



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

June 23, 1983

REPLY TO  
ATTENTION OF:

Operations Division, Permits  
Ms. Hall  
(504) 838-2299

SUBJECT: LMNOD-SP (17th Street Canal)2

PUBLIC NOTICE

Interested parties are hereby notified that application has been received by the District Engineer for a Department of the Army permit to authorize the following pursuant to Section 10 of the River and Harbor Act of March 3, 1899, (30 Stat. 1151; 33 USC 403):

DREDGING FOR DRAINAGE IMPROVEMENTS IN THE 17TH STREET CANAL  
(METAIRIE RELIEF CANAL)

Purpose: To describe the proposed project and solicit comments, and to announce a scheduled public information meeting to be held by the Sewerage and Water Board of New Orleans at the City Council Chambers, City Hall, 1300 Perdido Street, New Orleans, Louisiana 70112, on July 20, 1983, at 7:00 p.m.

Name of applicant: SEWERAGE AND WATER BOARD OF NEW ORLEANS, City Hall, Civic Center, New Orleans, Louisiana 70165.

Location of work: In the 17th Street Canal (Metairie Relief Canal) from Pump Station No. 6 to Lake Pontchartrain, in Metairie, Louisiana, in JEFFERSON PARISH, as shown on the attached drawings.

Character of work: Dredge to improve drainage. The dredging operation will consist of the removal of approximately 470,000 cubic yards of material from the bottom of the canal. The dredged material will be hauled from the site in leak proof trucks and deposited in a nonwetland site. One such location is adjacent to the sewage treatment plant off Florida Avenue owned by the applicant. The proposed dredging is part of a project to increase the cross sectional area of the canal and to increase the pumping rate of Pump Station No. 6 from the present 6,650 cubic feet per second to 10,400 cubic feet per second to improve the drainage capability of the canal and thereby reduce the incidence of flooding.

The 17th Street Canal was dug as a stormwater drainage outlet by the City of New Orleans in 1872. It was redredged in 1897, and again in 1929. The 17th Street Canal is the main stormwater drainage outlet for approximately 7,860 acres of urbanized land in Orleans Parish (Uptown, Broadmoor, Carrollton) and approximately 2,550 acres of similar area in Jefferson Parish (between Metairie Road and the Mississippi River).

PUBLIC NOTICE MAILED

This project is part of an overall project whose elements are aimed at providing a system capable of a 5-year return frequency protection. The applicant's project is to improve the present hydraulic characteristics of the canal to allow the pumping rate of Pump Station No. 6 to increase to 10,400 cubic feet per second, thereby reducing the instances of street and home flooding in the drained area.

The applicant proposes to remove all obstructions from the canal including all boat mooring facilities. The applicant has stated that people whose boats are displaced by the project will be allowed to moor their boats to the proposed sheet-pile wall on the west side of the canal. This and other alternatives are under consideration by the applicant. The project will displace approximately nine residences and two businesses presently located in the drainage canal. However, these improvements will decrease the flooding potential to approximately 200,000 residents of urban areas in Jefferson and Orleans Parishes.

As part of the project, modifications will be made to the existing levees on both sides of the canal to provide for levee stability. Although changes in the shape of the levees will be needed, the landside levees toes will not extend any further from the canal than they are at present. The existing bike paths will be removed during construction, but will later be replaced.

The Sewerage and Waterboard of New Orleans has scheduled a public information meeting at City Council Chambers, City Hall, 1300 Perdido Street, New Orleans, Louisiana 70112, on July 20, 1983, at 7:00 p.m. to explain the project in further detail. Everyone who has interest in this project is strongly urged to attend. The normal public notice comment period is being extended to allow for comments after the meeting.

Plans for the proposed work are now on file in the Office of the District Engineer, US Army Engineer District, New Orleans, Foot of Prytania Street, New Orleans, Louisiana, and may be seen by anyone having interest in the matter. Protests to the proposed work, suggestions for modification thereof or objections to it, stating reasons therefor, will be received up to and including August 1, 1983. Letters must contain both the applicant's name and the notice number.

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources.

The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among those are conservation, economics, esthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, navigation, recreation, water supply, water quality, energy needs, safety, food production, and, in general, the needs and welfare of the people.

No properties listed in the National Register of Historic Places are near the proposed work. The possibility exists that the proposed work may damage or destroy presently unknown archeological, scientific, prehistorical, or historical sites or data. Copies of this notice are being sent to the State Archeologist, State Historical Preservation Officer, and the National Park Service.

You are requested to communicate the information contained in this letter to any other parties whom you deem likely to have interest in the matter.

Our initial finding is that the proposed work would neither affect any species listed as endangered by the US Department of Interior nor affect any habitat designated as critical to the survival and recovery of any endangered species.

The applicant has certified that the proposed activity described in the application complies with and will be conducted in a manner that is consistent with the Louisiana Coastal Resources Program.

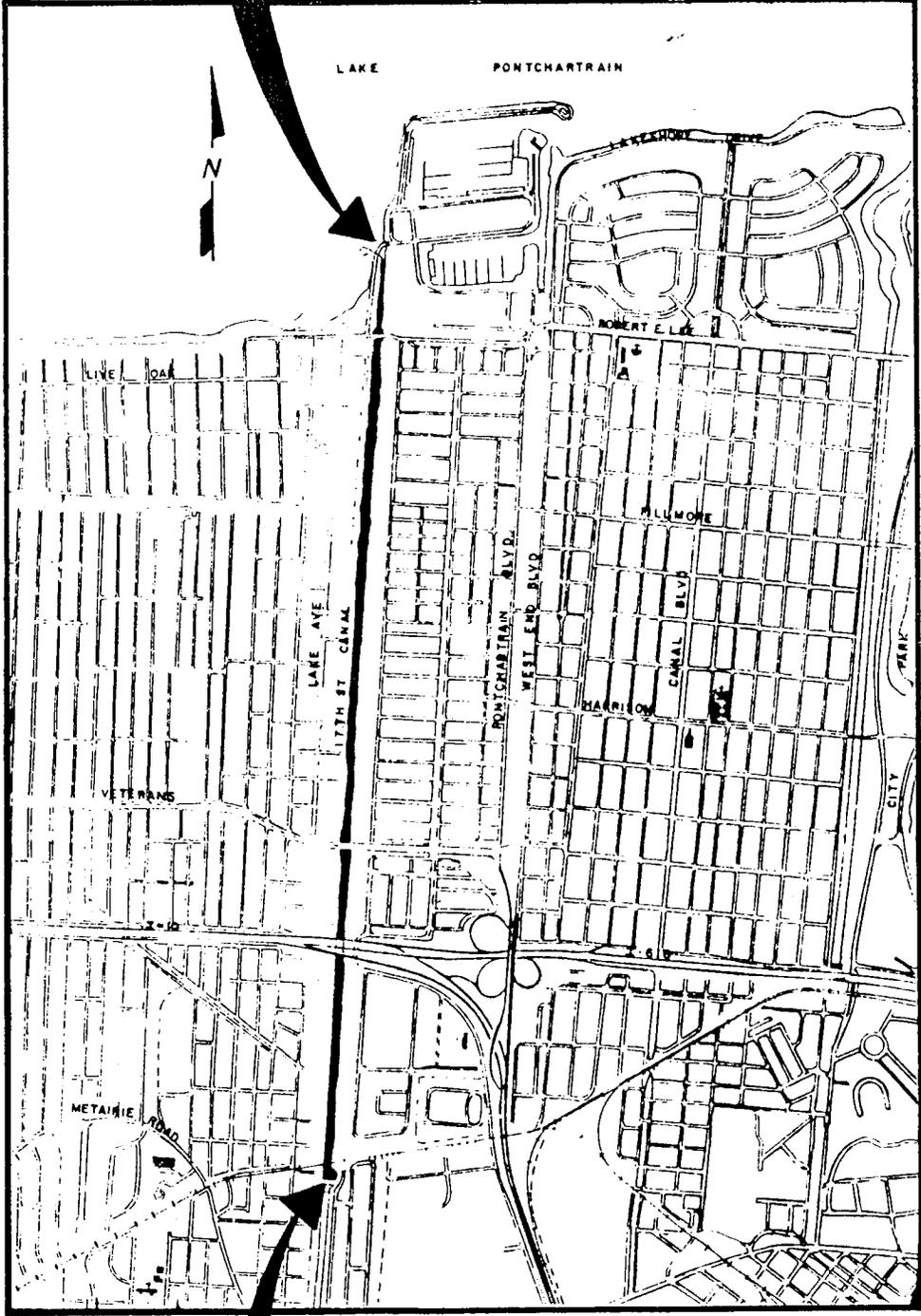
C. J. Nettles  
Chief, Operations Division

This project combines two (2) previously submitted permit requests by the Sewerage and Water Board of New Orleans' plan to improve the hydraulic characteristics of the 17th Street Canal. The limits of the total project are Pump Station No. 6 on the south and 370.0 feet north of Bucktown Pedestrian Bridge to the north, as shown on Attachment pages 2 and 3. The permit Application for Phase I was submitted to your office on December 29, 1980. The Permit Application for Phase II was submitted April 20, 1981. This application is to supersede the previous ones by combining the two (2) phases into one (1) project.

The applicant's goal for the 7,860 acres (75%) of Orleans Parish and 2,550 acres (25%) of Jefferson Parish drained by the 17th Street Canal is a drainage system capable of providing 5-year return frequency protection. The canal's tributary area is shown on Attachment page 10. Elements of the overall plan include: improving the drainage system upstream of Pump Station No. 6, increasing the pumping capacity of Pump Station No. 6 from 6,650 to 10,400 cubic feet per second, and dredging the 17th Street Canal (470,000 cubic yards) to give it the capability of carrying the increased flow. The improvement of the canal to a cross section capable of carrying 10,400 cubic feet per second in the section between the Hammond Highway Bridge and the Bucktown Bridge was provided for in the December 29, 1980 application.

Preliminary plans for this project call for the construction of sheet pile walls with concrete caps along both levees for the majority of the length of the project, then excavation of the canal to provide a flow area in the neighborhood of 2,500 square feet. In addition, some lowering of the existing levees behind the proposed sheet pile walls will be required to meet stability requirements. Sheet pile walls will, however, be of sufficient height to meet current flood protection criteria. The Southern Railroad Bridge just north of Pump Station No. 6 will require some modification as it could possibly become a substantial flow obstruction at extremely high lake stages and could also be a possible cause of flooding, due to the fact that the rail elevation is several feet below the existing levees in its proximity. Detailed hydraulic analyses have been undertaken during the design phase of this project to determine the effect of this bridge and other obstructions within the canal for the design flow of 10,400 cubic feet per second. Hydraulic gradient calculations based on the projected flow of 10,400 cubic feet per second at normal lake elevations and after completion of canal dredging, indicate an insufficient rise in water elevation at Veterans Highway Bridge to warrant consideration of flood gates. A synopsis of the hydraulic analyses is described on Attachment page 11.

All excavated material will be hauled away in leak proof trucks and disposed of in a nonwetland area and covered by at least one foot of clean fill to comply with suggestions made the the EPA concerning a previous permit application.



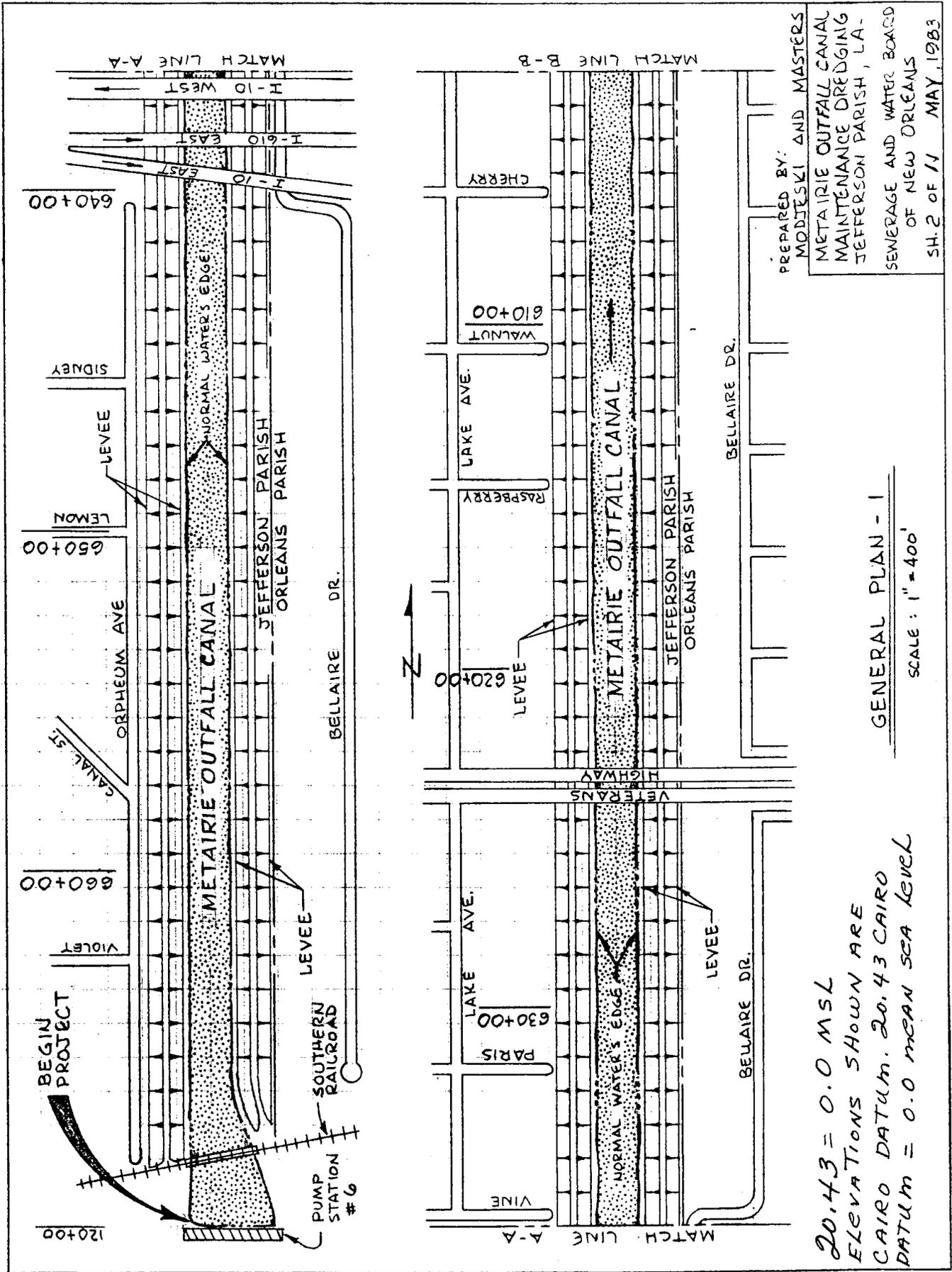
END PROJECT

EGIN PROJECT

**PROJECT LOCATION**



METAIRIE OUTFALL CANAL  
SEWERAGE AND WATER BOARD  
OF ORLEANS PARISH, LA  
PREPARED BY: MODJESKI AND MASTERS  
SH. 1 OF 11  
MAY, 1983

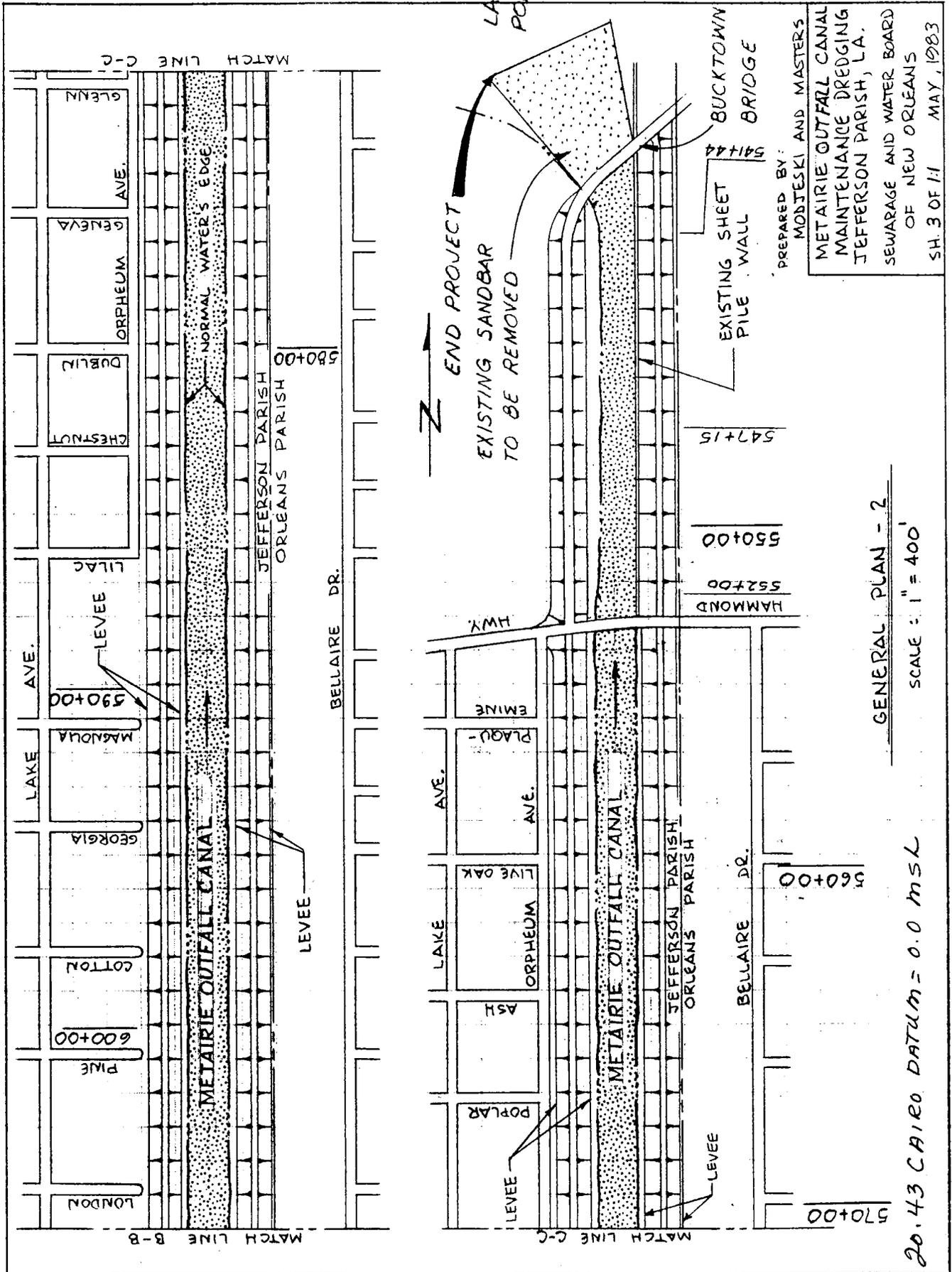


PREPARED BY:  
MODJESKI AND MASTERS  
METAIRIE OUTFALL CANAL  
MAINTENANCE DREDGING  
JEFFERSON PARISH, LA.  
SEWERAGE AND WATER BOARD  
OF NEW ORLEANS  
SH.2 OF 11 MAY, 1983

GENERAL PLAN - 1  
SCALE: 1" = 400'

20.43 = 0.0 MSL  
ELEVATIONS SHOWN ARE  
CAIRO DATUM. 20.43 CAIRO  
DATUM = 0.0 MEAN SEA LEVEL

LAKE PONTCHARTRÉ



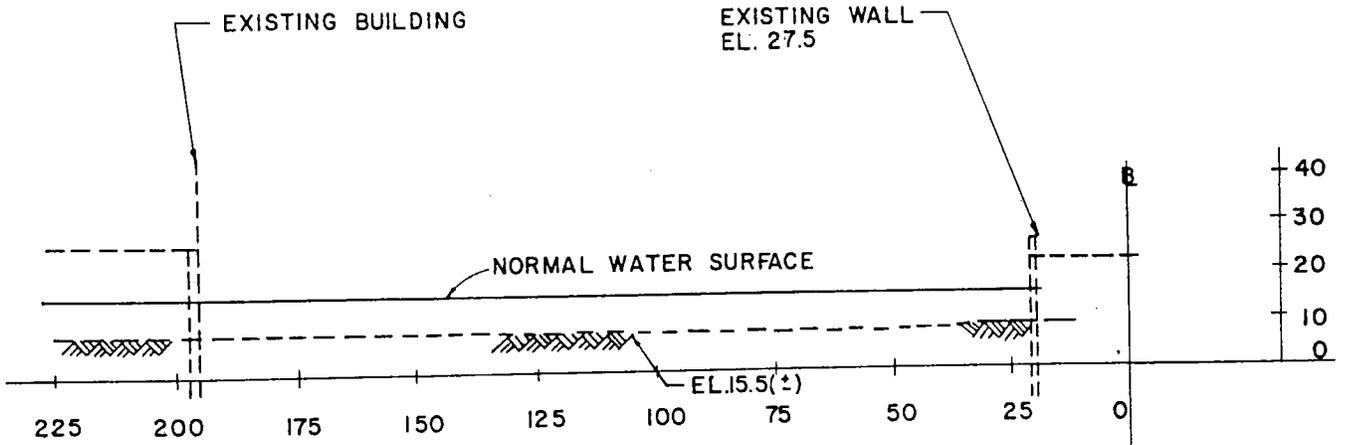
PREPARED BY:  
 MODTESKI AND MASTERS  
 METAIRIE OUTFALL CANAL  
 MAINTENANCE DREDGING  
 JEFFERSON PARISH, LA.  
 SEWERAGE AND WATER BOARD  
 OF NEW ORLEANS  
 SH. 3 OF 11 MAY, 1983

GENERAL PLAN - 2  
 SCALE: 1" = 400'

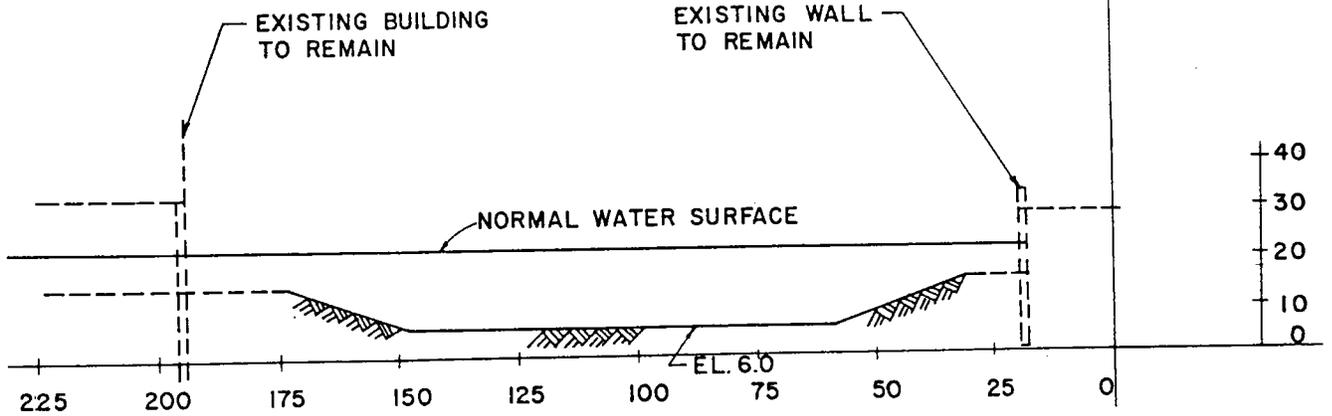
20.43 CAIRO DATUM = 0.0 MSL

ORLEANS PARISH

JEFFERSON PARISH



EXISTING



PROPOSED

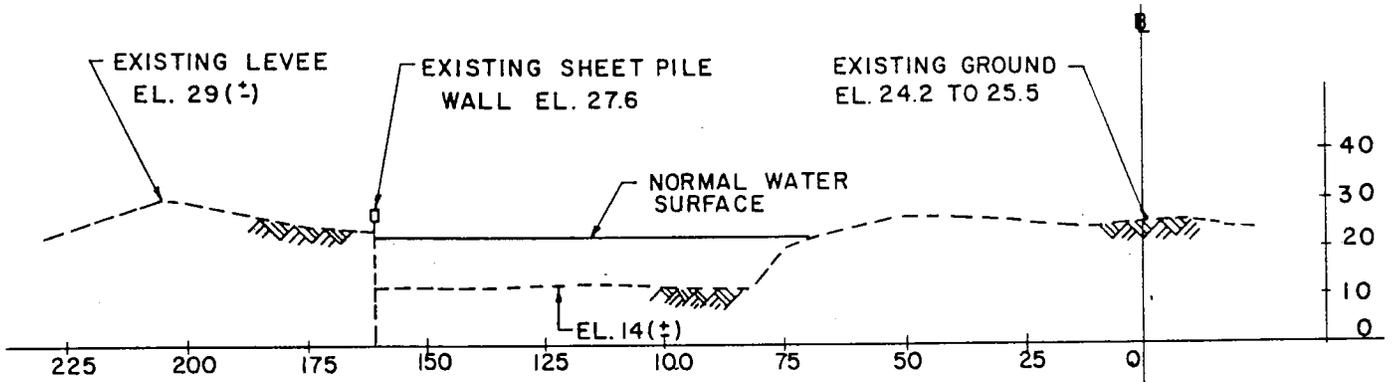
SECTIONAL VIEW 300' NORTH OF THE BUCKTOWN BRIDGE

(LOOKING SOUTH)

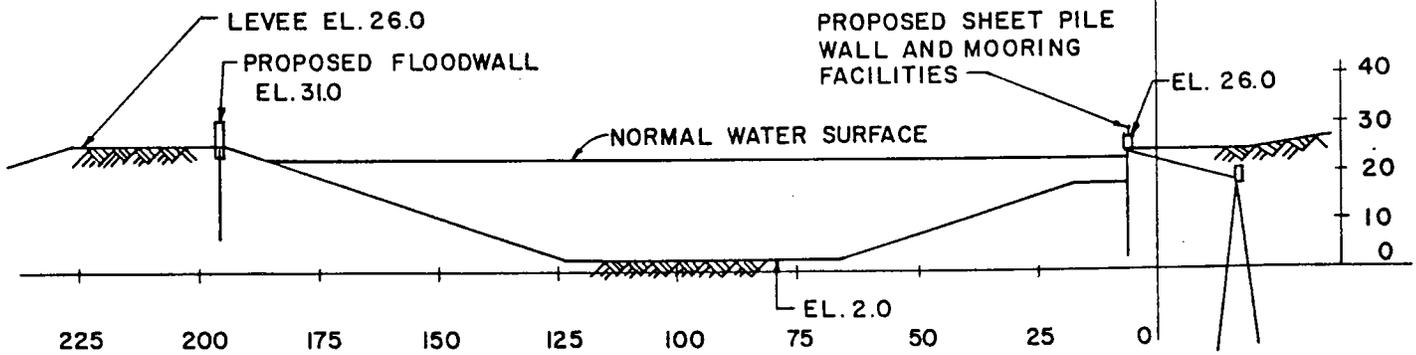
1" = 40'

20, 43 CAIRO DATUM = 0.0 m.s.l.

METAIRIE OUTFALL CANAL  
 SEWERAGE AND WATER BOARD  
 OF ORLEANS PARISH, LA.  
 PREPARED BY: MODJESKI AND MASTERS  
 MAY 1983



EXISTING



PROPOSED

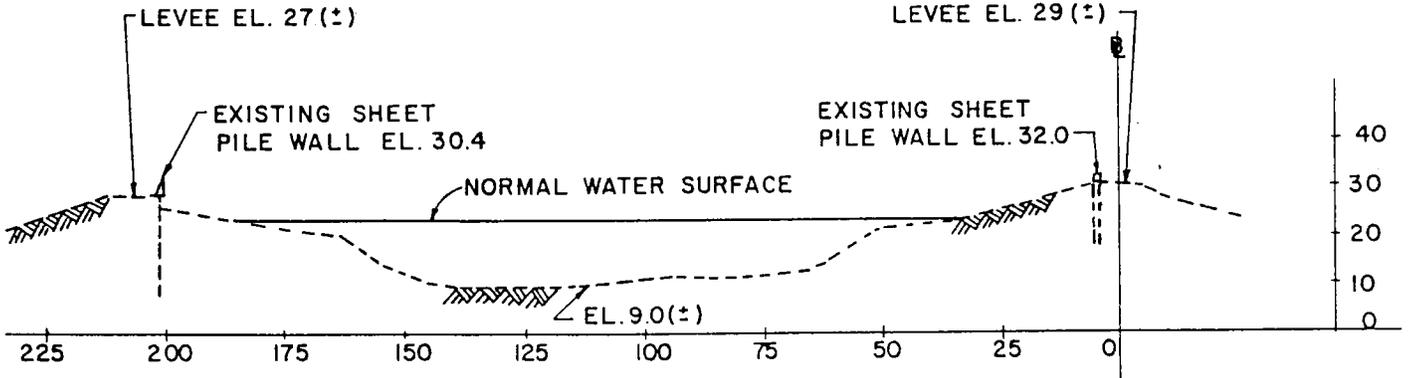
SECTIONAL VIEW BETWEEN BUCKTOWN BRIDGE AND HAMMOND HIGHWAY

(LOOKING SOUTH)

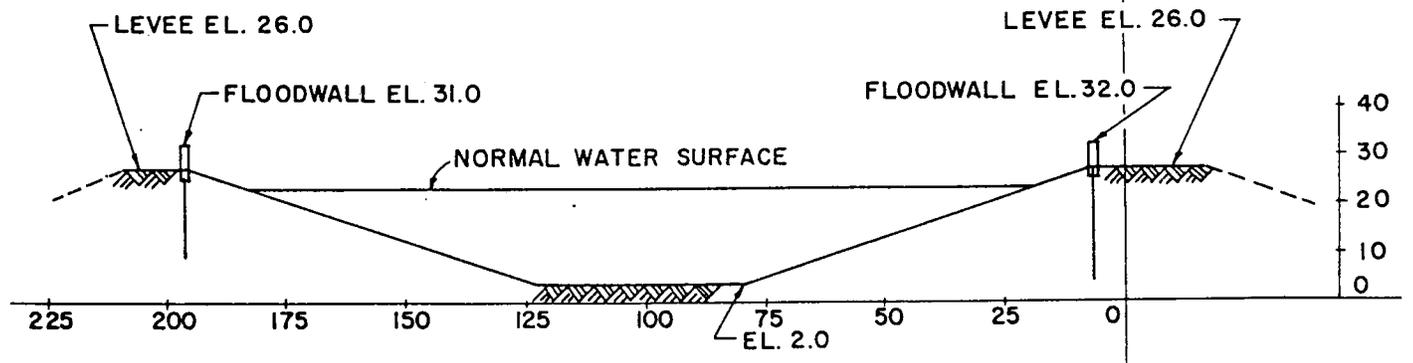
1" = 40'

20.43 CAIRO DATUM = 0.0 M.S.L.

METAIRIE OUTFALL CANAL SEWERAGE AND WATER BOARD OF ORLEANS PARISH, L.A. PREPARED BY: MODJESKI AND MASTERS MAY 1983
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EXISTING



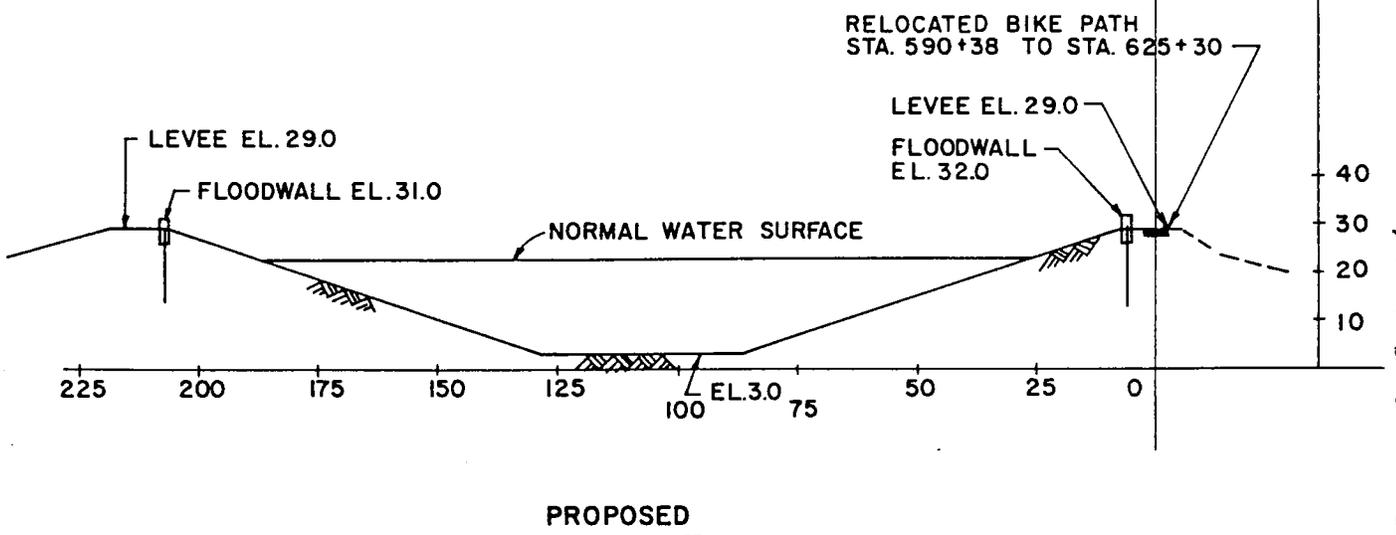
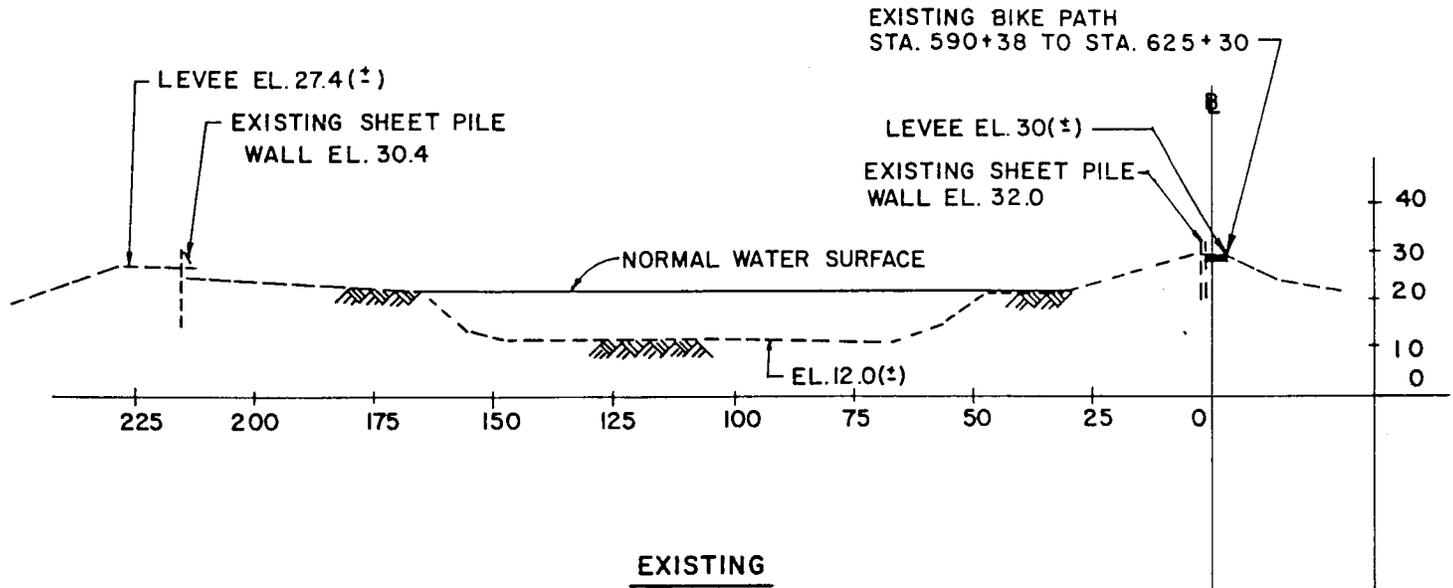
PROPOSED

SECTIONAL VIEW BETWEEN HAMMOND HIGHWAY AND VETERANS HIGHWAY

(LOOKING SOUTH)

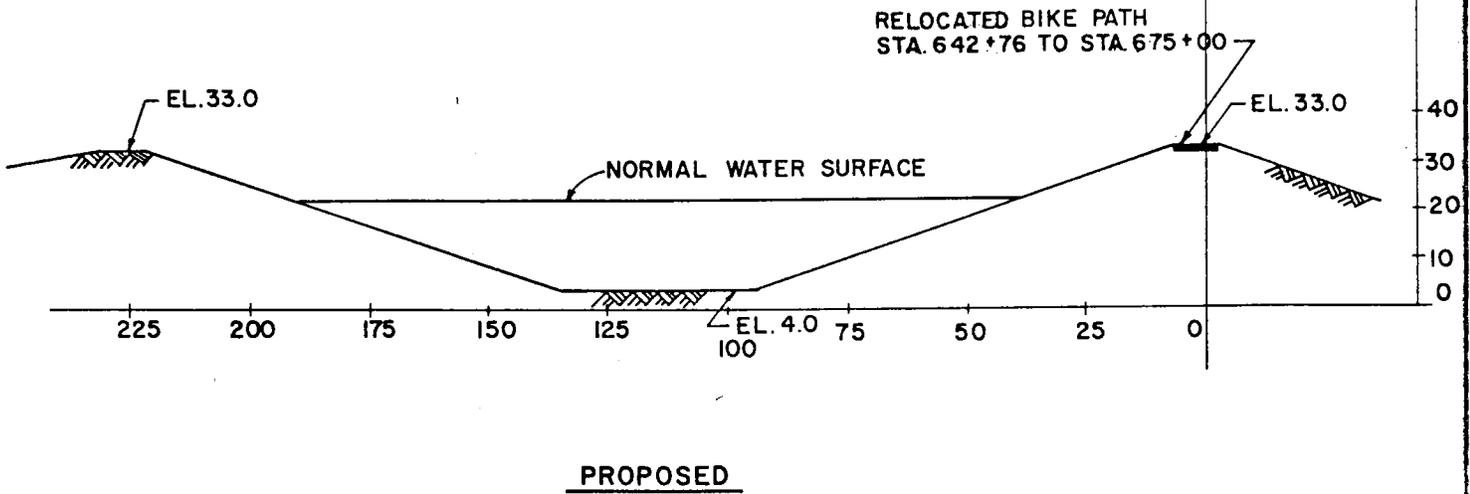
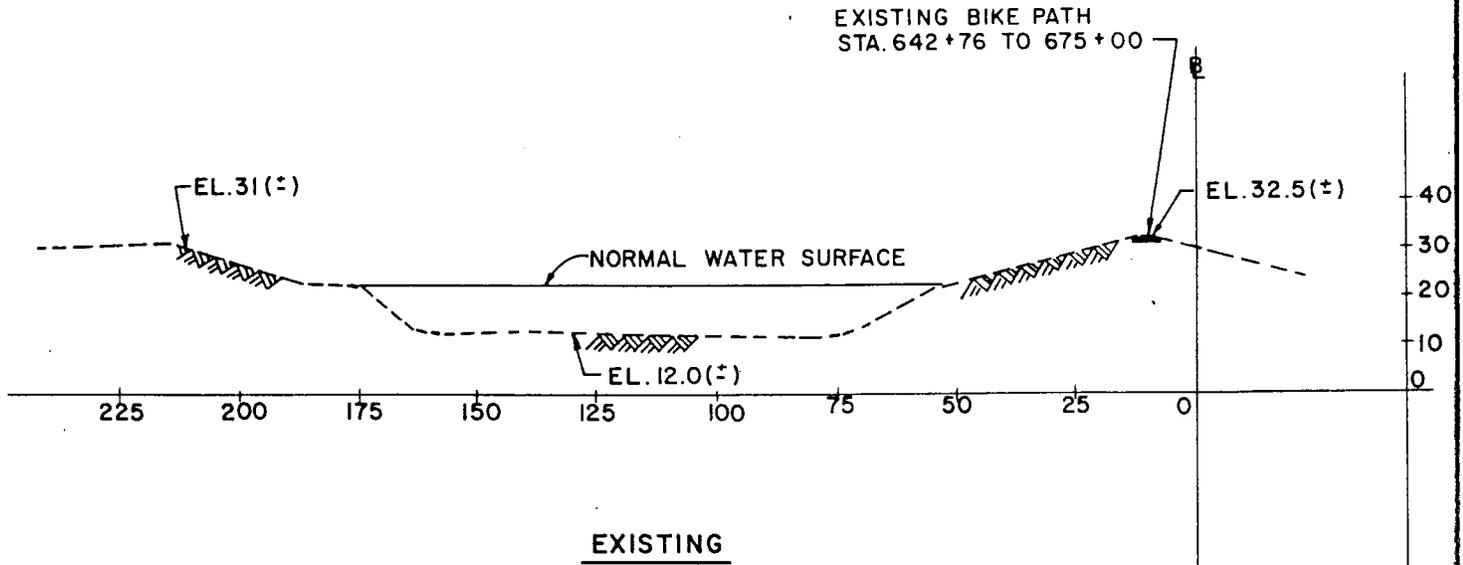
1"=40'

20.43 CAIRO DATUM = 0.0 m s l



SECTIONAL VIEW BETWEEN VETERANS HIGHWAY AND I-10  
(LOOKING SOUTH)  
1" = 40'

20.43 CAIRO DATUM = 0.0 MSL



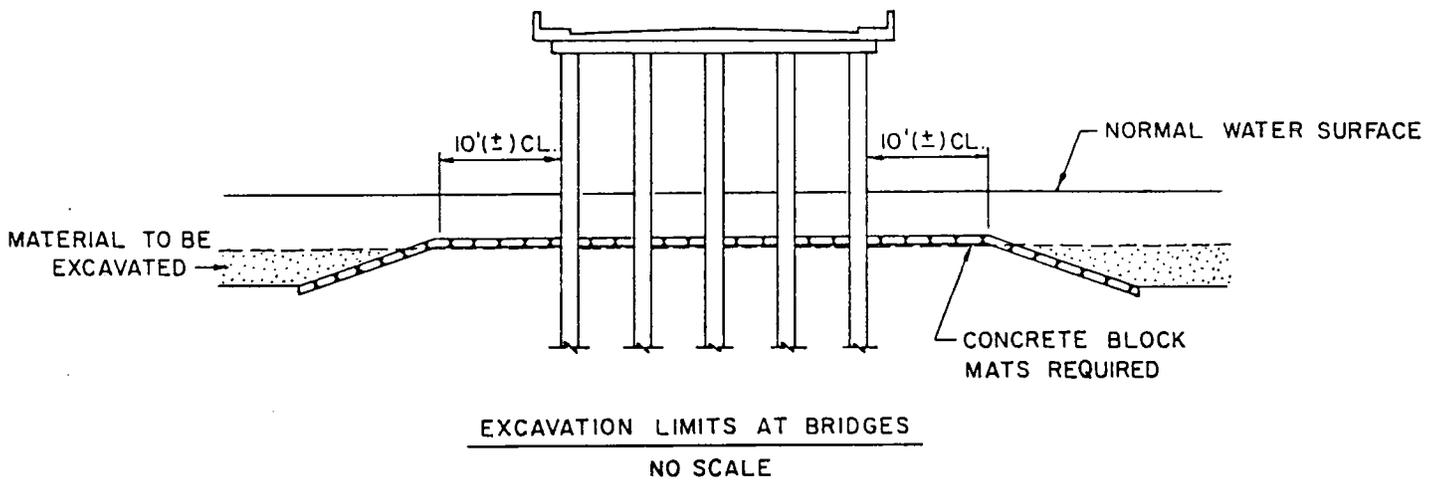
SECTIONAL VIEW BETWEEN I-10 AND PUMP STATION NO. 6

(LOOKING SOUTH)

1" = 40'

20.43 CAIRO DATUM = 0.0 M.S.L.

METAIRIE OUTFALL CANAL SEWERAGE AND WATER BOARD OF ORLEANS PARISH, L.A.	
PREPARED BY: MODJESKI AND MASTERS	MAY, 1983
SH. 8 OF 11	



NOTE: NO EXCAVATION WILL BE REQUIRED BETWEEN I-10 EASTBOUND AND I-10 WESTBOUND. HOWEVER CONCRETE BLOCK MATS WILL BE REQUIRED.

20.43 CAIRO DATUM = 0.0 M.S.L.

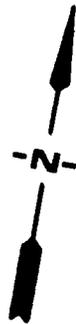
METAIRIE OUTFALL CANAL SEWERAGE AND WATER BOARD OF ORLEANS PARISH, LA. PREPARED BY: MODJESKI AND MASTERS
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L A K E

P O N T C H A R T R A I N

Jefferson  
Parish

Orleans  
Parish



Pumping Station No.6

Pumping Station No.1

2550 ACRES  
FROM JEFFERSON

7860 ACRES  
FROM ORLEANS

M I S S I S S I P P I

R I V E R

OUTFALL CANAL

AVENUE "C"

PONTCHARTRAIN HIGHWAY

TALESTO CANAL

CLEMMER ST.

S. SHERBORN AVE.

WALMLEY AVE.

S. CARROLLTON AVE.

LOWRY ST.

ROBINVILLE AVE.

NAPOLEON AVE.

S. CLARBORNE AVE.

THIRD ST.

ST. CHARLES AVE.

SELPOURNE AVE.

METAIRIE OUTFALL CANAL  
SEWERAGE AND WATER BOARD  
OF ORLEANS PARISH, LA.  
PREPARED BY: MODJESKI AND MASTERS  
SH. 10 OF 11 MAY, 1983

## SYNOPSIS OF HYDRAULIC ANALYSIS

### I. Determination of Cross-sectional Area

Reference: Open-channel Hydraulics by Chow, 1959  
Pages 165-168

- A. A velocity of 4 fps was determined to be the recommended allowable.
- B. The Manning Formula was used to arrive at the desirable cross-sectional area of 2500 sf.
- C. The D'Aubuisson Method was used to calculate the backwater effect of the bridges and other obstructions.

### II. History of Project

#### A. Phase I

- 1. Canal capacity analyzed for 7225 cfs.
- 2. Canal capacity analyzed for 10,000 cfs from Hammond Hwy. to the Lake and 6650 cfs from Pump Station No. 6 to Hammond Hwy.

#### B. Phase II - canal capacity analyzed for 10,400 cfs from Pump Station No. 6 to the Lake.

- 1. M & M Manual Calculations
- 2. HEC 2 by consultant of Jefferson Parish
- 3. Hydro-dynamic Model & HEC 2 by Drs. Alawady and Suhada
- 4. Linfield-Hunter Analysis