTE: Topography represents pre-Camille conditions.

Approximate Scale: 1" = 400'

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 PLAQUEMINES PARISH WATER MAIN
 U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648
 REVISED 6/72

Incl 11



LEGEND

- G — Existing Facilities Unaffected
- Existing Facilities To Be Relocated
- Relocated Facilities

NOTE: Topography represents pre-Camille conditions.

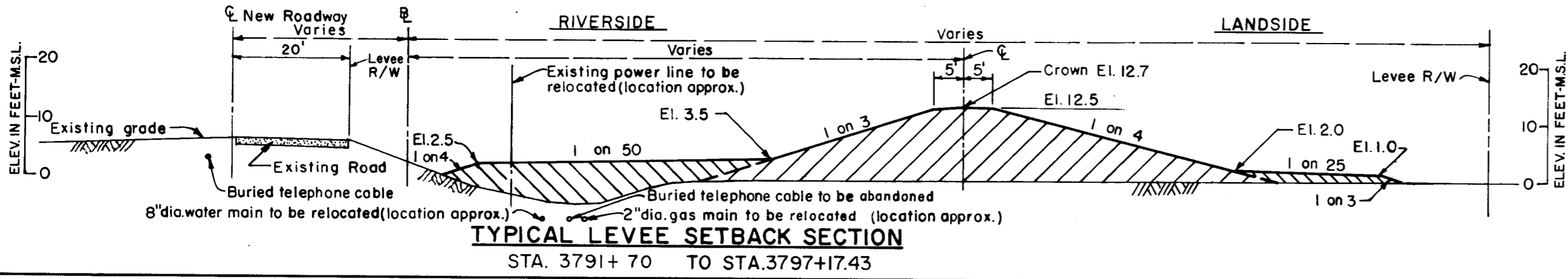
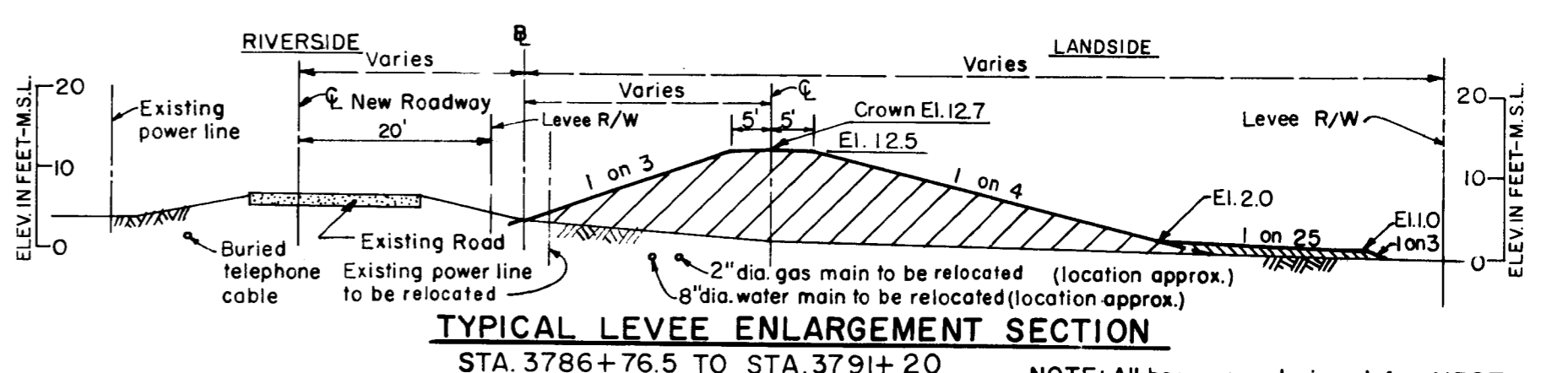
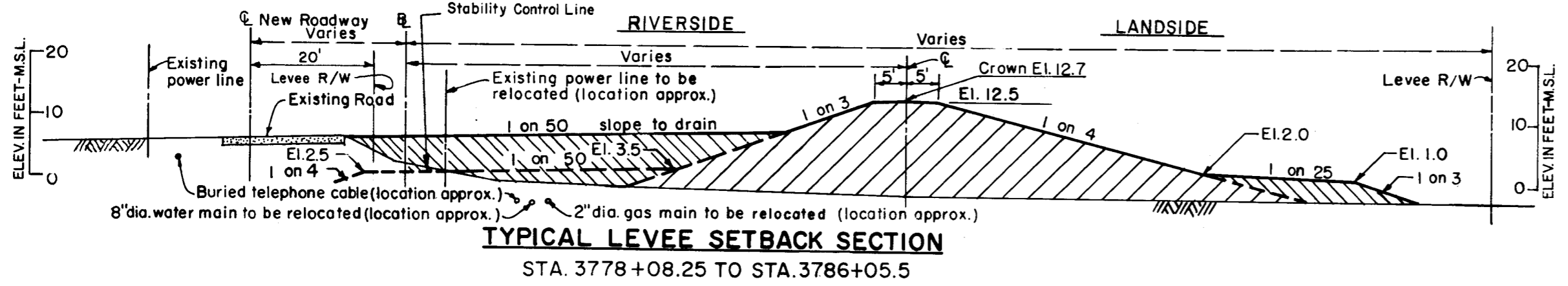
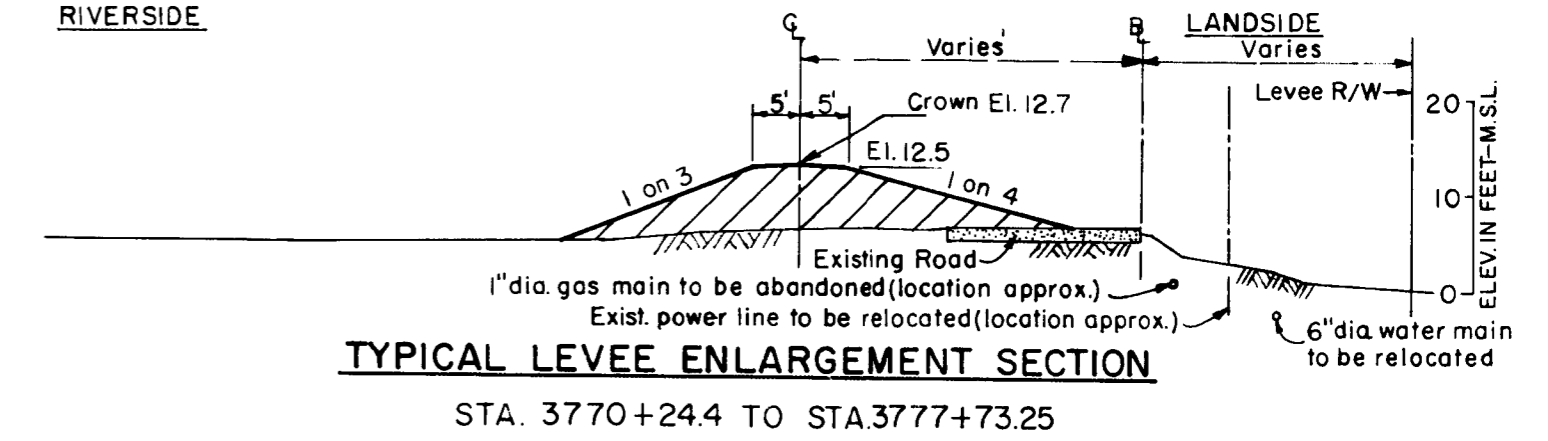
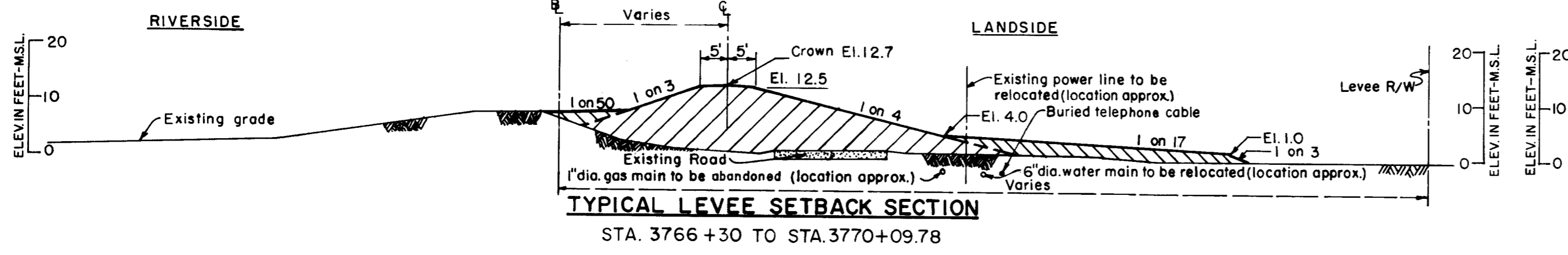
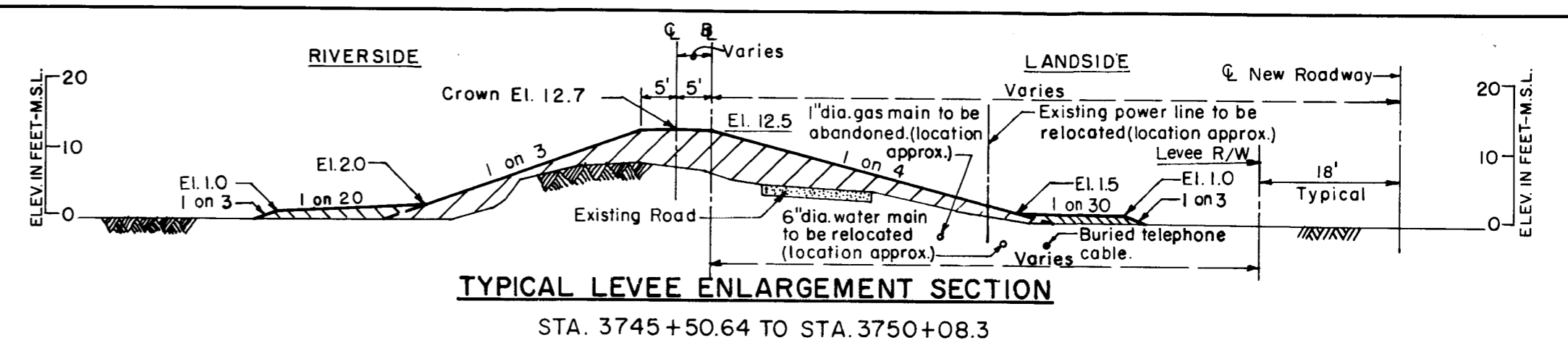
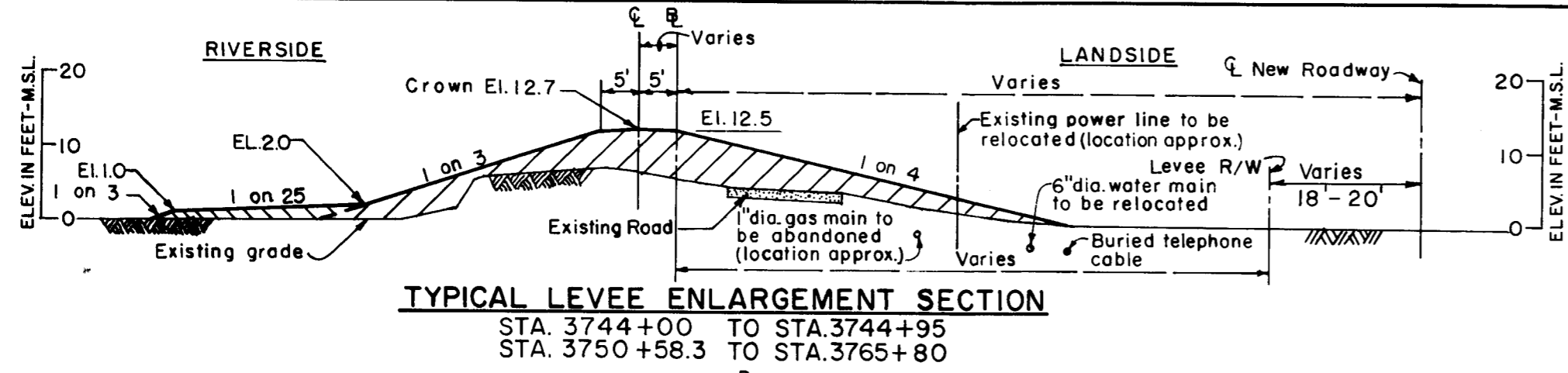
Approximate Scale: 1" = 400'

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 DELTA GAS COMPANY INC.
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-25648

REVISED 6/72

PLATE II

Incl 12



TRANSITIONS

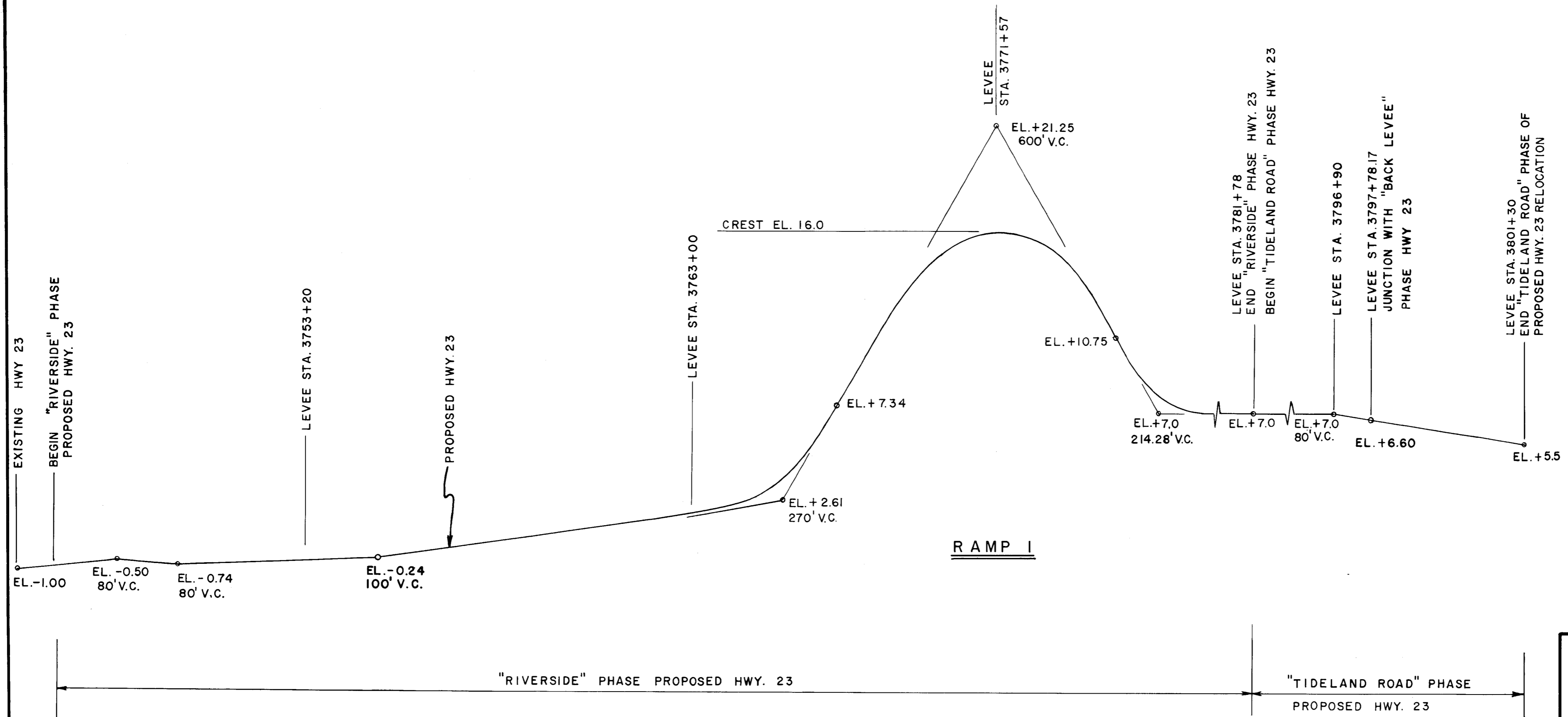
3744+95	3745+50.64
3750+08.3	3750+58.3
3765+80	3766+30
3770+09.78	3770+24.4
3777+73.25	3778+08.25
3786+05.5	3786+76.5
3791+20	3791+70

SCALE IN FEET
 20' 10' 0 20' 40'

NOTE: All berms are designed for MR&T grade. Larger riverside berms required due to constructing the levee with sufficient overbuild to compensate for settlement. All abandoned facilities which cross under the levee will be removed.

MISSISSIPPI RIVER MAINLINE LEVEES
 LOWER VENICE
 LEVEE ENLARGEMENT & SETBACK
 DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
 TYPICAL SECTIONS-LEVEES
 U. S. ARMY ENGINEER DISTRICT NEW ORLEANS
 CORPS OF ENGINEERS
 JULY 1971 FILE NO. H-2-25648

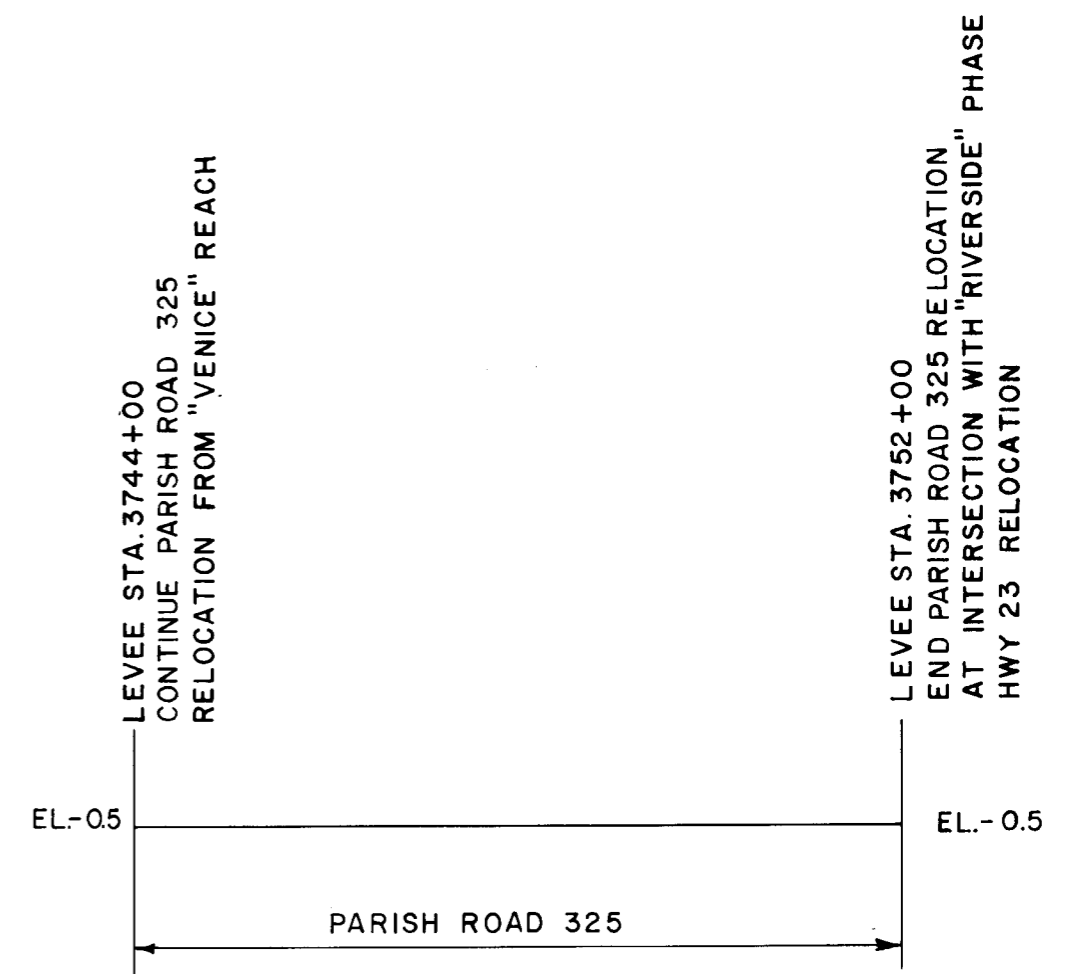
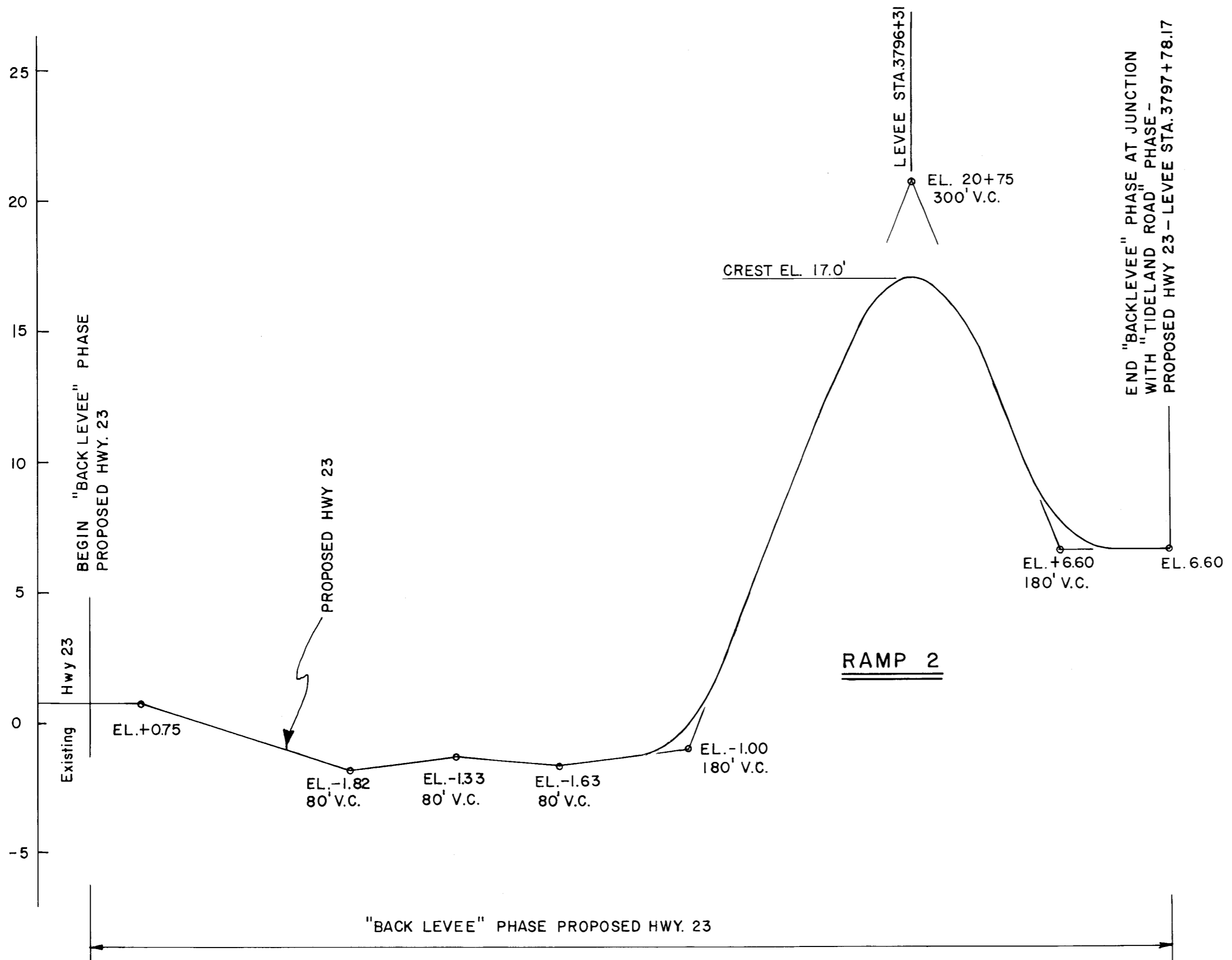
Inc 25



Scale 1" = 200' H
1" = 4' V

MISSISSIPPI RIVER MAINLINE LEVEES
LOWER VENICE
LEVEE ENLARGEMENT & SETBACK
DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
ROADS - PROFILES
U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS
JULY 1972 FILE NO. H-2-25648

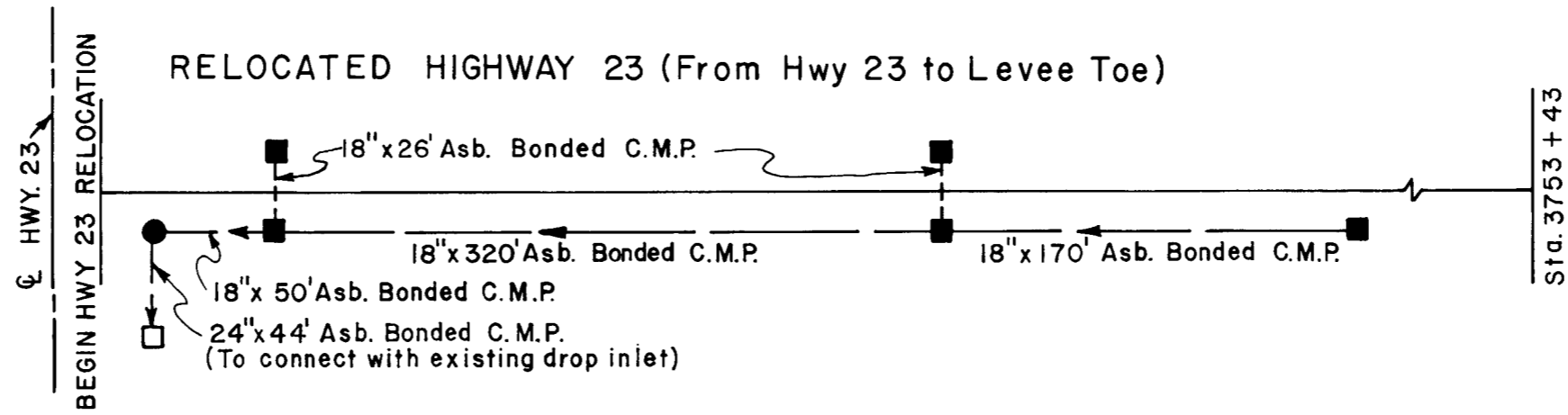
Incl 18



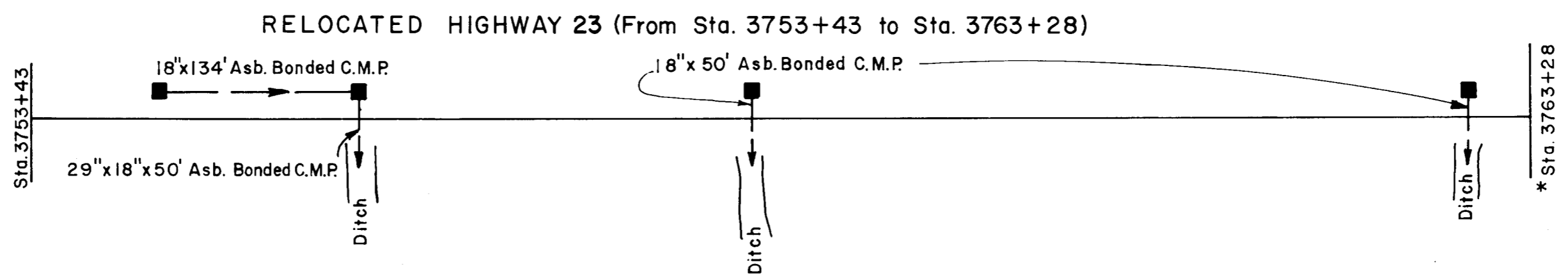
Scale 1" = 200'H
1" = 4'V

MISSISSIPPI RIVER MAINLINE LEVEES
LOWER VENICE
LEVEE ENLARGEMENT & SETBACK
DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
ROADS - PROFILES
U.S. ARMY ENGINEER DISTRICT NEW ORLEANS
CORPS OF ENGINEERS
JULY 1972 FILE NO. H-2-25648

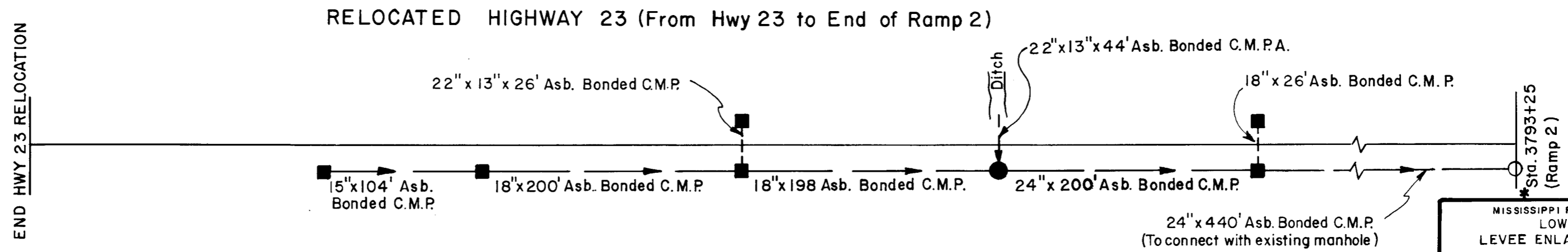
Incl 19



- Existing drop inlet
- Proposed catch basin
- Proposed manholes
- Existing manhole



*Between Sta. 3763+28 and Sta. 3793+25 no Storm Drain System.



In addition, 30"x90' Asb. Bonded C.M.P. at Sta. 3797+15.5 to provide drainage from landside to riverside of road.

MISSISSIPPI RIVER MAINLINE LEVEES
LOWER VENICE
LEVEE ENLARGEMENT & SETBACK
DESIGN MEMORANDUM NO. 7
RELOCATION OF FACILITIES
STORM DRAINAGE
U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
JULY 1972 FILE NO. H-2-25648

FLOOD CONTROL
MISSISSIPPI RIVER AND TRIBUTARIES
MISSISSIPPI RIVER LEVEES
ITEM M-10.4-R
LOWER VENICE LEVEE
ENLARGEMENT AND SETBACK
PLAQUEMINES PARISH, LOUISIANA
RELOCATION OF FACILITIES
DESIGN MEMORANDUM NO. 7

APPENDIX I
ATTORNEY'S REPORTS

ATTORNEY'S REPORT

SUBJECT: Attorney's Investigation and Report, relocation of the 6" water main with laterals, situated along the toe of the Mainline Levee for its entire length between Ft. Jackson and the Jump Settlement below Venice, Louisiana, and shown in subject Item M-14.9-R between levee stations 3445+26.8-3644+50.2, but what is said in this report relative to the ownership and compensable interest of Plaquemines Parish, Louisiana, in such 6" water main between the noted levee stations herein is likewise applicable to Plaquemines Parish's ownership and compensable interest in that entire water main running between Ft. Jackson and The Jump; and also the 18" sewerage discharge pipeline now located in and across the existing roadway and the existing levee at station 3587+13.8 in the Boothville Community, Item M-14.9-R Commander Levee Enlargement Right of Way, shown on advance copy of Map File No. H-8-25211, Sheets 1-4 of 4, dated January 1970, Mississippi River Levees, Buras Levee District, Corps of Engineers, U. S. Army, Office of the District Engineer, New Orleans, Louisiana, and pursuant to authority of DIVR 1110-2-1, 29 January 1968, and Flood Control Act of 15 May 1928, Public Law 70-391, Ch. 569, 45 Stat. 534, Title 33, Sections 702a-702m, U.S.C.A., as supplemented and amended. NOTE: Supplemental Report covering existing 4" gas main of Delta Gas, Incorporated, shown on subject map file, will be prepared on receipt of appropriate corporate organizational documents, permits for relocation of its line from abutting private landowners, its customer-consumers; and its, the gas company's, determination whether to relocate or abandon and not replace. (For permissible payment re abandonment, etc., see ER 1180-1-1, 1 Dec. 69, 73-209.3, UTILITIES, pages 7308-7310, and 73-700 - 73-704, pages 7335-7338, Part 7 - Relocations and Alterations Made Pursuant to Special Statutory Authority).

TO: District Engineer
U. S. Army Engineer District, New Orleans
New Orleans, Louisiana

An investigation and report, in accordance with DIVR 1110-2-2 and ER 1180-1-1, Section 73, Part 2, 73-203 and 73-204 (see above referenced 73-209.3 and 73-700 to 73-704), 1 Dec 69, of the legal obligations of the Government

Incl 16.

regarding affected facilities and determination of compensable interest of the PARISH OF PLAQUEMINES, STATE OF LOUISIANA, which is governed, conducted and operated under a governing authority known as the PLAQUEMINES PARISH COMMISSION COUNCIL, referred to as "PARISH COUNCIL," Pointe-a-la-Hache, Louisiana 70082, is hereby submitted by the undersigned RALPH E. HALLIBURTON, an attorney licensed to practice law in the State of Louisiana, and employed in the Real Estate Division of the U. S. Army Engineer District, New Orleans.

LEGAL OBLIGATION

Authority for subject levee enlargement is set forth in caption. DIVR 1110-2-1, 29 January 1968, page 2, at 4.b. Construction, Enlargement, or Improvement of Main Line Mississippi River Levees provides:

"Authority for construction, enlargement, or improvement of main line Mississippi River Levees, including berms, is contained in the Act of 15 May 1928 (PL 391, 70th Congress), as amended. The furnishing of right of way for levee foundations and levees on the main stem Mississippi River, except levee setbacks, is an obligation of local interests (see Section 3, Act of 15 May 1928). The replacement or relocation of public roads, highways, railroads, public utilities, and pipelines required for the construction of main line Mississippi River Levees will be accomplished at Federal expense (see correspondence referred to in para 2a above). Reimbursement of costs to local cooperating agencies in perfecting relocation of interfering facilities may be made pursuant to the Act of 23 April 1934 (PL 171, 73d Congress)."

DETERMINATION OF COMPENSABLE INTEREST

Plaquemines Parish, Louisiana, and the other political subdivisions and districts situated therein, including the Buras Levee District (see Sec. 1, Art. I, and Sec. 4, Art. II, of Charter, pages 1 and 5), as provided for by Section 3(d) of Article XIV (Act 631 of the 1960 Legislature), supplemented by Section 3(c) of Article XIV of the Louisiana Constitution, 1921, and by the applicable laws of the State of Louisiana and the Charter for Local Self-Government for Plaquemines Parish, Louisiana, is conducted and operated under a governing authority known as the PLAQUEMINES PARISH COMMISSION COUNCIL. Among the powers, not exclusive, of the Parish Council, set forth in Section 3 of Article II of the Charter, are number 10, the right of eminent domain to secure lands and property needed for public improvements in laying out of streets, roads — and the construction and repairing of — sewers and other needed repairs and improvements; number 13, maintain roads and streets dedicated for public use; number 15, regulate public health; number 17, provide sanitary and health requirements; number 19, to compel and regulate construction or use of cesspools, connections of properties with sewers and drains; and number 25, to regulate, control,

grant franchises to, or itself operate any public utilities. Sec. 4, Title II of the Charter, provides that the Parish Council shall succeed to all the jurisdictions, powers, duties and functions of the Plaquemines Parish Police Jury as governing authority of the Parish of Plaquemines and of other political subdivisions and districts therein, ---- including the Buras and the Grand Prairie Levee Districts ---- with the full authority as governing authority of said levee districts to appropriate property for levee and levee drainage purposes, as authorized by the State Constitution.

Personal investigation and inquiry, by the undersigned, on the ground, as to all facilities and improvements concerned herein, and, as to the background and history of subject road and highway, at the offices of the Department of Highways at Baton Rouge, Louisiana, all subsequently confirmed by letter, affidavit and other documentary proof, discloses, to quote an appropriate and reliable affidavit dated 25 June 1970, that:

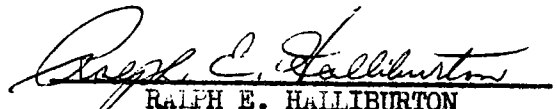
- "1) The road situated on the Mississippi River Levee from Ft. Jackson to Venice was constructed prior to the date that the U. S. Corps of Engineers assumed responsibility of the maintenance of the Mississippi River Levee and that this road has been continually maintained and improved either by Plaquemines Parish or State of Louisiana agencies since that date.
- "2) That the Parish of Plaquemines through its Police Jury, or its successor the Plaquemines Parish Commission Council, constructed in 1957, and continually maintained, a potable water line in a portion of this same road right of way; that said potable water line extends along the road right of way and is an integral part of the Parish of Plaquemines potable water distribution system, a portion of which extends along Louisiana Highway No. 23 with several intermediate connections to the line along the River Road between Ft. Jackson and Venice, all of which is on public right of way; that the water line extending along the Mississippi River Road is essential to the Maintenance of adequate water pressure and supply to the entire area; that said water line is still in use and operation and still owned and operated by the Parish of Plaquemines for service to the public of potable water.
- "3) That the Parish of Plaquemines constructed in 1968 and has continued in use and operation a sewerage discharge line over said road and levee area at approximate station 3587+13.8 in the Boothville Community."

In my earlier related Attorney's Reports dated respectively 6 November 1969 and 11 June 1970, covering "Gulftown Road," and State Highway 23 below New Orleans, Plaquemines Parish, the Parish's road acquisition is set forth in some detail, including recorded data for Louisiana Highway No. 23, along a portion of which is located subject water main referred to in the above quoted affidavit. However, as reported herein, both subject facilities are publicly owned and operated by the local Parish governing agency for the area where same are situated with the combined powers of other agencies to which it succeeded by vote and consent of the people of Plaquemines Parish and the resultant adoption of the Charter for Local Self-Government for Plaquemines Parish above described, such governing agency having, besides its numerous other powers and duties, the powers of both appropriation and condemnation. A corporate or body politic such as the present Plaquemines Parish Council having, particularly, the right of eminent domain would be deemed to possess a vested right in the right of way to be relocated, even without conventional negotiation for and acquisition of such required servitudes as was decreed in a long line of decisions by the Louisiana Supreme Court of which the following are examples. See St. Julian vs. Morgan's Louisiana & T. R. Co., 35th La. Ann. 924, Gumbel vs. New Orleans Terminal Company, 186 La. 882, 183 So. 212, Tate vs. Town of Ville Platte, 44 So. 2nd 360. In Tremont & G. R. Co. vs. Louisiana & A. R. Co. 128 La. 299, 54 So. 826, it was pointed out that in order that the public shall have the services of public utility corporations and that there shall be no interruption in their services a prescriptive period has been placed upon their expropriation proceedings whereby the owner is barred from objecting. In Gumbel vs. New Orleans Terminal it was held a proper exercise of the judicial function, and not judicial legislation, for the Courts to decide that, when a corporation has the right of eminent domain, the landowner waives his right to insist that the creation and exercise of the servitude be preceded by an expropriation proceeding and estops himself from asserting that right and restricts himself to a claim for damages or compensation when he fails to object to the actual exercise of a servitude for a purpose of public utility across his property, the Courts thereby applying laws as to eminent domain as pertinent instead of those as to servitudes. The rights by which the present water main and sewerage pipeline, wherever located on, over or across privately owned lands, are not such as may be terminated at the will of any private owner, same having long since been constructed under plans, consents and authorizations of the now same Parish Council in view of its merged powers which it succeeded to and acquired from the earlier separate appropriate agencies and districts, resulting in the facility having been constructed by itself with its own sanction and approval and without opposition of landowner. Tate vs. Town of Ville Platte (1950) declares that application of the doctrine of acquisition of servitude by unopposed use for public purpose, is not dependent on lapse of any specific prescriptive period, and even a brief period of occupancy and use of property by public utility, with knowledge, consent or acquiescence of landowner, will suffice to effectuate such doctrine in favor of a utility. Further, Tate vs Ville

Platte held that the rule that servitudes could only be acquired by written authorization by owner does not apply to one who claims servitude, having power of eminent domain and having actually used property with acquiescence of owner. And, continuing, that where owner, Tate, not only acquiesced in town's pipeline running on his property for many months without making objection thereto, but also gave verbal permission for it to be constructed, town using pipeline for distribution of natural gas acquired servitude although there was no written authorization by the owner, since town had right to exercise power of eminent domain. The Comptroller General's Decision B-134242, December 24, 1937, is in harmony with the above Louisiana holdings.

In view of the foregoing, together with other information in the matter obtained by and for me for use herein, it is my opinion that PLAQUEMINES PARISH, LOUISIANA, through its governing body and authority, PLAQUEMINES PARISH COMMISSION COUNCIL, usually referred to as "Parish Council," has an established compensable interest in the water main and sewerage discharge pipeline described in caption hereof, required by subject project to be relocated, in whole or in part, and that the United States is authorized and obligated to pay or reimburse for the relocations or alterations thereof, as required, to prevent interference therewith.

New Orleans, Louisiana
1 September 1970


RALPH E. HALLIBURTON
ATTORNEY
U. S. Army Engineer District,
New Orleans

20 January 1972

REVISED ATTORNEY'S REPORT

SUBJECT: Attorney's Investigation and Report covering the following facilities or improvements required to be relocated, modified or abandoned:

- a. Relocation of Louisiana State Highway 23 below New Orleans, Plaquemines Parish, Louisiana, between Stations 3197+00 and 3248+57.6, Item M-21.5-R, Childress Levee Enlargement Right of Way, shown on advance copy of Map File No. H-8-25269, Sheet 1 of 1, dated (blank), Mississippi River Levees, Buras Levee District, Corps of Engineers, U. S. Army, Office of the District Engineer, New Orleans, Louisiana;
- b. Powerlines owned by Louisiana Power & Light Company located between approximate levee stations 3197+00 - 3247+80, and 3204+40 - 3255+20. (Note portion located on batture between stations 3213+18.2 - 3246+90).
- c. Telephone lines or cables (aerial and buried) owned by South Central Bell Telephone Company, approximate stations 3232+35 - 3234+05, 3204+40 - 3245+15 and 3205+60 - 3213+19.
- d. Water mains and sewer lines owned by Plaquemines Parish, Louisiana, approximate levee stations 3202+80 - 3212+30; 3204+40 - 3213+19; and 3205+80 - 3257+15.44;
- e. Gas lines owned by Delta Gas, Inc., at approximate stations 3205+80 - 3216+20; 3216+20 - 3245+15; and 3245+15 - 3246+85.8; and
- f. Two water irrigation pipelines:
 1. Item C-1 (6-in. dia.) owned by Mr. George Pivach, Jr., Belle Chasse, La., which crosses levee at station 3232+40; and
 2. Item C-2 (8-in. dia.) owned by Mrs. Mary Lulich, Buras, La., which crosses levee at station 3242+44.

all pursuant to authority of DIVR 1110-2-1, 29 January 1968, and Flood Control Act of 15 May 1928, Public Law 70-391, Ch. 569, 45 Stat. 534, Title 33, Sections 702a - 702m, U.S.C.A., as supplemented and amended.

INC/ 17

TO: District Engineer
U. S. Army Engineer District, New Orleans
New Orleans, Louisiana

An investigation and report, in accordance with DIVR 1110-2-2, and ER 1180-1-1, Section 73, Part 2, 73-203 and 73-204, 1 Dec 69, of the legal obligations of the Government regarding affected facilities and determination of compensable interest of STATE OF LOUISIANA, DEPARTMENT OF HIGHWAYS, P. O. Box 44245, Capitol Station, Baton Rouge, Louisiana 70804, and the above captioned facilities, and the owners thereof, is hereby submitted by the undersigned, RALPH E. HALLIBURTON, an attorney licensed to practice law in the State of Louisiana, and employed in the Real Estate Division of the U. S. Army Engineer District, New Orleans.

LEGAL OBLIGATION

Authority for subject levee enlargement is set forth in caption, and the relocation of the interfering facilities is authorized in accordance with DIVR 1110-2-1, 29 January 1968, page 2, at 4.b. Construction, Enlargement, or Improvement of Main Line Mississippi River Levees, which provides:

"Authority for construction, enlargement, or improvement of main line Mississippi River Levees, including berms, is contained in the Act of 15 May 1928 (PL 391, 70th Congress), as amended. The furnishing of right of way for levee foundations and levees on the main stem Mississippi River, except levee setbacks, is an obligation of local interests (see Section 3, Act of 15 May 1928). The replacement or relocation of public roads, highways, railroads, public utilities, and pipelines required for the construction of main line Mississippi River Levees will be accomplished at Federal expense (see correspondence referred to in para 2a above). Reimbursement of costs to local cooperating agencies in perfecting relocation of interfering facilities may be made pursuant to the Act of 23 April 1934 (PL 171, 73d Congress)."

DETERMINATION OF COMPENSABLE INTEREST OF THE OWNERS OF THE SUBJECT FACILITIES SET FORTH IN CAPTION

a. LOUISIANA STATE HIGHWAY 23 - Department of Highways, State of Louisiana.

The Department of Highways, State of Louisiana, was created by Act 4 of 1942, Louisiana Revised Statutes, Title 48, Section 11. The said creating act gives the Department the right of Eminent Domain (expropriation), L.R.S. 48:217 and 218. Louisiana Constitution, 1921, Art. 6, Sec. 19, authorizes acquisition of rights of way for highways by expropriation or otherwise. As held in HORNSBY v. STATE DEPARTMENT OF HIGHWAYS, 241 La.

989, 132 So. 2d 871, (1961) the Highway Department, likewise, for certain purposes, under La. Civil Code, Arts. 665, 707, may also appropriate land required on the shores of navigable rivers. The Act of 1942, as amended, established (at PART XI, STATE HIGHWAY SYSTEM, R.S. 48:191) a system of state highways consisting of Class A Highways, or a Primary System; Class B Highways, or a Secondary System; and Class C Highways, or a Farm-to-Market System. Subject Louisiana State Highway 23, in said Act R.S. 48-191, is classified and included in the States Primary Systems' Class "A" highway descriptions, as follows: "LA 23 - From a point on the right descending bank of the Mississippi River at or near Venice through or near Buras, Port Sulphur and Gretna to a junction with LA-US 90 at or near New Orleans."

Highway rights of way easements (servitudes) were acquired for subject Louisiana No. 23, beginning in 1923, from the abutting landowners by the Parish of Plaquemines, and later by the Department of Highways in 1937, 1938 (La. Highway Commission prior to 1942), 1953 and 1956. All such servitude acquisitions are locally recorded, i.e., in Plaquemines Parish, Louisiana. Examples so recorded are the following:

<u>Easement Dated</u>	<u>Recorded in Conv. Book</u>	<u>Page</u>
5/16/23	23	189
3/21/37	84	65
3/21/37	84	66
3/29/37	84	74
5/31/37	85	150
10/10/38	92	192
10/12/38	92	196
10/12/38	92	197
10/10/38	92	202
1/16/56	188	368

In view of the foregoing, together with other information in the matter obtained by and for me for use herein, it is my opinion that the State of Louisiana, Department of Highways, has an established compensable interest in Louisiana State Highway No. 23, required by subject project to be relocated in part, and that the United States is authorized and obligated to pay or reimburse for the relocations or alterations thereof, as required, to prevent interference therewith.

Continuing in the order indicated in caption hereof, compensable interest is considered or reported on b. and c.:

The powers and authority of Louisiana Power and Light Company, b. herein, which were earlier set out in this Attorney's Report dated 26 September 1970, being a Supplemental Report to the original, dated 23 September 1970, (for Buras Levee Setback, Item M-25.0-R), for completeness hereof, as directed, is reiterated in part as follows:

b.
COMPENSABLE INTEREST
OF
LOUISIANA POWER & LIGHT COMPANY
a Florida corporation domiciled at Tallahassee

By letter of 23 September 1970 Louisiana Power & Light Company, 1001 Virgil Street, Gretna, Louisiana 70053, through its Assistant Right of Way Agent, Donald E. Kern, furnished this office xerox copy of a Certificate and Qualification and Good Standing, dated 7 September 1967, signed by Wade O. Martin, Secretary of State of the State of Louisiana.

A corporation having the right of eminent domain, as does Louisiana Power & Light Company, as well as South Central Bell Telephone Company, discussed next below, with legal authorities applicable to both utilities, acquires a vested real interest in its right of way by unopposed use. This is the situation here absent formal right of way permits. Also, wherever its line right of way crosses or is located within the present existing levee right of way relief may be granted it for the cost of labor relocation by the following ER 1180-1-1, 1 Dec. 69, Part 7 - Relocation and Alterations Made Pursuant to Special Statutory Authority:

73-701 Lack of Compensable Interest - Civil Works. Where a public utility will be destroyed or damaged due to operation of a civil works project and relocation or alteration of the facility is required to continue service to the public, the Government may assume the cost of relocating or altering the facility (but not the cost for a new right-of-way) when, in fact, the utility owner is not presently vested with a compensable interest in the existing right-of-way. Negotiations with utility owners in accordance with the foregoing is authorized under Section 2, Flood Control Act of 1938, (52 Stat. 1215; 33 U.S.C. 701c-1). (See Comp. Gen. Decision B-134242, 24 Dec 1957).

Accordingly, Louisiana Power & Light Company, to the extent and for the reasons set forth below relative to South Central Bell Telephone Company, and qualified, (as to that utility), particularly the qualification regarding "batture", has a compensable interest in its presently existing right of way, and to its facilities located thereon, which are located outside of the existing levee right of way, it having acquired same by both negotiated conventional right of way servitude obtained from the said granting landowners, and from the remaining landowners by unopposed use. As to such rights of way, cost of removal and new locations may be furnished at Government cost. The acquisition of new rights of way in lieu of those now situated within the levee right of way will be the obligation of the utility company which it perhaps may acquire in the manner by which its facilities were previously installed. To sum up, all labor costs incurred in subject item by Louisiana Power & Light

Company is obliged to be paid by the United States. New rights of way expense may only be borne by the Government to replace such as are now outside of the present levee right of way.

c.
COMPENSABLE INTEREST
OF
SOUTH CENTRAL BELL TELEPHONE COMPANY
(Formerly South Central Telephone Co.,
and Successor to
Southern Bell Telephone & Telegraph Co.)

By letter of 24 August 1970, South Central Bell Telephone Company, through G. E. Orr, Jr., District Engineer, 1010 Hancock Street, Gretna, Louisiana 70053, furnished Plaquemines Parish Commission Council, Governing Body of Plaquemines Parish, Louisiana, copies of certificates, permits, servitudes (easements) and related documents in order to substantiate its lawful claim to its various facilities and the rights of way therefor. Among the furnished documents were:

1. Certificates of the Secretary of State, State of Louisiana, dated 19 August 1970, showing that South Central Bell Telephone Company, a Delaware Corporation, had filed copy of its Articles of Incorporation in his office and had qualified to do business in the State of Louisiana.

2. Affidavit by G. E. Orr, Jr., District Engineer, dated 14 August 1970, claiming for the telephone company, having the right of eminent domain, a compensable property interest in all other telephone plant not on existing public right-of-way [as modified by the above referred to letter of 24 August].

Telephone companies have the right of eminent domain, L.R.S. 19:2 and 45:781, but the latter statute expressly provides that, [the company] "...shall not impede the full use of the highways, navigable waters, or the drainage or natural servitudes of the land over which the right of way may be exercised...." R.S. 45:781.

For the area outside of the levee right of way, in, on or over which it cannot obtain a vested real right adverse to the public, South Central Bell Telephone Co., being a corporation with the right of eminent domain would be deemed to possess a vested right in the right of way to be re-located, even without conventional negotiation for and acquisition of such required servitudes, as was decreed in a long line of decisions by the Louisiana Supreme Court, of which the following are examples. See St. Julian vs. Morgan's Louisiana & T. R. Co., 35th La. Ann. 924, Gumbel vs. New Orleans Terminal Company, 186 La. 882, 183 So. 212, Tate vs.

Town of Ville Platte, 44 So. 2nd 360. In Tremont & G. R. Co. vs. Louisiana & A. R. Co., 128 La. 299, 54 So. 826, it was pointed out that in order that the public shall have the services of public utility corporations and that there shall be no interruption in their services a prescriptive period has been placed upon their expropriation proceedings whereby the owner is barred from objecting. In Gumbel vs. New Orleans Terminal it was held a proper exercise of the judicial function, and not judicial legislation, for the Courts to decide that, when a corporation has the right of eminent domain, the landowner waives his right to insist that the creation and exercise of the servitude be preceded by an expropriation proceeding and estops himself from asserting that right and restricts himself to a claim for damages or compensation when he fails to object to the actual exercise of a servitude for a purpose of public utility across his property, the Courts thereby applying laws as to eminent domain as pertinent instead of those as to servitudes. The rights by which the present telephone facilities, wherever located on, over or across privately owned lands, are not such as may be terminated at the will of any private owner, same having long since been constructed with visible notice that it is claiming a servitude of right-of-way and without opposition of landowner. Tate vs. Town of Ville Platte (1950) declares that application of the doctrine of acquisition of servitude by unopposed use for public purpose, is not dependent on lapse of any specific prescriptive period, and even a brief period of occupancy and use of property by public utility, with knowledge, consent or acquiescence of landowner, will suffice to effectuate such doctrine in favor of a utility. Further, Tate vs. Ville Platte held that the rule that servitudes could only be acquired by written authorization by owner does not apply to one who claims servitude, having power of eminent domain and having actually used property with acquiescence of owner. And, continuing, that where owner, Tate, not only acquiesced in town's pipeline running on his property for many months without making objection thereto, but also gave verbal permission for it to be constructed, town using pipeline for distribution of natural gas acquired servitude although there was no written authorization by the owner, since town had right to exercise power of eminent domain. The Comptroller General's Decision B-134242, December 24, 1937, is in harmony with the above Louisiana holdings.

It is understood that Engineering Division, on the ground, will determine the extent of conflict between existing cables and other facilities and lines of said telephone company, and of the Louisiana Power and Light Company, as presently located along or across the existing levee or across land which actually constitutes batture.

To constitute "batture" such lands must meet the requirements of the legal definition thereof.

The legal definitions of alluvion, as distinguished from batture, are appropriate and follow:

Alluvion is that which is added to land little by little so that it can not be known how much is added at each moment of time. Livingston v. Heerman, 9 Mart. (O.S.) 656. It is defined by the Louisiana Civil Code, at Art. 509: "The accretions, which are formed successively and imperceptibly to any soil situated on the shore of a river or other stream, are called alluvion. The alluvion belongs to the owner of the soil situated on the edge of the water, whether it be a river or stream, and whether the same be navigable or not, who is bound to leave public that portion of the bank which is required by law for public use." Civil Code Article 510 continues: "The same rule applies to derelictions formed by running water retiring imperceptibly from one of its shores and encroaching on the other; the owner of the land adjoining the shore which is left dry, has a right to the dereliction, nor can the owner of the opposite shore claim the land which he has lost. This right does not take place in case of derelictions of the sea."

Batture is that part of river bed which is uncovered at time of low water, but is covered annually at time of ordinary high water; when it ceases to be covered at time of ordinary high water, it ceases to be batture and becomes bank of river. Boyce Cottonseed Oil Mfg. Co. v. Board of Comrs. of Red River, A. & B. B. Levee Dist., 160 La. 727, 107 So. 506. See also Leonard's Heirs v. Baton Rouge, 39 La. Ann. 275, 4 So. 241; Ward v. Board of Levee Comrs. of Orleans Levee Dist., 152 La. 158, 92 So. 769. Whether the accretion be alluvion or batture it belongs to the riparian owner. See Seibert v. Conservation Comm., 181 La. 237, 159 So. 375, which held that sand and gravel bar adjacent to shore and which was proved by lay testimony to be above water level during low stages of the river constitutes alluvion or batture which belongs to the riparian owner. In accordance with Boyce Cottonseed Oil v. Levee District, and other cases cited above, batture which no longer is covered annually at time of ordinary high water ceases to be batture and becomes bank of river. Consequently, land which may have been added to the other property of the owner adjoining the shore, but which accretion being of sufficient elevation to escape being covered annually at time of ordinary high water, must be treated as any other land of owner forming the bank of river, and, although such land, under Louisiana law, be subject to a servitude in favor of the public for levee purposes, such high land is not batture subject to use by the state, or its agencies, for levee purposes without compensation as prescribed by La. Const. 1921, Art. XVI, Sec. 6-LSA, which states, in part:

"Sec. 6. Compensation for property used or destroyed; tax

Section 6. Lands and improvements thereon hereafter actually used or destroyed for levees or levee drainage purposes , shall be paid for at a price not to exceed the assessed value of the preceding year; provided, that this shall not apply to batture nor to property the control of which is vested in the State or any

subdivision thereof for the purpose of commerce;
. . . ." (Emphasis mine)

As was stated in PRUYN v. NELSON BROS., 180 La. 760, at 765:

"The law is clear that all landed proprietors, whose property is adjacent to a navigable stream, hold it subject to certain conditions imposed for the common utility or public welfare. Dubose v. Levee Commissioners, 11 La. Ann. 165; Zenor v. Parish of Concordia, 7 La. Ann. 150; Cubbins v. Mississippi River Commission, 241 U. S. 351, 36 S. Ct. 671, 60 L. Ed. 1041; Mailhot v. Pugh, 30 La. Ann. 1359; Egan v. Hart, 45 La. Ann. 1358, 14 So. 244; In re Bass v. State, 34 La. Ann. 494.

"The batture as well as the riparian property along the Mississippi river is subject to a servitude for the building and repairing of levees, and this servitude is in favor of the public. R.C.C. arts. 453 and 665; Bass v. State, 34 La. Ann. 494; Peart v. President of Red River, A. & B. B. Levee District, 45 La. Ann. 421, 12 So. 490; Stevens v. Walker, 15 La. Ann. 577.

"Previous to the year 1921, no compensation was due the riparian owner when the servitude was legally exercised on the riparian property, and even now compensation is not due when the servitude is validly exercised on the batture by the proper authority for levee purposes. Const. 1921, art. 16, § 6."

In the case of Mrs. Mattie Mayer v. Board of Commissioners for Caddo Levee District, 177 La. 1119, 150 So. 295, 296, a consideration of the meaning of this section and article of the Constitution was considered and the Court said:

"Lands and improvements thereon hereafter actually used or destroyed for levees or levee drainage purposes shall be paid for at a price not to exceed the assessed value for the preceding year; provided, this shall not apply to batture, nor to property control of which is vested in the State or any subdivision thereof for the purpose of commerce * * *

"This shall not prevent the appropriation of said property before payment.

"The law imposes a servitude for the common utility on lands abutting navigable streams for the construction and repair of levees, roads, and other purposes. Civ. Code, art. 665. The principle recognized by the cited article of the Code is of ancient origin. Morgan v. Livingston, 6 Mart. (O.S.) 19, 235, 236; Ruch v. New Orleans, 43 La. Ann. 275, 9 So. 473; Eldridge v. Trezevant, 160 U. S. 452, 463, 16 S. Ct. 345, 40 L. Ed. 490
* * * "

In the Louisiana landmark case of General Box Company v. United States of

America, 351 U.S. 159, 76 S. Ct. 728, 100 L. Ed. 778, denying payment for timber destroyed for levee purposes, which had been growing on land unquestionably batture, the court held that where the Louisiana Levee Board correctly exercised, for itself and for United States, riparian servitude upon the tracts there in question, compensation, if any, for standing timber destroyed on right of way by United States through its contractors was to be determined by Louisiana law relative to the servitude.

Hence, in the situation involving any facilities belonging to Louisiana Power & Light Company and to South Central Bell Telephone Company, if they be situated over, on or under land which, although belonging to the riparian owner is merely part of the bank of the river and not on land constituting "batture," then such utility company will have acquired a compensable interest by virtue of permit, grant, unopposed use (coupled with the utility company's right of expropriation), OR, if the land be "batture" which has been, or may be, appropriated for levee building purposes which will involve no payment whatever therefor, the utility cannot be deemed to possess a compensable interest and can be paid or reimbursed for its relocation only by virtue of Congressional authority, Sec. 2 of the Flood Control Act of 1938, which, as in all such cases of Federal payment dependent upon such act, will not include the cost of new right-of-way as is provided in ER 1180-1-1, 1 Dec 69, Part 7 - Relocations and Alterations Made Pursuant to Special Statutory Authority, which makes the following provision for public utilities lacking compensable interest:

"73-701 Lack of Compensable Interest - Civil Works. Where a public utility will be destroyed or damaged due to operation of a civil works project and relocation or alteration of the facility is required to continue service to the public, the Government may assume the cost of relocating or altering the facility (but not the cost for a new right-of-way) when, in fact, the utility owner is not presently vested with a compensable interest in the existing right-of-way. Negotiations with utility owners in accordance with the foregoing is authorized under Section 2, Flood Control Act of 1938, (52 Stat. 1215; 33 U.S.C. 701-c). (See Comp. Gen. Decision B-134242, 24 Dec 1957)."

Based upon the foregoing, I am of the opinion that South Central Bell Telephone Company has a compensable interest in its easements (servitudes) or rights-of-way and in its facilities and improvements situated thereon, EXCEPT within the levee right-of-way, actual batture, and such portion of its other facilities directly installed under the permit(s) which it may have locally or from Louisiana Department of Public Works, and the United States, (which require alteration or removal at applicant's expense) required by subject project to be relocated to prevent interference therewith, and that the United States is authorized and obligated to pay or reimburse for such alterations or relocations.

d.
DETERMINATION OF COMPENSABLE INTEREST
Water Mains and Sewer Lines
Owned by PLAQUEMINES PARISH

Plaquemines Parish, Louisiana, and the other political subdivisions and districts situated therein, including the Buras Levee District (see Sec. 1, Art. I, and Sec. 4, Art. II, of Charter, pages 1 and 5), as provided for by Section 3(d) of Article XIV (Act 631 of the 1960 Legislature), supplemented by Section 3(c) of Article XIV of the Louisiana Constitution, 1921, and by the applicable laws of the State of Louisiana and the Charter for local Self-Government for Plaquemines Parish, Louisiana, is conducted and operated under a governing authority known as the PLAQUEMINES PARISH COMMISSION COUNCIL. Among the powers, not exclusive, of the Parish Council set forth in Section 3 of article II of the Charter, are: Number 10, the right of eminent domain to secure lands and property needed for public improvements in laying out of streets, roads ---- and the construction and repairing of ---- sewers and other needed repairs and improvements; Number 13, maintain roads and streets dedicated for public use; Number 15, regulated public health; Number 17, provide sanitary and health requirements; Number 19, to compel and regulate construction or use of cesspools, connections of properties with sewers and drains; and Number 25, to regulate, control, grant franchises to, or itself operate any public utilities. Sec. 4, Title II of the Charter, provides that the Parish Council shall succeed to all the jurisdictions, powers, duties and functions of the Plaquemines Parish Police Jury as governing authority of the Parish of Plaquemines and of other political subdivisions and districts therein, ---- including the Buras and Grand Prairie Levee Districts ---- with the full authority as governing authority of said levee districts to appropriate property for levee and levee drainage purposes, as authorized by the State Constitution.

Personal investigation and inquiry by the undersigned, on the ground, as to Plaquemines Parish owned facilities and improvements concerned herein, besides the background and history of roads and highways, inquiry at the offices of the Department of Highways at Baton Rouge, Louisiana, all subsequently confirmed by letter, affidavit and other documentary proof, discloses, to quote an appropriate and reliable affidavit dated 25 June 1970, that:

- "1) The road situated on the Mississippi River Levee from Ft. Jackson to Venice was constructed prior to the date that the U. S. Corps of Engineers assumed responsibility of the maintenance of the Mississippi River Levee and that this road has been continually maintained and improved either by Plaquemines Parish or State of Louisiana agencies since that date.

- "2. That the Parish of Plaquemines through its Police Jury, or its successor, the Plaquemines Parish Commission Council, constructed in 1957, and continually maintained, a potable water line in a portion of this same road right of way; that said potable water line extends along the road right of way and is an integral part of the Parish of Plaquemines potable water distribution system, a portion of which extends along Louisiana Highway No. 23 with several intermediate connections to the line along the River Road between Ft. Jackson and Venice, all of which is on public right of way; that the water line extending along the Mississippi River Road is essential to the maintenance of adequate water pressure and supply to the entire area; that said water line is still in use and operation and still owned and operated by the Parish of Plaquemines for service to the public of potable water.
- "3) That the Parish of Plaquemines constructed in 1968 and has continued in use and operation a sewerage discharge line over said road and levee area at approximate station 3587+13.8 in the Boothville Community."

As to the public nature, public use, and public ownership of these facilities, basically, no dispute has been seriously presented. The following Codal articles should suffice to establish that Plaquemines Parish is entitled to use the public servitude established and recognized by the effect of law. No known case in Louisiana has made a distinction between the relative rights of a levee board and the rights of the Police Jury, the governing body of a parish. All these river and levee servitudes are due the public, the people, the STATE (and the State has delegated the use of these rights to its agencies, but at the same time has retained the rights to itself insofar as might be required. See City of New Orleans vs. Board of Commissioners of Port of New Orleans, App. 1963, 148 So. 2d 782. Also, see the articles, shown below, which treat the subject of "CONFUSION" in law when the rights of the debtor and creditor merge into a single body or entity. Civil Code Articles 2217 and 805 state:

Of Confusion.

Art. 2217 (2215). Confusion Defined. When the qualities of debtor and creditor are united in the same person, there arises a confusion of right, which extinguishes the obligation.

Art. 805 (801). Union of the Two Estates; Extinction by Confusion. Every servitude is extinguished, when the estate to which it is due, and the estate owing it, are united in the same hands.

But it is necessary that the whole of the two estates should belong to the same owner; for if the owner of one estate only

acquires the other in part or in common with another person, confusion does not take effect.

Also, as determined in the above cited case of New Orleans vs. Port, 148 So. 2d 782, under the annotations to Civil Code Article 805:

Art. 805. Confusion

1. Construction and application

The board of commissioners of the port of New Orleans was not entitled to take part of bank of Mississippi river fronting on Audubon Park in city of New Orleans for purpose of constructing an upstream extension of wharf, on theory that as agent of state board had right to exercise right of servitude of use for purposes of commerce and navigation, where under acts property was owned by the state, and was not burdened by predial servitude which had been extinguished by confusion when the state ^{acquired} ownership of the park property. City of New Orleans v. Board of Com'rs of Port of New Orleans, App. 1963, 148 So.2d 782, writ refused 244 La. 204, 151 So.2d 493.

Also from the Civil Code, the following Articles are apt:

Art. 453. Public things are those, the property of which is vested in a whole nation, and the use of which is allowed to all the members of the nation; of this kind are * * * * the beds of rivers, as long as the same are covered with water.

Art. 455. * * * The use * * * of the banks of navigable rivers, * * * is public. * * * Nevertheless the ownership of the river banks belongs to those who possess the adjacent lands. * * *

Art. 457. * * * The banks of a river * * * are understood to be that which contains it in its ordinary state of high water; for the nature of the banks does not change, although for some cause they may be overflowed for a time.

Nevertheless on the borders of the Mississippi and other navigable streams, where there are levees, established according to law, the levees shall form the banks.

Art. 664. Servitudes

2. Banks of streams. Land in Louisiana bordering on a navigable stream is subject to the state law allowing the public to impose servitudes on such land without compensation for the making and repairing of levees, even though the title to the land is derived from the United States. Eldridge v. Trezevant, 1896, 160 U.S. 452, 40 L.Ed. 490, 16 S.Ct. 345.

Rural property along banks of Red river, at least before Const. 1921, owed public servitude for levees and roads. Powell v. Porter, 1931, 172 La. 681, 135 So. 24.

Road following levee along former bank of Red river, and used by public for over 60 years, held public road, if not by express, at least by tacit, dedication. Id.

The servitude given to the public upon the banks of navigable rivers or streams by Art. 455 is not necessarily confined to the definition of "banks." McKeen v. Kurfust, 1855, 10 La. Ann. 523.

The space to be left for roads and levees by riparian proprietors is a legal servitude, which purchasers are bound to know; and a judgment recognizing it does not authorize a refusal to pay the price. Bourg v. Niles, 1851, 6 La. Ann. 77.

The use of the banks of navigable rivers, is a servitude for the public use, or common utility; and every proprietor adjacent to the shores of a navigable river is bound to leave sufficient space for levees, roads [streets] and other public or common works. Hanson v. City Council of Lafayette, 1841, 18 La. 295.

No man or individual proprietor of the banks of a navigable river, can appropriate them exclusively to his own use, and at his pleasure construct levees, or erect buildings and works that will obstruct the free use of its banks to all men, although the right of property is in him as proprietor of the adjacent lands.

Federal Government had all powers possessed by state in location, survey and construction of levees and their maintenance and other improvements upon the Mississippi and its tributaries, and such agencies as might be selected and appointed by federal legislation for such purpose had full authority to locate, survey and trace out such works and could appropriate necessary lands for that purpose without having to resort to proceedings usually invoked for purpose of expropriating property for public use. Op. Atty. Gen. 1918-20, p. 584.

Art. 665. Legal public servitudes.

Art. 665. Servitudes imposed for the public or common utility, relate to the space which is to be left for the public use by the adjacent proprietors on the shores of navigable rivers, and for the making and repairing of levees, roads and other public or common works. [Emphasis supplied].

All that relates to this kind of servitude is determined by laws or particular regulations.

The Parish of Plaquemines was created by the Acts of the Territory of Orleans, of the year 1807, 2nd Session of 1st Legislature, Chap. 1, page 2, approved March 31, 1807. The government of the parish was by Police Jury, or its primitive form thereof. (The governing body - Police Jury - was actually called by that name beginning in the year 1811). Such governing body ---- which, by L.R.S. 33:1236, setting forth the powers of a police jury, at number (2) thereof, has, among many others, the power "To regulate the proportion and direction, the making and repairing of the roads, bridges, causeways, dikes, dams, LEVEES, and highways***" [emphasis mine] ---- continued to govern the Parish of Plaquemines until the adoption of the Charter form of Commission Council in 1960, pursuant to the State of Louisiana Constitutional authority (Article 14, Sec. 3d) adopted November 8, 1960.

The Buras Levee District was created by Act 18 of 1894. By specific section in the Parish Charter, Section 4, Article II, at page 5 of the printed Charter, provision is made for the assumption of jurisdiction, powers, duties and functions of various existing bodies and agencies of and situated in the Parish as follows:

"The Parish Council shall succeed to all the jurisdictions, powers, duties and functions of the Plaquemines Parish Police Jury as governing authority of the Parish of Plaquemines and other political subdivisions and districts therein, including the Buras Levee District and the Grand Prairie Levee District, with full authority as governing authority of said LEVEE DISTRICTS to APPROPRIATE properly for levee and levee drainage purposes, as authorized by the State Constitution." [Underscore and emphasis supplied].

According to information obtained by me from the President of the Plaquemines Parish Commission Council (in December 1971) the bonded indebtedness of the former Buras Levee District (having only a fictional legal existence for Constitutional requirements that its contracts cannot be abridged in this instance, and of outstanding indebtedness) has been ASSUMED by the Commission Council when the Charter was adopted.

The following is pertinent hereto:

"U.S. La. (1876). A levee board charged with the maintenance of levees within a certain district, when superseded in its functions by a law dividing the district and creating a new corporation for one portion, and placing the other under charge of the local authorities, ceases to exist, except so far as its existence is expressly continued for special objects,--such as settling up its indebtedness, etc.--Barkley v. Levee Com'rs of Louisiana, 93, U.S. 258, 23 L.Ed. 893."

As set forth in the various discussions and citations preceding this point, the Parish of Plaquemines, begun in 1807, has no newly acquired rights by virtue of the Charter. The Charter only changed ~~the~~ the form of its government and the Parish, by virtue of its powers and those designated a Police Jury always had the right to use the levees and the banks of the river to the full extent of the State's rights.

The Parish's acquisition of rights of way for State Highway 23 below New Orleans, Plaquemines Parish, is partially set forth at page 3 of this report. Along a portion of such road is located subject water main referred to in the above quoted affidavit. However, both subject facilities are publicly owned and operated by the local Parish governing agency for the areas where same are situated having the combined and merged powers of other agencies to which it succeeded by vote and consent of the people of Plaquemines Parish and the resultant adoption of the Charter for Local Self-Government for Plaquemines Parish above described, such governing agency having, besides its numerous other powers and duties, the powers of both appropriation (when fictionally operating under its acquired rights of a Levee Board) and condemnation. A corporate or body politic such as the present Plaquemines Parish Council having, particularly, the right of eminent domain would be deemed to possess a vested right in the right of way to be relocated, even without conventional negotiation for and acquisition of such required servitudes as was decreed in a long line of decisions by the Louisiana Supreme Court cited above relative to South Central Bell Telephone Company. The rights by which the present water main and sewerage pipeline, wherever located on, over or across privately owned lands, are not such as may be terminated at the will of any private owner, same having long since been constructed under plans, consents and authorizations of the now same Parish Council in view of its merged powers which it succeeded to and acquired from the earlier separate appropriate agencies and districts, resulting in the facility having been constructed by itself, naturally without dissent from its own body, but with its own sanction and approval, and without opposition of landowner. See Tate vs. Ville Platte (1950) discussed in report hereinabove re South Central Bell Telephone Company.

In view of the foregoing, together with other information in the matter obtained by and for me for use herein, it is my opinion that PLAQUEMINES PARISH, LOUISIANA, through its governing body and authority, PLAQUEMINES PARISH COMMISSION COUNCIL, usually referred to as "Parish Council," has an established compensable interest in the water main and sewerage discharge pipeline described in caption hereof, required by subject project to be relocated, in whole or in part, and that the United States is authorized and obligated to pay or reimburse for the relocations or alterations thereof, as required to prevent interference therewith.

e.
COMPENSABLE INTEREST
of
DELTA GAS, INC.

A Louisiana corporation, with registered office at 861 Carondelet Street, New Orleans, Louisiana 70130.

According to investigations made, and as regards subject item, most, if not all, of Delta's lines are outside the present levee right-of-way, and from

copies of applications for gas service and permits therein to cross customer-owned land to effect connections to such individual consumer-customer of the Gas Company such lines have been so located dating back to 1956 or earlier. It is understood that Delta Gas, Inc. operates and maintains a gas line, of various sizes, for gas utility service to the public in this area, besides those particularly located above within Item M-21.5-R, extending from Ft. Jackson to or below Venice, Louisiana. Its right-of-way in all instances has been acquired by permit from the customer-consumer to be served, or by acquisition of a servitude of right-of-way for its lines by unopposed use and occupancy. Such method of right-of-way acquisition is set forth in detail above herein, covering the compensable interest of both Louisiana Power and Light Company and South Central Bell Telephone Company. What is there said relates also, in the absence of permit, to any portion of right-of-way so acquired by Delta. Also, as Delta furnishes General Engineering Section additional plats showing the location of its present lines, which must be removed or abandoned to accommodate the Project, should any portion of such line be located within present levee rights-of-way, ER 73-701, covering payment of labor costs by United States to utilities lacking compensable interest would likewise be applicable to Delta Gas, Inc., a public utility company, which, by Louisiana statutes, has the right of eminent domain.

Delta Gas, Inc., as shown by furnished copies of Articles of Incorporation of 2 December 1946, with amendment changing its name on 18 March 1960, and Certificate of Incorporation by the Secretary of State of the State of Louisiana, dated 29 January 1954, shows Delta Gas, Inc. was originally organized as "Delta Power & Gas Co. Inc." in 1946, and that it amended only Article I of the Articles of Incorporation, to effect change of name to Delta Gas, Inc. in 1960. The corporation's organized purpose, as stated in its Articles, was, besides others, to construct and maintain gas plants, transmission and pipe lines, to distribute gas to public and private buildings for lighting, heating, power, fuel and all other purposes for which same may be used; to contract by franchise or otherwise with any public body or authority and any person, firm or corporation for the distributing, delivering and sale of gas, etc.

Relative to partial abandonment and discontinuance of services:

Louisiana Public Service Commission, P. O. Box 44035, State Capitol, Baton Rouge, Louisiana 70804, pursuant to Article 6, Section 4, Constitution of Louisiana, 1921, supervises, regulates and controls common carrier railroads, telephone, telegraph, gas, electric light, heat and power, water works, common carrier pipe lines, canals (except irrigation canals) and other public utilities in the State of Louisiana. The power, authority and duties of the Commission affect all matters of things connected with SERVICE TO BE GIVEN BY the common carriers and PUBLIC UTILITIES, and the Commission is empowered to adopt and enforce such REASONABLE rules, regulations and modes of procedure as it may deem proper for the discharge of its duties.

Consequently, any major change in its business practice and procedure, such as any abandonment and discontinuance of service and facilities by DELTA GAS, INC., as a consequence of or in connection with any of projects levee enlargements and setbacks must first be reported to and proper ruling thereon obtained from the Public Service Commission. (See La. Const. 1921, Art 6, Sec 4, Note 86). Delta's articles of incorporation makes no specific mention of authority to abandon, but the utility company has the usual necessary power to contract. Also, business corporations, under the new corporations act, 105 of 1968, R.S. Title 12, applicable, except where earlier rights have vested, etc., to older corporation such as Delta, organized under Act 250 of 1928, have broader powers of alienation, R.S. 12:41 (4) and DONATION, R.S. 12:41 (12). In my opinion, when authorized by the Public Service Commission, Delta may reasonably abandon or discontinue its services and facilities where conditions so REQUIRE such action. Additionally, besides the authority from the Commission, its application forms executed by individuals and corporations for services and connections as set out at No. 14 of its terms and conditions, contains the "Act of God" and "force majeure" clauses which should cover the unexpected and disruptive event here being dealt with, one beyond the control and desire of a contracting party Delta, and operate to excuse such party from a contract.

Discussions have previously been had regarding the effect to be given the Project of ER 1180-1-1, 1 December 1969, 73-209.3 Utilities (Relocations) and particularly 73-209.3(2) a. and b. thereof, covering facilities to be abandoned which do not interfere with the construction, and facilities to be abandoned which do interfere, respectively, which for convenience are here quoted in part:

"(2) To be abandoned and not replaced (including R.E.A. facilities).

a. If the facility to be abandoned does not interfere with the construction, maintenance, or operation of the project (and for this reason does not have to be removed) and if the probability of its being flooded is so remote as not to constitute a legal taking within the meaning of the Fifth Amendment of the United States Constitution, the land within the project boundary will be acquired subject to the outstanding rights, if any, and no compensation will be paid for the facility to be abandoned. This is consistent with the decision of the U.S. Court of Claims of 15 January 1958 in the case of Southern Counties Gas Company of California v. the United States, 157 Fed.Sup. 934; 79 S.Ct. 23; 358 U.S. 815-Cert Denied.

b. If the facility to be abandoned does interfere with the construction, maintenance, or operation of the project (and for this reason must be removed) or if it will probably be flooded so frequently as to constitute a legal taking within the meaning of the Fifth Amendment of the United States Constitution, compensation may be made, whether or not the owner has a valid real property interest, under the provisions of Section 2 of the Flood Control Act of 1938.

In such cases, compensation will be limited to that portion of the facility lying within the project boundaries."

If, in order to provide Delta, or any other utility company, should such matter continue to arise, adequate substitute facilities in connection with tracts, or persons thereon, isolated from or deprived of utility services, it may be necessary to provide what, except for ER 1180-1-1, 73-205.1, usually is styled as "betterment." Such 73-205.1 is here quoted:

"73-205.1 Determination as to Adequacy of Substitute Facility and Reasonableness of Cost. If it has been determined that a relocation, alteration or protection is required, it will be planned to afford a degree of serviceability and susceptibility to flood or other damages comparable to that possessed by the existing facility. Anything provided over and above such construction at increased cost must be considered a betterment and the payment of cost thereof must be borne by the owner of the facility. The term 'betterment' should not, however, be interpreted to include more costly construction or construction to a higher class if such is necessitated solely as a result of the relocation."

Accordingly, Delta Gas, Inc., a public utility, has a compensable interest in its right-of-way located outside of levee right-of-way or actual batture, and to its facilities thereon which require relocating to prevent interference. Where such may be now situated within an existing levee right-of-way, or public property, payment may still be made to Delta for labor expenses of relocation under the above cited ER 73-701 covering public utilities. Payment may also be made for facilities to be abandoned and not replaced but require removal under 2b. of ECI 73-209.3, set out at page 7309 of ER 1180-1-1, 1 Dec 69, and Sec. 2 of the Flood Control Act of 1938 as there provided.

e.

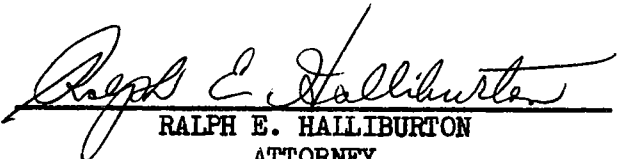
WATER IRRIGATION PIPELINES OF
C-1, Mr. George Pivach Jr., and
C-2, Mrs. Mary Lulich

The above owners of subject privately owned and used water irrigation lines, to the extent that they lie within or cross the levee right-of-way, have no compensable interest within such area, and do not qualify for Federal Assistance under such circumstances, as would a public utility pipeline. If, on the ground, however, any part of such owned lines are actually located on owner's private property beyond the public right-of-way, a compensable interest is vested in owners to that degree for reimbursement of such proportionate relocation expense. Failing that, however, such improvements within the limits of subject project must be removed at the expense of owners.

The above captioned facilities, a. through e., inclusive, having herein been reported separately, the mode of and required payment for relocation therefor is likewise separately stated.

I am cognizant of the omission in this Report of desirable record evidence of acquisition of right-of-way. None exists, and no known deeds are in the Company files. In view of the above discussed acquisition by UNOPPOSED OCCUPANCY BY OWNER HAVING THE POWER OF EXPROPRIATION (see above Tate vs. Town of Ville Platte, which also disposes of the requirement for any specific prescriptive period) no such recorded conventional deeds or other evidence of acquisition is deemed necessary in order to establish compensable interest.

New Orleans, La.
20 January 1972


RALPH E. HALLIBURTON
ATTORNEY
U. S. ARMY ENGINEER DISTRICT
NEW ORLEANS

ATTORNEY'S REPORT

SUBJECT: Attorney's Investigation and Report of Compensable Interest of:

- a. Louisiana State Highway 23;
- b. Parish Road 325, owner, Plaquemines Parish;
- c. Powerlines owned by Louisiana Power and Light Co.;
- d. Telephone lines owned by South Central Bell Telephone Co.;
- e. Water mains owned by Plaquemines Parish;
- f. Gas lines owned by Delta Gas, Inc.; and
- g. Three-inch diameter gasoline and four-inch diameter diesel lines crossing the levee at about station 3780+00, owned by Ellzey Marine Supplies, Inc.

in connection with Item M-10.4-R, LOWER VENICE LEVEE ENLARGEMENT AND SETBACK shown or locatable on Map File No. H-8-25381, embracing levee station 3744+20 to 3797+64.2, Sheets 1-3, dated September 1970, Mississippi River Levees, Buras Levee District, Lower Venice Levee Enlargement and Setback, Corps of Engineers, U. S. Army, Office of the District Engineer, New Orleans, La., pursuant to DIVR 1110-2-1, 29 January 1968, and under authority of the Flood Control Act of 15 May 1928, Public Law 70-391, Ch. 569, 45 Stat. 534, Title 33, Sections 702a-702m, U.S.C.A., as supplemented and amended.

TO: District Engineer
U. S. Army Engineer District, New Orleans
New Orleans, Louisiana

An investigation and report, in accordance with DIVR 1110-2-2 (see also DIVR 1110-2-1, 29 January 1968) and ER 1180-1-1, Section 73, Part 2, 73-203 and 73-204, of the legal obligations of the Government regarding affected facilities and determination of compensable interest of the owner thereof, as set forth below, is hereby submitted by me, an attorney at law, State of Louisiana, of the Real Estate Division, U. S. Army Engineer District, New Orleans.

EXHIBIT A

LEGAL OBLIGATION

Authority for subject levee enlargement is set forth in caption. DIVR 1110-2-1, 29 January 1968, page 2, at 4.b. Construction, Enlargement, or Improvement of Main Line Mississippi River Levees provides:

"Authority for construction, enlargement, or improvement of main line Mississippi River Levees, including berms, is contained in the Act of 15 May 1928 (PL 391, 70th Congress), as amended. The furnishing of right of way for levee foundations and levees on the main stem Mississippi River, except levee setbacks, is an obligation of local interests (see Section 3, Act of 15 May 1928). The replacement or relocation of public roads, highways, railroads, public utilities, and pipelines required for the construction of main line Mississippi River Levees will be accomplished at Federal expense (see correspondence referred to in para 2a above). Reimbursement of costs to local cooperating agencies in perfecting relocation of interfering facilities may be made pursuant to the Act of 23 April 1934 (PL 171, 73d Congress)."

COMPENSABLE INTERESTS

Before treating the above facility owners separately it is deemed appropriate to state that a levee right of way belongs to the public and is not susceptible of any private ownership therein. La. Civil Code, Article 448-458. La. Civil Code Article 665 makes provision for the imposition of servitudes for the public or common utility relating to the space which is to be left for the public use by the adjacent proprietors on the shores of navigable rivers and for the making and repairing of levees, roads and other public or common works. The matter of public levee rights of way was treated rather extensively by this writer in a former Attorney's Report dated 23 September 1970 for the Buras Levee Setback project, Item M-25.0-R, to which reference is made rather than setting forth in extenso herein a repetition thereof. See particularly pages 3 and 4 of such former report.

a.

LOUISIANA STATE HIGHWAY 23

The Department of Highways, State of Louisiana, was created by Act 4 of 1942, Louisiana Revised Statutes, Title 48, Section 11. The said creating act gives the Department the right of Eminent Domain (expropriation), L.R.S. 48:217 and 218. Louisiana Constitution, 1921, Art. 6, Sec. 19, authorizes acquisition of rights of way for highways by expropriation or otherwise. As held in HORNSBY v. STATE DEPARTMENT OF HIGHWAYS, 241 La. 989, 132 So. 2d 871, (1961) the Highway Department, likewise, for certain purposes, under La. Civil Code, Arts. 665, 707, may also appropriate land required on the shores of navigable rivers. This Act of 1942, as amended, established (at PART XI, STATE HIGHWAY SYSTEM, R.S. 48:191) a system of state highways consisting of Class A Highways, or a Primary System; Class B

Highways, or a Secondary System; and Class C Highways, or a Farm-to-Market System. Subject Louisiana State Highway 23, in said Act R.S. 48-191, is classified and included in the States Primary Systems' Class "A" highway descriptions, as follows: "LA 23 - From a point on the right descending bank of the Mississippi River at or near Venice through or near Buras, Port Sulphur and Gretna to a junction with LA-US 90 at or near New Orleans."

Highway rights of way easements (servitudes) were acquired for subject Louisiana No. 23, beginning in 1923, from the abutting landowners by the Parish of Plaquemines, and later by the Department of Highways in 1937, 1938 (La. Highway Commission prior to 1942), 1953 and 1956. All such servitude acquisitions are locally recorded, i.e., in Plaquemines Parish, Louisiana. Examples so recorded are the following:

<u>Easement Dated</u>	<u>Recorded in Conv. Book</u>	<u>Page</u>
5/16/23	23	189
3/21/37	84	65
3/21/37	84	66
3/29/37	84	74
5/31/37	85	150
10/10/38	92	192
10/12/38	92	196
10/12/38	92	197
10/10/38	92	202
1/16/56	188	368

In view of the foregoing, together with other information in the matter obtained by and for me for use herein, it is my opinion that the State of Louisiana, Department of Highways, has an established compensable interest in Louisiana State Highway No. 23, required by subject project to be relocated in part, and that the United States is authorized and obligated to pay or reimburse for the relocation or alterations thereof, as required, to prevent interference thereof.

b.

PARISH ROAD #325, Owner: PLAQUEMINES PARISH

Reference is made to this attorney's Report dated 6 November 1969 concerning the concrete slab road on the Mississippi River Main Line levee, LS 3113+50 to 3142+28.1, which reach, located above Fort Jackson, is sometimes referred to as "GULFTOWN ROAD;" and the road on the levee below Fort Jackson, LS 3354+56.7 to 3797+64.2, all in Plaquemines Parish. As is therein pointed out, the improved road atop the levee, beginning at The Jump, below Venice, and extending upriver approximately three miles, is designated by the State Department of Highways as No. 325; that such road is a public road owned by the Parish of Plaquemines, no transfer of ownership being contemplated or made of record, but the maintenance work thereon is performed, at the request

of the parish, by the State Department of Highways.

Accordingly, Plaquemines Parish, as the owner of such Road No. 325, has a compensable interest therein and the United States is authorized and obligated to pay or reimburse for the modification, relocation or alteration thereof as required to prevent interference with project.

c. & d.

LOUISIANA POWER AND LIGHT COMPANY
and
SOUTH CENTRAL BELL TELEPHONE COMPANY

The powers and authority of Louisiana Power and Light Co. to acquire and own real property rights and facilities thereon have been fully set forth in Attorney's Report dated 26 September 1970, Buras Levee Setback, Item M-25.0-R, a supplemental report to the original dated 23 September 1970, and to the same extent for the South Central Bell Telephone Company, likewise for Buras Levee Setback, Item M-25.0-R.

It is understood that Engineering Division itself, in view of further findings on the ground, will determine the extent of conflict between existing cables and other facilities and lines of said telephone company, and of the Louisiana Power and Light Company, as presently located along or across the existing levee, the levee road, and also along any roads. It will be borne in mind that neither company possesses a compensable interest in the present levee right of way or in a road as to such part as may be situated therein. However, both said companies, being public utilities, under existing congressional authority, Sec. 2 of the Flood Control Act of 1938, may be reimbursed material and labor cost of relocation, but not for such right of way. Where located within the right of way of public roads, over privately-owned fee lands, where alterations or relocations are necessary because of project, and not merely for convenience of the public road system, such facilities are on such fee lands despite their location within highway right of way limits, and, inasmuch as both telephone and light companies are public utilities, with right of eminent domain, whether they have obtained conventional right of way servitudes or are in place by unopposed occupancy, they own a compensable interest and should be altered or relocated at no expense to such companies.

e.

PLAQUEMINES PARISH WATER MAIN

Reference is made to this attorney's Report dated 1 September 1970 covering Item M-14.9-R, Commander Levee Enlargement, relating to the relocation of the 6" water main with laterals. Such 6" water pipeline, parallel and adjacent to the existing levee, is owned by Plaquemines Parish and is likewise a part of the Plaquemines Parish water and sewerage system, and hence Plaquemines Parish has a compensable interest therein and the United States

is authorized and obligated to pay or reimburse for the relocation or alteration thereof, as required to prevent interference therewith.

f.

DELTA GAS INC.

The history, the extent of its operations, and the ownership and authority of Delta Gas Inc. has been fully treated and reported by me in second supplement to my 23 September 1970 Attorney's Report for Buras Levee Setback, Item M-25.0-R, dated 29 September 1970, to which was attached an addendum report on said company dated 2 October 1970. Accordingly, the interest of Delta Gas Inc. for this item is recognized as is set forth in such former report and alterations and/or relocations of Delta's facilities may be handled as was there done.

g.

ELLZEY MARINE SUPPLIES, INC.

3" gasoline and 4" diesel pipelines

These pipelines connect with one large and two smaller petroleum storage tanks located at the confluence of Louisiana Highway No. 23 and the parish owned river road No. 325 running down river on top of the levee from near Fort Jackson and ending at The Jump settlement. The gasoline and diesel pipelines extending from the storage tanks pass under road No. 325 and run to the Ellzey Marine Supply store's marine service pumps located at water's edge by the store. The marine supply store and the marine service pumps, together with the aforesaid storage tanks, are all located on part of a larger tract of land containing, all together, 17.95 acres, the title to all of which land, buildings, storage tanks and connecting pipelines, is held by Ellzey Marine Supplies, Inc. Also located on the property is a Conoco products automobile service station, a welding shop, and other various improvements. Although Conoco products are dispensed at the Conoco motor car service station as well as at the Ellzey Marine Supplies, Inc. store, and its supplied brand of gasoline and diesel fuel are stored in the three above-ground storage tanks, which rest on concrete slabs, clear of the roads and the toe of the levee, the entire ownership is in Ellzey Marine Supplies, Inc. The service station, although owned by Ellzey, is actually operated by another, under lease granted him by Ellzey. Ellzey Marine Supplies, Inc. is not an agent or consignee of Conoco, Inc., but is an independent jobber handling its products, making payment therefor on delivery, taking ownership and storing and dispensing such petroleum products on its own premises and in its own facilities. Ellzey Marine Supplies, Inc., the family-owned corporation, began as a partnership in September, 1961, Plaquemines Parish Partnership Book No. 2, page 9, and Conveyance Book 243, page 179, formed by E. J. Ellzey, Sr. and his two sons. Although not having an interest in this property, there are two daughters, Mrs. Hallie Grace Ellzey Baker and Mrs. Gene Stratton Ellzey Rolder, born of the marriage of E. J. Ellzey, Sr. and the former Grace


Stratton. Mrs. Ellzey died in 1963, being survived by her said husband and children, Succession of Grace Stratton, No. 6503, 25th Judicial District Court, Plaquemines Parish, La. Judgment of Possession is recorded in COB 260, page 735. The partnership owning subject property became a corporation in February 1968, and the property was accordingly transferred to it on 16 February 1968, recorded 23 February 1968, in COB 322, page 148, records of Plaquemines Parish, La. The title to the real property comes down, in part, as follows:

E. J. Ellzey, Sr., moved to Plaquemines Parish in 1934. A portion of this property was acquired by him by act of sale by Willie G. Wilmot, Testamentary Executor of the Succession of Lotta Lacey Bernard, by act before Harry B. Kelleher, Notary Public for the Parish of Orleans, State of Louisiana, dated January 7, 1948, and registered on 2/28/48 in the records of Plaquemines Parish, Louisiana, COB 131, folio 290. 57.88 acres in "the section out of drainage district in Township 21 South, Range 30 East," was acquired by E. J. Ellzey, Sr., in such conveyance. An additional interest in the same property was acquired by E. J. Ellzey, Sr., by purchase from Plaquemines Tropical Fruit Company through its Receiver, Chester A. Wootan, by act before Rudolph W. McBride, Notary Public, dated 16 February 1953, and registered in COB 166, folio 63, of the Parish of Plaquemines. On September 21, 1961, recorded September 25, 1961, in COB 243, folio 179, E. J. Ellzey, Sr., conveyed the aforesaid 17.95 acres, on which is located the marine supply store and tanks above referred to, to Ellzey Marine Supplies, the previously identified partnership composed of the said E. J. Ellzey, Sr., and his two sons, Richard C. Ellzey and E. J. Ellzey, Jr. Thereafter by the Judgment of Possession in Succession of Grace Stratton Ellzey, deceased, wife of E. J. Ellzey, Sr., No. 6503, 25th Judicial District Court, Plaquemines Parish, the subject property in the partnership was recognized, in the judgment sending all the heirs into possession of their mother's estate, as being vested in the partnership free of any claim by the other two children, the daughters of the said E. J. Ellzey, Sr., and his wife, Grace Stratton Ellzey. Subsequently, as above mentioned, on February 16, 1968, registered February 23, 1968 in COB 322, page 148, Ellzey Marine Supplies, partnership, conveyed such real property to Ellzey Marine Supplies, Inc., a Louisiana corporation, in which corporation subject property is presently vested. Ellzey Marine Supplies, Inc., is assessed for said real property for the year 1970. It is also assessed with movable property described only as merchandise \$19,930.00, and business furniture and fixtures \$1,050.00, total \$20,980.00, which likely includes said tanks and pipelines.

In accordance with the above, partly as shown by the records of Plaquemines Parish and later verified in personal discussions with Mr. Richard Ellzey, who advised the undersigned that such tanks and pipelines belong to the corporation and that it is an independent jobber and not just the agent or consignee for Conoco products; and further, that all of the fixtures

in connection with such jobbing enterprise belong to the corporation, said Ellzey Marine Supplies, Inc., has a compensable interest in said 3" gasoline line and 4" diesel pipeline and in their location, or right of way, except where it may be determined they cross or encroach on the rather vaguely identified levee or its right of way, as well as in the aforesaid storage tanks, and same should accordingly be altered or relocated, subject to the above levee right of way qualification, and subject further to the requirement that for Mississippi River Levee Enlargements the local agency must provide all rights of way free and clear of encumbrances, at federal expense, payable to the owner or by reimbursement to the local agency (DIVR 1110-2-1) to prevent interference with project. In this connection, from a personal examination of the situs, it does not appear that the gasoline and diesel oil storage tanks are presently situated within a definite and formal, by appearances, levee right of way, and, to this reporter, there is no discernable levee appearance where such fuel pipes cross under the levee road, No. 325. In fact most of the area beginning with the road running beside the tanks and extending to Ellzey Marine Supply's store and service facilities used as access or parking area is a fairly level plot presumably constructed for itself by Ellzey Marine Supplies, Inc. The other nearby waterfront lands bear the same appearance. Part of the width of the road, I was informed by Mr. Richard Ellzey, in my discussions with him, was extended and improved by members of his family or the corporation, so that considering the existing circumstances there may be difficulty in distinguishing at what point such pipes cross a formally dedicated levee right of way. The government may, after taking into consideration a nominal cost (if it be such) of altering the road crossing pipelines (now contained in a single conduit, it is understood); the simpleness of the installation; and the long history of such levee and levee road prior to any records thereof, find it practical to make no reduction for any levee, so-called, crossing.

24 February 1971


RALPH E. HALLIBURTON
ATTORNEY
U. S. ARMY ENGINEER DISTRICT
NEW ORLEANS

22 March 1971

I - TIDELAND ROAD - From flashing traffic signal light, the beginning point of Louisiana State Highway 23, at which intersection, with levee and the Bituminous Road thereon, Highway #325 commences and runs upriver to Ft. Jackson; and subject paved road begins and extends southwesterly to its end, a distance of approximately 3.8 miles, owned by Plaquemines Parish, Louisiana.

FIRST SUPPLEMENT TO

24 FEBRUARY 1971

ATTORNEY'S REPORT

LOWER VENICE LEVEE ENLARGEMENT
AND SETBACK ITEM M-10.4-R

I
COMPENSABLE INTEREST
OF

PLAQUEMINES PARISH, LOUISIANA,
through its Governing Authority,
Plaquemines Parish Commission
Council, in and to the above
designated road.

Reference is made herein to a marked copy of our Map File No. H-25648, plate 8, dated 1971, for said LOWER VENICE LEVEE ENLARGEMENT AND SETBACK, DESIGN MEMORANDUM NO. 7, RELOCATION OF FACILITIES, and to drawing prepared by Department of Highways, Traffic and Planning Section, bearing revision dates, basic - 1965, and surface types - 1969, for Plaquemines Parish [South Section], Louisiana, copy of which is attached.

Reference is also made to this attorney's Report dated 6 November 1969 covering "GULFTOWN ROAD," on the Mississippi River Main line levee from approximate Levee Stations 3113+50 - 3142+28.1, and on the levee below Fort Jackson from approximate Levee Stations 3354+56.7 to 3797+64.2, Plaquemines Parish, Louisiana. The authorities therein cited, particularly ER 1180-1-1, 1 Dec 69, 73-701, Lack of Compensable Interest - Civil Works, citing Sec. 2, Flood Control Act of 1938 (52 Stat. 1215; 33 U.S.C. 701c-1) and Comp. Gen. Decision

EXHIBIT B

B-134242, Dec. 24, 1957. See also 73-703 of said ER 1180-1-1, Relocation of Facilities Owned by Governmental Agencies, and DIVR 1110-2-1, 29 Jan. 1968, 4b., at page 2, Construction, Enlargement or Improvement of Main Line Mississippi River Levees, referring to correspondence to MRC letter, LMVED-TL 20 September 1966, subject: "Relocation or Replacement of Roads Required by New Construction on Mississippi River Levees," and to Act of 15 May 1928 (PL 391, 70th Congress), as amended, and Act 23 April 1934 (PL 171, 73d Congress).

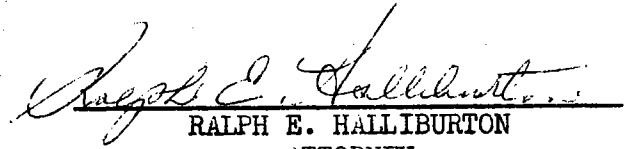
Information obtained by and for me, which is compatible with that set forth in detail in the above referred to "Gulftown Road" opinion of 6 November 1969, confirmed sufficiently as to this portion of road by the local office of the Department of Highways, State of Louisiana, for Districts 1 and 2 (Mr. Childs), shows that subject road, called TIDELAND ROAD, is a paved public road, owned by the Parish of Plaquemines. For maintenance purposes the Louisiana Department of Highways, on 7 October 1970, eliminated from its system that part of the levee road #325 between Venice and Duvic. Such levee road, from Ft. Jackson to Venice was owned by Plaquemines Parish. Road #325 was maintained by the State at the request of the parish. The parish has maintained this Tideland Road. Plaquemines Parish, under its charter for local self-government, is conducted and operated under a governing authority known as the PLAQUEMINES PARISH COMMISSION COUNCIL, which council succeeded to and is vested with all the merged jurisdictions, powers, duties and functions of the Plaquemines Parish Police Jury, as governing authority of the parish, and of other political subdivisions and districts therein, including the Buras Levee District, in which district subject road is situated, and Grand Prairie Levee District, with the full authority granted to such districts, governing bodies and boards, as authorized by the State Constitution.

References: Plaquemines Parish Charter for Local Self-Government; Louisiana Revised Statutes, Title 33, Sec. 1236, power of police jury; Louisiana Civil Code Article 3501, the prescription of thirty years; La. C. C. Art. 658, ownership of servient estate (public roads over); La. Rev. Stat. 48:22, powers of La. Dept. of Highways; LRS 48:224, abandonment of highway by the State, - acquisition by Parish; LRS 48:481, powers of Parish governing authorities as to roads, bridges and ditches; LRS 48:491, What are public roads [maintained or worked for period of three years by authority of parish governing authority --]; and Fuselier v. Police Jury of Parish of Iberia, 109 La. 551, 33 So. Rep. 597 (1903).

As a result of investigations and the foregoing cited and referenced authorities I am of the opinion that the Parish of Plaquemines has a compensable interest in subject road, no exception being here applicable as to its location in a levee right of way or on the levee itself (the governing body of owner and of the levee district being coalescent), and the United States, therefore, besides the additional authority provided by 73-703 of ER 1180-1-1, Relocation of Facilities owned by Governmental Agencies, and the other

pertinent authorities cited at the beginning hereof, is authorized to pay or reimburse the Parish of Plaquemines for the relocations or alterations of the road, as required, to prevent interference with project.

New Orleans, Louisiana
22 March 1971



RALPH E. HALLIBURTON
ATTORNEY
U.S. ARMY ENGINEER DISTRICT,
NEW ORLEANS

FLOOD CONTROL
MISSISSIPPI RIVER AND TRIBUTARIES
MISSISSIPPI RIVER LEVEES
ITEM M-10.4-R
LOWER VENICE LEVEE
ENLARGEMENT AND SETBACK
PLAQUEMINES PARISH, LOUISIANA
RELOCATION OF FACILITIES
DESIGN MEMORANDUM NO. 7

APPENDIX II
LOUISIANA DEPARTMENT OF HIGHWAYS
MINIMUM DESIGN STANDARDS
FOR RURAL HIGHWAYS AND ROADS

LOUISIANA DEPARTMENT OF HIGHWAYS MINIMUM DESIGN STANDARDS FOR RURAL HIGHWAYS AND ROADS

DATE
JULY 1, 1969
REV. AUGUST 6, 1969
REV. MARCH 10, 1971

ITEM NO.	ITEMS	C. SYSTEM						LOCAL ROADS	
		A. SYSTEM			B. SYSTEM			HARD SURFACED	AGGREGATE OR NO SURFACE
		CLASS 1	CLASS 2	CLASS 3	CLASS 4	CLASS 5	CLASS 6		
1	CURRENT AVERAGE DAILY TRAFFIC	OVER 12,000	12,000 - 3,001	3,000 OR LESS	1,500 - 751	750 OR LESS	400 OR LESS	300 OR LESS	100 OR LESS
2	DESIGN HOURLY VOLUME (1)	OVER 2,400	2,400 - 601	600 OR LESS	400 - 200				
3	NUMBER OF TRAFFIC LANES	6	4	2	2	2	2	2	2
4	WIDTH OF EACH LANE	12'	12'	12'	12'	10'	10'	9'	9'
5	WIDTH OF SHOULDERS	8' OUT. TMS. 6'	8' OUT. TMS. 6'	8'	8'	8'	5'	3'	3'
6	TYPE OF SHOULDERS	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE
7	WIDTH OF MEDIUM	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE	MINIMUM DESIRABLE
8	FORE SLOPE - RATIO	4:1	4:1	4:1	4:1	4:1	4:1	4:1	4:1
9	BACK SLOPE - RATIO	3:1	3:1	3:1	3:1	3:1	3:1	3:1	3:1
10	DESIGN SPEED M.P.H.	70	70	60 (3)	60	50	40	40	20
11	STOPPING SIGHT DISTANCE	600'	600'	475' (3)	475'	350'	275'	275'	200'
12	CONTROLLING CURVATURE (4)	3"	3"	3"	3"	3"	3"	3"	3"
13	CONTROLLING GRADE (5)	4%	4%	5% (4)	5%	6%	7%	10%	6%
14	HORIZONTAL CLEARANCE (6)	15'	15'	15'	15'	15'	15'	15'	15'
15	RIGHT OF WAY WIDTH (8)	30'	30'	30'	30'	30'	30'	30'	30'
16	DESIGN LOADING FOR BRIDGES	HS 20-44	HS 20-44	HS 20-44	HS 20-44	HS 20-44	HS 20-44	HS 20-44	HS 20-44
17	MINIMUM WIDTH OF BRIDGES (MEASURED FROM FACE TO FACE OF BRIDGE RAIL)	16'	16'	16'	16'	16'	16'	16'	16'
18	PAVEMENT CROSS SLOPE	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
19	GUARDRAIL REQUIRED AT BRIDGE ENDS	YES	YES	YES	YES	YES	YES	YES	YES
20									

- (1) DETAILED INFORMATION TO BE FURNISHED BY TRAFFIC AND PLANNING.
- (2) STABILIZED AND SURFACED DESIRABLE.
- (3) ON FUTURE FOUR LANE FACILITY DESIGN FOR 70 MPH WITH 600' S.S.D. AND 4% CONTROLLING GRADE.
- (4) BASED ON 0.10 FT/FT MAXIMUM SUPERELEVATION.
- (5) GRADES MAY BE INCREASED TO MAXIMUM USABLE WITH DESIGN SPEED SELECTED, BUT NOT TO EXCEED 6% IN ANY CASE, EXCEPT FOR CLASS 6 HIGHWAYS AND LOCAL ROADS.
- (6) 16 FT. VERTICAL CLEARANCE OVER TRUNK LINE ROUTES.
- (7) MAY BE LESS IF PROTECTED BY GUARDRAIL.
- (8) MINIMUM FOR NEW LOCATION. FOR EXISTING LOCATION NOT LESS THAN THAT REQUIRED FOR ALL ELEMENTS OF THE CROSS-SECTION AND APPROPRIATE BORDER AREAS.
- (9) 300' WHERE FUTURE FOUR LANES ARE INDICATED.
- (10) AS REQUIRED TO ACCOMMODATE SECTION.
- (11) IN SPECIAL CASES PARTIAL SHOULDERS MAY BE USED.
- (12) 18' MINIMUM WIDTH FOR RETENTION OF BRIDGES IN GOOD CONDITION.

ADOPTED *[Signature]*
A. R. RATCLIFF, JR.
CHIEF ENGINEER
MARCH 10, 1971

FLOOD CONTROL
MISSISSIPPI RIVER AND TRIBUTARIES
MISSISSIPPI RIVER LEVEES
ITEM M-10.4-R
LOWER VENICE LEVEE
ENLARGEMENT AND SETBACK
PLAQUEMINES PARISH, LOUISIANA
RELOCATION OF FACILITIES
DESIGN MEMORANDUM NO. 7

APPENDIX III
PERTINENT CORRESPONDENCE



STATE OF LOUISIANA
DEPARTMENT OF HIGHWAYS

P. O. BOX 44245, CAPITOL STATION
BATON ROUGE, LA. 70804

IN REPLY PLEASE REFER TO
FILE NO.

April 28, 1971

STATE PROJECT 713-34-15
LOWER VENICE LEVEE AND ROAD RELOCATION
PLAQUEMINES PARISH

Mr. Jerome Pepper
Pepper & Associates, Inc.
1000 Howard Avenue
New Orleans, Louisiana

Dear Mr. Pepper:

After reviewing the proposed preliminary layout presented by yourself at a conference held at our office on March 26, 1971, we make the following comments:

1. We concur with the concept of the provision for a dual 2-lane roadway to provide equal capacity to that of the existing 4-lane La. 23 which is being closed by the construction of the new levee.
2. Highway La. 23 is in our Class A System and based on traffic count made in Venice, La. during 1970, which was 4,900 vehicles per day, and in accordance with the Louisiana Department of Highways Minimum Design Standards for Rural Highways and Roads, Revised March 1971 for this amount of traffic, these roads fall into the category of the Class 3 System which requires 12 foot lanes with a minimum shoulder width of eight feet.
3. This road, in accordance with the provisions of your proposed contract, must meet the usual Department's standards of construction with regard to pavement design base course recommendations sub-grade treatment and drainage.
4. We hereby approve the typical sections transmitted with the preliminary layout plans consisting of 24 ft. wide, Portland cement concrete pavement 9" thick and various other features indicated on the transmitted plans.

Very truly yours,

S. L. POLEYARD
CHIEF LOCATION AND DESIGN ENGINEER

SLP:sf

EXHIBIT A

LMHED-DL

3 November 1969

Mr. George P. Forman, Road Maintenance Engineer
State of Louisiana
Department of Highways
P. O. Box 44245, Capitol Station
Baton Rouge, Louisiana 70804

Dear Mr. Forman:

This is to confirm the conversation of 29 October 1969 held between yourself and Messrs. Smith and Bordelon of this office concerning the validity of permanently repairing or re-surfacing the existing road on top of the main line Mississippi River levee below Fort Jackson, Louisiana.

At the present time, this office is conducting a detailed study for enlarging and raising the levees in this area to provide hurricane protection. It is anticipated that this study will be completed during the second quarter of calendar year 1970 and that construction of the proposed levee work will commence during the third quarter of 1970 if funds are made available.

In light of this study, it appears at this stage that relocation of the existing road on the levee crown will be required to accommodate the planned levee construction. Therefore, we do not recommend permanent repairs of this road at this time.

If we can be of further assistance concerning this matter, please advise.

Sincerely yours,

JEROME C. BAHR
Chief, Engineering Division

Smith

Bordelon

Sommer

Martin

Baehr

EXHIBIT B

FLOOD CONTROL
MISSISSIPPI RIVER AND TRIBUTARIES
MISSISSIPPI RIVER LEVEES
ITEM M-10.4-R
LOWER VENICE LEVEE
ENLARGEMENT AND SETBACK
PLAQUEMINES PARISH, LOUISIANA
RELOCATION OF FACILITIES
DESIGN MEMORANDUM NO. 7

APPENDIX IV
DETAILED COST ESTIMATE - ROADS

APPENDIX IV

DETAILED COST ESTIMATE - ROADS

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	COST	AMOUNT
<u>HIGHWAY 23.</u>					
1	Clearing and Grubbing	Sum	Job	Sum	\$ 20,000
2	Removal of Structures and Obstructions	Sum	Job	Sum	8,500
3	Removal of Portland Cement Concrete Pavement	6,244	SY	2.00	12,488
4	Unclassified Excavation	3,980	CY	2.00	7,960
5	Embankment	7,945	CY	3.50	27,808
6	Base Course	6,990	CY	12.00	83,880
7	Aggregate Surface Course	30	CY	8.00	240
8	Asphaltic Concrete (Type 3) (Wearing Course)	800	Ton	19.00	15,200
9	Asphaltic Concrete (Type 3) (Binder Course)	270	Ton	19.00	5,130
10	Asphaltic Concrete (Type 1, 2 or 4) (Wearing Course - Shoulder Mix)	940	Ton	19.00	17,860
11	Bituminous Tack Coat	480	Gal	.35	168
12	Bituminous Prime Coat	180	Gal	.30	54
13	Portland Cement Concrete (9-inch thickness)	19,600	SY	9.00	176,400
14	Bituminous Coated Corrugated Metal Pipe (15")	32	LF	12.50	400
15	Asbestos Bonded CMP (SL) (WB) (30-inch)	90	LF	29.90	2,691

Incl 5

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT COST	AMOUNT
16	Asbestos Bonded CMP (SL) (WB) (15-inch)	104	LF	21.10	2,194
17	Asbestos Bonded CMP (SL) (WB) (18-inch)	1,250	LF	21.40	26,750
18	Asbestos Bonded CMP (SL) (WB) (24-inch)	684	LF	24.50	16,758
19	Asbestos Bonded CMPA (SL) (WB) (22-inch x 13-inch)	70	LF	16.50	1,155
20	Asbestos Bonded CMPA (SL) (WB) (29-inch x 18-inch)	50	LF	25.30	1,265
21	Manholes (R-CB-B Mod)	2	Each	850.00	1,700
22	Catch Basins (R-CB-7X)	12	Each	600.00	7,200
23	Catch Basins (R-CB-31X)	3	Each	600.00	1,800
24	Rebuilt Fence	8	Sta	400.00	3,200
25	Combination Curb and Gutter (6-inch) (Barrier Type)	3,781	LF	3.50	13,234
26	Combination Curb and Gutter (18-inch) (Barrier Type)	90	LF	9.00	810
27	Combination Curb and Gutter (3-foot) (Barrier Type)	250	LF	18.00	4,500
28	Integral Concrete Curb (Mountable Type)	441	LF	1.50	661
29	Right-of-way Marker (Concrete Post)	25	Each	15.00	375
30	Signs and Barricades	Sum	Job	Sum	20,000
31	Water	56	M.Gal	4.00	224
32	Seeding	167	Pound	5.00	835
33	Fertilizer	5,590	Pound	.10	559

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	COST	AMOUNT
34	Field Lab for Asphaltic Pavement	1	Bldg.	1,000	1,000
35	Field Lab for General Use	1	Bldg.	3,000	3,000
36	Mobilization	Sum	Job	Sum	25,000
37	Bedding Material	789	CY	9.00	7,101
38	Adjusting Sanitary Sewer House Conn.	25	Each	100.00	2,500
39	Dead End Road Installation	2	Each	250.00	500
40	Detour-Temp Embkt and Base Course and Surface	Sum	Job	Sum	<u>16,000</u>

SUBTOTAL

\$537,100

PARISH ROAD #325

1	Clearing and Grubbing	Sum	Job	Sum	1,000
2	Removal of Structures and Obstructions	Sum	Job	Sum	1,000
3	Removal of Surface and Stabilized Base Course	70	SY	2.00	140
4	Unclassified Excavation	1,100	CY	2.00	2,200
5	Aggregate Surface Course	1,000	CY	8.00	8,000
6	Aggregate Surface Course (Ramps and Shoulders)	200	CY	6.00	1,200
7	Asphaltic Concrete (End Result) (Type 1,2,3 or 4) (Binder and Wearing Course)	300	Ton	19.00	5,700
8	Bituminous Tack Coat	100	Gal	.35	350
9	Asbestos Bonded CMPA (SL) (WB) (22-inch x 13-inch)	40	LF	16.50	660

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	COST	AMOUNT
10	RC Arch Pipe with Headwall (13-1/2-inch x 22-inch)	20	LF	27.50	550
11	Signs and Barricades	Sum	Job	Sum	300
12	Water	6	M.Gal	4.00	24
13	Seeding	19	Pound	5.00	95
14	Fertilization	310	Pound	.10	31
15	Mobilization	Sum	Job	Sum	1,400
16	Cement Treated Shell and Sand Base Course	2,100	SY	2.50	5,250
17	Adjusting Sanitary Sewer House Connection	3	Each	100.00	300
18	Dead End Road Installations	2	Each	250.00	500
19	Drainage Excavation	Sum	Job	Sum	<u>200</u>
	SUBTOTAL				\$28,000

Relocation Cost	\$565,100
Plus Removal Cost	5,400 <u>1/</u>
Subtotal	570,500
Contingencies (25% <u>+</u>)	142,500
Subtotal	713,000
E&D (6% <u>+</u>)	43,000
S&A (6% <u>+</u>)	43,000
Subtotal	799,000
R/W Cost	<u>170,000</u>
TOTAL	\$969,000 <u>2/</u>

1/ Covers only the removal of that portion of Tideland Road which is outside of the proposed levee right-of-way. Remainder of the removal of the existing roads to be included in the contract for levee construction.

2/ Does not include the cost of Ramp No. 1 and Ramp No. 2 which are to be accomplished under the contract for levee construction.

FLOOD CONTROL
MISSISSIPPI RIVER AND TRIBUTARIES
MISSISSIPPI RIVER LEVEES
ITEM M-10.4-R
LOWER VENICE LEVEE
ENLARGEMENT AND SETBACK
PLAQUEMINES PARISH, LOUISIANA
RELOCATION OF FACILITIES
DESIGN MEMORANDUM NO. 7

APPENDIX V
OTHER PLANS CONSIDERED

APPENDIX V
OTHER PLANS CONSIDERED

1. PLAN A. Plan A required the relocation of Highway 23, Tideland Road and Parish Road #325. It was rejected due to a higher overall cost than that of the recommended plan and due to the adverse impact the Highway 23 ramp would have had on the developed areas along Highway 23 and Grand Bayou.

a. Highway 23. Plan A proposed ramping the four lanes of Highway 23 over the proposed levee at approximate levee station 3782+00. The landside approach of this relocation was to be a continuation of the existing alignment with a gradual increase in grade to a maximum elevation of 16.0 m.s.l. over the new levee crown. At this point, the proposed alignment turned south along Grand Bayou and decreased in elevation to tie into the relocation of Tideland Road.

b. Tideland Road. Under Plan A, Tideland Road would have been relocated beginning at approximate levee station 3800+00 and extending to a point of intersection with the relocation of Parish Road #325 in the vicinity of levee station 3781+00. It would have been a double-lane roadway aligned parallel to Grand Bayou generally adjacent to the existing Tideland Road alignment.

c. Parish Road #325. Plan A proposed the relocation of Parish Road #325 as a double-lane roadway extending northeast from Highway 23 to a point opposite the landside toe of the proposed levee at approximate levee station 3751+80. From this point, the proposed alignment continued in a southerly direction, parallel to the proposed levee right-of-way, to approximate levee station 3763+00 where it ramped over the new levee (elevation 16.0 m.s.l.) and continued parallel and adjacent to the new levee floodside right-of-way. The proposed relocation would have terminated at

an intersection with the relocation of Tideland Road in the vicinity of levee station 3781+00.

2. PLAN B. Plan B provided for the construction of a levee-floodwall configuration which would have allowed the existing Highway 23, Tideland Road and Parish Road #325 to remain in place. It would have required the construction of gated structures at the intersection of the floodwall and Parish Road #325 and at the intersection of the floodwall and Highway 23 and the construction of a lateral road opposite approximate levee station 3751+00 to connect Parish Road #325, as severed by the construction of Item M-10.7-R, Venice Levee Enlargement and Setback, to Highway 23. Plan B was rejected due to the higher cost and lower dependability of the levee-floodwall configuration as compared to the recommended plan.