1110 Gen COE Engr & Des Corres Files- '82
Subject:Hurricane Protection Lake Pontchatrain LA & Vicinity Citrus Lakefront Levee- IHNC to Paris Road Foreshore Protection (GDM-Revision)

A0001757

ENGINEERING DIVISION
Permit Review Sheet

SUSPENSE:* 7/12/99

(1)
- ED-S
- ED-SP
- 1A ED-SR ~~DM for GH~~

SUSPENSE:* 7/14/99

(2)
- ED-H
- ED-HD
- ✓ ED-HC
- ED-HH
- ✓ ED-HM

SUSPENSE:* 7-23-99

(3)
- ED-F
- ED-FG
- ED-FD
- ✓ ED-FS

SUSPENSE:*

(4)
- ED-L
- ED-LW
- ED-LC
- ED-LL
- ED-T
- ED-G

***If a suspense cannot be met, notify secy, ext. 2240, of new suspense date.**

SUBJECT: EM-19-990-1624, Appl by the New Orleans Sewerage & Water Board for work in Lake Pontchartrain.

ED-SR
No Cmts from a Relocations standpoint.
SCN 7/12/99 DM

ED-HC No objection; however 14Jul99 we recommend the same gradation used in our adjacent stone toe protection in 3ft thickness. The gradation is:

Percent Lighter by Weight	Weight lbs
100	2200-900
50	930-440
15	460-130

We advise that the 1250 lb stone in the permits gradation may not fit into a 2-ft layer thickness. We also note that the way the gradation is described may allow the contractor too much latitude in determing the stone weight for each percentage interval.
JM Hale 7/20/99

ED-FS
NO COMMENTS.
FV JR

FILE

CEMVN-OD-SE (1145b)

Swindler/2278
8 July 1999

MEMORANDUM FOR Chief, Engineering Division

SUBJECT: EM-19-990-1624 Appl by the New Orleans Sewerage & Water Board for work in Lake Pontchartrain.

1. Request by the New Orleans Sewerage & Water Board to plant and maintain submerged aquatic vegetation and create wetlands, build breakwaters and dredge construction access channels at the old LINCOLN BEACH amusement park, near the Lake Pontchartrain Hurricane protection floodwall.

2. Forwarded for comment and return. Time may be charged to **L-20075**. Please return enclosed Charge Record Sheet with your response.

3. P.O.C. is Roger Swindler ext. 2278.

RONALD J. VENTOLA
Chief, Regulatory Branch
Operations Division

Encls
As stated

CHARGE RECORD SHEET

1-ENGR.CH1

APPLICANT: NEW ORLEANS S&WB

PERMIT NO.: EM-19-990-1624

CHARGE ACCOUNT NO.: L-20075 DATE 8 July

REVIEWER	OFFICE SYMBOL	REVIEW TIME (HOURS)	ORGANIZATION CODE/ DATE
FRANK VOJKOVICH	ED-FS	1	KX

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT
(33 CFR 325)

OMB APPROVAL NO. 0710-003
Expires October 1996

reporting burden for this collection of information is estimated to average 6 hours per response, including the time for reviewing instructions, ing existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send ents regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to tment of Defense, Washington Headquarters Service Directorate of InformationOperations and Reports, 1215 Jefferson Davis Highway, Suite , Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003), Washington, DC 3. Please DO NO RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having iction over the location of the proposed activity.

PRIVACY ACT STATEMENT

ority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, gable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged rial for the purpose of dumping it into ocean waters. Routine Uses: Information provided on this form will be used in evaluating the application permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be ssed nor can a permit be issued.

set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this cation (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed ity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED
	P990796CK		

(ITEMS BELOW TO BE FILLED BY APPLICANT)

APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE *(an agent is not required)*
SEWERAGE AND WATER BOARD OF NEW ORLEANS	BURK-KLEINPETER, INC. LESTER P. GUARINO, LANDSCAPE ARCHITECT
APPLICANT'S ADDRESS 625 ST. JOSEPH STREET NEW ORLEANS, LA 70165	**9. AGENT'S ADDRESS** 4176 CANAL STREET NEW ORLEANS, LA 70119
APPLICANT'S PHONE NOS. W/AREA CODE a. Residence b. Business	**10. AGENT'S PHONE NOS. W/AREA CODE** a. Residence b. Business (504) 486-5901

STATEMENT OF AUTHORIZATION

I hereby authorize, BURK-KLEINPETER, INC. to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE — DATE 6/17/99

NAME, LOCATION AND DESCRIPTION OF PROJECT OR ACTIVITY

PROJECT NAME OR TITLE *(see instructions)*

LINCOLN BEACH WATER QUALITY IMPROVEMENT PLAN

NAME OF WATERBODY, IF KNOWN *(if applicable)*

LAKE PONTCHARTRAIN

LOCATION OF PROJECT

ORLEANS PARISH — LOUISIANA STATE

14. PROJECT STREET ADDRESS *(if applicable)*

SITE IS LOCATED ON THE LAKESIDE OF HAYNE BLVD. (INSIDE THE LEVEE) APPROXIMATELY 600 FEET NE OR INTERSECTION WITH VINCENT DRIVE.

OTHER LOCATION DESCRIPTIONS, IF KNOWN, *(see instructions)*

SEE ATTACHMENT A

DIRECTIONS TO THE SITE

SEE ATTACHMENT A

Nature of Activity (Description of project, include all features)

SEE ATTACHMENT A

Project Purpose (Describe the reason or purpose of the project, see instructions)

SEE ATTACHMENT A

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

Reason(s) for Discharge

SEE ATTACHMENT A

Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

WETLAND SUBSTRATE FILL - 3,120 CY
WAVE PROTECTION CORE STONE - 9,900 TONS (6,600 CY)
WAVE PROTECTION ARMOR STONE - 7,200 TONS (4,800 CY)

Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

SEE ATTACHMENT A

Is Any Portion of the Work Already Complete? Yes ____ No X IF YES, DESCRIBE THE COMPLETED WORK

Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

SEE ATTACHMENT A

List of Other Certifications or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

o the best of my knowledge the proposed activity described in my permit application complies with and ill be conducted in a manner that is consistent with the LA Coastal Management Program. /ould include but is not restricted to zoning, building and flood plain permits

Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
	4/17/99		6-22-99

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

*U.S. GPO:1994-550-478/82018

AFFIDAVIT OF NOTIFICATION TO OWNER OF PROPERTY

STATE OF LOUISIANA

PARISH OF ORLEANS

I, SEWERAGE AND WATER BOARD OF NEW ORLEANS , am applying to the Coastal Management Division of the Louisiana Department of Natural Resources for a Coastal Use Permit for the purpose of: AN ENVIRONMENTAL ENHANCEMENT PROJECT FOR EXISTING AND PROPOSED WETLANDS AND SAV ON EITHER SIDE OF THE EXISTING LINCOLN BEACH SITE IN LAKE PONTCHARTRAIN. THE PURPOSE OF THIS PROJECT IS TO SATISFY THE REQUIREMENT FOR SUBMISSION OF A DESIGN PLAN DESCRIBED IN THE CONSENT DECREE.

This activity is to occur on the following described property:
THE WETLAND AREAS ALONG THE LAKE SHORELINE ON EACH SIDE OF THE MAIN LINCOLN BEACH UPLAND SITE (PREVIOUSLY FILLED) AND THE LAKE PONTCHARTRAIN BOTTOMS EXTENDING 500 FEET TO THE EAST AND WEST OF LINCOLN BEACH AND APPROXIMATELY 500 FEET INTO THE LAKE FROM THE NORTHERN MOST RAILROAD TRACK.

Further, with regard to ownership of the above described property (check appropriate block):

_____ I am the owner of the property on which the above described activity is to occur.

OR

X I have made every reasonable effort to determine the identity and current address of the owner(s) of the land on which the above described use is to occur, which included, if necessary, a search of the public records of the parish. The owner(s) and their address(es) are as follows (use additional sheets of paper as required):

CITY OF NEW ORLEANS

A copy of the application has been distributed to the above listed owner(s).

Signed this 17TH day of JUNE, 19 99

BY:

APPLICANT
SEWERAGE AND WATER BOARD OF NEW ORLEANS

16. Other Location Descriptions

The Lincoln Beach property is located on Section 25, T.11 S., R. 12 E., in Orleans Parish, Louisiana. The overall Design Plan site areas are illustrated on Permit Drawing No.2. Included in the design plan are the wetland areas along the lake shoreline on each side of the main Lincoln Beach upland site (previously filled) and the Lake Pontchartrain water bottoms on each side of the main site (for the submerged aquatic vegetation (SAV) and wetland portions of the Design Plan). The main Lincoln Beach upland site contains 17 acres extending approximately 1,440 feet between parallel bulkheads/rip rap that run perpendicular to the shore. The proposed wetland enhancements, SAV plantings, wave protection structures and boardwalks do not occur on the main Lincoln Beach site. The project wetland shores and SAV areas extend an additional 500 feet to the east and west from the bulkheads/rip rap and into the lake approximately 500 feet from the north track of the Norfolk Southern railroad. The railroad right-of-way extends to the north 100 feet from the centerline of the tracks and overlaps into the wetland areas. This defines the overall limits for the wetland work. The actual extent of the SAV and wetland areas are defined further, within these limits, in the construction drawings.

17. Directions to the Site

The site may be accessed by walking over the levee at Hayne Blvd. north of Vincent Drive. Access from roadways to this site is currently limited to the existing tunnel that goes under the double tracks of the Norfolk Southern Railroad Corporation. The tunnel is accessible from Hayne Boulevard through the existing flood control gate that is under the jurisdiction of the Board of Commissioners of the Orleans Levee District (OLD).

18. Nature of Activity

The Design Plan includes the following elements that are expected to require permitting (in order of implementation):

1) Wave Protection Structures:
   Construction of wave protection structures in Lake Pontchartrain in front of and on either side of the Lincoln Beach site shall be the first work item to be completed. The wave protection structures are intended to create a general calming affect to the lake waters between the wave protection structure and the existing shore. Calmer conditions will be more suitable for the growth of the proposed SAV plants and both proposed and existing emergent wetland plants than areas with no protection. The wave protection structures are not intended to fully protect these areas from named storms or high annual lake levels and storm tides that occur in Lake Pontchartrain.

The level of the lake, direction and intensity and duration of winds and tides will create varying conditions of protection through out the contract period and beyond.

The wave protection structures will also serve to mitigate and limit the effects of runoff and erosion in the beach area. Site runoff currently flows into the proposed SAV and emergent wetland areas. The wave protection structures will minimize the flow of runoff from the site from reaching the swimming area and will be constructed on top of and extended beyond the existing wood and rip rap jetties.

It is anticipated that stone for the wave protection structures may be delivered to the site by barge, unloaded into trucks, hauled and placed directly onto the structure locations. The contractor will have the option to haul stone to the site by barge or by truck. If chosen by the contractor, the first construction step for the wave breaks will be the temporary barge access channel, temporary unloading apron and temporary land side access routes established to haul the stone from the barge to the wave breaks locations. Placement of stone for the wave protection structures construction would be accomplished by progressively backing haul trucks from the land side and dumping onto the structure alignment creating the necessary profile. The wave protection structures may also utilize concrete rip rap from the demolition of on-site concrete structures such as the fishing pier deck, swimming pool, paving and building structures.

2) Wetland Substrate Fill Placement:
Placement of a substrate fill material will occur behind the wave protection structures in the water bottoms of Lake Pontchartrain for the purpose of growing emergent wetland plants. The contractor shall place the fill material to the cross sections shown on the project drawings. Once the fill has been placed to an approximate elevation of 1.5' ngvd, it is expected that, due to the dynamic wave conditions that can occur in Lake Pontchartrain, the fill section will be further modified by the action of the waves and tides. Once the fill placement has initially stabilized, planting of SAV and emergent vegetation will take place. The West Wetland Enhancement Area will receive 840 CY of substrate fill. The East Wetland Enhancement Area will receive 2,280 CY of substrate fill.

3) SAV and Wetland Vegetation Planting:
The first cycle of planting of SAV plants and emergent wetland plants shall take place behind the wave protection structures during March and April. During the next growing season a second planting will be done (considering any changes in materials and methods developed from the previous year as a result of the observations noted during the monitoring period). Procurement of the wetland and SAV plants and is the first step prior to their planting. SAV plantings will require protective enclosures secured to the lake bottom at the time of planting to prevent herbivory and will be further secured by SAV planting mats. The SAV Planting Mat is a pre-manufactured,

1½ to 2-inch thick, non-woven, fibrous matting that will allow the plant root material to extend and grow new shoots. Vegetation will be gently separated into individual plants in the field and placed in precut slits (6 inches on center) in the matting. The mats will be deployed directly into the field at intervals to allow for natural expansion between the mats as the SAV grows beyond the mat surface area. SAV species shall include *Vallisneria americana* and *Ruppia maritima.*

Wetland emergent vegetation will be planted within the wetland substrate fill areas with species indigenous to the area including *Spartina alterniflora, Spartina patens, Spartina cynosuroides* and *Juncus roemerianus.* Plants will be provided in tube or standard quart nursery containers with two to four actively growing stems and installed on 4 foot (*Spartina alterniflora*) and 3 foot centers with slow release fertilizer. Planting locations in relation to lake elevations will follow the natural growth habits of these plants. Low marsh plants such as the *Spartina alterniflora* will be planted roughly between mean high tide (1.4'-1.5' ngvd) and mean lake level (1.1' - 1.2' ngvd). High marsh plants such as *Spartina patens* will be planted just above mean high tide (1.4'-1.5' ngvd). *Spartina cynosuroides* naturally occurs between the elevations of *Spartina alterniflora* and *Spartina patens* and will be planted likewise. *Juncus romerianus* occurs at about the same elevation as *Spartina patens.*

The existing wetland areas will be cleaned of debris and man-made objects that have washed onto the shore. Existing wood pilings will be left in place. Existing Chinese Tallow trees on the sand ridge of the west wetland area will be removed, however, these trees are well established throughout the Lincoln Beach site and may re-vegetate.

4) Alternative Boardwalk:
If the boardwalk (to be bid as an alternate) is included in the contractor's contract, boardwalk construction shall be undertaken after the wave protection structures are in place. The boardwalk is intended to allow for a closer inspection of west wetland and SAV area while restricting interference with plant growth. The boardwalk will be an alternative to the standard overlook at the west side only.

5) Monitoring Plan:
After implementation, monitoring of the wetlands and SAV plantings will continue for the remaining duration of the 5 year SEP period.

6) Contingency Plans:

A Contingency Plan is necessary because success of certain aspects of the SEP cannot be predicted with certainty. These include the effects of the wave break on the shoreline, the effects of adverse weather on marsh areas and SAV plantings and the success of SAV planting. Restoration of SAV can be problematic, and alternate

restoration plans should be implemented if monitoring indicates a low probability of success. The Contingency Plan provides alternate action for these possible but uncertain events. Adverse weather such as severe storms and floods may also affect the project goals, but it is not feasible to develop specific plans for all unforeseen events

Changes based upon experience during the first year would be implemented during the second year. Possible changes in materials and methods might include: slight changes in the design of the enclosures; changes in plant stock and planting methods; planting more of the SAV species that had the greatest growth and propagation rates; selection of different depths for planting and other unanticipated changes. In addition to allowing for the implementation of improvements, spreading the plantings over a two year period will allow reuse of the enclosures from year one to year two, and provide an alternate planting period if unfavorable environmental conditions occurred during year one.

7) Fishing Pier Demolition:
Demolition of the existing fishing pier deck and removal of wood pilings. Concrete from the demolition and removal of the existing fishing pier deck may be used for construction of the wave protection structures. Wood pilings and other debris from the pier removal shall be hauled away from the Lincoln Beach site.

20. Reasons for Discharge:

Wave Protection Armor Stone and Core Stone:
Function to construct breakwater (See Permit Drawing No.5)

Wetland Substrate Fill:
Functions to create favorable conditions for the growth of wetland and SAV plants (See Permit Drawing No.8)

Spoil Placement Area:
Temporary stockpile for the excavated substrate material resulting from the creation of the temporary barge access channel (necessary for the off-load and stone for wave protection structure)(See Permit Drawing No.5).

19. Purpose

The Lincoln Beach Water Quality Improvement Plan - Design Plan is being implemented by the S&WB as an environmental enhancement project for existing and proposed wetlands and SAV on either side of the existing Lincoln Beach site in Lake Pontchartrain.

The purpose of this project is to satisfy the requirement for submission of a design plan described in Section XXI, Supplemental Environmental Project (SEP) of the Consent Decree, lodged April 27, 1998 and Exhibit 6 of the Consent Decree.

The goals and benefits of the SEP are:

1) to secure significant water quality improvement and health improvements in the Lincoln Beach Area;
2) to provide public access to the project area for educational, recreational and environmental purposes;
3) to restore, enhance, and create wetlands and submerged aquatic vegetation (SAV) bed in a wave protected area and vegetative upland buffer;
4) to mitigate and limit the effects of runoff and erosion in the beach area; and
5) to make this area both swimable and fishable in the future.

22. Surface Area in Acres of Wetlands or Other Waters Filled:

Lake Bottom covered by Rock Breakwater: Approx. 1.49 Acres

Lake bottom covered by Spoil resulting from channel (temporary): Approx. 1.15 Acres

Lake bottom covered by wetland substrate fill (for creation of new wetland areas):
Approx. 0.71 acre East Wetland
Approx. 0.25 acre West Wetland

24. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody:

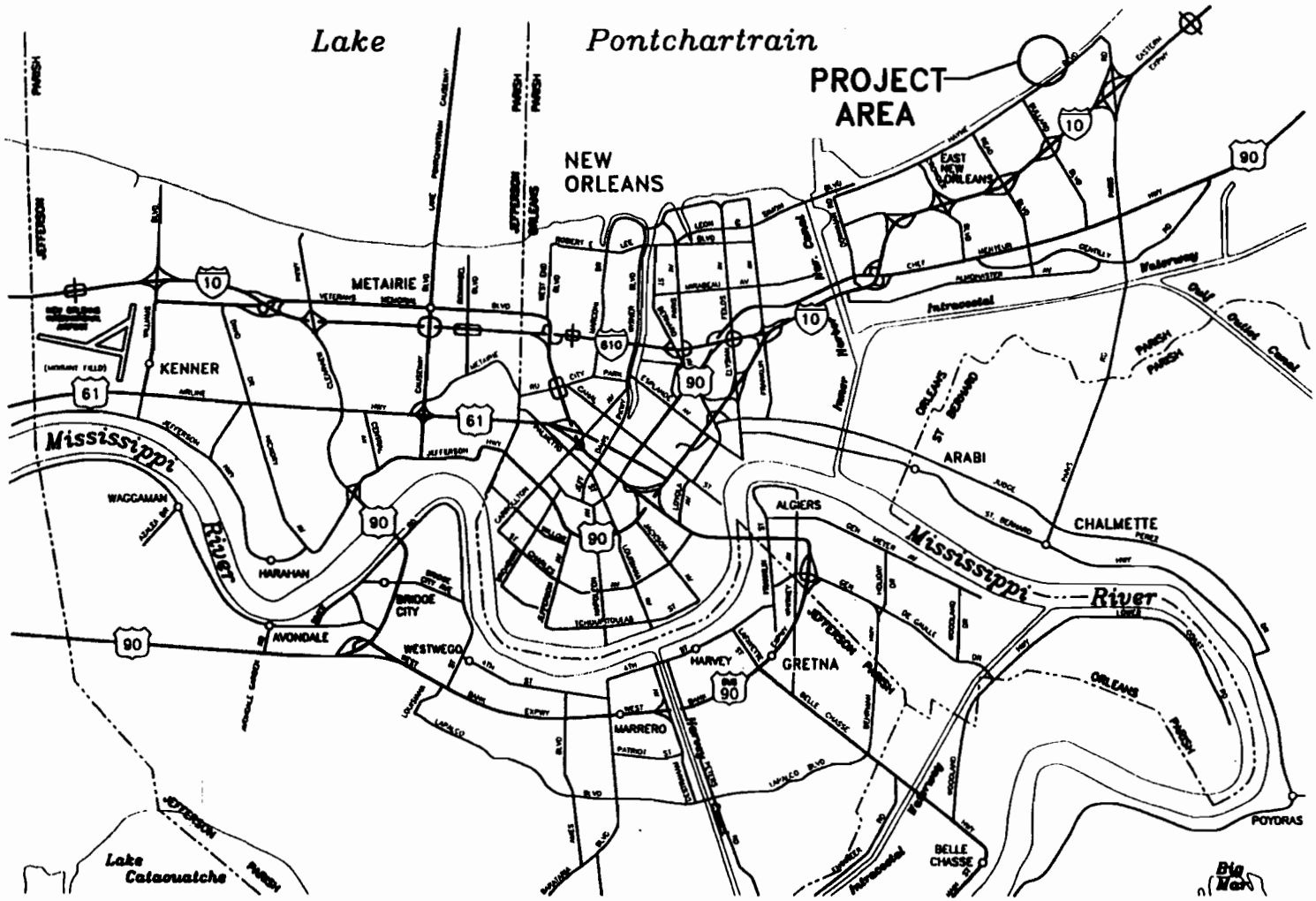
1) Paul E. Gibson, Jr.
Division Superintendent
Norfolk Southern Corporation (railroad)
1400 Norfolk Southern Drive
Birmingham, AL 35210

2) The Owner of Lincoln Beach
Note:
The Orleans Levee District has transferred title of the upland Lincoln Beach site to the City of New Orleans.

Board of the Commissioners of the Orleans Levee District
Lakefront Airport

New Orleans, LA 70122

City of New Orleans
Dept. of Environmental Affairs
City Hall Room 7E04
1300 Perdido Street
New Orleans, LA 70112



PROJECT LOCATION MAP

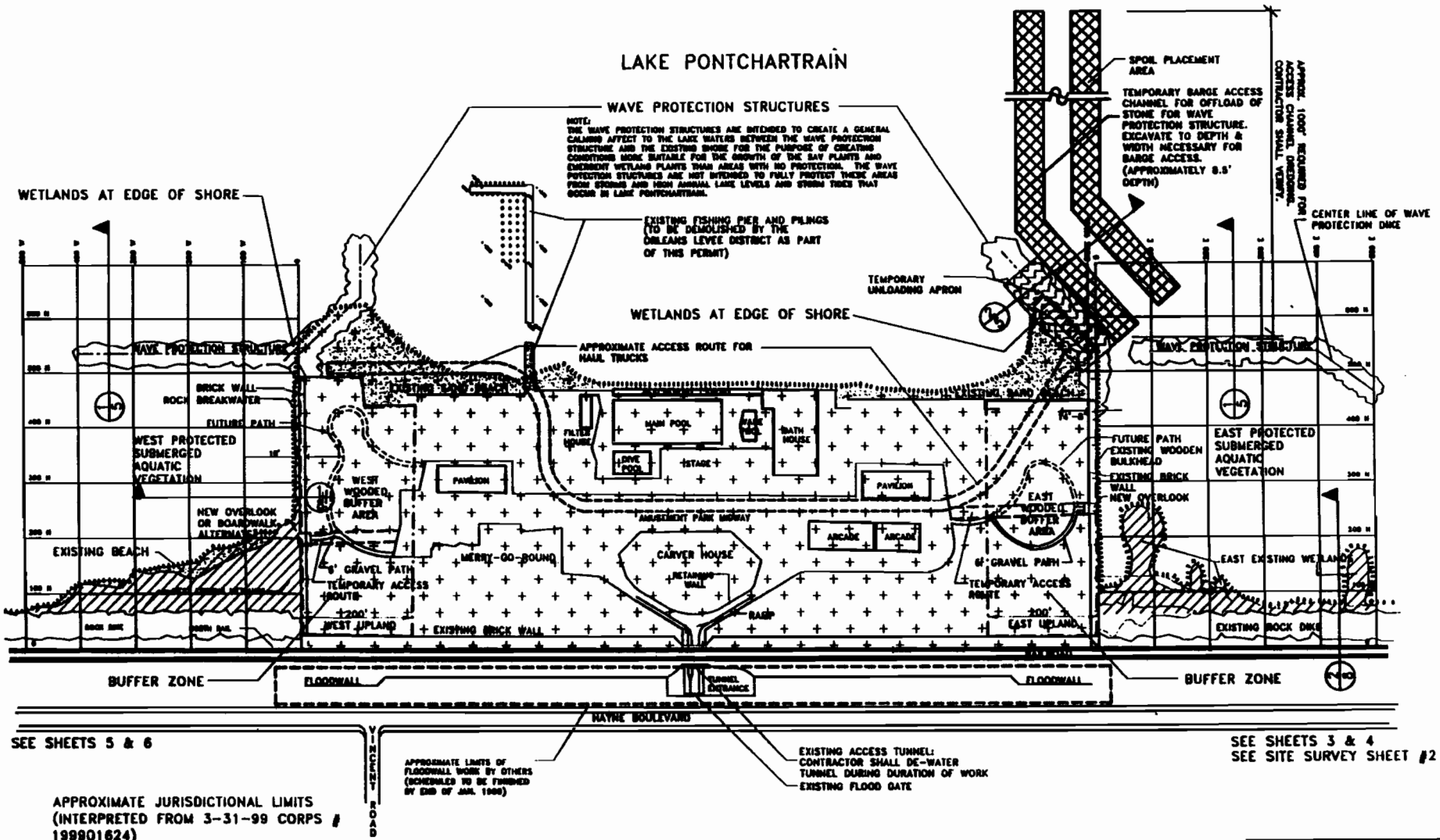
PERMIT DRAWING NO.1
APRIL 16, 1999

SEWERAGE AND WATER BOARD OF NEW ORLEANS

Lincoln Beach
Water Quality Improvement Plan
Design Plan

PROJECT LOCATION MAP

DWG. No.



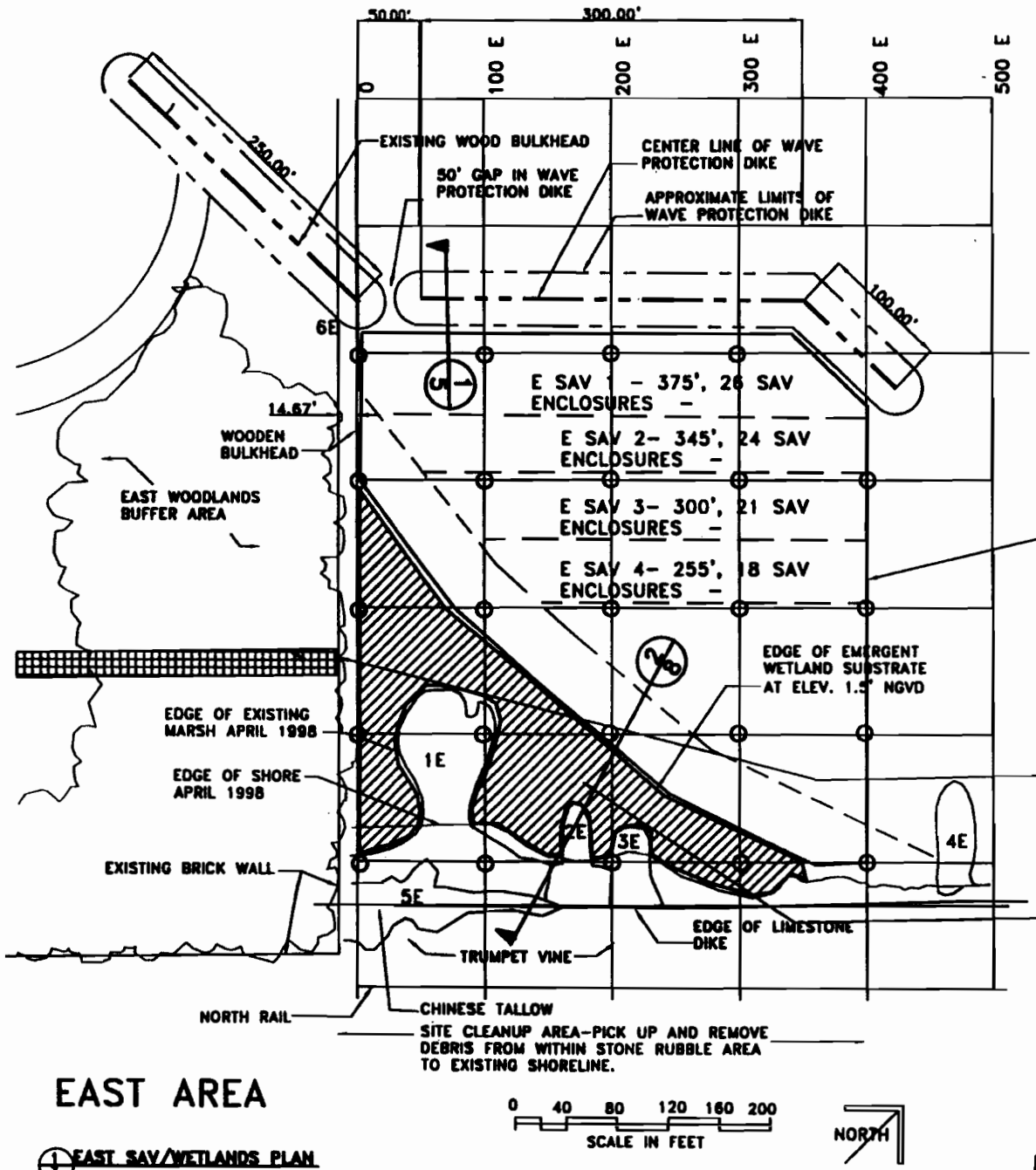
PERMIT DRAWING NO.2
APRIL 16, 1999

SEWERAGE AND WATER BOARD OF NEW ORLEANS

Lincoln Beach
Water Quality Improvement Plan
Design Plan

Overall Site Plan

DWG. No.



EAST AREA

1/3 EAST SAV/WETLANDS PLAN

EXISTING PLANT LEGEND
(dominate plants listed)

1E-Marsh, Spartina alterniflora, Phragmites
2E-Marsh, Spartina alterniflora, Phragmites
3E-Marsh, Spartina alterniflora, with Phragmites
4E-Marsh, Spartina alterniflora, Phragmites
5E-Within rock dike, Chinese Tallow, Baccharis halimifolia
6E-Juncus romerianus

WETLAND LEGEND

- Submerged Aquatic Vegetation (SAV) area
- Center line of SAV enclosure (Preliminary location)
- Wetland Monitoring Post
- Wetland Enhancement Area (See plant list, plant locations to be determined in field by the Engineer)
- Access route location

NOTES:

1) PLACE SUBSTRATE FILL AS PER SECTION 2/8 WITHIN WETLAND ENHANCEMENT AREA. STAY WITHIN THE ACCESS ROUTE FOR FILL PLACEMENT. DO NOT DISTRUB ADJACENT VEGETATION.

2) USE ACCESS ROUTE AND NEW OPENING IN BRICK WALL TO TRUCK IN AND PLACE FILL WITHIN WETLAND ENHANCEMENT AREA. PROTECT THE EXISTING BRICK WALL AND WOODEN BULKHEAD WITH WOOD MATS DURING HAULING OPERATIONS.

3) AFTER CONSOLIDATION OF PLANTING FILL, PLANT WETLAND PLANTS CALLED OUT ON THE PLANT LIST WITHIN THE WETLAND ENHANCEMENT AREA AT LOCATIONS SELECTED BY THE ENGINEER.

4) SAV PLANTS AND ENCLOSURERS ARE TO BE LOCATED IN WATER DEPTHS OF 1 TO 2 FEET IN LOCATIONS SELECTED BY THE ENGINEER.

5) SEE SHEET 7 FOR WETLAND PLANT LIST

6) SITE CLEAN UP-THE CONTRACTOR SHALL PICKUP AND REMOVE FROM THE SITE ALL EXISTING MAN-MADE TRASH, DEBRIS, WOOD BOARDS AND TIMBERS, RAILROAD TIES, ETC. FROM WITHIN THE THE EXISTING SHORELINE AREAS AND AREAS OF THE LIMESTONE RUBBLE.

7) EXISTING OBJECTS SHOWN ON THIS DRAWING ARE BASED UPON AN UNCONTROLLED AERIAL PHOTOGRAPH. REFER TO THE SITE SURVEY FOR VERIFICATION OF LOCATIONS OF OBJECTS.

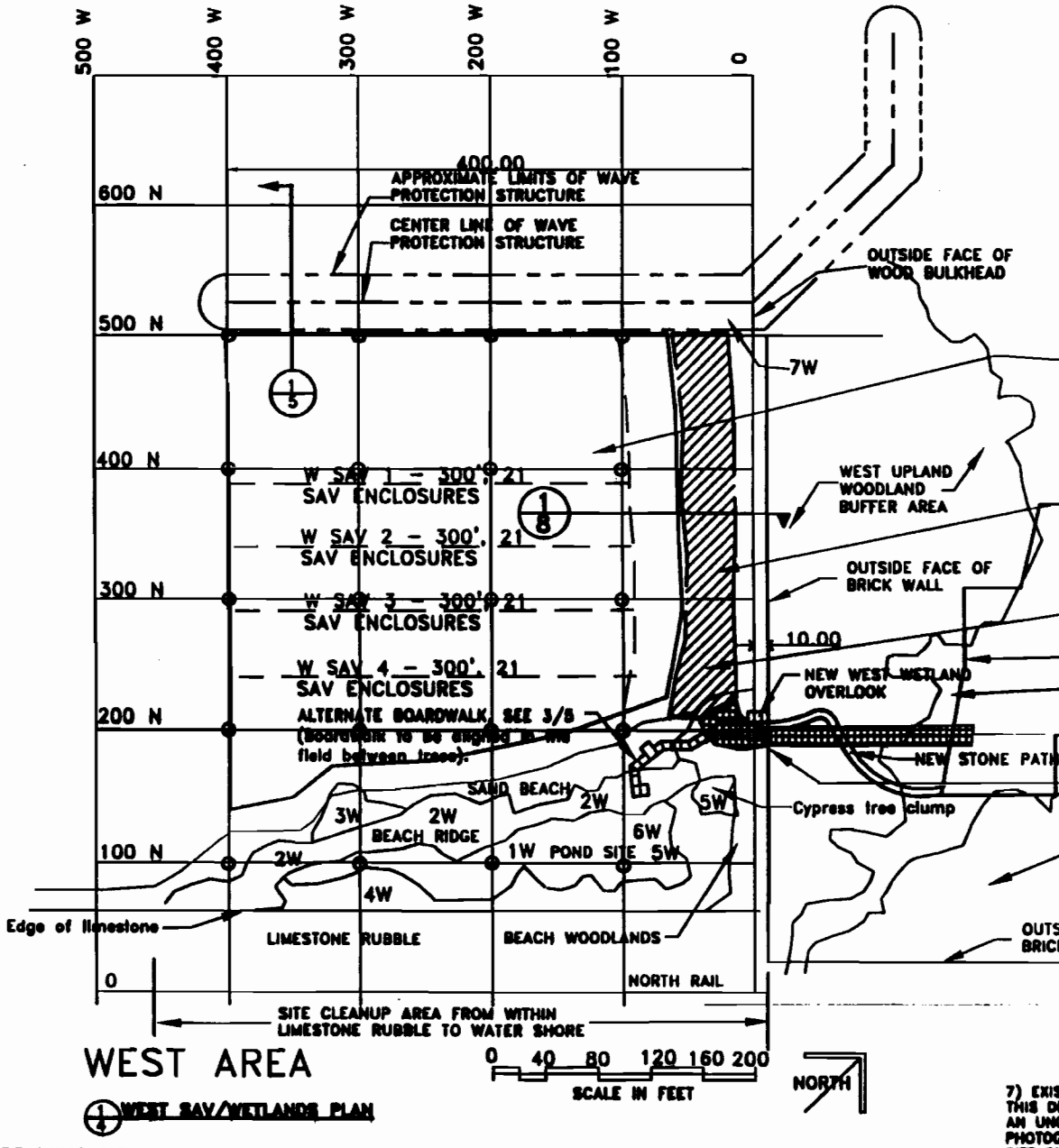
PERMIT DRAWING NO.3
APRIL 16, 1999

SEWERAGE AND WATER BOARD OF NEW ORLEANS

Lincoln Beach
Water Quality Improvement Plan
Design Plan

EAST SAV / WETLANDS PLAN

DWG. No.



WEST AREA

1/4 WEST SAV/WETLANDS PLAN

PERMIT DRAWING NO. 4
APRIL 16, 1999

EXISTING PLANT LEGEND

1W–Pond Site, Spartina patens marsh
2W–Beach Ridge with phragmites & small Tallow trees, wax myrtle & sea myrtle
3W–Spartina Alterniflora with Phragmites & willow
4W–Phragmites
5W–Bald Cypress trees
6W–trees, Willow
7W–Juncus romerianus

LEGEND

- Submerged Aquatic Vegetation (SAV) area
- Center line of SAV enclosures (See drawing11 for planting requirements)
- Wetland monitoring post
- Wetland Enhancement area (See plant list. plant locations to be determined in field by the Engineer.
- Access route location

NOTES:

1) CLEAR AND REMOVE ALL CHINESE TALLOW TREES FROM BEACH RIDGE AREA. DO NOT DISTURB OTHER VEGETATION.

2) SITE CLEAN UP–THE CONTRACTOR SHALL PICKUP AND REMOVE FROM THE SITE ALL EXISTING MAN-MADE TRASH, DEBRIS, WOOD BOARDS AND TIMBERS, RAILROAD TIES, ETC. FROM WITHIN THE SAND BEACH, BEACH RIDGE, POND SITE, BEACH WOODLANDS AND AREAS OF THE LIMESTONE RUBBLE.

3) PLACE SUBSTRATE FILL AS PER SECTION 2/5 WITHIN WETLAND ENHANCEMENT AREA. STAY WITHIN THE ACCESS ROUTE FOR FILL PLACEMENT. DO NOT DISTRUB ADJACENT VEGETATION.

4) AFTER STABILIZATON OF SUBSTRATE FILL, PLANT THE WETLAND PLANTS CALLED OUT ON THE PLANT LIST WITHIN THE WETLAND ENHANCEMENT AREA AT LOCATIONS SELECTED BY THE ENGINEER.

5) SAV PLANTS AND ENCLOSURES ARE TO BE LOCATED IN WATER DEPTHS OF 1 TO 2 FEET AT LOCATIONS SELECTED BY THE ENGINEER.

6) SEE SHEET 7 FOR WETLAND PLANT LIST

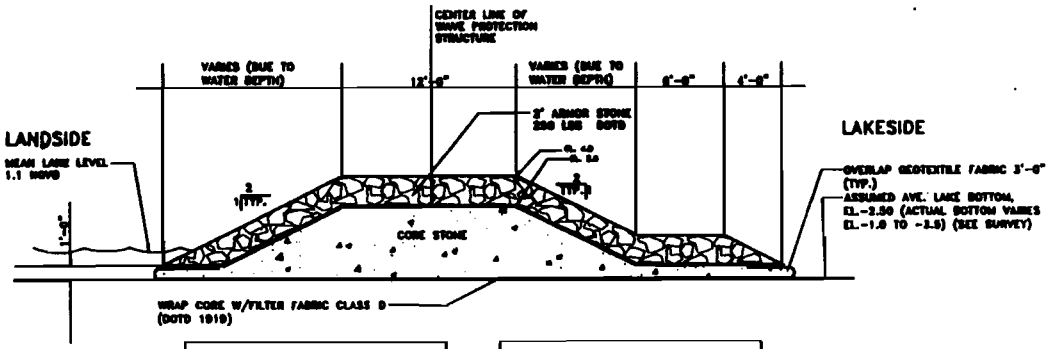
7) EXISTING OBJECTS SHOWN ON THIS DRAWING ARE BASED UPON AN UNCONTROLLED AERIAL PHOTOGRAPH. REFER TO THE SITE SURVEY FOR VERIFICATION OF LOCATIONS AND ELEVATIONS OF OBJECTS.

SEWERAGE AND WATER BOARD OF NEW ORLEANS

Lincoln Beach
Water Quality Improvement Plan
Design Plan

WEST SAV / WETLANDS PLAN

DWG. No.

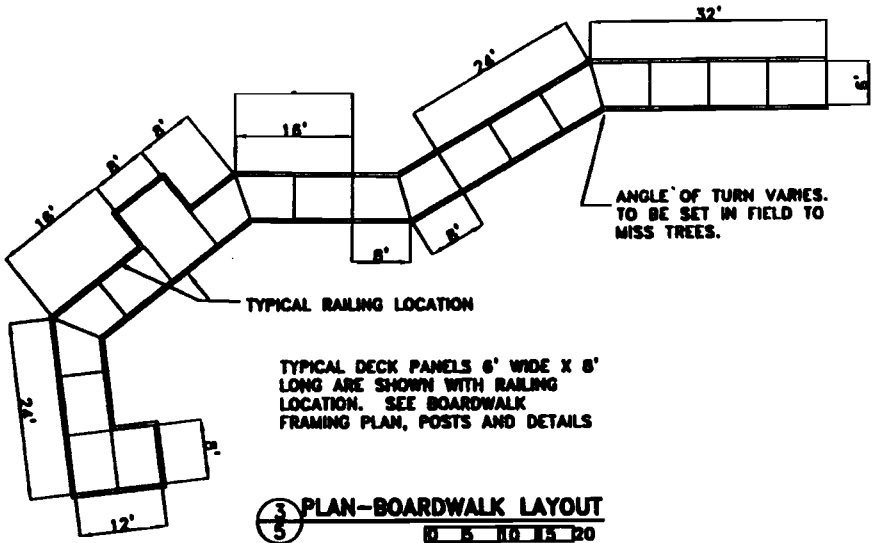


ARMOR STONE – 2' THICK (MIN) 440 LBS DOTD	
PERCENT LIGHTER BY WEIGHT	STONE WEIGHT LESS THAN (LBS)
100	1320
48–100	500
15–50	220
0–15	50

CORE STONE = #357	
PERCENT LIGHTER BY WEIGHT	STONE SIZE
100	3.5"
50–100	2"
30–70	1"
0–5	.5"

1/5 SECTION–WAVE PROTECTION STRUCTURE

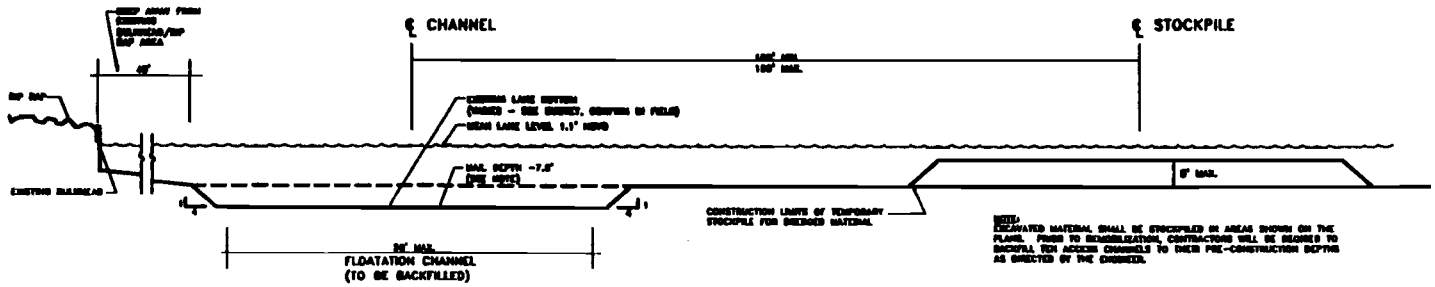
0 5 10 15 20
SCALE IN FEET



TYPICAL DECK PANELS 6' WIDE X 8' LONG ARE SHOWN WITH RAILING LOCATION. SEE BOARDWALK FRAMING PLAN, POSTS AND DETAILS

3/5 PLAN–BOARDWALK LAYOUT

0 5 10 15 20
SCALE IN FEET



2/5 SECTION–BARGE ACCESS CHANNEL

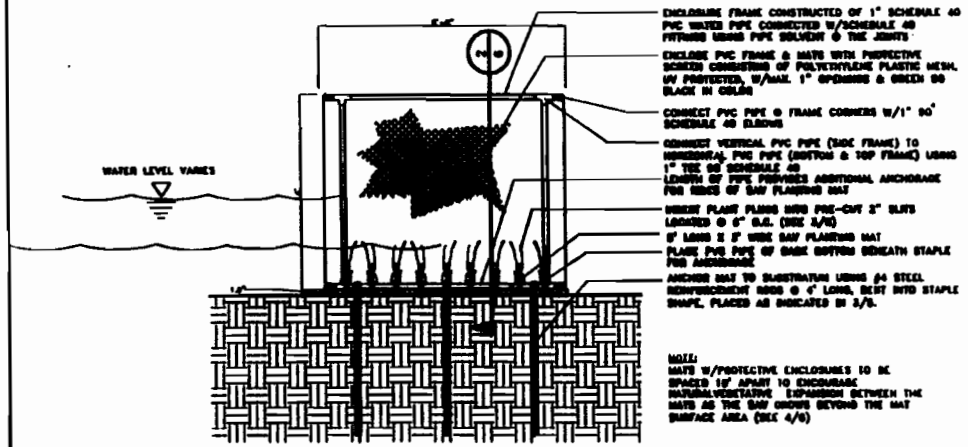
0 5 10 15 20
SCALE IN FEET

PERMIT DRAWING NO.5
APRIL 16, 1999

SEWERAGE AND WATER BOARD OF NEW ORLEANS

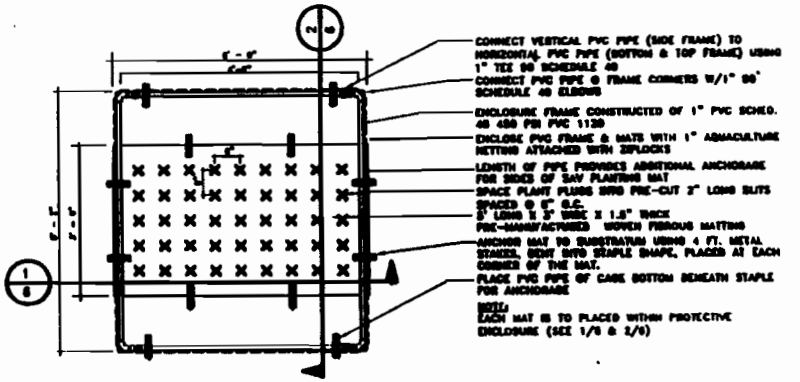
Lincoln Beach Water Quality Improvement Plan Design Plan

BOARDWALK & WAVE PROTECTION DETAILS



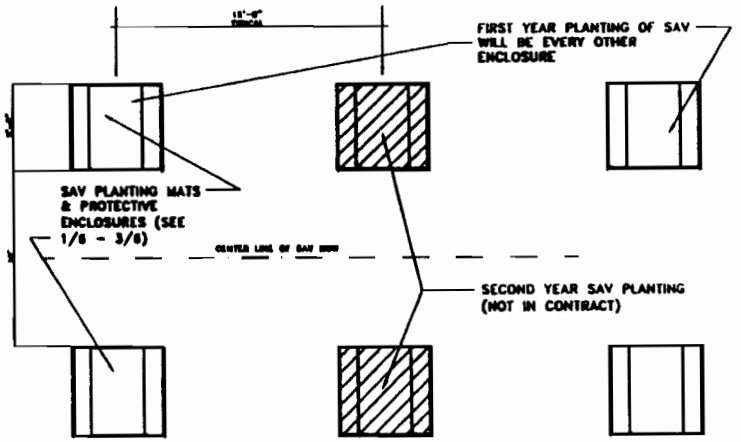
1/6 SECTION (SAV SIDE VIEW): PROTECTIVE ENCLOSURE CONSTRUCTION

NOT TO SCALE



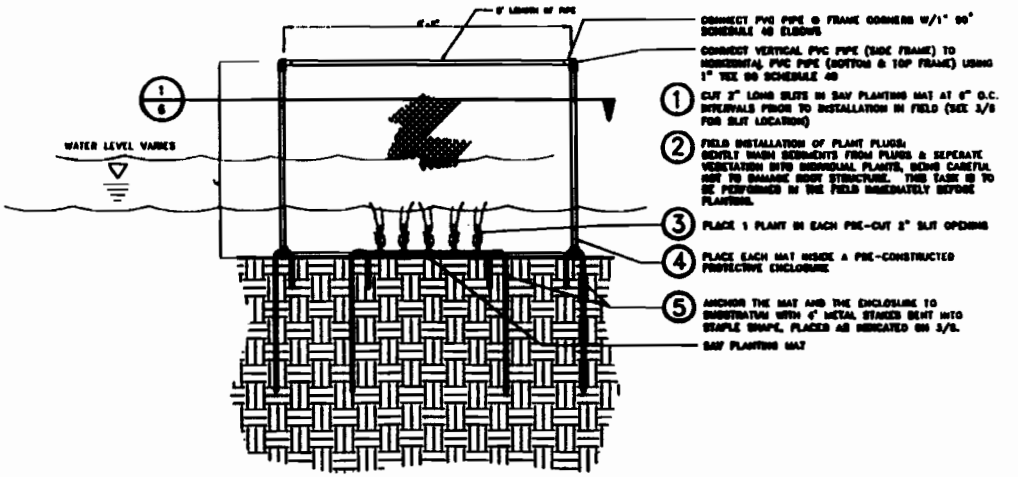
3/6 PLAN: SAV PLANTING MAT & PROTECTIVE ENCLOSURE

NOT TO SCALE



4/6 DIAGRAM: TYPICAL SAV PLANTING MAT SPACING

NOT TO SCALE



2/6 SECTION (SAV FRONT VIEW): PLANTING SCHEDULE W/ENCLOSURE

NOT TO SCALE

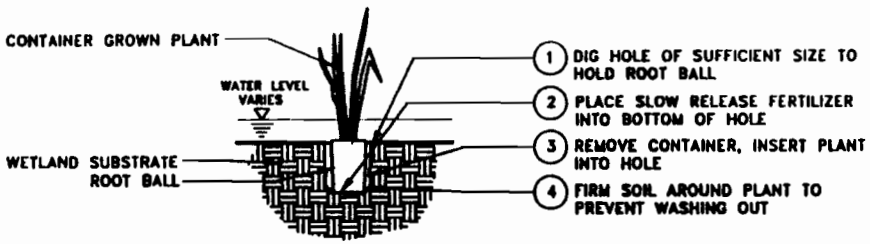
PERMIT DRAWING NO.6
APRIL 16, 1999

SEWERAGE AND WATER BOARD OF NEW ORLEANS

Lincoln Beach
Water Quality Improvement Plan
Design Plan

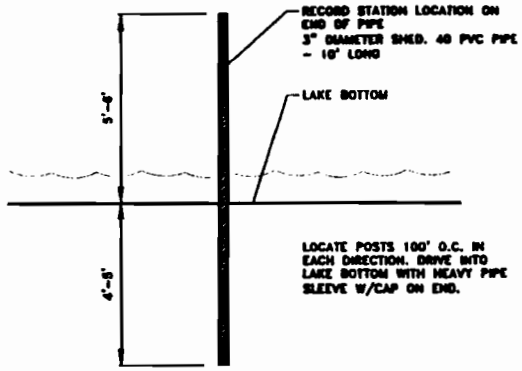
SAV PLANTING DETAILS

SUB. No.



1/7 DETAIL: WETLAND PLANTING

NOT TO SCALE



3/7 DETAIL: WETLAND MONITORING POST

NOT TO SCALE

PLANTING LIST - WETLAND ENHANCEMENT AREAS, SAV AREAS, TREES AND GRASS

EMERGENT WETLAND VEGETATION***

PLANT EMERGENT VEGATION WITHIN THE EAST AND WEST WETLAND ENHANCEMENT ARES AS DIRECTED BY THE ENGINEER.

WEST QTY	EAST QTY	ABBR	BOTANICAL NAME	COMMON NAME	CONTAINER SIZE	NOTES
510	1,530	SA	SPARTINA ALTERNIFLORA	OYSTER GRASS	TUBE OR 1 GAL. CONT	SPACE AT 48" OC
120	360	SP	SPARTINA PATENS	WIREGRASS	TUBE OR 1 GAL. CONT.	SPACE AT 36" OC
120	360	SC	SPARTINA CYNOSUROIDES	BIG CORDGRASS	TUBE OR 1 GAL. CONT.	SPACE AT 36" OC
60	180	JR	JUNCUS ROEMERIANUS	BLACK RUSH	TUBE OR 1 GAL. CONT.	SPACE AT 36" OC

TUBE CONTAINERS SHALL BE 2"-2.5" DIAMETER AND 7"-10" DEPTH W/ 2-4 ACTIVELY GROWING STEMS

SUBMERGED AQUATIC VEGETATION (SAV)***

PLANT SAV VEGETATION IN SAV PLANTING MATS WITHIN SAV ENCLOSURES

WEST QTY	EAST QTY	ABBR	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
1,800	2,003	VA	VALLISNERIA AMERICANA	WILD CELERY	DIVIDED TUBERS	SPACE AT 6" OC
1,800	2,003	RM	RUPPIA MARITIMA	WIDGEON GRASS	DIVIDED PLANTS	SPACE AT 6" OC
84	89		SAV PLANTING MATS AT 3'X5'			WITHIN SAV MAT
84	89		SAV ENCLOSURE			

NOTES: 1) 45 PLANTS ARE USED WITHIN EACH 5'X3' SAV PLANTING MAT SECTION SPACED 6" O.C.
2) EACH 5'X3' SAV PLANTING MAT SECTION IS PROTECTED WITH A SAV ENCLOSURE. SEE DETAILS
3) QUANTITIES FOR SAV PLANTS REPRESENT FIRST YEAR PLANTING QUANTITIES ONLY
4) SECOND YEAR PLANTING QUANTITIES ARE NOT SHOWN AND ARE NOT IN THIS CONTRACT.

UPLAND BUFFER AREAS

TREES**

NEW TREES ARE NOT SHOWN ON THE DRAWINGS, BUT WILL BE LOCATED IN THE FIELD BY THE ENGINEER TO REVEGETATE AREAS CLEARED FOR ACCESS

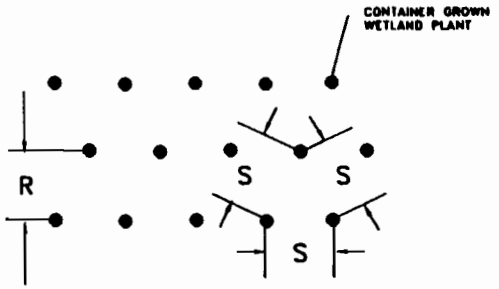
WEST QTY	EAST QTY	ABBR	BOTANICAL NAME	COMMON NAME	SIZE	NOTES
5	6	QV	QUERCUS VIRGINIANA	LIVE OAK	3" CAL,14'-16' HT	FULL / 6' CLEAR TRUNK
5	5	TD	TAXODIUM DISTICHUM	BALD CYPRESS	2" CAL,8'-10' HT	AT 12" HEIGHT
5	5	MY	MYRICA CERIFERA	WAX MYRTLE	5'-6' HT	WELL BRANCHED

GRASS*

GRASS SHOULDERS OF AGGREGATE PATHS AND ALL AREAS DISTRUBED BY CONSTRUCTION

WEST QTY	EAST QTY	ABBR	BOTANICAL NAME	COMMON NAME	NOTES
LS	LS	SEED GRASS	CYDONIA SINENSIS	BERMUDA GRASS (Common)	HYDROSEED WITH MULCH AND FERTILIZER

* PLANT ONLY FROM MARCH TO JUNE
** PLANT ONLY FROM OCTOBER TO APRIL
***PLANT ONLY FROM MARCH TO JUNE



* S = PLANT SPACING
R = (S X .866) = ROW SPACING
(S X R = AREA PER PLANT)

2/7 DIAGRAM: TYPICAL WETLAND PLANT SPACING

NOT TO SCALE

PERMIT DRAWING NO.7
APRIL 16, 1999

SEWERAGE AND WATER BOARD OF NEW ORLEANS

Lincoln Beach
Water Quality Improvement Plan
Design Plan

DWG. No.

ENGINEERING DIVISION
Permit Review Sheet

SUBJECT:
Req by OLD to construct 2 bus stop platforms along Citrus lakefront levee

LMN
_____ ED-A _____

SUSPENSE:*
_____ ED-S _____
_____ ED-SP _____
_____ ED-SR _____
_____ ED-SD _____

SUSPENSE:*
_____ ED-H _____
_____ ED-HD _____
_____ ED-HC _____
_____ ED-HH _____

SUSPENSE:* 14 Sep
1 ED-F _____
_____ ED-FG _____
_____ ED-FD _____
✓ ED-FS _____

SUSPENSE:*
2 ED-D _____
_____ ED-DL _____
_____ ED-DW _____
_____ ED-DR _____
_____ ED-DD _____
_____ ED-DG _____

*If suspense date cannot be met, furnish Secretary, Chief of Eng Div, the date it can be met.

ED-FS We have no objections provided a braced excavation plan taking into consideration the lateral pressures of the levee is designed and furnished to this office for review.

Estrada 9/17/90

FILE

9/17

Continue comments on separate sheet if necessary

CELMN-OD-OS (11-2-240a) 11 Sep 1990

MEMORANDUM FOR C/ENGR DIV

SUBJECT: REQUEST BY THE ORLEANS LEVEE DISTRICT TO CONSTRUCT TWO DEMONSTRATION BUS STOP PLATFORMS ALONG THE CITRUS LAKEFRONT LEVEE, AT L.S. 239+69 AND 248+67, IN ORLEANS PARISH.

1. Re-Forwarded for review, comment, and return. **PLEASE EXPEDITE!**

2. If any assistance is required, please contact Steven A. Schinetsky, ext 2343

90-414

Encl

ltr dtd 11 Sep 90
w/dwgs

Steven A. Schinetsky
for HENRY R. SCHORR
Chief, OPERATIONS AND
READINESS DIVISION

246-4000

The Board of Commissioners

OF THE

Orleans Levee District

SUITE 202 — ADMINISTRATION BUILDING
NEW ORLEANS LAKEFRONT AIRPORT

New Orleans, La.

70126

PROTECTING YOU
AND YOUR FAMILY

September 11, 1990

Mr. Henry Schorr, Chief
Operations & Readiness
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

RE: Bus Stop Platforms

Dear Mr. Schorr:

Reference your letter of no objection dated July 11, 1990, The proposed plans for construction of two demonstration bus stop platforms in the Citrus Lakefront Levee have been revised to conform to the R.T.A. requirements for rear door exit of the bus, as shown on the attached drawing. Your comments, and/or letter of no objection are requested.

Expeditious handling of this request will be very much appreciated.

Sincerely,

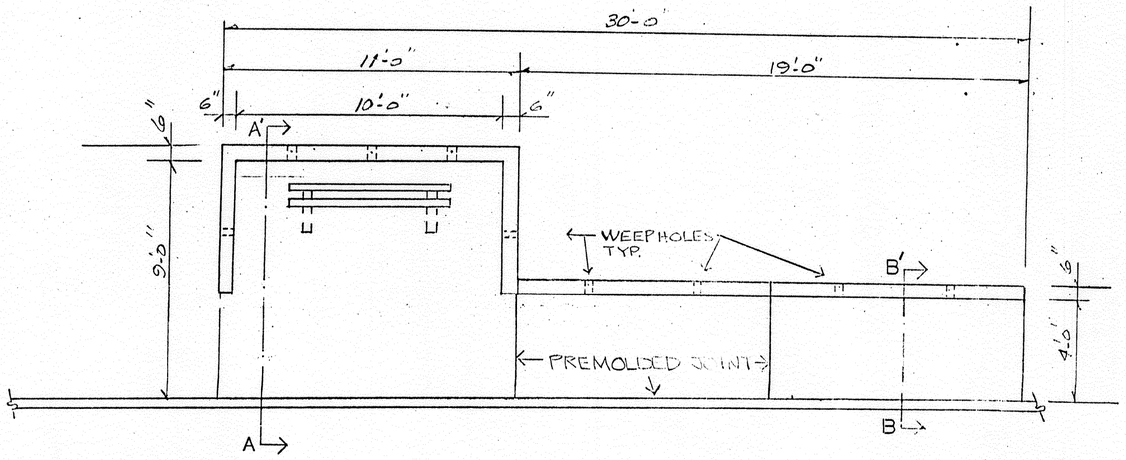
Frederic M. Chatry
Chief Engineer

Attachment:

FMC:AW:hd

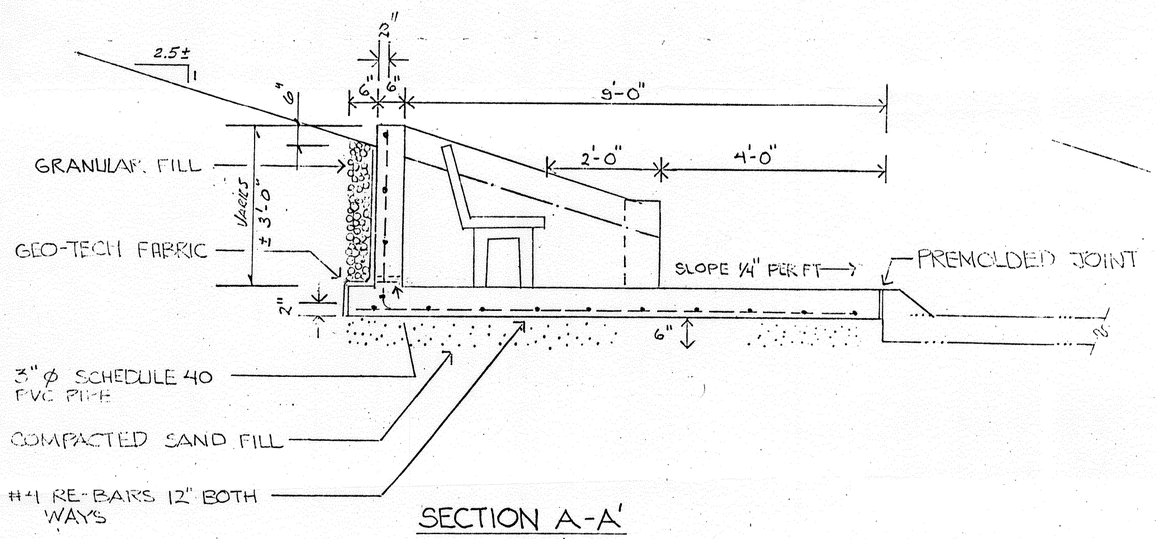
xc: Mr. H. B. Lansden
Ms. Geneva Grille, DOTD

BUSPLTFM.RTA



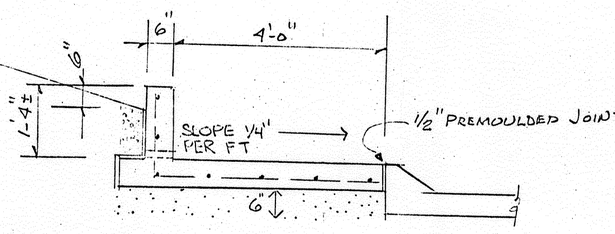
PLAN

SCALE: 1"=4'-0"



SECTION A-A'

SCALE: 1"=2'-0"



SECTION B-B'

SCALE: 1"=2'-0"

CONCRETE: F'_c = 3000 PSI @ 28 DAYS, STANDARD WT. AGG.

REINFORCING STEEL: F_s = 24000 PSI GRADE 60 ASTM A305 DEFORMATION

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT

BUS STOP IMPROVEMENT ON HAYNES BLVD.

DATE _____

CHIEF ENGR. C.E. LA. REG. NO. 08334.

DWN. BY	CK BY	CONTRACT NO.
SCALE	SHEET	DRWING NO.

246-4000

The Board of Commissioners

OF THE

Orleans Levee District

SUITE 202 — ADMINISTRATION BUILDING
NEW ORLEANS LAKEFRONT AIRPORT

New Orleans, La.

70126

PROTECTING YOU
AND YOUR FAMILY

October 15, 1990

Mr. Henry Schorr
Chief, Operations & Readiness
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

RE: Citrus Lakefront Levee - Bus Stop Platforms
Your Letter of September 25, 1990

Dear Mr. Schorr:

The proposed plans for construction of the two demonstration bus stop platforms along the Citrus Lakefront Levee, at stations 239+69 and 248+67 have been approved and permit issued by the Louisiana Department of Transportation in accordance with the revised requirements indicated on the attached plans.

The attached drawings are submitted for your comments, and/or letters of no objection as may be required. As you are aware, there is much public interest in this work and expeditious handling of this request would be very much appreciated.

Sincerely,

Frederic M. Chatry
Chief Engineer

FMC:CAW:lah

Enclosures: Construction Sequence
Construction Drawing

xc: Mr. H. B. Lansden
Mr. C. A. Wethern

CW:BUSSTOPS.COE

Board of Levee Commissioners
Orleans Levee District

HAYNE BLVD. BUS STOPS

CONSTRUCTION SEQUENCE:

1. Excavate levee to required depth and shore opening as necessary to prevent damage to levee.
2. Place reinforcing steel and cast concrete slab.
3. Place rear wall form, reinforcing steel, outside form, and cast wall concrete.
4. Remove forms and back fill as required.
5. Excavate for four inch concrete slope pavement and place concrete.

Estimated time to complete work, ten to fourteen days per location.

246-4000

The Board of Commissioners

OF THE

Orleans Levee District

SUITE 202 — ADMINISTRATION BUILDING
NEW ORLEANS LAKEFRONT AIRPORT

New Orleans, La.

70126

PROTECTING YOU
AND YOUR FAMILY

October 15, 1990

Mr. Henry Schorr
Chief, Operations & Readiness
U. S. Army Corps of Engineers
P. O. Box 60267
New Orleans, LA 70160-0267

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FMC:CAW:lah

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CAW

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Board of Levee Commissioners
Orleans Levee District

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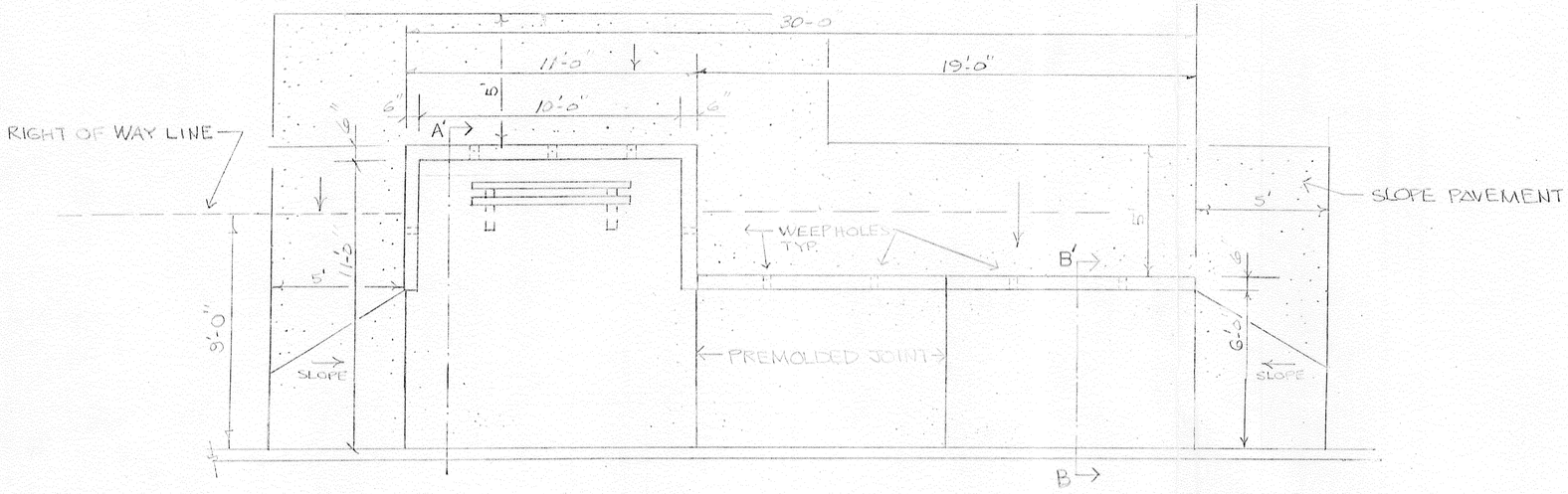
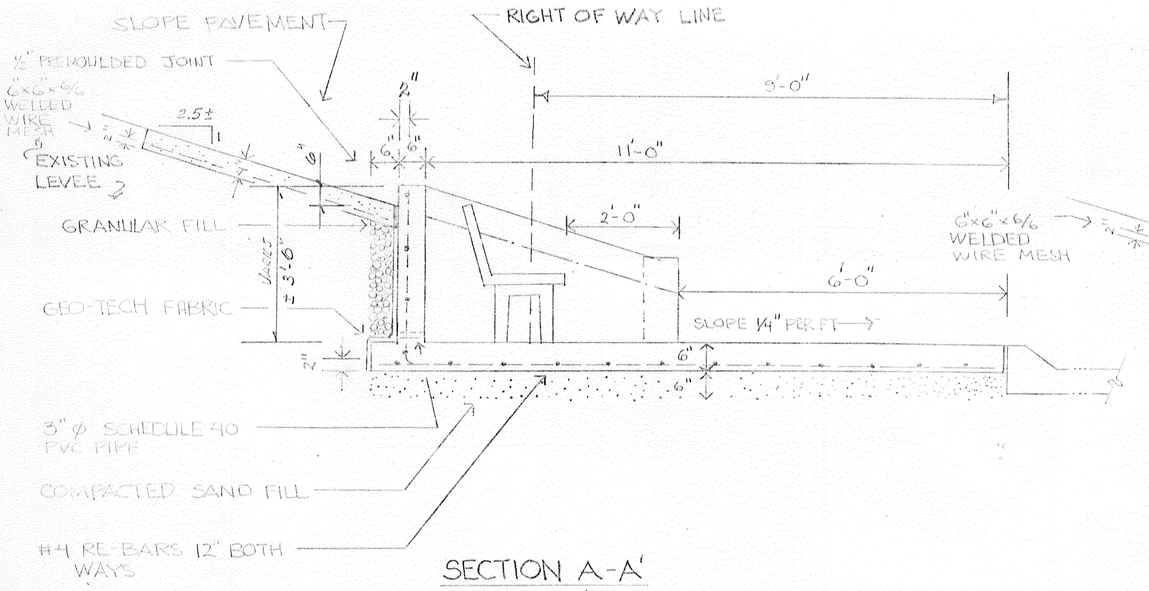


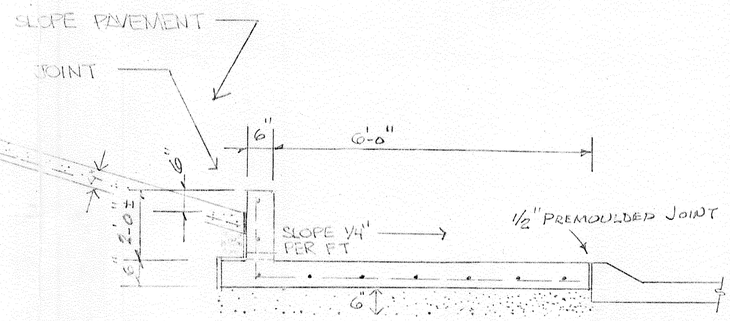
PLAN

SCALE: 1"=4'-0"



SECTION A-A'

SCALE: 1"=2'-0"



SECTION B-B'

SCALE: 1"=2'-0"

CONCRETE: F'_c = 3000 PSI @ 28 DAYS, STANDARD WT. AGG.

REINFORCING STEEL: F_s = 24000 PSI GRADE 60 ASTM A305 DEFORMATION

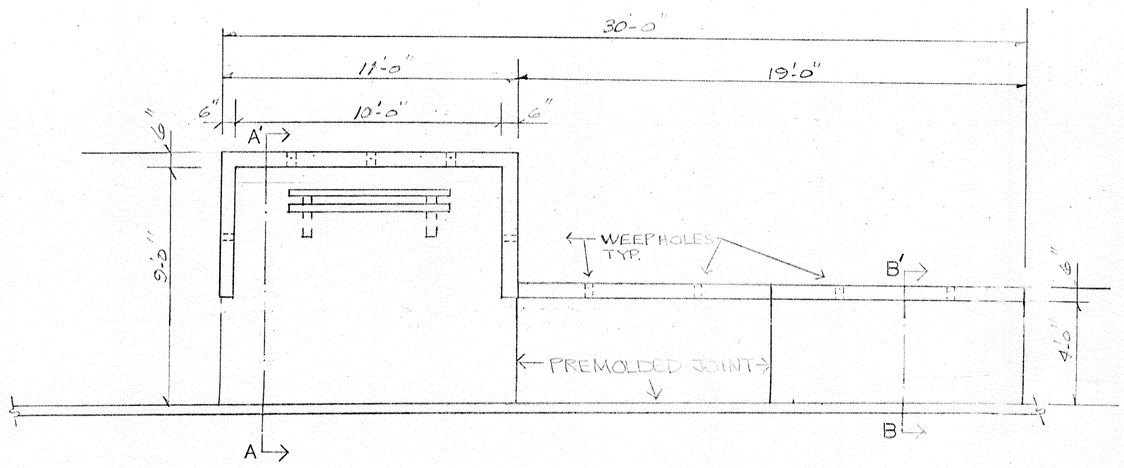
BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT

BUS STOP IMPROVEMENT ON HAYNES BLVD.

DATE

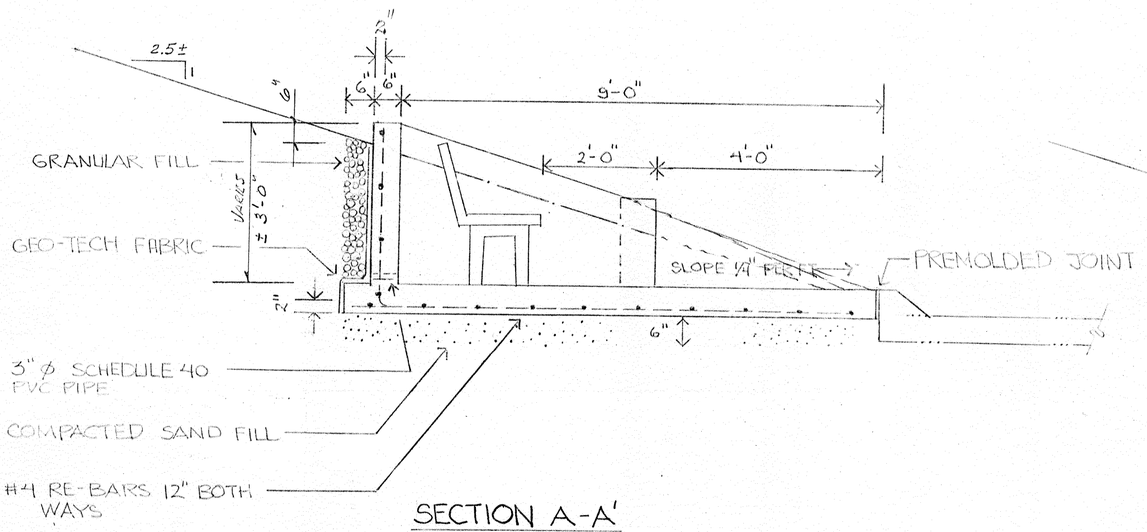
CHIEF ENGR. LA. REG. NO. 08334

DWN. BY	CK BY CAJ	CONTRACT NO.
SCALE	SHEET	DRWING. NO.



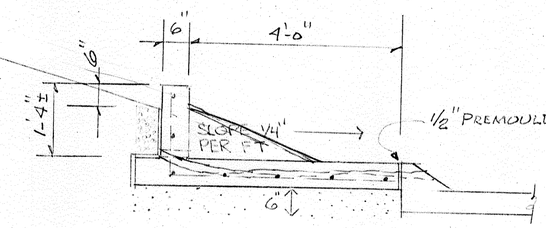
PLAN

SCALE: 1"=4'-0"



SECTION A-A'

SCALE: 1"=2'-0"



SECTION B-B'

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BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT

BUS STOP IMPROVEMENT ON HAYNES BLVD.

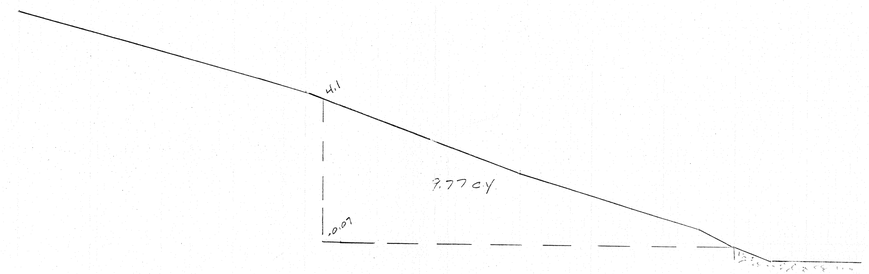
DATE

CHIEF ENGR. C.E. LA. REG. NO. 08334

DWN. BY	CK BY	CONTRACT NO.
SCALE	SHEET	DRWING NO.

SECTIONS AT PROPOSED BUS STOPS ALONG MAINE BLVD.

10.7.90



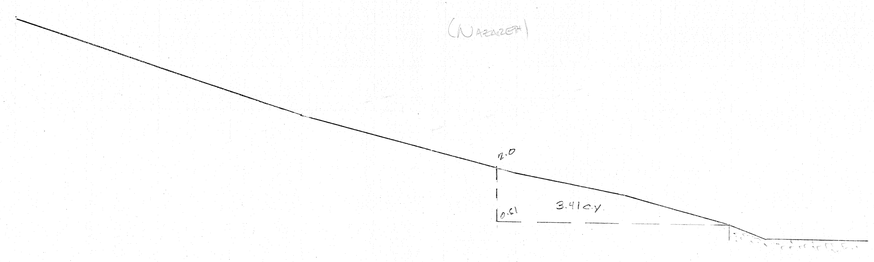
6.3	4.1	1.9	0.4	-0.07	-0.47	
20	12	6	1	0	-1	
				TC	GB	

STA 158+15

STA 248+67 AREA

PHASE 1

(NAZARETH)



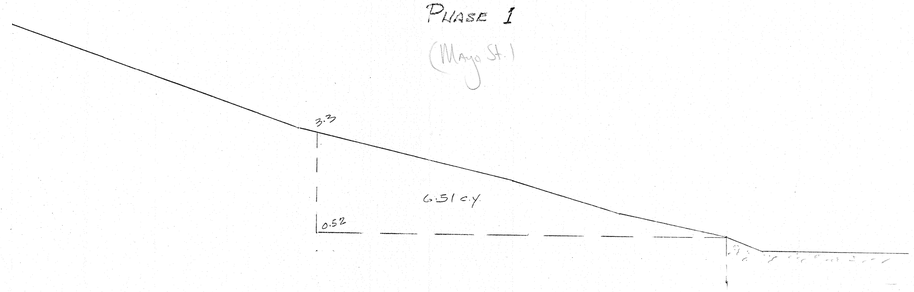
6.1	3.5	1.9	1.3	0.51	0.14	
20	12	6	3	0	-1	
				TC	GB	

STA. 50+25

STA. 239+69 AREA

PHASE 1

(Mayo St.)

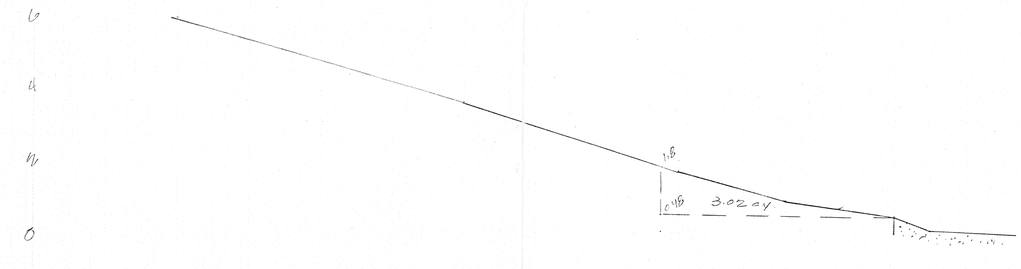


6.2	3.4	2.0	1.1	0.52	0.12	
20	12	6	3	0	-1	
				TC	GB	

STA. 50+15

STA. 239+69 AREA

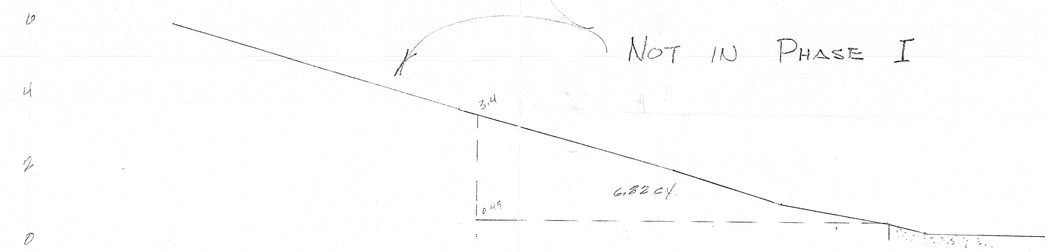
PHASE 1



5.9	3.6	1.7	0.9	0.48	0.17	
20	12	6	3	0	-1	
				TC	GB	

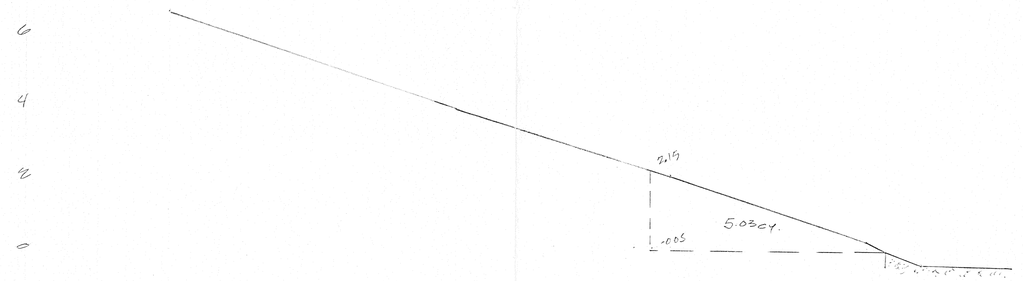
STA 307+72

NOT IN PHASE I



5.9	3.6	1.9	1.0	0.49	0.15	
20	12	6	3	0	-1	
				TC.	GB.	

STA 307+62



6.6	3.8	2.0	0.2	0.05	-0.45	
20	12	6	0.5	0	-1	
				TC.	GB	

STA. 158+25

STA 248+67 AREA

PHASE 1

(NAZARETH)

```
LI PERMIT 1-100
1 'CITRUS LAKEFRONT LEVEE'
2 'STA. 157+00, BUS STOP, NAZARETH INN'
3 10 10 0.5 110 1 0
4 10 1 2 1
5 100
6 0 62.5 0 0
7 0 112 400 400
8 33 122 0 0
9 15 117 200 200
10 0 102 300 300
11 33 122 0 0
12 20 117 200 200
13 0 106 620 700
14 33 122 0 0
15 33 122 0 0
16 0 11.5 88.7 11.5 95 15.5 105 15.5 138.5 3.7
17 138.51 0.5 138.52 -0.8 150.6 -0.8 150.7 0 250 0 9999.9 0
18 0 10 59 10 73 6 77 6 88.7 11.5 95 15.5
19 105 15.5 250 90 9999.9 0
20 0 10 59 10 74 3 87 8 102 11.5 114 9
21 130 3 138.51 0.5 138.52 -0.8 250 90 9999.9 0
22 0 10 59 10 74 3 80 0 99 -2 104 -4
23 106 -6 144 -6 147 -4 157 0 250 0
24 9999.9 0
25 0 0 80 0 99 -2 104 -4 106 -6 144 -6
26 147 -4 157 0 250 0 9999.9 0
27 0 -4 104 -4 106 -6 144 -6 147 -4 250 -4
28 9999.9 0
29 0 -4.1 104 -4.1 106 -6.1 144 -6.1 147 -4.1 200 -4.1
30 9999.9 0
31 0 -16 250 -16 9999.9 0
32 0 -24 250 -24 9999.9 0
33 0 -40 250 -40 9999.9 0
34 0 -60 250 -60 9999.9 0
35 0 11.5 88.7 11.5 138.52 -0.8 250 -0.8 9999.9 0
36 1 1 1 1 1 1 1 1 1 1 1 1
37 1 1 1 1 1 1 1 1
38 3 100 0 150 0 1
39 155
40 6 100 -6.1 140 -6.1 1
41 145
42 7 100 -16 150 -16 1
43 160
44 8 100 -24 170 -24 1
45 175
46 9 100 -40 175 -40 1
47 190
EOT..
```

BUS STOP
NAZARETH INN

BK RE-SUBMITTED

24 OCT. 90

AFTER SELECTED WEDGES,PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW & W = WINDOW)
1 = END, 2 = PLOT SECTION, 3 = NEW SECTION
MORE SLOPE DETAIL DATA

STR 3 EL. 0. NO 1

NO	DIST.	F.S.
2	155.	1.976
3	113.7	3.559
4	118.1	3.085
5	121.5	2.82
6	124.9	2.581
7	131.8	2.18
8	135.7	2.041
9	137.2	2.007
10	138.6	1.977
11	141.1	1.989

STR 6 EL. -6.1 NO 12

NO	DIST.	F.S.
13	145.	1.586
14	121.	2.438
15	125.4	2.05
16	127.4	1.899
17	129.3	1.76
18	131.3	1.641
19	133.7	1.542
20	135.7	1.498
21	137.6	1.479
22	138.6	1.478
E. H. 23	139.6	1.487
24	141.6	1.519
25	143.5	1.556
26	145.	1.585

STR 7 EL. -16. NO 27

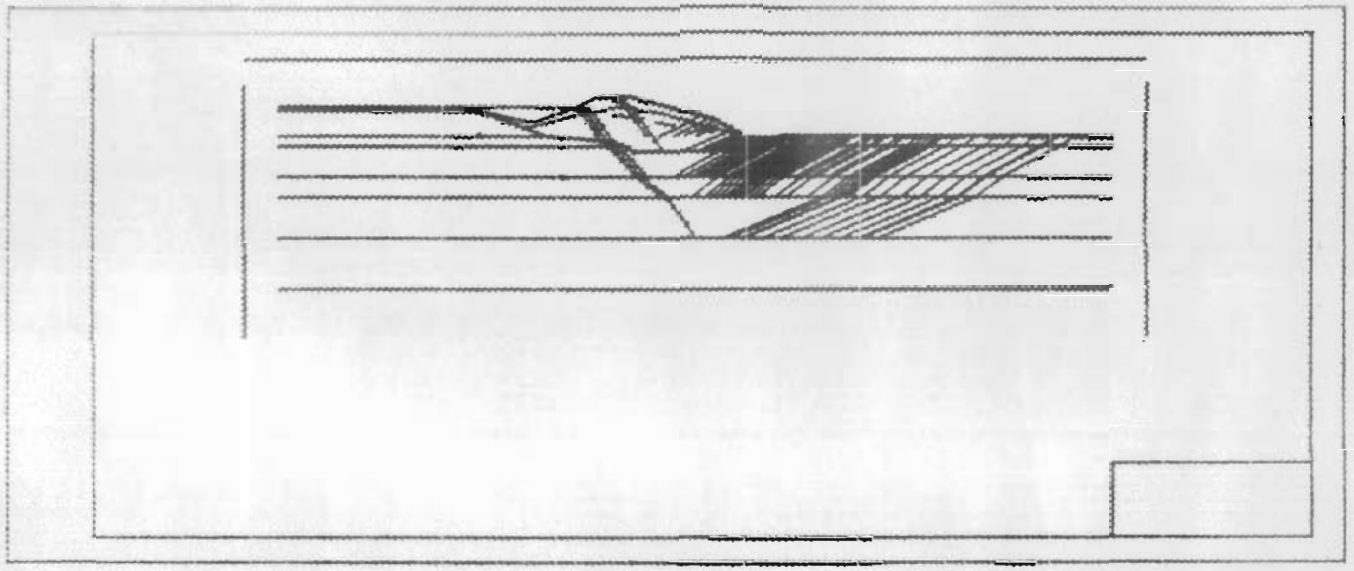
NO	DIST.	F.S.
28	160.	1.726
29	118.1	1.898
30	121.5	1.704
31	124.	1.606
32	125.9	1.542
33	127.9	1.499
34	129.8	1.466
35	131.8	1.449
36	131.8	1.449
37	134.7	1.445
38	135.7	1.452
39	136.7	1.456
40	137.6	1.46
41	138.6	1.468
42	139.6	1.48
43	141.6	1.504
44	143.5	1.528
45	148.9	1.596
46	151.3	1.626
47	155.2	1.669
48	157.2	1.692
49	161.1	1.739
50	165.	1.786

STR 8 EL. -24. NO 51

NO	DIST.	F.S.
52	175.	1.878
53	124.	1.496
54	127.9	1.442
55	129.8	1.418
56	131.8	1.401
57	133.7	1.394
58	135.2	1.394
59	136.7	1.398
60	137.6	1.403
61	139.1	1.417
62	139.6	1.424
63	141.6	1.449
64	143.5	1.475
65	145.5	1.505
66	152.3	1.589
67	158.6	1.668
68	166.9	1.775
69	170.9	1.825

STR 9 EL. -40. NO 70

NO	DIST.	F.S.
71	180.	3.169
72	133.7	2.335
73	135.7	2.353
74	139.1	2.406
75	139.6	2.416
76	145.5	2.526
77	150.8	2.63
78	157.2	2.744
79	163.	2.853
80	168.9	2.962
81	174.3	3.063



STOP STOP - TERMINATED NO PLOT
DI WI 1-1000

**** STABILITY WITH UPLIFT ****

CITRUS LAKEFRONT LEVEE
STA. 157+00, BUS STOP, NAZARETH INN
11 PROFILES
1VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

** STRATUM 3 ACT. WEDGE LOC. 100.0 EL. 0.0 PASS.WEDGE LOC. 140.0 EL. 0.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	0.0	1264.	719.	354.	346.	346.
59.0	0.0	1264.	719.	354.	346.	346.
SHEAR STRENGTHS ARE EQUAL		340.5	AT DIST.	60.2		
73.0	0.0	1033.	719.	204.	284.	204.
74.0	0.0	1031.	719.	203.	284.	203.
77.0	0.0	1050.	719.	215.	289.	215.
80.0	0.0	1138.	719.	273.	313.	273.
87.0	0.0	1329.	719.	396.	999999.	396.
88.7	0.0	1373.	719.	425.	999999.	425.
95.0	0.0	1835.	622.	788.	999999.	788.
99.0	0.0	1844.	560.	834.	999999.	834.
100.0	0.0	1846.	544.	846.	999999.	846.
102.0	0.0	1851.	514.	869.	999999.	869.
104.0	0.0	1847.	483.	886.	999999.	886.
105.0	0.0	1844.	467.	894.	999999.	894.
106.0	0.0	1803.	452.	877.	999999.	877.
114.0	0.0	1471.	328.	742.	999999.	742.
130.0	0.0	779.	81.	453.	999999.	453.
138.5	0.0	97.	0.	63.	999999.	63.
138.5	0.0	-42.	0.	0.	999999.	0.
138.5	0.0	-50.	0.	0.	999999.	0.
144.0	0.0	-50.	0.	0.	999999.	0.
147.0	0.0	-50.	0.	0.	999999.	0.
150.6	0.0	-46.	0.	0.	999999.	0.
150.7	0.0	0.	0.	0.	200.	0.
157.0	0.0	0.	0.	0.	200.	0.
200.0	0.0	0.	0.	0.	200.	0.
250.0	0.0	0.	0.	0.	200.	0.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. 0.0 DP 35. RP 155.0 EL. 0.0

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	0.0	13203.	9345.	0.	23475.	2.50
105.0	0.0	14071.	11209.	0.	19116.	2.17
110.0	0.0	13087.	11000.	0.	14856.	1.99
115.0	0.0	10603.	10376.	0.	11021.	2.03
120.0	0.0	7703.	8533.	0.	7628.	2.12
125.0	0.0	5307.	7158.	0.	4685.	2.28
130.0	0.0	3385.	6037.	0.	2194.	2.48
135.0	0.0	1287.	4665.	0.	502.	4.19

CRIT. ACTIVE LOC 110.0 EL 0.0 DA 13087. RA 11000.

DP	RP	DB	RB	FS
0.	0.	0.	14856.	1.98
5585.	12755.	0.	2888.	3.55
4282.	10164.	0.	5997.	3.08
3378.	8208.	0.	8175.	2.82
2471.	6257.	0.	10141.	2.58
782.	2431.	0.	13097.	2.10
199.	807.	0.	14498.	2.04
80.	379.	0.	14730.	2.01
2.	7.	0.	14856.	1.98
39.	93.	0.	14856.	1.99

** STRATUM 6 ACT. WEDGE LOC. 100.0 EL. -6.1 PASS.WEDGE LOC. 140.0 EL. -6.1

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-6.1	1918.	1100.	531.	999999.	531.
59.0	-6.1	1918.	1100.	531.	999999.	531.
73.0	-6.1	1687.	1100.	381.	999999.	381.
74.0	-6.1	1685.	1100.	380.	999999.	380.
77.0	-6.1	1704.	1100.	392.	999999.	392.
80.0	-6.1	1793.	1100.	450.	99999	

9. 450.

87.0	-6.1	1998.	1100.	583.	999999.	583.
88.7	-6.1	2045.	1100.	614.	999999.	614.
95.0	-6.1	2520.	1003.	986.	999999.	986.
99.0	-6.1	2538.	941.	1037.	999999.	1037.
100.0	-6.1	2549.	926.	1054.	999999.	1054.
102.0	-6.1	2569.	895.	1087.	999999.	1087.
104.0	-6.1	2581.	864.	1115.	999999.	1115.
105.0	-6.1	2584.	848.	1127.	999999.	1127.

SHEAR STRENGTHS ARE EQUAL 1113.1 AT DIST. 106.0

106.0	-6.1	2547.	833.	1113.	824.	824.
114.0	-6.1	2215.	710.	977.	748.	748.
130.0	-6.1	1524.	463.	689.	586.	586.

SHEAR STRENGTHS ARE EQUAL 455.0 AT DIST. 135.6

138.5	-6.1	841.	332.	331.	385.	331.
138.5	-6.1	663.	331.	215.	321.	215.
138.5	-6.1	647.	331.	205.	315.	205.
144.0	-6.1	647.	331.	205.	315.	205.
147.0	-6.1	637.	331.	198.	999999.	198.
150.6	-6.1	616.	331.	185.	999999.	185.
150.7	-6.1	705.	331.	242.	999999.	242.
157.0	-6.1	654.	331.	210.	999999.	210.
200.0	-6.1	654.	331.	210.	999999.	210.
250.0	-6.1	654.	331.	210.	999999.	210.

ASSUMED CRIT. PASSIVE LOC. 140.0 EL. -6.1 DP 1719. RP 2006.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-6.1	24241.	12159.	0.	28913.	1.91
105.0	-6.1	27188.	16548.	0.	23448.	1.65
110.0	-6.1	26636.	17628.	0.	18385.	1.53
115.0	-6.1	23748.	16554.	0.	14286.	1.49
120.0	-6.1	19686.	15126.	0.	10723.	1.55
125.0	-6.1	15618.	12618.	0.	7414.	1.59
130.0	-6.1	12065.	10732.	0.	4357.	1.65
135.0	-6.1	8131.	8493.	0.	1721.	1.91
140.0	-6.1	3115.	4687.	0.	0.	4.80

CRIT. ACTIVE LOC 115.0 EL -6.1 DA 23748. RA 16554.

DIS.	EL.	DP	RP	DB	RB	FS
145.0	-6.1	1910.	2765.	0.	15309.	1.59
121.0	-6.1	8541.	16254.	0.	4270.	2.44
125.4	-6.1	6413.	11838.	0.	7147.	2.05
127.4	-6.1	5477.	9775.	0.	8363.	1.90
129.3	-6.1	4506.	7782.	0.	9540.	1.76
131.3	-6.1	3607.	5827.	0.	10668.	1.64
133.7	-6.1	2712.	3929.	0.	11954.	1.54
135.7	-6.1	2183.	2859.	0.	12882.	1.50
137.6	-6.1	1821.	2187.	0.	13679.	1.48
138.6	-6.1	1715.	2002.	0.	14003.	1.48
139.6	-6.1	1717.	2008.	0.	14203.	1.49
141.6	-6.1	1796.	2197.	0.	14603.	1.52
143.5	-6.1	1900.	2445.	0.	15003.	1.56
145.0	-6.1	1909.	2758.	0.	15302.	1.58

* * STRATUM 7 ACT. WEDGE LOC. 100.0 EL. -16.0 PASS.WEDGE LOC. 150.0 EL. -16.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	UT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-16.0	3076.	1719.	694.	700.	694.
59.0	-16.0	3076.	1719.	694.	700.	694.
73.0	-16.0	2846.	1719.	610.	700.	610.
74.0	-16.0	2843.	1719.	609.	700.	609.
77.0	-16.0	2863.	1719.	616.	700.	616.
80.0	-16.0	2951.	1719.	649.	700.	649.

SHEAR STRENGTHS ARE EQUAL 700.0 AT DIST. 84.8

87.0	-16.0	3156.	1719.	723.	700.	700.
88.7	-16.0	3203.	1719.	740.	700.	700.
95.0	-16.0	3679.	1622.	949.	700.	700.
99.0	-16.0	3697.	1560.	978.	700.	700.
100.0	-16.0	3707.	1544.	987.	700.	700.
102.0	-16.0	3728.	1514.	1006.	700.	700.
104.0	-16.0	3739.	1483.	1021.	700.	700.
105.0	-16.0	3742.	1467.	1028.	700.	700.
106.0	-16.0	3705.	1452.	1020.	700.	700.
114.0	-16.0	3373.	1328.	944.	700.	700.
130.0	-16.0	2682.	1081.	782.	700.	700.

SHEAR STRENGTHS ARE EQUAL 700.0 AT DIST. 133.5

138.5	-16.0	1999.	950.	582.	700.	582.
138.5	-16.0	1821.	950.	517.	700.	517.
138.5	-16.0	1805.	950.	511.	700.	511.
144.0	-16.0	1805.	950.	511.	700.	511.
147.0	-16.0	1795.	950.	507.	700.	507.
150.6	-16.0	1775.	950.	500.	700.	500.
150.7	-16.0	1863.	950.	532.	700.	532.
157.0	-16.0	1813.	950.	514.	700.	514.
200.0	-16.0	1813.	950.	514.	700.	514.
250.0	-16.0	1812.	950.	514.	700.	514.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. -16.0 DP 14238. RP 16007.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
100.0	-16.0	48734.	19226.	0.	32507.	1.96
105.0	-16.0	53354.	22719.	0.	29007.	1.73
110.0	-16.0	56782.	27000.	0.	25507.	1.61

110.0	-16.0	55894.	89783.	0.	22007.	1.63
120.0	-16.0	51648.	28378.	0.	18507.	1.68
125.0	-16.0	45784.	26484.	0.	15007.	1.82
130.0	-16.0	39417.	23388.	0.	11507.	2.02
135.0	-16.0	32880.	20366.	0.	8034.	2.38

CRIT. ACTIVE LOC 110.0 EL -16.0 DA 56782. RA 27000.

DIS.	EL.	DP	RP	DB	RB	FS
160.0	-16.0	14142.	15907.	0.	30697.	1.73
118.1	-16.0	26041.	25675.	0.	5675.	1.90
121.5	-16.0	23189.	22189.	0.	8068.	1.70
124.0	-16.0	21279.	20254.	0.	9778.	1.61
125.9	-16.0	19799.	18870.	0.	11145.	1.54
127.9	-16.0	18518.	17831.	0.	12513.	1.50
129.8	-16.0	17326.	16954.	0.	13880.	1.48
131.8	-16.0	16215.	16535.	0.	15248.	1.45
131.8	-16.0	16215.	16535.	0.	15248.	1.45
134.7	-16.0	15049.	16030.	0.	17282.	1.45
135.7	-16.0	14737.	16139.	0.	17926.	1.45
136.7	-16.0	14474.	16038.	0.	18548.	1.46
137.6	-16.0	14266.	15936.	0.	19147.	1.46
138.6	-16.0	14129.	15889.	0.	19716.	1.47
139.6	-16.0	14133.	15898.	0.	20216.	1.48
141.6	-16.0	14144.	15909.	0.	21214.	1.50
143.5	-16.0	14154.	15919.	0.	22213.	1.53
148.9	-16.0	14213.	15981.	0.	24943.	1.60
151.3	-16.0	14232.	16000.	0.	26188.	1.63
155.2	-16.0	14156.	15916.	0.	28239.	1.67
157.2	-16.0	14142.	15907.	0.	29247.	1.69
161.1	-16.0	14142.	15907.	0.	31255.	1.74
165.0	-16.0	14142.	15907.	0.	33263.	1.79

* * STRATUM 8 ACT. WEDGE LOC. 100.0 EL. -24.0 PASS.WEDGE LOC. 170.0 EL. -24.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-24.0	3924.	2219.	700.	1108.	700.
59.0	-24.0	3924.	2219.	700.	1107.	700.
73.0	-24.0	3694.	2219.	700.	958.	700.
74.0	-24.0	3691.	2219.	700.	956.	700.
77.0	-24.0	3711.	2219.	700.	969.	700.
80.0	-24.0	3799.	2219.	700.	1026.	700.
87.0	-24.0	4004.	2219.	700.	1159.	700.
88.7	-24.0	4051.	2219.	700.	1190.	700.
95.0	-24.0	4527.	2122.	700.	1562.	700.
99.0	-24.0	4545.	2060.	700.	1614.	700.
100.0	-24.0	4555.	2044.	700.	1630.	700.
102.0	-24.0	4576.	2014.	700.	1664.	700.
104.0	-24.0	4587.	1983.	700.	1692.	700.
105.0	-24.0	4590.	1967.	700.	1703.	700.
106.0	-24.0	4553.	1952.	700.	1689.	700.
114.0	-24.0	4221.	1828.	700.	1554.	700.
130.0	-24.0	3530.	1581.	700.	1265.	700.
138.5	-24.0	2847.	1450.	700.	907.	700.
138.5	-24.0	2669.	1450.	700.	792.	700.

138.5	-24.0	2653.	1450.	700.	781.	700.
144.0	-24.0	2653.	1450.	700.	781.	700.
147.0	-24.0	2643.	1450.	700.	775.	700.
150.6	-24.0	2623.	1450.	700.	762.	700.
150.7	-24.0	2711.	1450.	700.	819.	700.
157.0	-24.0	2661.	1450.	700.	786.	700.
200.0	-24.0	2661.	1450.	700.	786.	700.
250.0	-24.0	2660.	1450.	700.	786.	700.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -24.0 DP 32033. RP 25827.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
100.0	-24.0	73446.	25142.	0.	49000.	2.41
105.0	-24.0	78973.	27430.	0.	45500.	2.10
110.0	-24.0	83354.	30332.	0.	42000.	1.91
115.0	-24.0	86512.	34507.	0.	38500.	1.81
120.0	-24.0	86693.	38597.	0.	35000.	1.82
125.0	-24.0	82405.	39318.	0.	31500.	1.92
130.0	-24.0	75646.	37552.	0.	28000.	2.10
135.0	-24.0	67245.	35398.	0.	24500.	2.43
140.0	-24.0	57696.	32150.	0.	21000.	3.08

CRIT. ACTIVE LOC 115.0 EL -24.0 DA 86512. RA 34507.

DIS.	EL.	DP	RP	DB	RB	FS
175.0	-24.0	32033.	25827.	0.	42000.	1.88
124.0	-24.0	41597.	26421.	0.	6278.	1.50
127.9	-24.0	38241.	26078.	0.	9013.	1.44
129.8	-24.0	36619.	25842.	0.	10380.	1.42
131.8	-24.0	35084.	25819.	0.	11748.	1.40
133.7	-24.0	33814.	25830.	0.	13115.	1.39
135.2	-24.0	33063.	25838.	0.	14141.	1.39
136.7	-24.0	32483.	25846.	0.	15167.	1.40

137.6	-24.0	32192.	25855.	0.	15850.	1.40
139.1	-24.0	31999.	25871.	0.	16876.	1.42
139.6	-24.0	32000.	25878.	0.	17218.	1.42
141.6	-24.0	31999.	25916.	0.	18585.	1.45
143.5	-24.0	32015.	25914.	0.	19953.	1.47
148.9	-24.0	32136.	25827.	0.	23714.	1.55
152.3	-24.0	32122.	25827.	0.	26107.	1.59
158.6	-24.0	32033.	25827.	0.	30551.	1.67
166.9	-24.0	32033.	25827.	0.	36363.	1.77
170.9	-24.0	32033.	25827.	0.	39098.	1.83

* * STRATUM 9 ACT. WEDGE LOC. 100.0 EL. -40.0 PASS.WEDGE LOC. 175.0 EL. -40.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-40.0	5876.	3219.	1726.	1726.	1726.
59.0	-40.0	5876.	3219.	1726.	1726.	1726.
73.0	-40.0	5646.	3219.	1576.	1576.	1576.
74.0	-40.0	5643.	3219.	1575.	1575.	1575.
77.0	-40.0	5663.	3219.	1587.	1587.	1587.
80.0	-40.0	5751.	3219.	1645.	1645.	1645.
87.0	-40.0	5956.	3219.	1778.	1778.	1778.
88.7	-40.0	6003.	3219.	1808.	1808.	1808.
95.0	-40.0	6479.	3122.	2180.	2180.	2180.
99.0	-40.0	6497.	3060.	2232.	2232.	2232.
100.0	-40.0	6507.	3044.	2249.	2249.	2249.
102.0	-40.0	6528.	3014.	2282.	2282.	2282.
104.0	-40.0	6539.	2983.	2310.	2310.	2310.
105.0	-40.0	6542.	2967.	2321.	2321.	2321.
106.0	-40.0	6505.	2952.	2308.	2308.	2308.
114.0	-40.0	6173.	2828.	2172.	2172.	2172.
130.0	-40.0	5482.	2581.	1884.	1884.	1884.
138.5	-40.0	4799.	2450.	1526.	1526.	1526.
138.5	-40.0	4621.	2450.	1410.	1410.	1410.
138.5	-40.0	4605.	2450.	1399.	1399.	1399.
144.0	-40.0	4605.	2450.	1399.	1399.	1399.
147.0	-40.0	4595.	2450.	1393.	1393.	1393.
150.6	-40.0	4575.	2450.	1380.	1380.	1380.
150.7	-40.0	4663.	2450.	1437.	1437.	1437.
157.0	-40.0	4613.	2450.	1404.	1404.	1404.
200.0	-40.0	4613.	2450.	1404.	1404.	1404.
250.0	-40.0	4612.	2450.	1404.	1404.	1404.

ASSUMED CRIT. PASSIVE LOC. 175.0 EL. -40.0 DP 90215. RP 90370.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-40.0	153387.	57153.	0.	129851.	4.39
105.0	-40.0	158428.	60056.	0.	118413.	3.94
110.0	-40.0	162963.	59735.	0.	107004.	3.53
115.0	-40.0	165688.	61574.	0.	96017.	3.29
120.0	-40.0	166268.	63065.	0.	85472.	3.14
125.0	-40.0	165502.	65848.	0.	75378.	3.08

130.0	-40.0	161053.	68074.	0.	65735.	3.16
135.0	-40.0	151597.	65346.	0.	56843.	3.48
140.0	-40.0	138064.	59870.	0.	49146.	4.17
145.0	-40.0	124027.	53963.	0.	42150.	5.52
150.0	-40.0	113032.	50203.	0.	35198.	7.70

CRIT. ACTIVE LOC 125.0 EL -40.0 DA 165502. RA 65848.

DIS.	EL.	DP	RP	DB	RB	FS
180.0	-40.0	90214.	90369.	0.	82400.	3.17
133.7	-40.0	91183.	91276.	0.	16387.	2.33
135.7	-40.0	90662.	90607.	0.	19678.	2.35
139.1	-40.0	90207.	90350.	0.	24984.	2.41
139.6	-40.0	90209.	90355.	0.	25668.	2.42
145.5	-40.0	90235.	90418.	0.	33867.	2.53
150.8	-40.0	90298.	90568.	0.	41336.	2.63
157.2	-40.0	90215.	90371.	0.	50352.	2.74
163.0	-40.0	90215.	90370.	0.	58582.	2.85
168.9	-40.0	90215.	90370.	0.	66813.	2.96
174.3	-40.0	90215.	90370.	0.	74358.	3.06

EOT..

Bus Stop

Nazareth Inn

Re-Submitted

Dated 11 Sept. 1990

```
[illegible]
'TITLE [illegible]
'STA. [illegible]0, BUS STOP, NAZARE[illegible]
10 10 0.5 110 1 0
10 1 [illegible]
120
[illegible]
0 112 400 400
33 122 0 0
15 117 200 200
0 102 300 300
33 122 0 0
20 117 200 200
0 106 620 700
33 122 0 0
33 122 0 0
0 11.5 88.7 11.5 95 15.5 105 15.5 140.6 3.7
140.61 0 140.62 -0.8 150.6 -0.8 150.7 0 250 0 9999.9 0
0 10 59 10 73 6 77 6 88.7 11.5 95 15.5
105 15.5 250 90 9999.9 0
0 10 59 10 74 3 87 8 102 11.5 114 9
130 3 140.61 0 250 90 9999.9 0
0 10 59 10 74 3 80 0 99 -2 104 -4
106 -6 144 -6 147 -4 157 0 250 0
9999.9 0
0 0 80 0 99 -2 104 -4 106 -6 144 -6
147 -4 157 0 250 0 9999.9 0
0 -4 104 -4 106 -6 144 -6 147 -4 250 -4
9999.9 0
0 -4.1 104 [illegible]
9999.9 0
0 -16 250 -16 9999.9 0
0 -24 250 -24 9999.9 0
0 -40 250 -40 9999.9 0
0 -60 250 -60 9999.9 0
0 11.5 88.7 11.5 140 -0.8 250 -0.8 9999.9 0
1 1 1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1
3 100 0 150 0 1
155
6 100 -6.1 140 -6.1 1
145
7 100 -16 150 -16 1
160
8 100 -24 170 -24 1
175
9 100 -40 175 -40 1
180
EOT..
```

AFTER SELECTED WEDGES, PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW & W = WINDOW)
1 = END, 2 = PLOT SECTION, 3 = NEW SECTION
4 = STORE, 5 = SPOOL DETAIL DATA

STR 3 EL. 0. NO 1

NO	DIST.	F.S.
2	155.	2.119 E. H.
3	113.2	3.822
4	117.1	3.352
5	119.1	3.179
6	123.5	2.887
7	127.9	2.688
8	132.8	2.54
9	137.6	2.334
10	141.1	2.122
11	146.4	2.132
12	151.3	2.119
13	155.2	2.119

STR 6 EL. -6.1 NO 14

NO	DIST.	F.S.
15	145.	1.639
16	122.	2.755
17	125.9	2.437
18	129.8	2.08
19	131.8	1.93
20	133.7	1.805
21	135.7	1.707
22	137.6	1.629
23	139.6	1.57
24	139.6	1.57
25	141.1	1.564
26	143.	1.601
27	145.5	1.648
28	295.4	2.829 E.
29	149.4	1.736
30	151.3	1.757
31	156.7	1.799

STR 7 EL. -16. NO 32

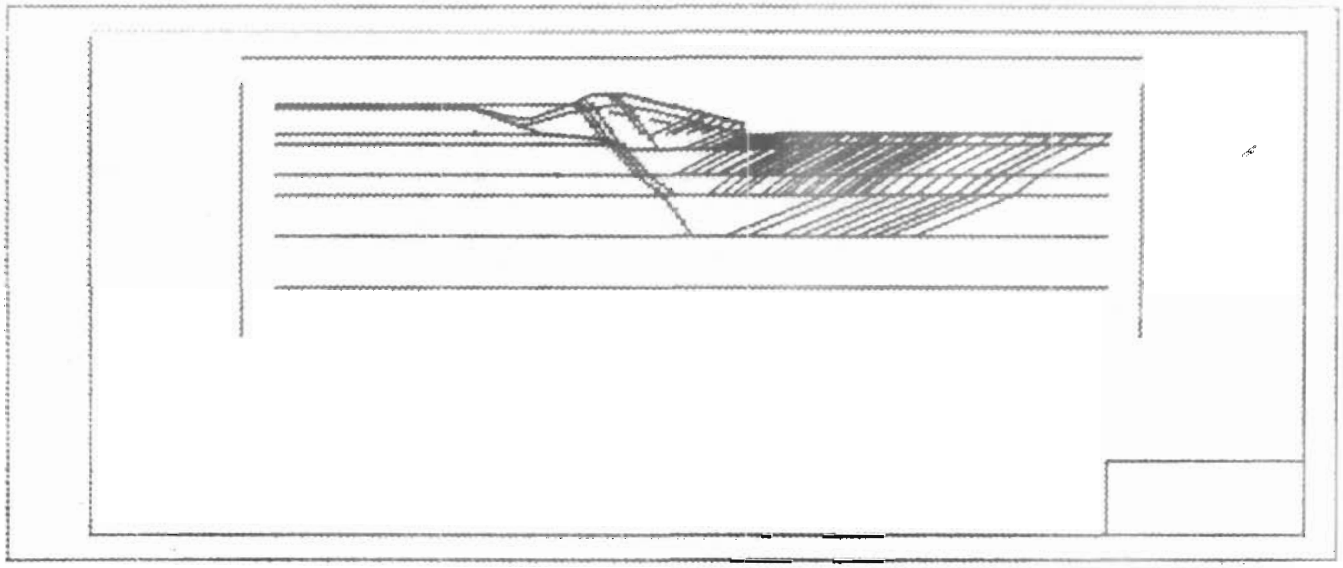
NO	DIST.	F.S.
33	160.	1.738
34	120.1	2.012
35	124.	1.788
36	127.9	1.646
37	132.8	1.557
38	133.7	1.546
39	137.6	1.517
40	139.6	1.506
41	142.5	1.528
42	145.5	1.565
43	149.4	1.614
44	153.3	[illegible]
45	157.2	1.704
46	162.1	1.763

STR 8 EL. -24. NO 47

NO	DIST.	F.S.
48	175.	1.872
49	129.8	1.51
50	133.7	1.46
51	137.2	1.439
52	139.6	1.432
53	145.5	1.497
54	148.9	1.542
55	151.3	1.574
56	153.3	1.597
57	157.2	1.645
58	159.1	1.67
59	162.6	1.714
60	164.5	1.738
61	167.9	1.782
62	172.3	1.838
63	176.7	1.894

STR 9 EL. [illegible] NO 64

NO	DIST.	F.S.
65	180.	3.167
66	135.2	2.405
67	141.6	2.457
68	151.3	2.641
69	157.2	2.745
70	163.	2.854
71	168.9	2.962
72	174.8	3.07
73	179.6	3.16
74	184.5	3.25
75	192.3	3.394



STOP STOP - TERMINATED NO PLOT
DI WI 1-1000

**** STABILITY WITH UPLIFT ****

CITRUS LAKEFRONT LEVEE
STA. 157+00, BUS STOP, NAZARETH INN
11 PROFILES
1VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

** STRATUM 3 ACT. WEDGE LOC. 100.0 EL. 0.0 PASS.WEDGE LOC. 150.0 EL. 0.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	0.0	1264.	719.	354.	346.	346.
59.0	0.0	1264.	719.	354.	346.	346.
SHEAR STRENGTHS ARE EQUAL 340.5 AT DIST. 60.2						
73.0	0.0	1033.	719.	204.	284.	204.
74.0	0.0	1031.	719.	203.	284.	203.
77.0	0.0	1050.	719.	215.	289.	215.
80.0	0.0	1139.	719.	273.	313.	273.
87.0	0.0	1329.	719.	396.	999999.	396.
88.7	0.0	1373.	719.	425.	999999.	425.
95.0	0.0	1835.	624.	786.	999999.	786.
99.0	0.0	1844.	564.	831.	999999.	831.
100.0	0.0	1846.	549.	842.	999999.	842.
102.0	0.0	1851.	519.	865.	999999.	865.
104.0	0.0	1847.	489.	881.	999999.	881.
105.0	0.0	1844.	474.	890.	999999.	890.
106.0	0.0	1805.	459.	874.	999999.	874.
114.0	0.0	1492.	340.	748.	999999.	748.
130.0	0.0	838.	100.	479.	999999.	479.
140.0	0.0	438.	0.	284.	999999.	284.
140.6	0.0	42.	0.	27.	211.	27.
140.6	0.0	-45.	0.	0.	999999.	0.
140.6	0.0	-50.	0.	0.	999999.	0.
144.0	0.0	-50.	0.	0.	999999.	0.
147.0	0.0	-50.	0.	0.	999999.	0.
150.6	0.0	-46.	0.	0.	999999.	0.
150.7	0.0	0.	0.	0.	200.	0.
157.0	0.0	0.	0.	0.	200.	0.
200.0	0.0	0.	0.	0.	200.	0.
250.0	0.0	0.	0.	0.	200.	0.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. 0.0 DP 35. RP 16846. FS 2.12

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	0.0	13203.	9318.	0.	25437.	2.65
105.0	0.0	14071.	11171.	0.	21098.	2.30
110.0	0.0	13140.	10993.	0.	16846.	2.13
115.0	0.0	12797.	10449.	0.	12989.	2.19
120.0	0.0	8049.	8797.	0.	9543.	2.30
125.0	0.0	5748.	7588.	0.	6617.	2.48
130.0	0.0	3870.	6595.	0.	3911.	2.76
135.0	0.0	2371.	5523.	0.	1759.	3.15

CRIT. ACTIVE LOC 110.0 EL 0.0 DA 13140. RA 10993.
150.0 EL. 0.0

DIS.	EL.	DP	RP	DB	RB	FS
155.0	0.0	0.	0.	0.	16846.	2.12
113.2	0.0	6038.	13616.	0.	2532.	3.82
117.1	0.0	4879.	11322.	0.	5378.	3.35
119.1	0.0	4347.	10255.	0.	6704.	3.18
123.5	0.0	3269.	8054.	0.	9454.	2.90
127.9	0.0	2345.	6150.	0.	11879.	2.69
132.8	0.0	1508.	4366.	0.	14183.	2.54
137.6	0.0	732.	1937.	0.	16028.	2.33
141.1	0.0	9.	23.	0.	16846.	2.12
146.4	0.0	39.	93.	0.	16846.	2.13
151.3	0.0	0.	0.	0.	16846.	2.12
155.2	0.0	0.	0.	0.	16846.	2.12

** STRATUM 6 ACT. WEDGE LOC. 100.0 EL. -6.1 PASS.WEDGE LOC. 140.0 EL. -6.1

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
83.						

0.0	-6.1	1918.	1100.	531.	999999.	531.
59.0	-6.1	1918.	1100.	531.	999999.	531.
73.0	-6.1	1687.	1100.	381.	999999.	381.
74.0	-6.1	1685.	1100.	380.	999999.	380.
77.0	-6.1	1704.	1100.	392.	999999.	392.
80.0	-6.1	1793.	1100.	450.	999999.	450.
87.0	-6.1	1998.	1100.	583.	999999.	583.
88.7	-6.1	2045.	1100.	614.	999999.	614.
95.0	-6.1	2520.	1006.	984.	999999.	984.
99.0	-6.1	2538.	946.	1034.	999999.	1034.
100.0	-6.1	2549.	931.	1051.	999999.	1051.
102.0	-6.1	2569.	901.	1084.	999999.	1084.
104.0	-6.1	2581.	871.	1111.	999999.	1111.
105.0	-6.1	2584.	856.	1122.	999999.	1122.
SHEAR STRENGTHS ARE EQUAL 1109.6 AT DIST. 106.0						
106.0	-6.1	2549.	841.	1110.	822.	822.
114.0	-6.1	2236.	721.	984.	751.	751.
130.0	-6.1	1582.	481.	715.	601.	601.
140.0	-6.1	1182.	331.	553.	510.	510.
SHEAR STRENGTHS ARE EQUAL 455.0 AT DIST. 140.2						
140.6	-6.1	786.	331.	295.	365.	295.
140.6	-6.1	657.	331.	211.	318.	211.
140.6	-6.1	647.	331.	205.	315.	205.
144.0	-6.1	647.	331.	205.	315.	205.
147.0	-6.1	637.	331.	198.	999999.	198.
150.6	-6.1	616.	331.	185.	999999.	185.
150.7	-6.1	705.	331.	242.	999999.	242.
157.0	-6.1	654.	331.	210.	999999.	210.
200.0	-6.1	654.	331.	210.	999999.	210.
250.0	-6.1	654.	331.	210.	999999.	210.

ASSUMED CRIT. PASSIVE LOC. 140.0 EL. -6.1 DP 1829. RP 2265.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-6.1	24241.	12135.	0.	30229.	1.99
105.0	-6.1	27188.	16489.	0.	24783.	1.72
110.0	-6.1	26690.	17587.	0.	19731.	1.59
115.0	-6.1	23962.	16612.	0.	15621.	1.56
120.0	-6.1	20126.	15322.	0.	12029.	1.62
125.0	-6.1	16263.	13060.	0.	8673.	1.66
130.0	-6.1	12859.	11367.	0.	5552.	1.74
135.0	-6.1	9896.	9900.	0.	2662.	1.84
140.0	-6.1	7293.	8216.	0.	0.	1.92

CRIT. ACTIVE LOC 115.0 EL -6.1 DA 23962. RA 16612.

DIS.	EL.	DP	RP	DB	RB	FS
145.0	-6.1	1910.	2765.	0.	16771.	1.64
122.0	-6.1	9407.	18518.	0.	4973.	2.76
125.9	-6.1	7845.	15127.	0.	7541.	2.44
129.8	-6.1	5885.	11014.	0.	9966.	2.08
131.8	-6.1	4946.	8955.	0.	11125.	1.93
133.7	-6.1	4071.	7051.	0.	12250.	1.81

135.7	-6.1	3279.	5345.	0.	13339.	1.71
137.6	-6.1	2570.	3837.	0.	14394.	1.63
139.6	-6.1	1947.	2536.	0.	15415.	1.57
139.6	-6.1	1947.	2536.	0.	15415.	1.57
141.1	-6.1	1770.	2135.	0.	15966.	1.56
143.0	-6.1	1874.	2383.	0.	16366.	1.60
145.5	-6.1	1922.	2853.	0.	16864.	1.65
295.4	-6.1	245.	2188.	0.	48307.	2.83
149.4	-6.1	2031.	3837.	0.	17631.	1.74
151.3	-6.1	2018.	3909.	0.	18032.	1.76
156.7	-6.1	1942.	3759.	0.	19243.	1.80

* * STRATUM 7 ACT. WEDGE LOC. 100.0 EL. -16.0 PASS.WEDGE LOC. 150.0 EL. -16.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-16.0	3076.	1719.	694.	700.	694.
59.0	-16.0	3076.	1719.	694.	700.	694.
73.0	-16.0	2846.	1719.	610.	700.	610.
74.0	-16.0	2843.	1719.	609.	700.	609.
77.0	-16.0	2863.	1719.	616.	700.	616.
80.0	-16.0	2951.	1719.	649.	700.	649.
SHEAR STRENGTHS ARE EQUAL 700.0 AT DIST. 84.8						
87.0	-16.0	3156.	1719.	723.	700.	700.
88.7	-16.0	3203.	1719.	740.	700.	700.
95.0	-16.0	3679.	1624.	948.	700.	700.
99.0	-16.0	3697.	1564.	976.	700.	700.
100.0	-16.0	3707.	1549.	985.	700.	700.
102.0	-16.0	3728.	1519.	1004.	700.	700.
104.0	-16.0	3739.	1489.	1019.	700.	700.
105.0	-16.0	3742.	1474.	1025.	700.	700.
106.0	-16.0	3708.	1459.	1018.	700.	700.
114.0	-16.0	3394.	1340.	948.	700.	700.
130.0	-16.0	2740.	1100.	797.	700.	700.
140.0	-16.0	2341.	950.	706.	700.	700.
SHEAR STRENGTHS ARE EQUAL 700.0 AT DIST. 140.0						
140.6	-16.0	1944.	950.	562.	700.	562.
140.6	-16.0	1815.	950.	515.	700.	515.

140.6	-16.0	1805.	950.	511.	700.	511.
144.0	-16.0	1805.	950.	511.	700.	511.
147.0	-16.0	1795.	950.	507.	700.	507.
150.6	-16.0	1775.	950.	500.	700.	500.
150.7	-16.0	1863.	950.	532.	700.	532.
157.0	-16.0	1813.	950.	514.	700.	514.
200.0	-16.0	1813.	950.	514.	700.	514.
250.0	-16.0	1812.	950.	514.	700.	514.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. -16.0 DP 14238. RP 16000.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-16.0	48734.	19207.	0.	33160.	1.98
105.0	-16.0	53354.	22678.	0.	29660.	1.75
110.0	-16.0	56823.	26945.	0.	26160.	1.62
115.0	-16.0	56065.	29692.	0.	22660.	1.63
120.0	-16.0	52054.	28462.	0.	19160.	1.68
125.0	-16.0	46513.	26735.	0.	15660.	1.81
130.0	-16.0	40486.	23913.	0.	12160.	1.98
135.0	-16.0	34912.	21492.	0.	8660.	2.23

CRIT. ACTIVE LOC 110.0 EL -16.0 DA 56823. RA 26945.

DIS.	EL.	DP	RP	DB	RB	FS S
160.0	-16.0	14142.	15907.	0.	31349.	1.74
120.1	-16.0	26435.	27159.	0.	7043.	2.01
124.0	-16.0	23408.	23016.	0.	9778.	1.79
127.9	-16.0	20703.	20013.	0.	12513.	1.65
132.8	-16.0	17667.	18090.	0.	15932.	1.56
133.7	-16.0	17156.	17767.	0.	16615.	1.55
137.6	-16.0	15232.	16805.	0.	19350.	1.52
139.6	-16.0	14429.	16169.	0.	20718.	1.51
142.5	-16.0	14149.	15914.	0.	22366.	1.53
145.5	-16.0	14167.	15933.	0.	23862.	1.56
149.4	-16.0	14223.	15992.	0.	25841.	1.61
153.3	-16.0	14180.	15947.	0.	27871.	1.66
157.2	-16.0	14142.	15907.	0.	29900.	1.70
162.1	-16.0	14142.	15907.	0.	32410.	1.76

* * STRATUM 8 ACT. WEDGE LOC. 100.0 EL. -24.0 PASS.WEDGE LOC. 170.0 EL. -24.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-24.0	3924.	2219.	700.	1108.	700.
59.0	-24.0	3924.	2219.	700.	1107.	700.
73.0	-24.0	3694.	2219.	700.	958.	700.
74.0	-24.0	3691.	2219.	700.	956.	700.
77.0	-24.0	3711.	2219.	700.	969.	700.
80.0	-24.0	3799.	2219.	700.	1026.	700.
87.0	-24.0	4004.	2219.	700.	1159.	700.
88.7	-24.0	4051.	2219.	700.	1190.	700.
95.0	-24.0	4527.	2124.	700.	1560.	700.
99.0	-24.0	4545.	2064.	700.	1611.	700.
100.0	-24.0	4555.	2049.	700.	1627.	700.
102.0	-24.0	4576.	2019.	700.	1660.	700.
104.0	-24.0	4587.	1989.	700.	1687.	700.
105.0	-24.0	4590.	1974.	700.	1699.	700.
106.0	-24.0	4556.	1959.	700.	1686.	700.
114.0	-24.0	4242.	1840.	700.	1560.	700.
130.0	-24.0	3588.	1600.	700.	1291.	700.
140.0	-24.0	3189.	1450.	700.	1129.	700.
140.6	-24.0	2792.	1450.	700.	872.	700.
140.6	-24.0	2663.	1450.	700.	788.	700.
140.6	-24.0	2653.	1450.	700.	781.	700.
144.0	-24.0	2653.	1450.	700.	781.	700.
147.0	-24.0	2643.	1450.	700.	775.	700.
150.6	-24.0	2623.	1450.	700.	762.	700.
150.7	-24.0	2711.	1450.	700.	819.	700.
157.0	-24.0	2661.	1450.	700.	786.	700.
200.0	-24.0	2661.	1450.	700.	786.	700.
250.0	-24.0	2660.	1450.	700.	786.	700.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -24.0 DP 32033. RP 35827.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	
100.0	-24.0	73446.	25138.	0.	49000.	2.41
105.0	-24.0	78973.	27419.	0.	45500.	2.10
110.0	-24.0	83383.	30305.	0.	42000.	1.91
115.0	-24.0	86631.	34456.	0.	38500.	1.81
120.0	-24.0	86979.	38540.	0.	35000.	1.81
125.0	-24.0	82955.	39323.	0.	31500.	1.90
130.0	-24.0	76566.	37703.	0.	28000.	2.06
135.0	-24.0	69075.	35736.	0.	24500.	2.32
140.0	-24.0	61596.	32837.	0.	21000.	2.69
145.0	-24.0	52628.	30509.	0.	17500.	3.59

CRIT. ACTIVE LOC 120.0 EL -24.0 DA 86979. RA 38540.

DIS.	EL.	DP	RP	DB	RB	FS
175.0	-24.0	38033.	25827.	0.	38500.	1.87
129.8	-24.0	39839.	26661.	0.	6880.	1.51
133.7	-24.0	36317.	25830.	0.	9615.	1.46
137.2	-24.0	33882.	25850.	0.	12009.	1.44
139.6	-24.0	32422.	25878.	0.	13718.	1.43
146.5	-24.0	32054.	25863.	0.	17821.	1.50
148.9	-24.0	32136.	25827.	0.	20214.	1.54
151.3	-24.0	32162.	25827.	0.	21923.	1.57
153.3	-24.0	32089.	25827.	0.	23291.	1.60
157.2	-24.0	32033.	25827.	0.	26026.	1.65
159.1	-24.0	32033.	25827.	0.	27393.	1.67
162.6	-24.0	32033.	25827.	0.	29786.	1.71
164.5	-24.0	32033.	25827.	0.	31154.	1.74
167.9	-24.0	32033.	25827.	0.	33547.	1.78
172.3	-24.0	32033.	25827.	0.	36624.	1.84
176.7	-24.0	32033.	25827.	0.	39701.	1.89

* * STRATUM 9 ACT. WEDGE LOC. 100.0 EL. -40.0 PASS.WEDGE LOC.

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-40.0	5876.	3219.	1726.	1726.	1726.
59.0	-40.0	5876.	3219.	1726.	1726.	1726.
73.6	-40.0	5876.	3219.	1576.	1576.	1576.
74.0	-40.0	5643.	3219.	1575.	1575.	1575.
77.0	-40.0	5663.	3219.	1587.	1587.	1587.
80.0	-40.0	5751.	3219.	1645.	1645.	1645.
87.0	-40.0	5956.	3219.	1778.	1778.	1778.
88.7	-40.0	6003.	3219.	1808.	1808.	1808.
95.0	-40.0	6479.	3124.	2178.	2178.	2178.
99.0	-40.0	6497.	3064.	2229.	2229.	2229.
100.0	-40.0	6507.	3049.	2245.	2245.	2245.
102.0	-40.0	6528.	3019.	2278.	2278.	2278.
104.0	-40.0	6539.	2989.	2305.	2305.	2305.
105.0	-40.0	6542.	2974.	2317.	2317.	2317.
106.0	-40.0	6508.	2959.	2304.	2304.	2304.
114.0	-40.0	6194.	2840.	2178.	2178.	2178.
130.0	-40.0	5540.	2600.	1909.	1909.	1909.
140.0	-40.0	5141.	2450.	1747.	1747.	1747.
140.6	-40.0	4744.	2450.	1490.	1490.	1490.
140.6	-40.0	4615.	2450.	1406.	1406.	1406.
140.6	-40.0	4605.	2450.	1399.	1399.	1399.
144.0	-40.0	4605.	2450.	1399.	1399.	1399.
147.0	-40.0	4595.	2450.	1393.	1393.	1393.
150.6	-40.0	4575.	2450.	1380.	1380.	1380.
150.7	-40.0	4663.	2450.	1437.	1437.	1437.
157.0	-40.0	4613.	2450.	1404.	1404.	1404.
200.0	-40.0	4613.	2450.	1404.	1404.	1404.
250.0	-40.0	4612.	2450.	1404.	1404.	1404.

ASSUMED CRIT. PASSIVE LOC. 175.0 EL. -40.0 DP 90215. RP 90370.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-40.0	153387.	57118.	0.	131923.	4.42
105.0	-40.0	158428.	59996.	0.	120505.	3.97
110.0	-40.0	163017.	59681.	0.	109103.	3.56
115.0	-40.0	165901.	61598.	0.	98094.	3.30
120.0	-40.0	166712.	63176.	0.	87496.	3.15
125.0	-40.0	166240.	66045.	0.	77319.	3.07
130.0	-40.0	162168.	68378.	0.	67562.	3.15
135.0	-40.0	154065.	66463.	0.	58217.	3.37
140.0	-40.0	144077.	63451.	0.	49278.	3.77
145.0	EL -40.0	129626.	56646.	0.	42150.	4.80
150.0	-40.0	117182.	51053.	0.	35198.	6.55

CRIT. ACTIVE LOC 125.0 EL -40.0 DA 166240. RA 66045.

DIS.	EL.	DP	RP	DB	RB	FS
180.0	-40.0	90214.	90369.	0.	84340.	3.17
135.2	-40.0	91946.	93138.	0.	19469.	2.40
141.6	-40.0	90217.	90375.	0.	30342.	2.46
151.3	-40.0	90285.	90538.	0.	43978.	2.64
157.2	-40.0	90215.	90371.	0.	52293.	2.75
163.0	-40.0	90215.	90370.	0.	60523.	2.85
168.9	-40.0	90215.	90370.	0.	68754.	2.96
174.8	-40.0	90215.	90370.	0.	76984.	3.07
179.6	-40.0	90214.	90370.	0.	83843.	3.16
184.5	-40.0	90214.	90369.	0.	90702.	3.25
192.3	-40.0	90209.	90318.	0.	101676.	3.39

EOT..

Bus Stop.

Nazareth Inn OK.

3 July 90

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LI PERMIT 1-100
1 'CITRUS LAKEFRONT LEVEE'
2 'STA. 157+00, BUS STOP, NAZARETH INN'
3 10 10 0.5 110 1 0
4 10 1 2 1
5 100
6 0 62.5 0 0
7 0 112 400 400
8 33 122 0 0
9 15 117 200 200
10 0 102 300 300
11 33 122 0 0
12 20 117 200 200
13 0 106 620 700
14 33 122 0 0
15 33 122 0 0
16 0 11.5 88.7 11.5 95 15.5 105 15.5 135 5.5 135.7 4.9
17 144.6 0.41 144.61 -0.8 150.6 -0.8 150.7 0 250 0 9999.9 0
18 0 10 59 10 73 6 77 6 88.7 11.5 95 15.5
19 105 15.5 250 90 9999.9 0
20 0 10 59 10 74 3 87 8 102 11.5 114 9
21 130 3 141 0 144.6 0.41 250 90 9999.9 0
22 0 10 59 10 74 3 80 0 99 -2 104 -4
23 106 -6 144 -6 147 -4 157 0 250 0
24 9999.9 0
25 0 0 80 0 99 -2 104 -4 106 -6 144 -6
26 147 -4 157 0 250 0 9999.9 0
27 0 -4 104 -4 106 -6 144 -6 147 -4 250 -4
28 9999.9 0
29 0 -4.1 104 -4.1 106 -6.1 144 -6.1 147 -4.1 200 -4.1
30 9999.9 0
31 0 -16 250 -16 9999.9 0
32 0 -24 250 -24 9999.9 0
33 0 -40 250 -40 9999.9 0
34 0 -60 250 -60 9999.9 0
35 0 11.5 88.7 11.5 135 5.5 144. 0 250 0 9999.9 0
36 1 1 1 1 1 1 1 1 1 1 1 1
37 1 1 1 1 1 1 1 1
38 3 100 0 150 0 1
39 155
40 6 100 -6.1 140 -6.1 1
41 145
42 7 100 -16 150 -16 1
43 160
44 8 100 -24 170 -24 1
45 175
46 9 100 -40 175 -40 1
47 180
EOT..
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AFTER SELECTED WEDGES,PLACE CROSSHAIRS AT ADDITIONAL F.S. LOCATIONS
(N,S,E - COMPLETE STRATA & D,R - REDRAW & U - WINDOW)

STR 3 EL. 0. NO 1

NO	DIST.	F.S.
2	155.	1.713 E. H.
3	117.6	2.824
4	123.	2.456
5	128.4	2.204
6	133.2	2.002
7	138.1	1.861
8	143.	1.744
9	146.9	1.726
10	148.9	1.725
11	151.8	1.713

STR 6 EL. -6.1 NO 12

NO	DIST.	F.S.
13	145.	1.439
14	121.	2.281
15	126.9	1.928
16	131.3	1.704
17	135.2	1.514
18	136.7	1.462
19	139.1	1.405
20	141.1	1.386
21	142.5	1.398
22	144.	1.421
23	145.9	1.459
24	149.9	1.547
25	156.7	1.594
26	160.1	1.622

STR 7 EL. -16. NO 27

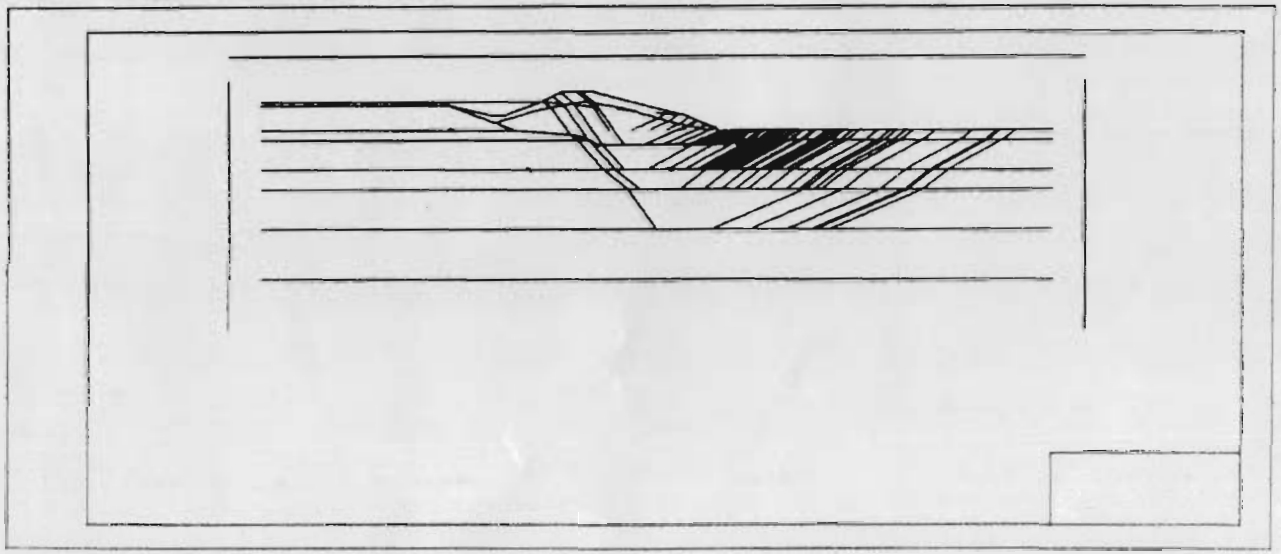
NO	DIST.	F.S.
28	160.	1.673
29	122.5	1.712
30	128.9	1.537
31	134.2	1.468
32	138.1	1.455
33	140.1	1.457
34	142.	1.467
35	143.5	1.481
36	145.	1.496
37	145.	1.496
38	144.5	1.49
39	145.	1.496
40	146.9	1.52
41	150.3	1.564
42	154.2	1.606
43	159.1	1.662
44	163.	1.709
45	166.	1.743

STR 8 EL. -24. NO 46

NO	DIST.	F.S.
47	175.	1.833
48	132.8	1.434
49	140.1	1.419
50	145.5	1.458
51	149.9	1.517
52	153.8	1.564
53	160.1	1.644
54	166.	1.718
55	177.2	1.862

STR 9 EL. -40. NO 56

NO	DIST.	F.S.
57	180.	3.04
58	142.5	2.359
59	154.7	2.584
60	166.5	2.795
61	174.3	2.936



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STOP STOP - TERMINATED NO PLOT
DI W1 1-1000

                    **** STABILITY WITH UPLIFT ****


          CITRUS LAKEFRONT LEVEE
          STA. 157+00, BUS STOP, NAZARETH INN
                     11 PROFILES
                      1VERTICALS
          UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

 * * STRATUM  3 ACT. WEDGE LOC.   100.0 EL.    0.0 PASS.WEDGE LOC.  150.0 EL.   0.0
                                                 CRIT. ACTIVE LOC    110.0  EL   0.0  DA   13136.  RA   10215.
          ASSUMED FAILURE SURFACE DATA

    DIST.    ELEV.       WT.    UPLIFT     STR 1     STR 2  STR USED
      0.0      0.0     1264.      719.      354.      346.      346.
     59.0      0.0     1264.      719.      354.      346.      346.
SHEAR STRENGTHS ARE EQUAL    340.5  AT DIST.    60.2
     73.0      0.0     1033.      719.      204.      284.      204.
     74.0      0.0     1031.      719.      203.      284.      203.
     77.0      0.0     1050.      719.      215.      289.      215.
     80.0      0.0     1139.      719.      273.      313.      273.
     87.0      0.0     1329.      719.      396.   999999.      396.
     88.7      0.0     1373.      719.      425.   999999.      425.
     95.0      0.0     1835.      668.      758.   999999.      758.
     99.0      0.0     1844.      635.      785.   999999.      785.
    100.0      0.0     1846.      627.      792.   999999.      792.
    102.0      0.0     1851.      611.      805.   999999.      805.
    104.0      0.0     1847.      595.      813.   999999.      813.
    105.0      0.0     1844.      587.      817.   999999.      817.
    106.0      0.0     1805.      579.      796.   999999.      796.
    114.0      0.0     1490.      514.      634.   999999.      634.
    130.0      0.0      832.      384.      291.   999999.      291.
    135.0      0.0      631.      344.      187.   999999.      187.
    135.7      0.0      563.      317.      160.   999999.      160.
    141.0      0.0      249.      115.       87.      236.       87.
    144.0      0.0       83.        0.       54.   999999.       54.
    144.6      0.0      -42.        0.        0.   999999.        0.
    144.6      0.0      -50.        0.        0.   999999.        0.
    147.0      0.0      -50.        0.        0.   999999.        0.
    150.6      0.0      -46.        0.        0.   999999.        0.
    150.7      0.0        0.        0.        0.      200.        0.
    157.0      0.0        0.        0.        0.      200.        0.
    200.0      0.0        0.        0.        0.      200.        0.
    250.0      0.0        0.        0.        0.      200.        0.

 ASSUMED CRIT. PASSIVE LOC.  150.0  EL.   0.0  DP      35.  RP      83.

          ACTIVE WEDGE DATA

 DIST.    ELEV.       DA         RA         DB         RB        FS
    100.0      0.0    13203.      8907.        0.    20152.     2.21
    105.0      0.0    14071.     10542.        0.    16122.     1.91
    110.0      0.0    13136.     10215.        0.    12292.     1.72
    115.0      0.0    10780.      9570.        0.     8972.     1.73
    120.0      0.0     8017.      7861.        0.     6178.     1.77
    125.0      0.0     5708.      6680.        0.     3920.     1.88
    130.0      0.0     3825.      5879.        0.     2197.     2.15
    135.0      0.0     2321.      5046.        0.     1003.     2.68

 DIS.     EL.       DP         RP         DB         RB        FS
    155.0      0.0        0.         0.        0.    12292.     1.71
    117.6      0.0     4712.      8720.        0.     4851.     2.82
    123.0      0.0     3349.      6291.        0.     7529.     2.46
    128.4      0.0     2211.      4272.        0.     9590.     2.20
    133.2      0.0     1218.      2712.        0.    10930.     2.00
    138.1      0.0      451.      1628.        0.    11758.     1.86
    143.0      0.0       46.       402.        0.    12218.     1.74
    146.9      0.0       39.        93.        0.    12292.     1.73
    148.9      0.0       37.        88.        0.    12292.     1.72
    151.8      0.0        0.         0.        0.    12292.     1.71

 * * STRATUM  6 ACT. WEDGE LOC.   100.0 EL.   -6.1 PASS.WEDGE LOC.
 140.0 EL.  -6.1
```

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-6.1	1918.	1100.	531.	999999.	531.
59.0	-6.1	1918.	1100.	531.	999999.	531.
73.0	-6.1	1687.	1100.	381.	999999.	381.
74.0	-6.1	1685.	1100.	380.	999999.	380.
77.0	-6.1	1704.	1100.	392.	999999.	392.
80.0	-6.1	1793.	1100.	450.	999999.	450.
87.0	-6.1	1998.	1100.	583.	999999.	583.
88.7	-6.1	2045.	1100.	614.	999999.	614.
95.0	-6.1	2520.	1049.	956.	999999.	956.
99.0	-6.1	2538.	1017.	988.	999999.	988.
100.0	-6.1	2549.	1008.	1000.	999999.	1000.
102.0	-6.1	2569.	992.	1024.	999999.	1024.
104.0	-6.1	2581.	976.	1042.	999999.	1042.
105.0	-6.1	2584.	968.	1049.	999999.	1049.
SHEAR STRENGTHS ARE EQUAL 1032.1 AT DIST. 106.0						
106.0	-6.1	2549.	960.	1032.	778.	778.
114.0	-6.1	2234.	895.	869.	687.	687.
130.0	-6.1	1577.	765.	527.	495.	495.
SHEAR STRENGTHS ARE EQUAL 455.0 AT DIST. 133.4						
135.0	-6.1	1376.	725.	423.	437.	423.
135.7	-6.1	1307.	698.	395.	422.	395.
141.0	-6.1	993.	496.	323.	381.	323.
144.0	-6.1	827.	381.	289.	362.	289.
144.6	-6.1	660.	381.	181.	999999.	181.
144.6	-6.1	645.	381.	171.	999999.	171.
147.0	-6.1	637.	381.	166.	999999.	166.
150.6	-6.1	616.	381.	153.	999999.	153.
150.7	-6.1	705.	381.	210.	999999.	210.
157.0	-6.1	654.	381.	177.	999999.	177.
200.0	-6.1	654.	381.	177.	999999.	177.
250.0	-6.1	654.	381.	177.	999999.	177.

ASSUMED CRIT. PASSIVE LOC. 140.0 EL. -6.1 DP 2384. RP 2072.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-6.1	24241.	11766.	0.	26566.	1.85
105.0	-6.1	27188.	15565.	0.	21430.	1.57
110.0	-6.1	26685.	16318.	0.	16732.	1.44
115.0	-6.1	23943.	15056.	0.	12957.	1.39
120.0	-6.1	20086.	13528.	0.	9731.	1.43
125.0	-6.1	16205.	11074.	0.	6805.	1.44
130.0	-6.1	12787.	9309.	0.	4179.	1.49
135.0	-6.1	9815.	7937.	0.	1860.	1.59
140.0	-6.1	6547.	6353.	0.	0.	2.01

CRIT. ACTIVE LOC 115.0 EL -6.1 DA 23943. RA 15056.

DIS.	EL.	DP	RP	DB	RB	FS
145.0	-6.1	1910.	2233.	0.	14415.	1.44
121.0	-6.1	9593.	13816.	0.	3858.	2.28
126.9	-6.1	7091.	10249.	0.	7185.	1.93
131.3	-6.1	5326.	7255.	0.	9409.	1.70
135.2	-6.1	3808.	4252.	0.	11182.	1.51
136.7	-6.1	3291.	3377.	0.	11759.	1.46
139.1	-6.1	2590.	2289.	0.	12652.	1.40
141.1	-6.1	2220.	1750.	0.	13307.	1.39
142.5	-6.1	2057.	1777.	0.	13767.	1.40
144.0	-6.1	1930.	2012.	0.	14203.	1.42
145.9	-6.1	1956.	2438.	0.	14575.	1.46
149.9	-6.1	2033.	3624.	0.	15209.	1.55
156.7	-6.1	1942.	3508.	0.	16507.	1.59
160.1	-6.1	1942.	3507.	0.	17113.	1.62

* * STRATUM 7 ACT. WEDGE LOC. 100.0 EL. -16.0 PASS.WEDGE LOC. 150.0 EL. -16.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-16.0	3076.	1719.	694.	700.	694.
59.0	-16.0	3076.	1719.	694.	700.	694.
73.0	-16.0	2846.	1719.	610.	700.	610.
74.0	-16.0	2843.	1719.	609.	700.	609.
77.0	-16.0	2863.	1719.	616.	700.	616.
80.0	-16.0	2951.	1719.	649.	700.	649.
SHEAR STRENGTHS ARE EQUAL 700.0 AT DIST. 84.8						
87.0	-16.0	3156.	1719.	723.	700.	700.
88.7	-16.0	3203.	1719.	740.	700.	700.
95.0	-16.0	3679.	1668.	932.	700.	700.
99.0	-16.0	3697.	1635.	950.	700.	700.
100.0	-16.0	3707.	1627.	957.	700.	700.
102.0	-16.0	3728.	1611.	970.	700.	700.
104.0	-16.0	3739.	1595.	981.	700.	700.
105.0	-16.0	3742.	1587.	984.	700.	700.
106.0	-16.0	3707.	1579.	975.	700.	700.
114.0	-16.0	3392.	1514.	884.	700.	700.

SHEAR STRENGTHS ARE EQUAL 700.0 AT DIST. 129.3

130.0	-16.0	2735.	1384.	692.	700.	692.
135.0	-16.0	2534.	1344.	633.	700.	633.
135.7	-16.0	2465.	1317.	618.	700.	618.
141.0	-16.0	2151.	1115.	577.	700.	577.
144.0	-16.0	1985.	1000.	559.	700.	559.
144.6	-16.0	1818.	1000.	498.	700.	498.
144.6	-16.0	1803.	1000.	492.	700.	492.
147.0	-16.0	1795.	1000.	489.	700.	489.
150.6	-16.0	1775.	1000.	482.	700.	482.
150.7	-16.0	1863.	1000.	514.	700.	514.
157.0	-16.0	1813.	1000.	496.	700.	496.
200.0	-16.0	1813.	1000.	496.	700.	496.
250.0	-16.0	1812.	1000.	496.	700.	496.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. -16.0 DP 14238. RP 15[illegible]

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-16.0	48734.	18907.	0.	32572.	1.94
105.0	-16.0	53354.	22036.	0.	29072.	1.70
110.0	-16.0	56820.	25751.	0.	25572.	1.57
115.0	-16.0	56050.	27744.	0.	22072.	1.56
120.0	-16.0	52018.	26031.	0.	18572.	1.59
125.0	-16.0	46448.	23870.	0.	15072.	1.69
130.0	-16.0	40390.	20657.	0.	11575.	1.82
135.0	-16.0	34790.	17925.	0.	8263.	2.02
140.0	-16.0	29129.	15706.	0.	5239.	2.44

CRIT. ACTIVE LOC 115.0 EL -16.0 DA 56050. RA 27744.

DIS.	EL.	DP	RP	DB	RB	FS
160.0	-16.0	14142.	15276.	0.	27079.	1.67
122.5	-16.0	24786.	20541.	0.	5252.	1.71
128.9	-16.0	20438.	17292.	0.	9697.	1.54
134.2	-16.0	17331.	15764.	0.	13315.	1.48
138.1	-16.0	15589.	15387.	0.	15727.	1.45
140.1	-16.0	14969.	15214.	0.	16883.	1.46
142.0	-16.0	14509.	15197.	0.	18011.	1.47
143.5	-16.0	14263.	15287.	0.	18841.	1.48
145.0	-16.0	14163.	15298.	0.	19617.	1.50
145.0	-16.0	14163.	15298.	0.	19617.	1.50
144.5	-16.0	14162.	15297.	0.	19375.	1.49
145.0	-16.0	14163.	15298.	0.	19617.	1.50
146.9	-16.0	14182.	15318.	0.	20575.	1.52
150.3	-16.0	14246.	15385.	0.	22237.	1.56
154.2	-16.0	14163.	15298.	0.	24217.	1.61
159.1	-16.0	14142.	15276.	0.	26649.	1.66
163.0	-16.0	14142.	15276.	0.	28586.	1.71
166.0	-16.0	14142.	15276.	0.	30039.	1.74

* * STRATUM 8 ACT. WEDGE LOC. 100.0 EL. -24.0 PASS.WEDGE LOC. 170.0 EL. -24.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-24.0	3924.	2219.	700.	1108.	700.
59.0	-24.0	3924.	2219.	700.	1107.	700.
73.0	-24.0	3694.	2219.	700.	958.	700.
74.0	-24.0	3691.	2219.	700.	956.	700.
77.0	-24.0	3711.	2219.	700.	969.	700.
80.0	-24.0	3799.	2219.	700.	1026.	700.
87.0	-24.0	4004.	2219.	700.	1159.	700.
88.7	-24.0	4051.	2219.	700.	1190.	700.
95.0	-24.0	4527.	2168.	700.	1532.	700.
99.0	-24.0	4545.	2135.	700.	1565.	700.
100.0	-24.0	4555.	2127.	700.	1577.	700.
102.0	-24.0	4576.	2111.	700.	1600.	700.
104.0	-24.0	4587.	2095.	700.	1619.	700.
105.0	-24.0	4590.	2087.	700.	1626.	700.
106.0	-24.0	4555.	2079.	700.	1608.	700.
114.0	-24.0	4240.	2014.	700.	1446.	700.
130.0	-24.0	3583.	1884.	700.	1103.	700.
135.0	-24.0	3382.	1844.	700.	999.	700.
135.7	-24.0	3313.	1817.	700.	972.	700.
141.0	-24.0	2999.	1615.	700.	899.	700.
144.0	-24.0	2833.	1500.	700.	866.	700.
144.6	-24.0	2666.	1500.	700.	757.	700.
144.6	-24.0	2651.	1500.	700.	747.	700.
147.0	-24.0	2643.	1500.	700.	742.	700.
150.6	-24.0	2623.	1500.	700.	729.	700.
150.7	-24.0	2711.	1500.	700.	786.	700.
157.0	-24.0	2661.	1500.	700.	754.	700.
200.0	-24.0	2661.	1500.	700.	754.	700.
250.0	-24.0	2660.	1500.	700.	754.	700.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -24.0 DP 32033. RP 25196.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
100.0	-24.0	73446.	25068.	0.	49000.	2.40
105.0	-24.0	78973.	27245.	0.	45500.	2.09
110.0	-24.0	83381.	29877.	0.	42000.	1.89
115.0	-24.0	86620.	33615.	0.	38500.	1.78
120.0	-24.0	86953.	36999.	0.	35000.	1.77

125.0	-24.0	82906.	37177.	0.	31500.	1.85
130.0	-24.0	76483.	35092.	0.	28000.	1.99
135.0	-24.0	68953.	32710.	0.	24500.	2.23
140.0	-24.0	61071.	29440.	0.	21000.	2.60
145.0	-24.0	53096.	26955.	0.	17500.	3.31

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CRIT. ACTIVE LOC 120.0 EL -24.0 DA 86953. RA 36999.

DIS.	EL.	DP	RP	DB	RB	FS
175.0	-24.0	32033.	25196.	0.	38500.	1.83
132.8	-24.0	37428.	25110.	0.	8932.	1.43
140.1	-24.0	33191.	25256.	0.	14060.	1.42
145.5	-24.0	32054.	25233.	0.	17821.	1.46
149.9	-24.0	32166.	25196.	0.	20897.	1.52
153.8	-24.0	32075.	25196.	0.	23632.	1.56
160.1	-24.0	32033.	25196.	0.	28077.	1.64
166.0	-24.0	32033.	25196.	0.	32179.	1.72
177.2	-24.0	32033.	25196.	0.	40043.	1.86

* * STRATUM 9 ACT. WEDGE LOC. 100.0 EL. -40.0 PASS.WEDGE LOC. 175.0 EL. -40.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-40.0	5876.	3219.	1726.	1726.	1726.
59.0	-40.0	5876.	3219.	1726.	1726.	1726.
73.0	-40.0	5646.	3219.	1576.	1576.	1576.
74.0	-40.0	5643.	3219.	1575.	1575.	1575.
77.0	-40.0	5663.	3219.	1587.	1587.	1587.
80.0	-40.0	5751.	3219.	1645.	1645.	1645.
87.0	-40.0	5956.	3219.	1778.	1778.	1778.
88.7	-40.0	6003.	3219.	1808.	1808.	1808.
95.0	-40.0	6479.	3168.	2150.	2150.	2150.
99.0	-40.0	6497.	3135.	2183.	2183.	2183.
100.0	-40.0	6507.	3127.	2195.	2195.	2195.
102.0	-40.0	6528.	3111.	2219.	2219.	2219.
104.0	-40.0	6539.	3095.	2237.	2237.	2237.
105.0	-40.0	6542.	3087.	2244.	2244.	2244.
106.0	-40.0	6507.	3079.	2227.	2227.	2227.
114.0	-40.0	6192.	3014.	2064.	2064.	2064.
130.0	-40.0	5535.	2884.	1721.	1721.	1721.
135.0	-40.0	5334.	2844.	1617.	1617.	1617.
135.7	-40.0	5265.	2817.	1590.	1590.	1590.
141.0	-40.0	4951.	2615.	1518.	1518.	1518.
144.0	-40.0	4785.	2500.	1484.	1484.	1484.
144.6	-40.0	4618.	2500.	1375.	1375.	1375.
144.6	-40.0	4603.	2500.	1366.	1366.	1366.
147.0	-40.0	4595.	2500.	1360.	1360.	1360.
150.6	-40.0	4575.	2500.	1347.	1347.	1347.
150.7	-40.0	4663.	2500.	1405.	1405.	1405.
157.0	-40.0	4613.	2500.	1372.	1372.	1372.
200.0	-40.0	4613.	2500.	1372.	1372.	1372.
250.0	-40.0	4612.	2500.	1372.	1372.	1372.

ASSUMED CRIT. PASSIVE LOC. 175.0 EL. -40.0 DP 90215. RP 87826.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
100.0	-40.0	153387.	56577.	0.	125576.	4.27
105.0	-40.0	158428.	59067.	0.	114467.	3.83
110.0	-40.0	163012.	58263.	0.	103487.	3.43
115.0	-40.0	165882.	59649.	0.	93015.	3.18
120.0	-40.0	166672.	60536.	0.	83070.	3.03
125.0	-40.0	166174.	62545.	0.	73660.	2.95
130.0	-40.0	162068.	63684.	0.	64786.	3.01
135.0	-40.0	153921.	60868.	0.	56440.	3.22
140.0	-40.0	143208.	57380.	0.	48607.	3.66
145.0	-40.0	130691.	52483.	0.	41176.	4.48
150.0	-40.0	118305.	47399.	0.	34386.	6.04

CRIT. ACTIVE LOC 125.0 EL -40.0 DA 166174. RA 62545.

DIS.	EL.	DP	RP	DB	RB	FS
180.0	-40.0	90214.	87825.	0.	80520.	3.04
142.5	-40.0	90430.	87270.	0.	28883.	2.36
154.7	-40.0	90226.	87853.	0.	45849.	2.58
166.5	-40.0	90215.	87826.	0.	61943.	2.80
174.3	-40.0	90215.	87826.	0.	72664.	2.94

EOT..

Qualifier: 243AAAA

Citrus Lakefront Levee, Sta. 157+00, Bus Stop

Nazareth Inn.

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LI PERMIT 1-100
1 'CITRUS LAKEFRONT LEVEE'
2 'STA. 157+00, BUS STOP, NAZARETH INN'
3 10 10 0.5 110 1 0
4 10 1 2 1
5 100
6 0 62.5 0 0
7 0 112 400 400
8 33 122 0 0
9 15 117 200 200
10 0 102 300 300
11 33 122 0 0
12 20 117 200 200
13 0 106 620 700
14 33 122 0 0
15 33 122 0 0
16 0 11.5 88.7 11.5 95 15.5 105 15.5 140.6 3.7
17 140.61 0 140.62 -0.8 150.6 -0.8 150.7 0 250 0 9999.9 0
18 0 10 59 10 73 6 77 6 88.7 11.5 95 15.5
19 105 15.5 250 90 9999.9 0
20 0 10 59 10 74 3 87 8 102 11.5 114 9
21 130 3 140.61 0 250 90 9999.9 0
22 0 10 59 10 74 3 80 0 99 -2 104 -4
23 106 -6 144 -6 147 -4 157 0 250 0
24 9999.9 0
25 0 0 80 0 99 -2 104 -4 106 -6 144 -6
26 147 -4 157 0 250 0 9999.9 0
27 0 -4 104 -4 106 -6 144 -6 147 -4 250 -4
28 9999.9 0
29 0 -4.1 104 -4.1 106 -6.1 144 -6.1 147 -4.1 200 -4.1
30 9999.9 0
31 0 -16 250 -16 9999.9 0
32 0 -24 250 -24 9999.9 0
33 0 -40 250 -40 9999.9 0
34 0 -60 250 -60 9999.9 0
35 0 11.5 88.7 11.5 140 -0.8 250 -0.8 9999.9 0
36 1 1 1 1 1 1 1 1 1 1 1 1
37 1 1 1 1 1 1 1 1
38 3 100 0 150 0 1
39 155
40 6 100 -6.1 140 -6.1 1
41 145
42 7 100 -16 150 -16 1
43 160
44 8 100 -24 170 -24 1
45 175
46 9 100 -40 175 -40 1
47 180
EOT..
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BUS STOP 2

MAYO STREET.

RE-SUBMITTED ON

? 24 OCT. 90

AFTER SELECTED WEDGES, PLACE CROSSHAIRS AT ADDITIONAL P.U. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW & W = WINDOW)

STR 3 EL. 0. NO 1

NO	DIST.	F.S.
2	155.	2.058 E. H.
3	127.9	3.227
4	133.2	2.513
5	135.7	2.29
6	139.6	2.079
7	141.6	2.079
8	145.5	2.077

STR 6 EL. -6. NO 9

NO	DIST.	F.S.
10	175.	1.99
11	116.2	2.784
12	119.1	2.508
13	121.5	2.317
14	125.4	2.026
15	127.4	1.885
16	129.8	1.715
17	133.2	1.535
18	135.7	1.452
19	137.6	1.409
20	137.6	1.409
21	139.1	1.418
22	139.6	1.424

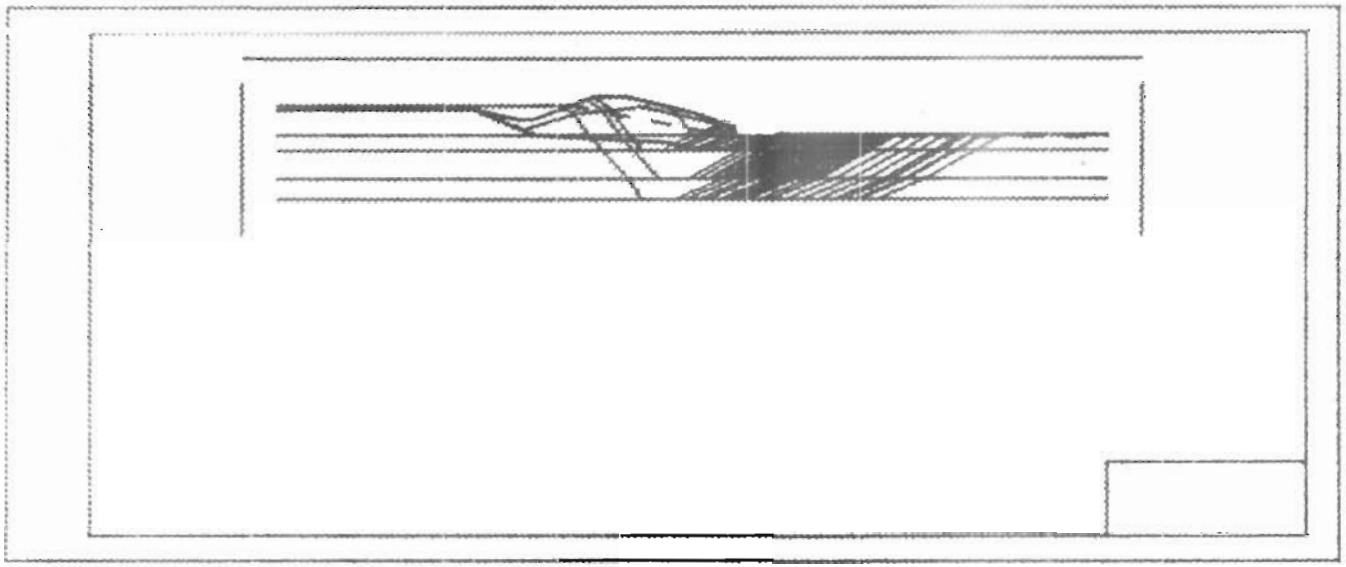
STR 7 EL. -17. NO 30

NO	DIST.	F.S.
23	139.6	1.424
24	140.6	1.448
25	141.6	1.47
26	143.	1.502
27	143.5	1.51
28	145.5	1.561
29	148.9	1.654
31	160.	1.915
32	124.	1.744
33	126.9	1.67
34	129.8	1.624
35	131.3	1.619
36	133.2	1.603
37	134.7	1.594
38	135.7	1.591
39	137.2	1.59
40	137.6	1.59
41	139.6	1.616
42	141.1	1.64
43	141.6	1.647

44	143.5	1.679	65	139.6	1.479
45	145.	1.702	66	141.6	1.485
46	145.5	1.71	67	145.5	1.495
47	147.4	1.742	68	148.4	1.503
48	149.4	1.774	69	153.3	1.504
49	151.3	1.8	70	158.2	1.504
50	153.3	1.825	71	163.	1.504
51	155.2	1.851	72	167.9	1.504
52	158.2	1.89	73	174.3	1.503
53	162.1	1.943	74	180.6	1.503

STR 8 EL. -25. NO 54

NO	DIST.	F.S.
55	175.	1.503
56	120.1	2.092
57	123.5	1.918
58	127.4	1.738
59	129.8	1.651
60	133.7	1.546
61	135.2	1.516
62	135.7	1.507
63	137.6	1.479
64	139.1	1.478



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STOP STOP - TERMINATED NO PLOT
DI W1 1-1000

                **** STABILITY WITH UPLIFT ****


        CITRUS LAKEFRONT LEVEE
        STA. 89+00, BUS STOP, MAYO STREET
                    9 PROFILES
                    1VERTICALS
        UPLIFT WITH 1 PIEZOMETRIC GRADE LINES
```

DIS.	EL.	DP	RP	DB	RB	FS
155.0	0.0	0.	0.	0.	5187.	2.08
127.9	0.0	1758.	4400.	0.	1523.	3.23
133.2	0.0	797.	1900.	0.	3777.	2.51
135.7	0.0	408.	976.	0.	4546.	2.29
139.6	0.0	39.	93.	0.	5129.	2.08
141.6	0.0	39.	93.	0.	5129.	2.08
145.5	0.0	37.	88.	0.	5129.	2.08

* * STRATUM 3 ACT. WEDGE LOC. 90125.0 EL. 0.0 PASS.WEDGE LOC. 200.0 EL. 0.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	0.0	1264.	719.	354.	354.	354.
59.0	0.0	1264.	719.	354.	354.	354.
73.0	0.0	1028.	719.	201.	201.	201.
74.0	0.0	1026.	719.	199.	199.	199.
77.0	0.0	1046.	719.	212.	212.	212.
78.0	0.0	1076.	719.	232.	232.	232.
88.5	0.0	1367.	719.	421.	421.	421.
89.0	0.0	1399.	711.	447.	447.	447.
95.0	0.0	1769.	618.	747.	747.	747.
100.0	0.0	1776.	540.	802.	802.	802.
105.0	0.0	1783.	463.	857.	857.	857.
110.0	0.0	1615.	385.	799.	799.	799.
118.0	0.0	1311.	261.	682.	682.	682.
124.0	0.0	1083.	168.	595.	595.	595.
138.0	0.0	340.	0.	221.	221.	221.
138.0	0.0	32.	0.	21.	21.	21.
138.0	0.0	-45.	0.	0.	999999.	0.
138.0	0.0	-50.	0.	0.	999999.	0.
143.0	0.0	-50.	0.	0.	999999.	0.
150.0	0.0	-44.	0.	0.	999999.	0.
STRATUM 3 STARTS FAILURE POSSIBLE FROM DIST. 150.0						
150.1	0.0	35.	0.	23.	999999.	23.
155.0	0.0	0.	0.	0.	0.	0.
250.0	0.0	0.	0.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 200.0 EL. 0.0 DP 0. RP 0.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
125.0	0.0	5481.	6092.	0.	5187.	2.06

CRIT. ACTIVE LOC 125.0 EL 0.0 DA 5481. RA 6092.

* * STRATUM 6 ACT. WEDGE LOC. 100.0 EL. -6.0 PASS.WEDGE LOC. 200.0 EL. -6.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-6.0	1966.	1094.	434.	517.	434.
59.0	-6.0	1966.	1094.	434.	517.	434.
73.0	-6.0	1730.	1094.	371.	432.	371.
74.0	-6.0	1728.	1094.	370.	431.	370.
77.0	-6.0	1748.	1094.	375.	438.	375.
78.0	-6.0	1778.	1094.	383.	449.	383.
88.5	-6.0	2073.	1094.	462.	556.	462.
89.0	-6.0	2105.	1086.	473.	571.	473.
95.0	-6.0	2477.	993.	598.	740.	598.
100.0	-6.0	2486.	915.	621.	772.	621.
105.0	-6.0	2495.	838.	644.	803.	644.
110.0	-6.0	2329.	760.	620.	771.	620.
118.0	-6.0	2028.	636.	573.	707.	573.
124.0	-6.0	1810.	543.	540.	661.	540.
138.0	-6.0	1071.	325.	400.	471.	400.
138.0	-6.0	763.	325.	317.	359.	317.
138.0	-6.0	643.	325.	285.	316.	285.
138.0	-6.0	633.	325.	283.	312.	283.
143.0	-6.0	634.	325.	283.	313.	283.
150.0	-6.0	629.	325.	281.	311.	281.
150.1	-6.0	750.	325.	314.	355.	314.
155.0	-6.0	702.	325.	301.	337.	301.
250.0	-6.0	702.	325.	301.	337.	301.
0.						

ASSUMED CRIT. PASSIVE LOC. 200.0 EL. -6.0 DP 2106. RP 4008.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
						S

100.0	-6.0	83838.	12283.	0.	39482.	2.64
105.0	-6.0	85357.	14911.	0.	36320.	2.38
110.0	-6.0	85371.	16654.	0.	33159.	2.31
115.0	-6.0	23234.	15777.	0.	30131.	2.36
120.0	-6.0	19647.	13671.	0.	27251.	2.56
125.0	-6.0	15820.	11695.	0.	24513.	2.93
130.0	-6.0	12149.	9595.	0.	21989.	3.54
135.0	-6.0	8290.	7061.	0.	19715.	4.98

CRIT. ACTIVE LOC 110.0 EL -6.0 DA 25371. RA 16654.

DIS.	EL.	DP	RP	DB	RB	FS
175.0	-6.0	2106.	4008.	0.	25634.	1.99
116.2	-6.0	11652.	17834.	0.	3706.	2.78
119.1	-6.0	10126.	16192.	0.	5392.	2.51
121.5	-6.0	8885.	14780.	0.	6760.	2.32
125.4	-6.0	6968.	11758.	0.	8875.	2.03
127.4	-6.0	5976.	10031.	0.	9883.	1.89
129.8	-6.0	4716.	7673.	0.	11088.	1.71
133.2	-6.0	3200.	4712.	0.	12676.	1.54
135.7	-6.0	2337.	3065.	0.	13738.	1.45
137.6	-6.0	1780.	2037.	0.	14545.	1.41
137.6	-6.0	1780.	2037.	0.	14545.	1.41
139.1	-6.0	1664.	1961.	0.	15002.	1.42
139.6	-6.0	1667.	1967.	0.	15141.	1.42
139.6	-6.0	1667.	1967.	0.	15141.	1.42
140.6	-6.0	1740.	2142.	0.	15417.	1.45
141.6	-6.0	1804.	2294.	0.	15693.	1.47
143.0	-6.0	1892.	2503.	0.	16107.	1.50
143.5	-6.0	1898.	2542.	0.	16245.	1.51
145.5	-6.0	1918.	3153.	0.	16798.	1.56
148.9	-6.0	2132.	4026.	0.	17762.	1.65

* * STRATUM 7 ACT. WEDGE LOC. 100.0 EL. -17.0 PASS.WEDGE LOC. 150.0 EL. -17.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-17.0	3253.	1781.	736.	956.	736.
59.0	-17.0	3253.	1781.	736.	956.	736.
73.0	-17.0	3017.	1781.	650.	803.	650.
74.0	-17.0	3015.	1781.	649.	801.	649.
77.0	-17.0	3035.	1781.	656.	814.	656.
78.0	-17.0	3065.	1781.	667.	833.	667.
88.5	-17.0	3360.	1781.	774.	1025.	774.
89.0	-17.0	3392.	1773.	789.	1051.	789.
95.0	-17.0	3764.	1680.	958.	1353.	958.
100.0	-17.0	3773.	1603.	990.	1409.	990.
105.0	-17.0	3782.	1525.	1021.	1465.	1021.
110.0	-17.0	3616.	1448.	989.	1408.	989.
115.0	-17.0	3315.	1323.	925.	1294.	925.
124.0	-17.0	3097.	1230.	880.	1213.	880.
130.0	-17.0	2358.	1013.	690.	873.	690.
138.0	-17.0	2050.	1013.	577.	673.	577.
138.9	-17.0	1930.	1013.	534.	596.	534.
138.9	-17.0	1920.	1012.	530.	589.	530.

143.0	-17.0	1921.	1012.	531.	590.	531.
150.0	-17.0	1916.	1012.	529.	587.	529.
150.1	-17.0	2037.	1012.	573.	665.	573.
155.0	-17.0	1989.	1012.	555.	634.	555.
250.0	-17.0	1989.	1012.	555.	634.	555.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. -17.0 DP 16987. RP 88114.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
100.0	-17.0	51741.	20680.	0.	40472.	2.28
105.0	-17.0	55756.	24009.	0.	35444.	2.00
110.0	-17.0	58397.	27523.	0.	30417.	1.84
115.0	-17.0	57861.	29244.	0.	25572.	1.78
120.0	-17.0	54773.	29223.	0.	20926.	1.81
125.0	-17.0	49840.	27227.	0.	16474.	1.88
130.0	-17.0	43560.	24156.	0.	12013.	2.05
135.0	-17.0	37016.	21149.	0.	8492.	2.38
140.0	-17.0	29197.	17215.	0.	5301.	3.33

CRIT. ACTIVE LOC 115.0 EL -17.0 DA 57861. RA 29244.

DIS.	EL.	DP	RP	DB	RB	FS
160.0	-17.0	16906.	18030.	0.	31168.	1.92
124.0	-17.0	23656.	22216.	0.	8197.	1.74
126.9	-17.0	21598.	20608.	0.	10718.	1.67
129.8	-17.0	19712.	19574.	0.	13122.	1.62
131.3	-17.0	18962.	19473.	0.	14280.	1.62
133.2	-17.0	18053.	18789.	0.	15779.	1.60
134.7	-17.0	17461.	18287.	0.	16869.	1.59
135.7	-17.0	17105.	18014.	0.	17580.	1.59
137.2	-17.0	16638.	17670.	0.	18621.	1.59

137.6	-17.0	16500.	17572.	0.	18962.	1.59
139.6	-17.0	16479.	17587.	0.	20057.	1.62
141.1	-17.0	16550.	17660.	0.	20835.	1.64
141.6	-17.0	16573.	17684.	0.	21094.	1.65
143.5	-17.0	16666.	17781.	0.	22131.	1.68
145.0	-17.0	16736.	17854.	0.	22908.	1.70
145.5	-17.0	16760.	17879.	0.	23167.	1.71
147.4	-17.0	16856.	17979.	0.	24202.	1.74
149.4	-17.0	16954.	18081.	0.	25236.	1.77
151.3	-17.0	16952.	18078.	0.	26322.	1.80
153.3	-17.0	16916.	18041.	0.	27426.	1.82
155.2	-17.0	16906.	18030.	0.	28516.	1.85
158.2	-17.0	16906.	18030.	0.	30144.	1.89
162.1	-17.0	16906.	18030.	0.	32314.	1.94

* * STRATUM 8 ACT. WEDGE LOC. 100.0 EL. -25.0 PASS.WEDGE LOC. 170.0 EL. -25.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-25.0	4229.	2281.	1265.	0.	0.
59.0	-25.0	4229.	2281.	1265.	0.	0.
73.0	-25.0	3993.	2281.	1112.	0.	0.
74.0	-25.0	3991.	2281.	1110.	0.	0.
77.0	-25.0	4011.	2281.	1123.	0.	0.
78.0	-25.0	4041.	2281.	1143.	0.	0.
88.5	-25.0	4336.	2281.	1334.	0.	0.
89.0	-25.0	4368.	2273.	1360.	0.	0.
95.0	-25.0	4740.	2180.	1662.	0.	0.
100.0	-25.0	4749.	2103.	1718.	0.	0.
105.0	-25.0	4758.	2025.	1775.	0.	0.
110.0	-25.0	4592.	1948.	1717.	0.	0.
118.0	-25.0	4291.	1823.	1603.	0.	0.
124.0	-25.0	4073.	1730.	1522.	0.	0.
138.0	-25.0	3334.	1513.	1183.	0.	0.
138.0	-25.0	3026.	1513.	982.	0.	0.
138.0	-25.0	2906.	1513.	905.	0.	0.
138.0	-25.0	2896.	1512.	899.	0.	0.
143.0	-25.0	2897.	1512.	899.	0.	0.
150.0	-25.0	2892.	1512.	896.	0.	0.
150.1	-25.0	3013.	1512.	974.	0.	0.
155.0	-25.0	2965.	1512.	943.	0.	0.
250.0	-25.0	2965.	1512.	943.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -25.0 DP 36721. RP 41269.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-25.0	81902.	31463.	0.	0.	1.61
105.0	-25.0	86407.	34926.	0.	0.	1.53
110.0	-25.0	89659.	38324.	0.	0.	1.50
115.0	-25.0	90483.	41057.	0.	0.	1.53
120.0	-25.0	88081.	42020.	0.	0.	1.62
125.0	-25.0	83227.	41028.	0.	0.	1.77
130.0	-25.0	76142.	37981.	0.	0.	2.01
135.0	-25.0	67649.	33789.	0.	0.	2.43

CRIT. ACTIVE LOC 110.0 EL -25.0 DA 89659. RA 38324.

DIS.	EL.	DP	RP	DB	RB	FS
175.0	-25.0	36720.	41269.	0.	0.	1.50
120.1	-25.0	44595.	55937.	0.	0.	2.09
123.5	-25.0	42154.	52771.	0.	0.	1.92
127.4	-25.0	40006.	47961.	0.	0.	1.74
129.8	-25.0	38885.	45485.	0.	0.	1.65
133.7	-25.0	37448.	42370.	0.	0.	1.55
135.2	-25.0	37023.	41470.	0.	0.	1.52
135.7	-25.0	36888.	41227.	0.	0.	1.51
137.6	-25.0	36411.	40442.	0.	0.	1.48
139.1	-25.0	36373.	40432.	0.	0.	1.48
139.6	-25.0	36391.	40478.	0.	0.	1.48
141.6	-25.0	36463.	40653.	0.	0.	1.48
145.5	-25.0	36608.	40999.	0.	0.	1.50
148.4	-25.0	36720.	41268.	0.	0.	1.50
153.3	-25.0	36729.	41289.	0.	0.	1.50
158.2	-25.0	36721.	41270.	0.	0.	1.50
163.0	-25.0	36721.	41270.	0.	0.	1.50
167.9	-25.0	36721.	41269.	0.	0.	1.50
174.3	-25.0	36720.	41269.	0.	0.	1.50
180.6	-25.0	36720.	41269.	0.	0.	1.50

EOT..

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LI PERMIT3 1-100
1 'CITRUS LAKEFRONT LEVEE'
2 'STA. 89+00, BUS STOP, MAYO STREET'
3 10 10 0.5 110 1 0
4 8 1 2 1
5 100
6 0 62.5 0 0
7 0 112 400 400
8 33 122 0 0
9 33 122 0 0
10 15 117 200 200
11 15 117 200 200
12 20 117 200 200
13 33 122 0 0
14 0 11.5 88.5 11.5 95 15.0 105 15.0 140 3.83
15 140.09 2.2
16 140.1 0 140.2 -0.8 150 -0.8 150.1 0.29 155 0
17 250 0 9999.9 0
18 0 10 59 10 73 6 77 6 88.5 11.5 95 15.0
19 105 15.0 250 90 9999.9 0
20 0 10 59 10 74 2 89 8 110 11 140.09 2.2
21 140.1 0 250 90 9999.9 0
22 0 10 59 10 74 2 78 0 140.1 0
23 250 90 9999.9 0
24 0 10 59 10 74 2 78 0 118 -3 124 -5
25 143 -6 155 0 250 0 9999.9 0
26 0 0 78 0 118 -3 124 -5 143 -6 155 0
27 250 0 9999.9 0
28 0 -6 250 -6 9999.9 0
29 0 -17 250 -17 9999.9 0
30 0 -25 250 -25 9999.9 0
31 0 11.5 87.5 11.5 140 -0.83 250 -0.83
32 9999.9 0
33 1 1 1 1 1 1 1 1 1 1 1 1
34 1 1 1 1
35 3 90125 0 200 0 1
36 155
37 6 100 -6.0 200 -6.0 1
38 175
39 7 100 -17 150 -17 1
40 160
41 8 100 -25 170 -25 1
42 175
EOT..
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Bus Stop

Mayo Street

Re-Submitted

Dated 11 Sept. 1990

Note: We assumed some settlement has already occured. We ran the ledge 2) elev. 15.0 (6" sett.)

AFTER SELECTED WEDGES,PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW & W = WINDOW)
1 = END, 2 = PLOT SECTION, 3 = NEW SECTION

STR 3 EL. 0. NO 1

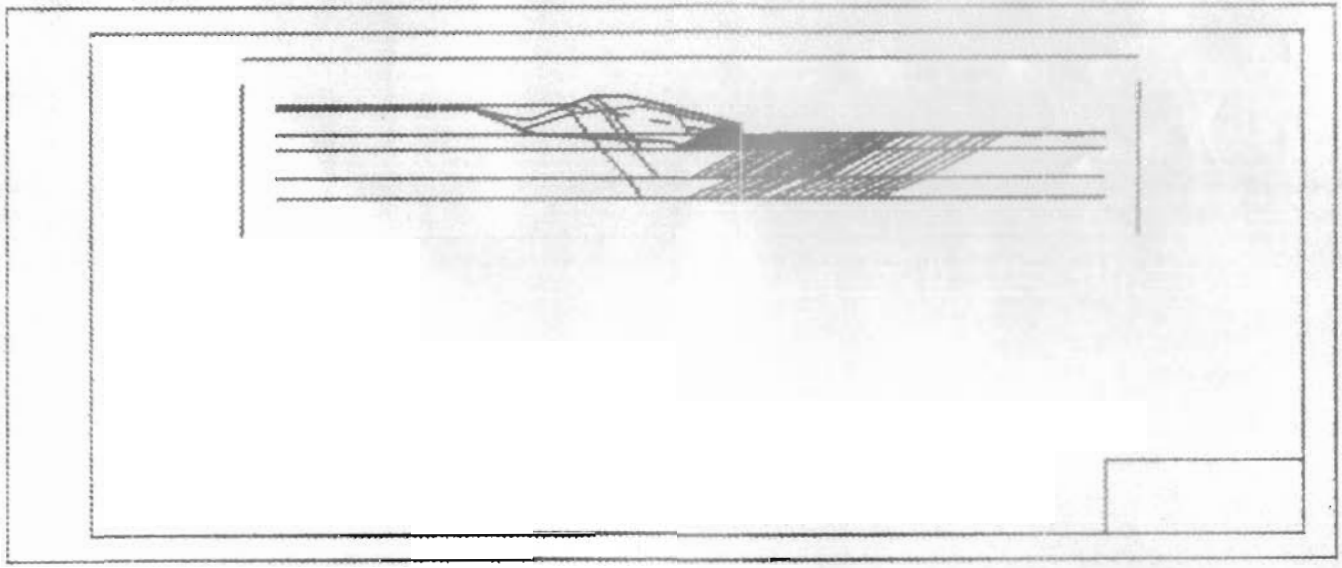
NO	DIST.	F.S.
2	155.	2.276 E. H.
3	127.9	4.104
4	129.8	3.748
5	130.8	3.606
6	133.2	3.321
7	135.2	3.013
8	137.2	2.686
9	139.6	2.333
10	141.6	2.297
11	143.5	2.299
12	147.4	2.295

STR 6 EL. -6. NO 13

NO	DIST.	F.S.
14	175.	2.012
15	120.1	2.609
16	122.	2.491
17	123.5	2.406
18	124.	2.368
19	125.9	2.206
20	127.9	2.076
21	127.9	2.076
22	128.9	2.009
23	129.8	1.946
24	129.8	1.946
25	131.3	1.839
26	131.8	1.805
27	133.2	1.715
28	133.7	1.688
29	135.2	1.615
30	135.7	1.593
31	136.7	1.554
32	137.6	1.519
33	138.6	1.488
34	139.6	1.462
35	140.6	1.469
36	141.6	1.491
37	142.5	1.513
38	143.5	1.531
39	145.	1.566
40	145.5	1.582
41	147.4	1.649
42	148.9	1.675
43	149.4	1.684
44	151.3	1.709
45	153.3	1.731
46	156.7	1.824
47	159.1	1.806

STR 7 EL. -17. NO 48

NO	DIST.	F.S.
49	160.	1.934
50	125.4	1.833
51	127.9	1.766
52	130.8	1.72
53	133.2	1.691
54	135.2	1.668
55	137.6	1.65
56	139.6	1.643
57	143.	1.689
58	145.	1.72
59	147.4	1.76
60	149.4	1.798
61	153.3	1.843
62	155.2	1.869
63	157.2	1.896
64	159.1	1.922
65	162.6	1.969
66	165.	2.002
67	175.	1.507
68	175.	1.507
69	124.	1.996
70	127.9	1.821
71	131.3	1.693
72	135.2	1.58
73	137.6	1.527
74	141.1	1.487
75	143.5	1.493
76	148.9	1.508
77	151.3	1.51
78	155.2	1.507
79	159.1	1.507
80	163.	1.507
81	166.9	1.507
82	174.3	1.507
83	178.7	1.507
84	182.1	1.507



STOP STOP - TERMINATED NO PLOT
DI W1 1-1000

**** STABILITY WITH UPLIFT ****

CITRUS LAKEFRONT LEVEE
STA. 89+00, BUS STOP, MAYO STREET
9 PROFILES
1VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 3 ACT. WEDGE LOC. 90125.0 EL. 0.0 PASS.WEDGE LOC. 180060 EL. 0.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	0.0	1264.	719.	354.	354.	354.
59.0	0.0	1264.	719.	354.	354.	354.
73.0	0.0	1028.	719.	201.	201.	201.
74.0	0.0	1026.	719.	199.	199.	199.
77.0	0.0	1046.	719.	212.	212.	212.
78.0	0.0	1076.	719.	232.	232.	232.
87.5	0.0	1339.	719.	403.	403.	403.
88.5	0.0	1367.	784.	430.	430.	430.
89.0	0.0	1399.	697.	456.	456.	456.
95.0	0.0	1769.	609.	753.	753.	753.
100.0	0.0	1776.	535.	806.	806.	806.
105.0	0.0	1783.	462.	858.	858.	858.
110.0	0.0	1611.	388.	794.	794.	794.
118.0	0.0	1302.	271.	669.	669.	669.
124.0	0.0	1070.	183.	576.	576.	576.
140.0	0.0	433.	0.	281.	281.	281.
140.1	0.0	27.	0.	18.	18.	18.
140.1	0.0	-4.	0.	0.	0.	0.
140.2	0.0	-50.	0.	0.	999999.	0.
143.0	0.0	-50.	0.	0.	999999.	0.
150.0	0.0	-44.	0.	0.	999999.	0.
STRATUM 3 STARTS FAILURE POSSIBLE FROM DIST. 150.0						
150.1	0.0	35.	0.	23.	999999.	23.
155.0	0.0	0.	0.	0.	0.	0.
250.0	0.0	0.	0.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 200.0 EL. 0.0 DP 0. RP

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
125.0	0.0	5350.	5818.	0.	6359.	2.28

CRIT. ACTIVE LOC 125.0 EL 0.0 DA 5350. RA 5818.

DIS.	EL.	DP	RP	DB	RB	FS
155.0	0.0	0.	0.	0.	6359.	2.28
127.9	0.0	2172.	5698.	0.	1527.	4.10
129.8	0.0	1822.	4932.	0.	2477.	3.75
130.8	0.0	1658.	4569.	0.	2926.	3.61
133.2	0.0	1283.	3717.	0.	3971.	3.32
135.2	0.0	988.	2598.	0.	4728.	3.01
137.2	0.0	615.	1487.	0.	5414.	2.69
139.2	0.0	103.	248.	0.	6174.	2.33
141.6	0.0	36.	86.	0.	6302.	2.30
143.5	0.0	39.	93.	0.	6302.	2.30
147.4	0.0	34.	82.	0.	6302.	2.30

* * STRATUM 6 ACT. WEDGE LOC. 100.0 EL. -6.0 PASS.WEDGE LOC. 200.0 EL. -6.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-6.0	1966.	1094.	434.	517.	434.
59.0	-6.0	1966.	1094.	434.	517.	434.
73.0	-6.0	1730.	1094.	371.	432.	371.
74.0	-6.0	1728.	1094.	370.	431.	370.
77.0	-6.0	1748.	1094.	375.	438.	375.
78.0	-6.0	1778.	1094.	383.	449.	383.
87.5	-6.0	2044.	1094.	455.	546.	455.
88.5	-6.0	2073.	1079.	466.	562.	466.
89.0	-6.0	2105.	1072.	477.	576.	477.
95.0	-6.0	2477.	984.	600.	744.	600.
100.0	-6.0	2486.	910.	622.	774.	622.
105.0	-6.0	2495.	837.	644.	803.	644.
110.0	-6.0	2325.	763.	618.	768.	618.
118.0	-6.0	2019.	646.	568.	700.	568.
124.0	-6.0	1797.	558.	532.	651.	532.
140.0	-6.0	1164.	323.	425.	506.	425.
140.1	-6.0	758.	323.	317.	358.	317.
140.1	-6.0	722.	323.	307.	345.	307.
140.2	-6.0	634.	323.	283.	313.	283.
143.0	-6.0	634.	323.	2		

83. 313. 283.

150.0	-6.0	629.	323.	282.	311.	282.
150.1	-6.0	750.	323.	314.	355.	314.
155.0	-6.0	702.	323.	302.	338.	302.
250.0	-6.0	702.	323.	301.	338.	301.

* * STRATUM 7 ACT. WEDGE LOC. 100.0 EL. -17.0 PASS.WEDGE LOC. 150.0 EL. -17.0

ASSUMED CRIT. PASSIVE LOC. 200.0 EL. -6.0 DP 2106. RP 4015.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-6.0	23232.	12364.	0.	39968.	2.67
105.0	-6.0	25357.	14960.	0.	36802.	2.40
110.0	-6.0	25358.	16654.	0.	33646.	2.34
115.0	-6.0	23173.	15709.	0.	30633.	2.39
120.0	-6.0	19513.	13517.	0.	27778.	2.60
125.0	-6.0	15626.	11376.	0.	25074.	2.99
130.0	-6.0	12338.	9434.	0.	22531.	3.52
135.0	-6.0	9388.	7623.	0.	20154.	4.37

CRIT. ACTIVE LOC 110.0 EL -6.0 DA 25358. RA 16654.

DIS.	EL.	DP	RP	DB	RB	FS
120.0	-6.0	2106.	4015.	0.	26108.	2.01
120.1	-6.0	10149.	17129.	0.	5902.	2.61
122.0	-6.0	9298.	16371.	0.	6976.	2.49
123.5	-6.0	8705.	15648.	0.	7766.	2.41
124.0	-6.0	8515.	15203.	0.	8027.	2.37
125.9	-6.0	7668.	13321.	0.	9054.	2.21
127.9	-6.0	6795.	11823.	0.	10055.	2.08
127.9	-6.0	6795.	11823.	0.	10055.	2.08
128.9	-6.0	6338.	11010.	0.	10546.	2.01
129.8	-6.0	5867.	10242.	0.	11031.	1.95
129.8	-6.0	5867.	10242.	0.	11031.	1.95
131.3	-6.0	5139.	8779.	0.	11746.	1.84
131.8	-6.0	4900.	8297.	0.	11981.	1.81
133.2	-6.0	4216.	6921.	0.	12678.	1.71
133.7	-6.0	3998.	6485.	0.	12907.	1.69
135.2	-6.0	3380.	5252.	0.	13584.	1.65
135.7	-6.0	3185.	4865.	0.	13806.	1.59
136.7	-6.0	2812.	4128.	0.	14247.	1.55
137.6	-6.0	2462.	3441.	0.	14681.	1.52
138.6	-6.0	2135.	2801.	0.	15108.	1.49
139.6	-6.0	1830.	2211.	0.	15530.	1.46
140.6	-6.0	1740.	2165.	0.	15873.	1.47
141.6	-6.0	1804.	2317.	0.	16150.	1.49
142.5	-6.0	1864.	2460.	0.	16427.	1.51
143.5	-6.0	1898.	2563.	0.	16704.	1.53
145.0	-6.0	1913.	2947.	0.	17118.	1.57
145.5	-6.0	1918.	3165.	0.	17257.	1.58
147.4	-6.0	2051.	3977.	0.	17809.	1.65
148.9	-6.0	2132.	4033.	0.	18223.	1.68
149.4	-6.0	2159.	4052.	0.	18360.	1.68
151.3	-6.0	2156.	4050.	0.	18950.	1.71
153.3	-6.0	2117.	4023.	0.	19553.	1.73
156.7	-6.0	2106.	4015.	0.	20588.	1.77
159.1	-6.0	2106.	4015.	0.	21324.	1.81

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-17.0	3253.	1781.	736.	956.	736.
59.0	-17.0	3253.	1781.	736.	956.	736.
73.0	-17.0	3017.	1781.	650.	803.	650.
74.0	-17.0	3015.	1781.	649.	801.	649.
77.0	-17.0	3035.	1781.	656.	814.	656.
78.0	-17.0	3065.	1781.	667.	833.	667.
87.5	-17.0	3331.	1781.	764.	1007.	764.
88.5	-17.0	3360.	1767.	780.	1034.	780.
89.0	-17.0	3392.	1759.	794.	1060.	794.
95.0	-17.0	3764.	1671.	962.	1359.	962.
100.0	-17.0	3773.	1598.	992.	1413.	992.
105.0	-17.0	3782.	1524.	1022.	1466.	1022.
110.0	-17.0	3612.	1451.	987.	1403.	987.
118.0	-17.0	3306.	1334.	918.	1281.	918.
124.0	-17.0	3084.	1245.	869.	1194.	869.
140.0	-17.0	2451.	1011.	724.	935.	724.
140.1	-17.0	2045.	1011.	577.	672.	577.
140.1	-17.0	2009.	1011.	564.	649.	564.
140.2	-17.0	1921.	1011.	531.	591.	531.
143.0	-17.0	1921.	1011.	531.	591.	531.
150.0	-17.0	1916.	1011.	529.	588.	529.
150.1	-17.0	2037.	1011.	573.	666.	573.
155.0	-17.0	1989.	1011.	556.	635.	556.
250.0	-17.0	1989.	1011.	556.	635.	556.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. -17.0 DP 16987. RP 18143.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	
100.0	-17.0	51738.	20767.	0.	41098.	2.30
105.0	-17.0	55755.	24128.	0.	36064.	2.02
110.0	-17.0	58383.	27582.	0.	31044.	1.85
115.0	-17.0	57807.	29223.	0.	26219.	1.80
120.0	-17.0	54650.	29099.	0.	21608.	1.83
125.0	-17.0	49626.	26992.	0.		

17808.	1.91					
130.0	-17.0	43688.	23925.	0.	13815.	2.07
135.0	-17.0	37806.	21177.	0.	9055.	2.38
140.0	-17.0	32495.	18603.	0.	5320.	2.71

CRIT. ACTIVE LOC 115.0 EL -17.0 DA 57807. RA 29223.

DIS.	EL.	DP	RP	DB	RB	FS S
160.0	-17.0	16906.	18059.	0.	31822.	1.93
125.4	-17.0	24198.	22998.	0.	9389.	1.83
127.9	-17.0	22510.	21642.	0.	11452.	1.77
130.8	-17.0	20655.	20831.	0.	13857.	1.72
133.2	-17.0	19342.	20015.	0.	15802.	1.69
135.2	-17.0	18400.	19189.	0.	17319.	1.67
137.6	-17.0	17364.	18334.	0.	19167.	1.65
139.6	-17.0	16656.	17766.	0.	20606.	1.64
143.0	-17.0	16642.	17785.	0.	22514.	1.69
145.0	-17.0	16736.	17882.	0.	23552.	1.72
147.4	-17.0	16856.	18007.	0.	24847.	1.76
149.4	-17.0	16954.	18109.	0.	25883.	1.79
153.3	-17.0	16916.	18069.	0.	28075.	1.84
155.2	-17.0	16906.	18059.	0.	29167.	1.87
157.2	-17.0	16906.	18059.	0.	30253.	1.90
159.1	-17.0	16906.	18059.	0.	31340.	1.92
162.6	-17.0	16906.	18059.	0.	33241.	1.97
165.0	-17.0	16906.	18059.	0.	34599.	2.00

* * STRATUM 8 ACT. WEDGE LOC. 100.0 EL. -25.0 PASS.WEDGE LOC. 175.0 EL. -25.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-25.0	4229.	2281.	1265.	0.	0.
59.0	-25.0	4229.	2281.	1265.	0.	0.
73.0	-25.0	3993.	2281.	1112.	0.	0.
74.0	-25.0	3991.	2281.	1110.	0.	0.
77.0	-25.0	4011.	2281.	1123.	0.	0.
78.0	-25.0	4041.	2281.	1143.	0.	0.
87.5	-25.0	4307.	2281.	1316.	0.	0.
88.5	-25.0	4336.	2267.	1344.	0.	0.
89.0	-25.0	4368.	2259.	1369.	0.	0.
95.0	-25.0	4740.	2171.	1668.	0.	0.
100.0	-25.0	4749.	2098.	1722.	0.	0.
105.0	-25.0	4758.	2024.	1775.	0.	0.
110.0	-25.0	4588.	1951.	1712.	0.	0.
118.0	-25.0	4282.	1834.	1590.	0.	0.
124.0	-25.0	4060.	1745.	1503.	0.	0.
140.0	-25.0	3427.	1511.	1245.	0.	0.
140.1	-25.0	3021.	1511.	981.	0.	0.
140.1	-25.0	2985.	1511.	958.	0.	0.
140.2	-25.0	2897.	1511.	900.	0.	0.
143.0	-25.0	2897.	1511.	901.	0.	0.
150.0	-25.0	2892.	1511.	897.	0.	0.
150.1	-25.0	3013.	1511.	975.	0.	0.
150.0	-25.0	2965.	1511.	944.	0.	0.
250.0	-25.0	2965.	1511.	944.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -25.0 DP 36721. RP 41333.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
100.0	-25.0	81900.	31551.	0.	0.	1.61
105.0	-25.0	86404.	35050.	0.	0.	1.54
110.0	-25.0	89640.	38416.	0.	0.	1.51
115.0	-25.0	90417.	41040.	0.	0.	1.53
120.0	-25.0	87943.	41876.	0.	0.	1.62
125.0	-25.0	83000.	40744.	0.	0.	1.77
130.0	-25.0	76227.	37844.	0.	0.	2.00
135.0	-25.0	68568.	34028.	0.	0.	2.37

CRIT. ACTIVE LOC 110.0 EL -25.0 DA 89640. RA 38416.

175.0	-25.0	36720.	41333.	0.	0.	1.51
124.0	-25.0	43219.	54255.	0.	0.	2.00
127.9	-25.0	40981.	50205.	0.	0.	1.82
131.3	-25.0	39396.	46671.	0.	0.	1.69
135.2	-25.0	37893.	43360.	0.	0.	1.58
137.6	-25.0	37081.	41833.	0.	0.	1.53
141.1	-25.0	36445.	40674.	0.	0.	1.49
143.5	-25.0	36535.	40889.	0.	0.	1.49
148.9	-25.0	36739.	41378.	0.	0.	1.51
151.3	-25.0	36757.	41420.	0.	0.	1.51
155.2	-25.0	36721.	41334.	0.	0.	1.51
159.1						

	-25.0	36721.	41334.	0.	0.	1.51
163.0	-25.0	36721.	41334.	0.	0.	1.51
166.9	-25.0	36721.	41334.	0.	0.	1.51
174.3	-25.0	36720.	41333.	0.	0.	1.51
178.7	-25.0	36720.	41333.	0.	0.	1.51
182.1	-25.0	36720.	41333.	0.	0.	1.51

EOT..

```
LI PERMIT2 1-100
1 'CITRUS LAKEFRONT LEVEE'
2 'STA. 89+00, BUS STOP, MAYO STREET'
3 10 10 0.5 110 1 0
4 8 1 2 1
5 100
6 0 62.5 0 0
7 0 112 400 400
8 33 122 0 0
9 33 122 0 0
10 15 117 200 200
11 15 117 200 200
12 20 117 200 200
13 33 122 0 0
14 0 11.5 87.5 11.5 95 15.5 105 15.5 134 6.0 136.0 4.0
15 140 2 144 0.41 144.01 -0.8 150 -0.8 150.1 0.29 155 0
16 250 0 9999.9 0
17 0 10 59 10 73 6 77 6 87.5 11.5 95 15.5
18 105 15.5 250 90 9999.9 0
19 0 10 59 10 74 2 89 8 110 11.0 140 2
20 144 0.41 250 90 9999.9 0
21 0 10 59 10 74 2 78 0 144 0 144.01 -0.8
22 250 90 9999.9 0
23 0 10 59 10 74 2 78 0 118 -3 124 -5
24 143 -6 155 0 250 0 9999.9 0
25 0 0 78 0 118 -3 124 -5 143 -6 155 0
26 250 0 9999.9 0
27 0 -6 250 -6 9999.9 0
28 0 -17 250 -17 9999.9 0
29 0 -25 250 -25 9999.9 0
30 0 11.5 87.5 11.5 136 6 140 2 144 0 250 0
31 9999.9 0
32 1 1 1 1 1 1 1 1 1 1 1 1
33 1 1 1 1
34 3 90125 0 200 0 1
35 155
36 6 100 -6.0 200 -6.0 1
37 175
38 7 100 -17 150 -17 1
39 160
40 8 100 -25 170 -25 1
41 175
EOT..
```

Bus Stop

Mayo Street, FK

3 July 90

AFTER SELECTED WEDGES,PLACE CROSSHAIRS AT ADDITIONAL P.U. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW & W = WINDOW)

STR 3 EL. 0. NO 1

NO	DIST.	F.S.
2	155.	1.564 E. H.
3	133.7	1.856
4	138.1	1.609
5	142.	1.569

STR 6 EL. -6. NO 6

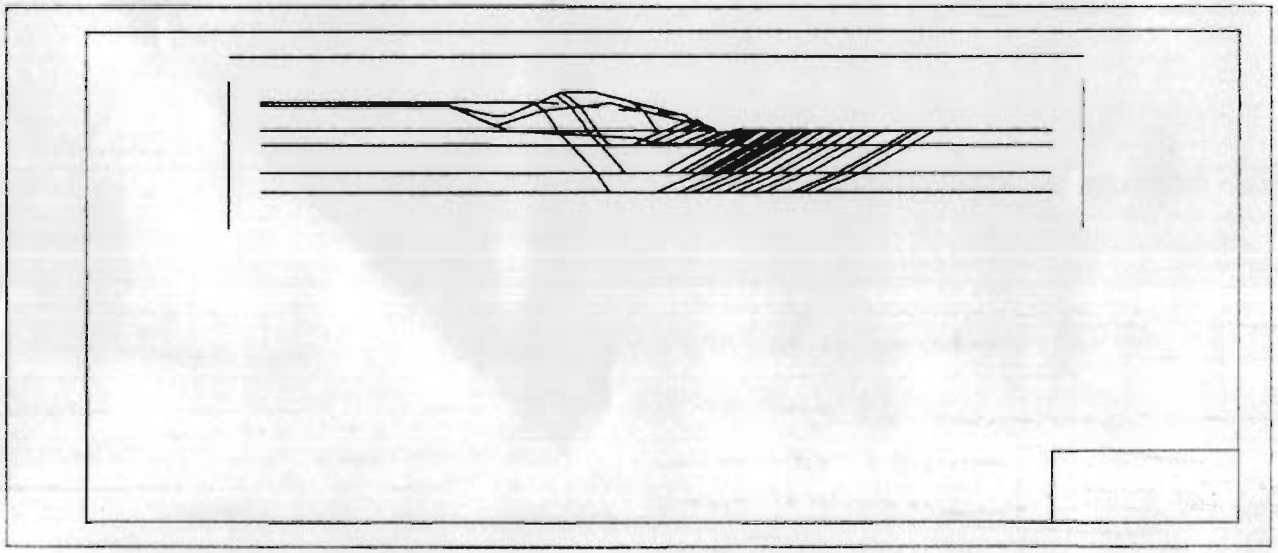
NO	DIST.	F.S.
7	175.	1.794
8	117.6	2.265
9	121.5	1.956
10	126.4	1.684
11	132.3	1.477
12	136.2	1.334
13	137.6	1.312
14	140.6	1.302
15	142.	1.315
16	144.5	1.363
17	149.4	1.496
18	156.2	1.572

STR 7 EL. -17. NO 19

NO	DIST.	F.S.
20	160.	1.752
21	126.4	1.681
22	131.8	1.53
23	134.7	1.483
24	138.1	1.479
25	141.1	1.504
26	143.5	1.531
27	144.5	1.547
28	147.4	1.591
29	151.3	1.645

STR 8 EL. -25. NO 30

NO	DIST.	F.S.
31	175.	1.412
32	124.5	1.773
33	131.3	1.547
34	135.7	1.423
35	140.1	1.402
36	145.5	1.404
37	149.4	1.414
38	154.2	1.412
39	158.6	1.412
40	167.4	1.412



STOP STOP - TERMINATED NO PLOT
DI W1 1-1000

xxxx STABILITY WITH UPLIFT xxxx

CITRUS LAKEFRONT LEVEE
STA. 89+00, BUS STOP, MAYO STREET
9 PROFILES
10 VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

x x STRATUM 3 ACT. WEDGE LOC. 90125.0 EL. 0.0 PASS.WEDGE LOC. 200.0 EL. 0.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	0.0	1264.	719.	354.	354.	354.
59.0	0.0	1264.	719.	354.	354.	354.
73.0	0.0	1028.	719.	201.	201.	201.
74.0	0.0	1026.	719.	199.	199.	199.
77.0	0.0	1046.	719.	212.	212.	212.
78.0	0.0	1078.	719.	233.	233.	233.
87.5	0.0	1363.	719.	418.	418.	418.
89.0	0.0	1458.	708.	487.	487.	487.
95.0	0.0	1825.	666.	753.	753.	753.
100.0	0.0	1832.	630.	780.	780.	780.
105.0	0.0	1839.	595.	808.	808.	808.
110.0	0.0	1662.	559.	716.	716.	716.
118.0	0.0	1345.	503.	547.	547.	547.
124.0	0.0	1107.	460.	420.	420.	420.
134.0	0.0	709.	389.	208.	208.	208.
136.0	0.0	479.	375.	68.	68.	68.
140.0	0.0	244.	125.	77.	77.	77.
143.0	0.0	98.	31.	43.	43.	43.
144.0	0.0	-42.	0.	0.	999999.	0.
144.0	0.0	-50.	0.	0.	999999.	0.
150.0	0.0	-44.	0.	0.	999999.	0.
STRATUM 3 STARTS FAILURE POSSIBLE FROM DIST. 150.0						
150.1	0.0	35.	0.	23.	999999.	23.
155.0	0.0	0.	0.	0.	0.	0.
250.0	0.0	0.	0.	0.	0.	0.

ASSUMED CRIT. PASSIVE LOC. 200.0 EL. 0.0 DP 0. RP 0.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
125.0	0.0	5802.	5523.	0.	3553.	1.56

CRIT. ACTIVE LOC 125.0 EL 0.0 DA 5802. RA 5523.

DIS.	EL.	DP	RP	DB	RB	FS
155.0	0.0	0.	0.	0.	3553.	1.56
133.7	0.0	892.	917.	0.	2673.	1.86
138.1	0.0	274.	215.	0.	3154.	1.61
142.0	0.0	48.	78.	0.	3427.	1.57

x x STRATUM 6 ACT. WEDGE LOC. 100.0 EL. -6.0 PASS.WEDGE LOC. 200.0 EL. -6.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-6.0	1966.	1094.	434.	517.	434.
59.0	-6.0	1966.	1094.	434.	517.	434.
73.0	-6.0	1730.	1094.	371.	432.	371.
74.0	-6.0	1728.	1094.	370.	431.	370.
77.0	-6.0	1748.	1094.	375.	438.	375.
78.0	-6.0	1780.	1094.	384.	450.	384.
87.5	-6.0	2068.	1094.	461.	555.	461.
89.0	-6.0	2164.	1083.	490.	594.	490.
95.0	-6.0	2533.	1041.	600.	743.	600.
100.0	-6.0	2542.	1005.	612.	759.	612.
105.0	-6.0	2551.	970.	624.	775.	624.
110.0	-6.0	2376.	934.	586.	725.	586.
118.0	-6.0	2062.	878.	517.	631.	517.
124.0	-6.0	1834.	835.	468.	563.	468.
134.0	-6.0	1439.	764.	381.	445.	381.
136.0	-6.0	1210.	750.	323.	367.	323.
140.0	-6.0	975.	500.	327.	373.	327.
143.0	-6.0	830.	406.	314.	354.	314.
144.0	-6.0	647.	375.	273.	299.	273.
144.0	-6.0	632.	375.	269.	293.	269.
150.0	-6.0	629.	375.	268.	292.	268.
150.1	-6.0	750.	375.	300.	336.	300.
155.0	-6.0	702.	375.	288.	319.	288.
250.0	-6.0	702.	375.	288.	319.	288.

ASSUMED CRIT. PASSIVE LOC. 200.0 EL. -6.0 DP 2106. RP 3812.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-6.0	24227.	12644.	0.	37005.	2.48
105.0	-6.0	26446.	14889.	0.	33916.	2.16
110.0	-6.0	26530.	16299.	0.	30892.	2.09
115.0	-6.0	24286.	15110.	0.	28068.	2.12
120.0	-6.0	20506.	12828.	0.	25459.	2.29
125.0	-6.0	16407.	10227.	0.	23059.	2.59
130.0	-6.0	12976.	8037.	0.	20873.	3.01
135.0	-6.0	9886.	6097.	0.	18915.	3.76

CRIT. ACTIVE LOC 110.0 EL -6.0 DA 26530. RA 16299.

DIS.	EL.	DP	RP	DB	RB	FS
175.0	-6.0	2106.	3813.	0.	23701.	1.79
117.6	-6.0	11602.	13292.	0.	4217.	2.26
121.5	-6.0	9545.	10736.	0.	6187.	1.96
126.4	-6.0	7250.	7700.	0.	8471.	1.68
132.3	-6.0	4731.	4968.	0.	10939.	1.48
136.2	-6.0	3141.	2539.	0.	12372.	1.33
137.6	-6.0	2711.	2109.	0.	12847.	1.31
140.6	-6.0	2140.	1651.	0.	13802.	1.30
142.0	-6.0	2006.	1670.	0.	14273.	1.31
144.5	-6.0	1905.	2265.	0.	14999.	1.36
149.4	-6.0	2159.	3850.	0.	16310.	1.50
156.2	-6.0	2106.	3813.	0.	18295.	1.57

* * STRATUM 7 ACT. WEDGE LOC. 100.0 EL. -17.0 PASS.WEDGE LOC. 150.0 EL. -17.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-17.0	3253.	1781.	736.	956.	736.
59.0	-17.0	3253.	1781.	736.	956.	736.
73.0	-17.0	3017.	1781.	650.	803.	650.
74.0	-17.0	3015.	1781.	649.	801.	649.
77.0	-17.0	3035.	1781.	656.	814.	656.
78.0	-17.0	3067.	1781.	668.	835.	668.
87.5	-17.0	3355.	1781.	773.	1022.	773.
89.0	-17.0	3451.	1771.	812.	1091.	812.
95.0	-17.0	3820.	1728.	961.	1358.	961.
100.0	-17.0	3829.	1693.	978.	1387.	978.
105.0	-17.0	3838.	1657.	994.	1416.	994.
110.0	-17.0	3663.	1622.	943.	1326.	943.
118.0	-17.0	3349.	1565.	849.	1158.	849.
124.0	-17.0	3121.	1523.	782.	1038.	782.
134.0	-17.0	2726.	1452.	664.	827.	664.
136.0	-17.0	2497.	1437.	585.	688.	585.
140.0	-17.0	2262.	1187.	591.	698.	591.
143.0	-17.0	2117.	1094.	572.	665.	572.
144.0	-17.0	1934.	1062.	517.	566.	517.
144.0	-17.0	1919.	1063.	512.	556.	512.
150.0	-17.0	1916.	1063.	511.	554.	511.
150.1	-17.0	2037.	1063.	555.	633.	555.
155.0	-17.0	1989.	1063.	537.	602.	537.
250.0	-17.0	1989.	1063.	537.	602.	537.

ASSUMED CRIT. PASSIVE LOC. 150.0 EL. -17.0 DP 16987. RP 27347.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
100.0	-17.0	52866.	21029.	0.	38016.	2.13
105.0	-17.0	57254.	24267.	0.	33088.	1.86
110.0	-17.0	60020.	27221.	0.	28247.	1.69
115.0	-17.0	59489.	28248.	0.	23678.	1.63
120.0	-17.0	56297.	27691.	0.	19402.	1.64
125.0	-17.0	51137.	25056.	0.	15410.	1.69
130.0	-17.0	44884.	21587.	0.	11708.	1.82
135.0	-17.0	38868.	18224.	0.	8315.	2.01
140.0	-17.0	32211.	15241.	0.	5357.	2.49

CRIT. ACTIVE LOC 115.0 EL -17.0 DA 59489. RA 28248.

DIS.	EL.	DP	RP	DB	RB	FS
160.0	-17.0	16906.	17263.	0.	29092.	1.75
126.4	-17.0	23804.	19539.	0.	9342.	1.60
131.8	-17.0	20304.	18498.	0.	13219.	1.53
134.7	-17.0	18756.	16964.	0.	15183.	1.48
138.1	-17.0	17561.	16564.	0.	17220.	1.48
141.1	-17.0	16948.	16784.	0.	18946.	1.50
143.5	-17.0	16682.	16944.	0.	20348.	1.53
144.5	-17.0	16709.	17059.	0.	20858.	1.55
147.4	-17.0	16855.	17211.	0.	22356.	1.59
151.3	-17.0	16952.	17311.	0.	24405.	1.64

* * STRATUM 8 ACT. WEDGE LOC. 100.0 EL. -25.0 PASS.WEDGE LOC. 170.0 EL. -25.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED	EQN.
0.0	-25.0	4228.	2281.	1265.	0.	0.	
69.0	-25.0	4229.	2281.	1265.	0.	0.	
73.0	-25.0	3993.	2281.	1112.	0.	0.	
74.0	-25.0	3991.	2281.	1110.	0.	0.	
77.0	-25.0	4011.	2281.	1123.	0.	0.	
78.0	-25.0	4043.	2281.	1144.	0.	0.	
87.5	-25.0	4331.	2281.	1331.	0.	0.	
89.0	-25.0	4427.	2271.	1401.	0.	0.	
95.0	-25.0	4796.	2228.	1668.	0.	0.	
100.0	-25.0	4805.	2193.	1696.	0.	0.	
105.0	-25.0	4814.	2157.	1725.	0.	0.	
110.0	-25.0	4639.	2122.	1635.	0.	0.	
118.0	-25.0	4325.	2065.	1467.	0.	0.	
124.0	-25.0	4097.	2023.	1347.	0.	0.	
134.0	-25.0	3702.	1952.	1136.	0.	0.	
136.0	-25.0	3473.	1937.	997.	0.	0.	
140.0	-25.0	3238.	1687.	1007.	0.	0.	
143.0	-25.0	3093.	1594.	974.	0.	0.	
144.0	-25.0	2910.	1562.	875.	0.	0.	
144.0	-25.0	2895.	1563.	865.	0.	0.	
150.0	-25.0	2892.	1563.	863.	0.	0.	
150.1	-25.0	3013.	1563.	942.	0.	0.	
155.0	-25.0	2965.	1563.	911.	0.	0.	
250.0	-25.0	2965.	1563.	911.	0.	0.	

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -25.0 DP 36721. RP 39545.

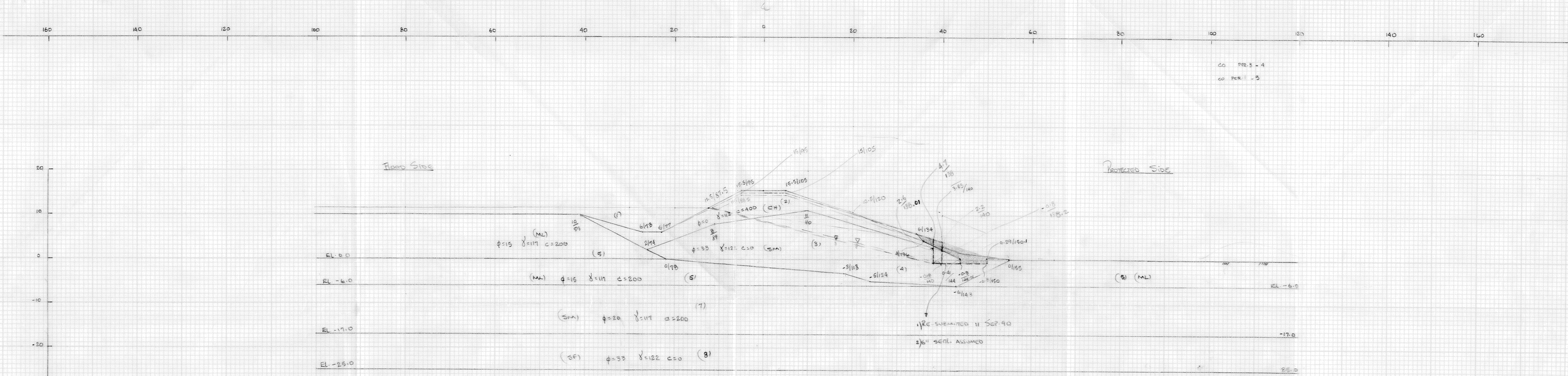
ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
100.0	-25.0	83169.	31692.	0.	0.	1.53
105.0	-25.0	88036.	34969.	0.	0.	1.45
110.0	-25.0	91596.	37928.	0.	0.	1.41
115.0	-25.0	92448.	39789.	0.	0.	1.42
120.0	-25.0	89975.	39765.	0.	0.	1.49
125.0	-25.0	84938.	37968.	0.	0.	1.61
130.0	-25.0	78016.	34324.	0.	0.	1.79
135.0	-25.0	70069.	29819.	0.	0.	2.08

CRIT. ACTIVE LOC 110.0 EL -25.0 DA 91596. RA 37928.

DIS.	EL.	DP	RP	DB	RB	FS
175.0	-25.0	36720.	39545.	0.	0.	1.41
124.5	-25.0	43302.	47708.	0.	0.	1.77
131.3	-25.0	39553.	42577.	0.	0.	1.55
135.7	-25.0	37849.	38539.	0.	0.	1.42
140.1	-25.0	36884.	38768.	0.	0.	1.40
145.5	-25.0	36606.	39271.	0.	0.	1.40
149.4	-25.0	36758.	39636.	0.	0.	1.41

154.2	-25.0	36722.	39550.	0.	0.	1.41
158.6	-25.0	36721.	39546.	0.	0.	1.41
167.4	-25.0	36721.	39545.	0.	0.	1.41



CITRUS LAKEFRONT LODGE

BUS STOP @ MAYO STREET

≈ STA. 89+00

QUADLINER 2ABAAAA

PERMIT 3

PERMIT 4

CELMN-ED-DL (OD-OS/29 Jun 90)(11-2-240a) 1st End
Mr Wright/gu/2721
SUBJECT: Request by Orleans Levee Board to Construct Two Demonstration Bus Stop Platforms in the Citrus Lakefront Levee at Stations 239+69 and 248+67 at New Orleans, LA, in Orleans Parish

CELMN-ED 6 Jul 90

FOR C/O&R Div

1. We have no adverse comments regarding the subject permit request.

2. Additional platform construction should be resubmitted for review prior to construction due to differences in levee design reaches along Citrus Lakefront levee.

3. In addition, permittee is requested to provide a tentative construction schedule for subject work.

Encl
nc

W. EUGENE TICKNER
Chief, Engineering Division

CF:
CELMN-ED-F
CELMN-ED-DD

ED-FS

CELMN-OD-OS(11-2-240a) 29,JUNE 1990

MEMORANDUM FOR C/ENGR DIV

SUBJECT: REQUEST BY THE ORLEANS LEVEE BOARD TO CONSTRUCT TWO DEMONSTRATION BUS STOP PLATFORMS IN THE CITRUS LAKEFRONT LEVEE AT STATIONS 239+69 AND 248+67, AT NEW ORLEANS, LOUISIANA, IN ORLEANS PARISH

1. Forwarded for review, comment, and return.

2. If further assistance is needed, please contact John J. Flanagan, ext 2238.

90-414

Encl
ltr dtd 28,Jun90
w/dwg

for HENRY R. SCHORR
Chief, Operations and
Readiness Division

90-4A

The Board of Commissioners

OF THE

Orleans Levee District

SUITE 202 — ADMINISTRATION BUILDING
NEW ORLEANS LAKEFRONT AIRPORT

New Orleans, La.

70126

June 28, 1990

Mr. Henry Schorr
Chief, Operations and Readiness
U. S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Schorr:

The Orleans Levee Board proposes to construct two demonstration bus stop platforms in the Citrus Lakefront Levee, one opposite the Nazareth Inn and another at Mayo Street, as shown on the attached drawing. Your comments, and/or letter of no objection are requested.

Expeditious handling of this request will be very much appreciated.

Sincerely,

Frederic M. Chatry
Chief Engineer

FMC:dpa

xc: Mr. H. B. Lansden
Ms. Geneva Grille, LA DOTD

Bus 33 — 239+69
34 248+67

ENGINEERING DIVISION

Permit Review Sheet

SUBJECT:

Req by Orleans levee Dist to construct two bus stop platforms in Citrus Lakefront Levee

LMN

_____ ED-A _____

SUSPENSE:*

_____ ED-S _____
_____ ED-SP _____
_____ ED-SR _____
_____ ED-SD _____

SUSPENSE:*

_____ ED-H _____
_____ ED-HD _____
_____ ED-HC _____
_____ ED-HH _____

SUSPENSE:*

✓ ED-F _____
_____ ED-FG _____
_____ ED-FD _____
✓ ED-FS _____

SUSPENSE:* 6 Jul

(a) ED-D _____
_____ ED-DL _____
_____ ED-DW _____
_____ ED-DR _____
_____ ED-DD _____
_____ ED-DG _____

*If suspense date cannot be met, furnish Secretary, Chief of Eng Div, the date it can be met.

EXPEDITE

ED-FS We have no objections from a foundations standpoint for the construction of two(2) demostration bus stop platforms at Mayo St. (Approx. BL Sta. 89+00) and opposite Nazareth Iron (Approx. BL. Sta 157+00).

RE 3 July 90

Ron Lee has encl -- Ron: coord w/F&M Br.

3

FILE

Continue comments on separate sheet if necessary

LMN Form 744 5 Apr 83 (Previous Edition Obsolete)

CELMN-OD-OS(11-2-240a) 29,JUNE 1990

MEMORANDUM FOR C/ENGR DIV

SUBJECT: REQUEST BY THE ORLEANS LEVEE BOARD TO CONSTRUCT TWO DEMONSTRATION BUS STOP PLATFORMS IN THE CITRUS LAKEFRONT LEVEE AT STATIONS 239+69 AND 248+67, AT NEW ORLEANS, LOUISIANA, IN ORLEANS PARISH

1. Forwarded for review, comment, and return.

2. If further assistance is needed, please contact John J. Flanagan, ext 2238.

90-414

Encl
ltr dtd 28,Jun90
w/dwg

for HENRY R. SCHORR
Chief, Operations and
Readiness Division

90-44

The Board of Commissioners

OF THE

Orleans Levee District

SUITE 202 — ADMINISTRATION BUILDING
NEW ORLEANS LAKEFRONT AIRPORT

New Orleans, La.

70126

June 28, 1990

Mr. Henry Schorr
Chief, Operations and Readiness
U. S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

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Expeditious handling of this request will be very much appreciated.

Sincerely,

Alan Trascugnes
for Frederic M. Chatry
Chief Engineer

FMC:dpa

xc: Mr. H. B. Lansden
Ms. Geneva Grille, LA DOTD

Bus 33 — 239+69
34 248+67

Roberto

Mayo St. Sta. 89+00

Nazareth Sta. 157+00

1) Analysis each Alternative at both sites. (4-stability runs)

2) Approval of permit will be for these two locations only. Permittee will need to resubmit for other locations.

3) Bus Sta. Locations are not tied to our baseline traverse. The stations were established by Design Eng. Inc.

The Board of Commissioners

OF THE

Orleans Levee District

SUITE 202 — ADMINISTRATION BUILDING
NEW ORLEANS LAKEFRONT AIRPORT

New Orleans, La.

70126

June 28, 1990

Copy
Hand Carried

Mr. Henry Schorr
Chief, Operations and Readiness
U. S. Army Corps of Engineers
P.O. Box 60267
New Orleans, LA 70160-0267

Dear Mr. Schorr:

The Orleans Levee Board proposes to construct two demonstration bus stop platforms in the Citrus Lakefront Levee, one opposite the Nazareth Inn and another at Mayo Street, as shown on the attached drawing. Your comments, and/or letter of no objection are requested.

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Sincerely,

Alan Trascongues
for Frederic M. Chatry
Chief Engineer

FMC:dpa

xc: Mr. H. B. Lansden
Ms. Geneva Grille, LA DOTD

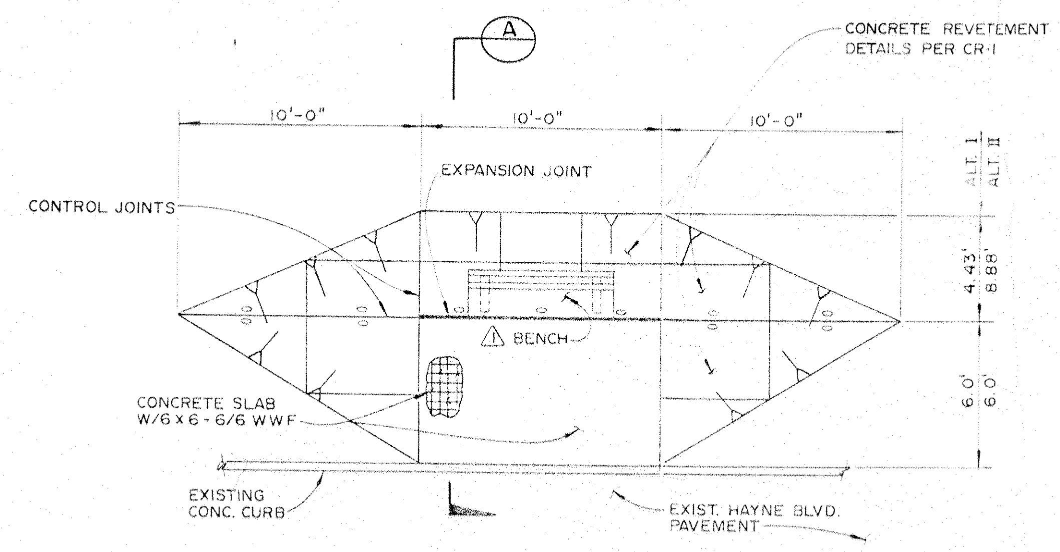
PHIL N.
Jim R.

Fri 2:30 6/29

NEED A fast review
on this permit submittal
Memo is in Routing to Levees

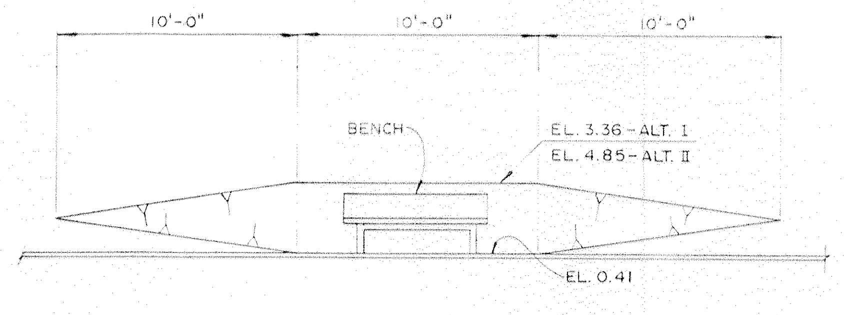
Advance Copy made
2721

327



PLAN

SCALE: 1" = 4'-0"



ELEVATION

SCALE: 1" = 4'-0"

BUS STATION LOCATIONS & ELEVATION A

Bus Stop No.		Station	Elevation A
1	I	25+29.6	-0.91
2	I	31+73.77	-0.26
[illegible]	I	37+58.73	-0.70
[illegible]	I	45+78.52	-0.43
5	I	52+12.88	-0.39
6	I	57+15.76	0.60
[illegible]	I	62+21.73	0.01
[illegible]	II	66+65.66	0.47
[illegible]	II	71+91.69	0.70
10	III	82+18.26	0.42
[illegible]	III	90+60.06	0.44
[illegible]	III	[illegible]	-0.08
[illegible]	III	[illegible]+67.28	-0.38
[illegible]		110+62.41	-0.10
[illegible]		[illegible]+19.41	-0.80
[illegible]		[illegible]+69.97	-0.70
[illegible]		134+45.41	-0.46
[illegible]		[illegible]+68.44	-0.76
[illegible]		[illegible]+15.15	-0.82
20		149+38.25	-1.01
21		155+61.63	-0.70
[illegible]		[illegible]	-0.11
[illegible]		[illegible]	0.16
[illegible]		[illegible]	0.14
[illegible]		[illegible]	0.45
[illegible]		[illegible]+51.52	-0.05
[illegible]		[illegible]	0.19
28		203+[illegible]	0.56
29		208+11.15	1.44
[illegible]		[illegible]	-0.04
[illegible]		[illegible]+67.57	-0.05
[illegible]		[illegible]+78.41	0.41
[illegible]		239+69.02	0.29
[illegible]		[illegible]	[illegible]
[illegible]		[illegible]	[illegible]
[illegible]		[illegible]+27.65	0.05
[illegible]		[illegible]+47.78	-0.13
[illegible]		[illegible]+63.76	-0.15

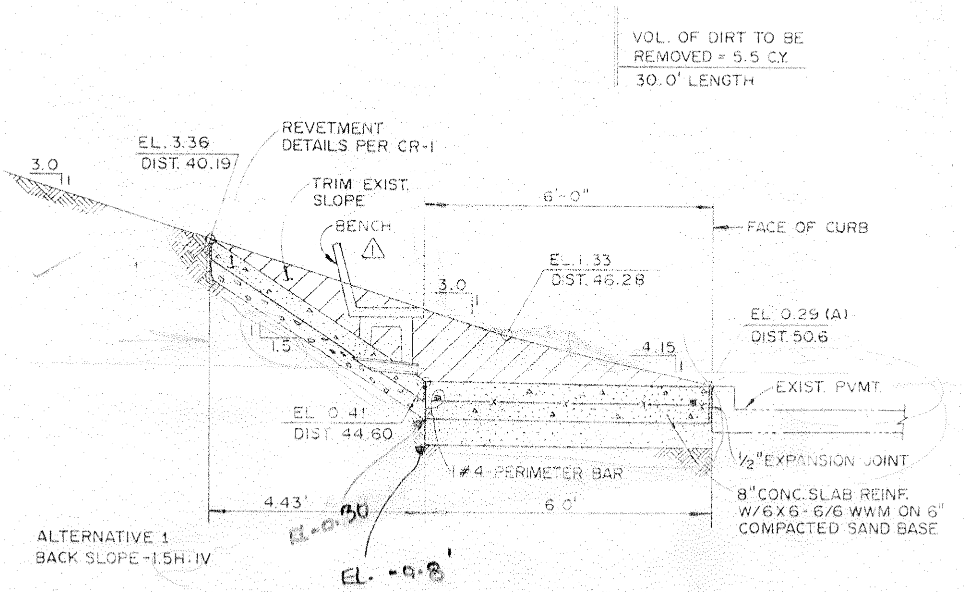
239+69

248+67

NOTES:

1. Sections and plan are [illegible] for top of curb elevation 0.29 wh[illegible] occurs at [illegible]

2. [illegible]

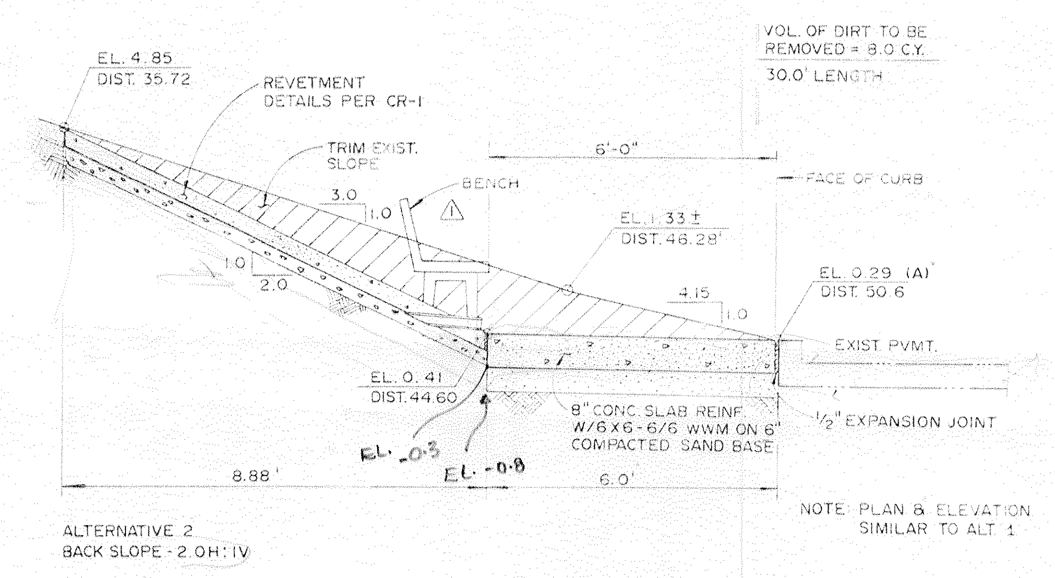


SECTION A - ALTERNATIVE 1

SCALE: 1" = 2'-0"

NAZARETH Inn

℄ STA. 157+00



NOTE: PLAN & ELEVATION SIMILAR TO ALT. 1

SECTION A - ALTERNATIVE 2

SCALE: 1" = 2'-0"

BUS STOP NO. 33 AND 34 SHOWN.
SEE TABLE FOR EL. "A" AT OTHER LOCATIONS.

Mayo Street.

STA. 89+00

FOR INFORMATION ONLY

JUN 26 1990

HAYNE BLVD.

No.	DATE	REMARKS	No.	DATE	REMARKS
3			3		
2			2		
1			1	6/26/90	CHANGED BENCH LOCATION
		REVISIONS			REVISIONS

DESIGN ENGINEERING INC.
3330 West Esplanade Ave. S.
Suite 205
Metairie, LA 70002
(504) 836-2155

DESIGNED BY: M.B.S.
CHECKED BY: M.B.S.
DRAWN BY: K.C.R.
CHECKED BY:
APPROVED BY:
DATE:

STAMP

BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
ORLEANS PARISH, LOUISIANA
CIRTRUS LAKEFRONT LEVEE

BUS STOP IMPROVEMENT

JOB No. 1015

SCALE AS SHOWN

SHEET NUMBER

OF

CELMN-ED-DL (OD-OS/29 Aug 90)(11-2-240a) 1st End
Mr. Wright/gu/2721
SUBJECT: Request by the Sewerage & Water Board of New Orleans to Install a 6-inch Sewer House Connection Line across the New Orleans East Lakefront Levee, for the Camp Owners North of Haynes Blvd., in Orleans Parish

CELMN-ED 13 Sep 90

FOR C/O&R Div

The following comments should be resolved and the permit request resubmitted for our further review:

1. Due to the steepness of the existing levee slopes, we suggest that the applicant resubmit a plan for embedding the pipeline 12-inches below the side slopes and at or above the stillwater elevation of 11.5 across the levee crown.

2. The applicant should provide details for passing the pipeline through the railroad embankment. If excavation is required on the floodside levee toe, we will need to review the excavation plan for determining levee stability.

3. If the alternative location for placing the manhole on the protected side levee slope is selected, the applicant will be required to submit an excavation plan for our review and approval prior to commencing construction.

4. It should be noted that the applicant's proposed work is located within the Citrus Lakefront Levee reach in lieu of subject project.

5. We need additional information on how the system will function, i.e., will each camp have its own sewer line, and is the system comprised of "collector stations" for pumping over the levee.

6. Additional details about how the pipeline will cross the foreshore protection dike are requested, i.e., will pipeline lay on the stone or will footings and beams be constructed to support pipeline.

W. EUGENE TICKNER
Chief, Engineering Division

Encl
nc

CF:
F&M 9/21

E-2354

ENGINEERING DIVISION Permit Review Sheet	SUBJECT: Req by S&WB to install 6" sewer house connection line across N.O. East lakefront levee
LMN 1 ED-A	SR- No objection relative to relocations actions. Ask owner to clarify that he will place pipe and cover over the levee (with appropriate slopes), as these specifics are not adequately presented on drawing. [initials] Gagliano
SUSPENSE: ~~31 Aug~~ 2 ED-S [initials] 8/31 ED-SP 2A ED-SR [initials] ED-SD	HC- No Comment [initials] 8/31
SUSPENSE: ~~5 Sep~~ 3 ED-H [initials] ✓ ED-HD ✓ ED-HC [initials] ED-HH	ED-FS We have no objections provided an excavation plan taking into consideration the lateral pressures of the levee is designed and furnished to this office for review. Estrada, 9/6/90
SUSPENSE: * 7 Sep 4 ED-F ED-FG ~~ED-FD~~ ✓ ED-FS	ED-FS
SUSPENSE: * 5 ED-D ED-DL ED-DW ED-DR ED-DD ED-DG	FILE [initials] R.P. 9/10
*If suspense date cannot be met, furnish Secretary, Chief of Eng Div, the date it can be met.	Continue comments on separate sheet if necessary

LMN Form 744 5 Apr 83 (Previous Edition Obsolete)

CELMN-OD-OS (11-2-240a) 29 Aug 1990

MEMORANDUM FOR C/ENGR DIV

SUBJECT: REQUEST BY THE SEWERAGE & WATER BOARD OF NEW ORLEANS TO INSTALL A 6-INCH SEWER HOUSE CONNECTION LINE ACROSS THE NEW ORLEANS EAST LAKEFRONT LEVEE, FOR THE CAMP OWNERS NORTH OF HAYNES BLVD., IN ORLEANS PARISH.

1. Forwarded for review, comment, and return.

2. If any assistance is required, please contact Steven A. Schinetsky, ext 2343

90-503

Encl

ltr dtd 27 Aug 90
w/dwgs

Steven A. Schinetsky
for HENRY R. SCHORR
Chief, OPERATIONS AND
READINESS DIVISION

40-503

Sewerage & Water Board OF NEW ORLEANS

G. JOSEPH SULLIVAN
General Superintendent

625 ST. JOSEPH STREET
NEW ORLEANS, LA., 70165 · 585-2365

August 27, 1990

Orleans Levee Board
Suite 202
Administration Building
New Orleans Lakefront Airport
New Orleans, LA 70126
Attn: Mr. Ed Bailey

REFERENCE: CONTRACT 3498 (SEWER HOUSE CONNECTION FOR HAYNE BLVD. CAMPS)

Gentlemen:

Enclosed are four (4) prints, of our preliminary drawing 7495-SW, sheet 46, showing the proposed installation of a 6 inch sewer house connection across Hayne Blvd. at Scottwood Drive. This will provide the camps North of Hayne Blvd. with a sewer house connection. This proposed connection, if approved would also be used at other sites along Hayne Blvd.

Please note that the terminal manhole on Hayne Blvd. has an alternative location. The alternate location may be required by the Department of Transportation and Development if they do not allow an open cut at Hayne Blvd.

If you have any questions, please call me at 585-2266.

Very truly yours,

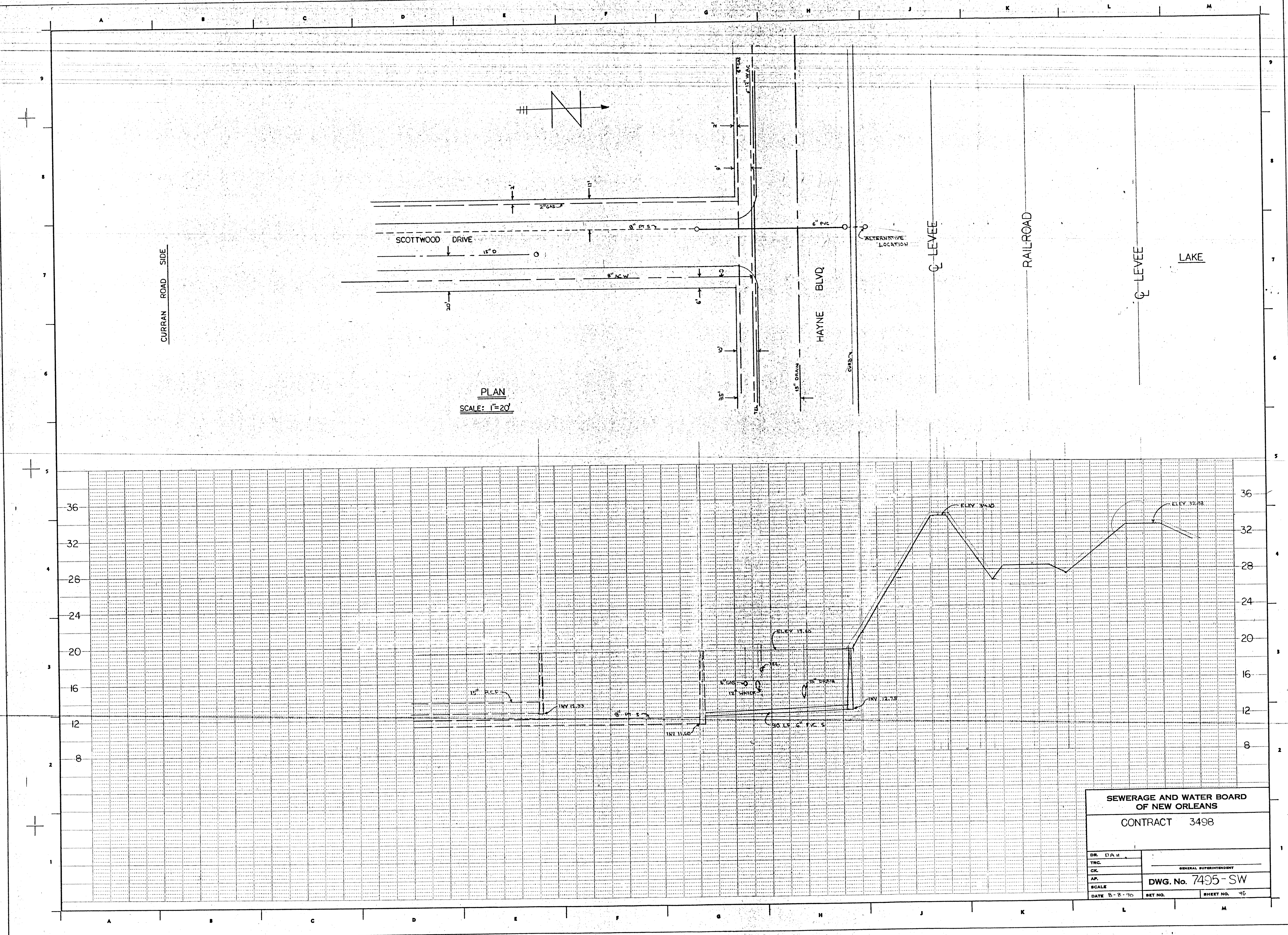
WESLEY L. BUSBY

WLB:hb
4534N
Encls. (4)

cc: all w/encls.
Messrs: Sullivan, Greco, Bodet, Swan

U.S. Army Corps. of Engrs./Operation and Readiness Division/P.O. Box 60267/N.O.,LA 70160-0267/2 copies

DOTD/7252 Lakeshore Dr./N.O., LA 70124/Attn: Ms. Geneva Grille
1 copy


PLAN
SCALE: 1"=20'
SCOTTWOOD DRIVE
CURRAN ROAD SIDE
HAYNE BLVD
℄ LEVEE
RAILROAD
℄ LEVEE
LAKE
ALTERNATIVE LOCATION
6" PVC
2" GAS
8" W
15" D
12" WAC
15" DRAIN
CURB
ELEV 34.10
ELEV 19.60
INV 12.33
INV 11.60
INV 12.75
30 LF 6" P.V.C. S
36
32
28
24
20
16
12
8
SEWERAGE AND WATER BOARD OF NEW ORLEANS
CONTRACT 3498
DR. DAH
TRC.
CK.
AP.
SCALE
DATE 8-8-70
GENERAL SUPERINTENDENT
DWG. No. 7495-SW
SET NO.
SHEET NO. 46

April 16, 1990

Engineering Division
Levees Station

Mr. Marvin Thompson, C.E.
Project Engineer
Crescent Associates, Incorporated
Consulting Engineers
Post Office Box 8443
New Orleans, Louisiana 70182

Dear Mr. Thompson:

As requested in your letter of March 26, 1990, we have reviewed your plans and specifications for construction of Level Standing Areas along Hayne Boulevard, Downman Road to Paris Road. Our comments are enclosed.

Sincerely.

W. Eugene Tickner
Acting Chief,
Engineering Division

Copy furnished with enclosure:

Mr. C. E. Bailey
Chief Engineer
Board of Commissioners
Orleans Levee District
Suite 202 - Administration Building
New Orleans Lakefront Airport
New Orleans, Louisiana 70126

CELMN-ED-DD
CELMN-ED-F 4/25

Comments on Level Standing Areas
Hayne Boulevard, Downman Road to Paris Road

1. The following design computations should be furnished for our review:

   a. Analyses indicating that the level standing areas are adequately designed to resist the soil pressure from the levee.

   b. Computations of the reinforced concrete which include all loadings and grade of reinforcing steel, etc.

2. A requirement should be added to the specifications that the contractor is to submit for approval his excavation, shoring, and bracing plans prior to construction. It is requested that Orleans Levee District submit these plans for our review prior to construction.

3. The contract specifications for the reinforcing steel should include the grade of steel, 40 ksi or 60 ksi, and the type of bar, plain or deformed.

4. Drawing Number 3 of 5

   a. Change "#4 bars @ 24" O.C." to " 18" O.C." as noted in red. The maximum spacing allowed between reinforcing bars based on our criteria is 18".

   b. The 2" of clear cover for the reinforcing steel against the earthen levee is valid provided the concrete is cast against the formwork, otherwise 3" clear cover should be provided.

   c. A number of dimensions appear incorrect in the section "Level Standing Area". The consultant should verify our annotations made in red.

5. Drawing Number 4 of 5

   a. Include steel reinforcing details at the retaining wall corners as indicated in red.

   b. Include an additional section as noted in red detailing the reinforcing steel in the two wingwalls.

6. Drawing Number 5 of 5 - The General Notes on excavation and backfill should be revised to include a requirement for hand tamping backfill around the structures.

Enclosure

CELMN-ED-DL 30 March 90

MEMORANDUM FOR C/F&M Br 4/3

SUBJECT: Review of P&S for Level Standing Areas Hayne Blvd., Downman Road to Paris Road.

1. You are requested to review and comment on the enclosed subject plans and specs by 6 April 90.

2. P.O.C. is Ronald Lee, ext. 2717.

DANIEL A. MARSALONE
Chief, Design Branch

CELMN-ED-FS 1st End Richardson/sg/1031

FOR C/Design Br 5 April 90

We have reviewed the subject plans and specs and have the following comments:

a. Analyses indicating that the level standing areas are adequately designed to resist the soil pressure from the levee fill should be furnished for our review.

b. Add a requirement into the specs. that the contractor is to obtain Corps of Engineer's approval for his excavation, shoring, and bracing plans prior to construction.

Encl
NC

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

Plans and Specs returned with response

4/5 FILE

CRESCENT ASSOCIATES, INC.
CONSULTING ENGINEERS

P.O. BOX 8443/TELEPHONE: (504)945-7625/NEW ORLEANS, LOUISIANA 70182-8443

March 26, 1990

U.S. Army Corps of Engineers
New Orleans Engineer District
P.O. Box 60267
New Orleans, Louisiana 70160

ATTENTION: CELMNED

RE: Orleans Levee District
Contract No. 2014
Level Standing Areas
Hayne Boulevard,
Downman Road to Paris Road

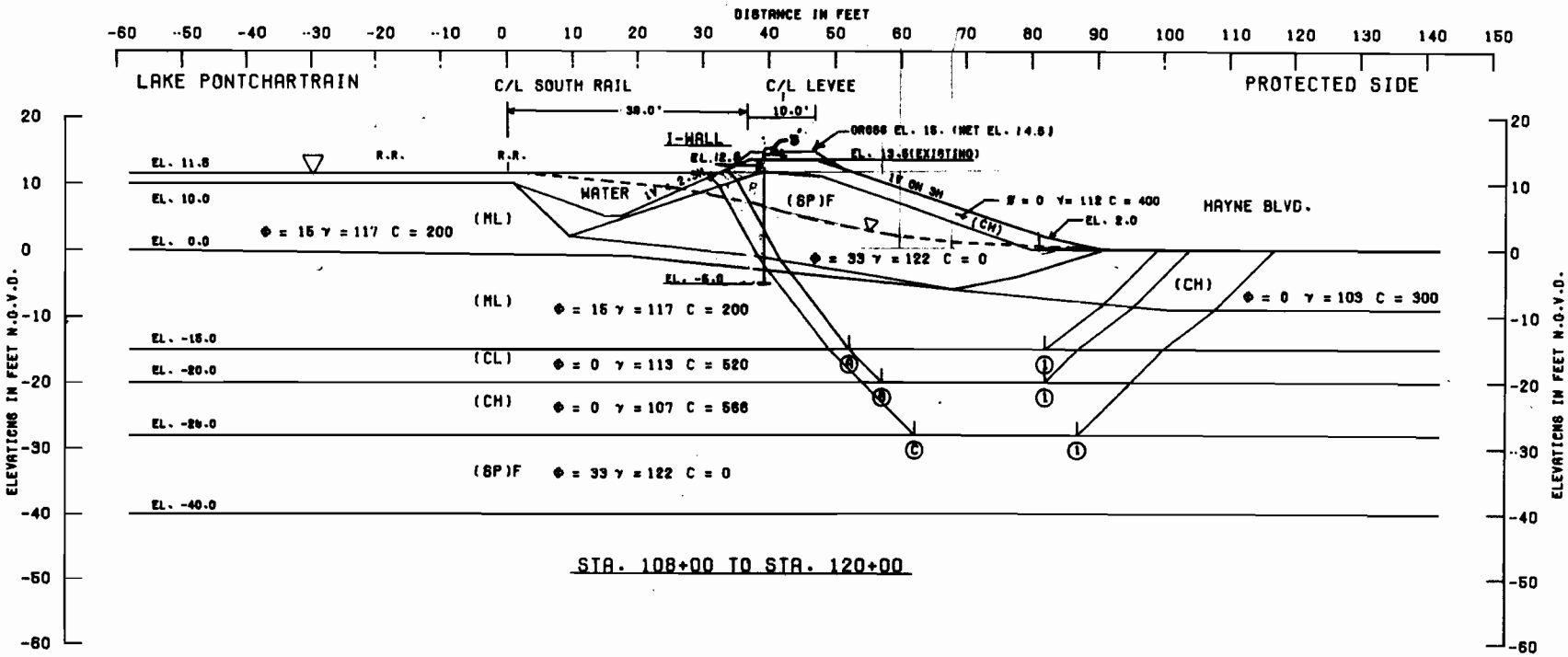
Gentlemen:

Transmitted herewith for your review and/or comment are preliminary plans and specifications, for the referenced project.

Sincerely yours,

Marvin Thompson, C.E.
Project Engineer

Enclosures:
As Stated
Copy Furnished: w/Enclosures
C.E. Bailey, Chief Engineer
Orleans Levee District



STA. 108+00 TO STA. 120+00

NOTE: PIEZOMETRIC HEAD DETERMINED BY SEEPAGE ANALYSIS

ASSUMED FAILURE SURFACE NO.	ASSUMED FAILURE SURFACE ELEV.	RESISTING FORCES R_A	R_B	R_P	DRIVING FORCES D_B	$-D_P$	SUMMATION OF FORCES RESISTING	DRIVING	FACTOR OF SAFETY
(A) (1)	-15.0	22759	15425	11540	47444	12918	49718	34529	1.440
(B) (1)	-20.0	27983	13000	16166	84341	22787	57121	41574	1.370
(C) (1)	-25.0	35632	14150	24896	95875	42742	74778	53133	1.410

GENERAL NOTES

CLASSIFICATION, STRATIFICATION, SHEAR STRENGTHS, AND UNIT WEIGHTS OF THE SOIL WERE BASED ON THE RESULTS OF THE UNDISTURBED BORING, SEE BORING DATA PLATES, BORING 13 ULC, AND DESIGN MEMORANDUM NO. 2 GENERAL DESIGN SUPPLEMENT NO. 5A BORING.

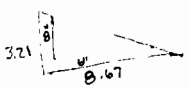
NOTES

Φ -- ANGLE OF INTERNAL FRICTION, DEGREES
C -- UNIT COHESION, P.S.F.
▽ -- STATIC WATER SURFACE
D -- HORIZONTAL DRIVING FORCE IN POUNDS
R -- HORIZONTAL RESISTING FORCE IN POUNDS
A -- AS A SUBSCRIPT, REFERS TO ACTIVE WEDGE
B -- AS A SUBSCRIPT, REFERS TO CENTRAL BLOCK
P -- AS A SUBSCRIPT, REFERS TO PASSIVE WEDGE

$$\text{FACTOR OF SAFETY} = \frac{R_A + R_B + R_P}{D_B - D_P}$$

1.31 with full head on floodside
1.29 with cut out
(Higher for mass stability)

4 Apr 90
Review of AIS for Level Standing Area



Soil - ½(3.21)8.67 = 13.9
13.7(112) = 1559

Concrete - 8/12(3.21) + 8(4/12)
= 6.15
6.15 × 150 = 922
1559 - 922 = 637 # diff

Critical reach other reaches have > 1.3 FS
JR 5 Apr 90

LAKE PONTCHARTRAIN, LA. AND VICINITY
HIGH LEVEL PLAN
DESIGN MEMORANDUM NO. 14-GENERAL DESIGN
CITRUS-LAKEFRONT LEVEE-I.H.N.C. TO PARIS ROAD

STABILITY ANALYSIS
PROTECTED SIDE
STA. 108+00 TO STA. 120+00 B/L

U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
CORPS OF ENGINEERS
JULY 1964 FILE NO. H-2-29653

PLATE 18

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-DL	N.O. Sewerage & Water Board pipeline crossings of LP&V Hurricane Protection Levee Along Hayne Blvd. (Citrus Lakefront)

TO: C/F&M Br 10/2 | FROM: C/ Design Br | DATE: 1 Oct 85 | CMT 1

Ms. Cottone/cb/2058

1. Reference the attached 27 Sep 85 letter from Pepper & Associates, Inc. and their enclosed set of specifications and drawings concerning the subject pipeline crossing.

2. We request that you review the plans and specs with particular attention to the stability of the pipe and cover and any potential seepage problems, and offer your comments NLT 11 Oct 85.

Encl

WALTER D. JUDLIN, III
Chief, Design Branch

BS

LMNED-FS

TO: C/Des Br | FROM: C/F&M Br | DATE: 15 Oct 85 | CMT 2

Mr. Estrada/mlm/1035

The plans and specs have been reviewed. The utility levee crossing section shown on the drawings meets the minimum safety requirements from the stability and seepage standpoint.

Encl
nc

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

File

PEPPER AND ASSOCIATES, INC.
CONSULTING ENGINEERS
3012 26TH STREET
JEROME PEPPER, P. E. METAIRIE, LOUISIANA 70002 504: 837-7330

September 27, 1985

Mr. Frederic M. Chatry
Chief of Engineering Division
U.S. Army Corps of Engineers
P. O. Box 60267
New Orleans, Louisiana 70160

RE: Capital Improvements
Upgrade and Improve
The Sewage Pumping System
at the New Orleans
Lakefront Airport
Orleans Levee Board
Project No.7005-3010

ATTN: Mr. Ron Lee

The Orleans Levee Board will very shortly undertake the modernization of the existing sewage disposal system at Lakefront Airport. After consultations with the New Orleans Sewerage and Water Board, we have rooted the outfall of the now force main to the intersection of Lamb St. and Wales St. As you can see from the plans this requires a crossing of the existing Lake Pontchartrain hurricane protection levee along Hayne Boulevard approximately one mile east of Downman Road.

For this reason we are sending you one (1) set of plans and one (1) set of specifications for your review and comment. We will also send one set of plans and specifications to the Orleans Levee Board, the New Orleans Sewerage & Water Board and the Southern Railroad for thier comments. When we receive the comments from all parties we will advertise this project for bids.

Very truly yours,

PEPPER & ASSOCIATES, INC.

Kenneth Dupuis
Project Engineer

KD/ks

Enclosures

```
LI RE091011-50
1 'LAKE PONT.LA. & VIC. CITRUS LAKFRONT LE.'
2 'IHNC TO PARIS ROAD, PIPE CROS. STA. 49+52 B/L'
3 10 10 0.5 110 1 0
4 7 1 2 1
5 100
6 0 62.5 0 0
7 0 112 400 400
8 30 122 0 0
9 15 117 200 200
10 20 117 200 200
11 33 122 0 0
12 33 122 0 0
13 0 11.5 78.5 11.5 95 17 105 17 155.5 0.2
14   202 -0.6 300 -0.6 9999.9 0
15 0 10 58.5 10 67 8 95 17 300 90 9999.9 0
16 0 10 58 10 81 0 134 -3 142 1.6 152 0.8
17 155 0.2 160 0.2 202 -0.6 300 -0.6 9999.9 0
18 0 10 58 10 81 0 134 -3 137 -5 144 -6.5
19 149 -6.5 155 -5 160 -0.2 202 -0.6 300 -0.6 9999.9 0
20 0 -5 137 -5 144 -6.5 149 -6.5 155 -5 300 -5
21 9999.9 0
22 0 -13 300 -13 9999.9 0
23 0 -20 300 -20 9999.9 0
24 0 -30 300 -30 9999.9 0
25 0 11.5 78.5 11.5 155.5 0.2 160 0.2 202 -0.6
26 300 -0.6 9999.9 0
27 1 1 1 1 1 1 1 1 1 1 1 1
28 1 1
29 3 90137 -5.0 170 -5.0 1
30 180
31 4 105 -5.0 170 -5.0 1
32 137 180
33 5 105 -13 170 -13 1
34 190
35 6 105 -20 170 -20 1
36 190
EOT..
SLIB*UPLPLOT

*****************************************************************************
       STABILITY ANALYSIS WITH UPLIFT AND PLOT ROUTINES
*****************************************************************************

RB CORRECTED 6/03/75, CONVERTED WITH IMPROVED DISPLAY 03/20/81
25 POINTS ON PIEZOMETRIC GRADE LINE ADDED 03/20/81
UPLIFT CORRECTED TO ZERO WITH FLAG FOR RA, RB & RP 04/20/81
SCALE IMPROVED 05/27/81, ERROR DETECTION   06/23/81
AUTOMATIC BORING AND PHREATIC POINT INSERTION  06/23/81

HARRIS CONVERSION 03/24/82 - 05/17/82

 ENTER NAME OF INPUT FILE ( FOUR TO EIGHT CHARACTERS )
RE0910

 ENTER NAME OF PLOT FILE ( ONE TO SEVEN CHARACTERS )
PONCE

FILE IS =         PONCE1

FILE IS =         W1

FILE IS =         W2

            **** STABILITY WITH UPLIFT ****


       LAKE PONT.LA. & VIC. CITRUS LAKFRONT LE.
       IHNC TO PARIS ROAD, PIPE CROS. STA. 49+52 B/L

    7 STRATUM      8 PROFILES      1 VERTICALS

  DATA EDIT : ENTER 0 = BYPASS, 1 = PROFILES, 2 = SOIL PROPERTIES,
3 = ALL
```

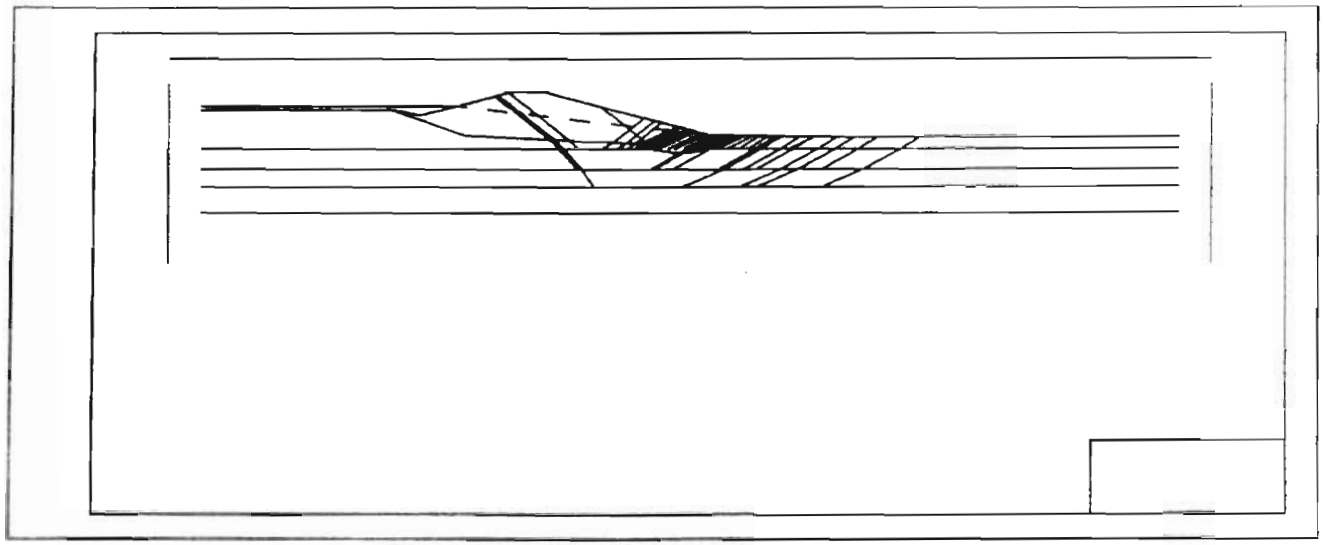
STR 3 EL. -5. NO 1

NO	DIST.	F.S.				
2	180.	2.668	23	136.3	1.777	
3	139.7	3.178	24	137.7	1.746	E. H.
4	142.6	2.832	25	164.6	1.717	
5	144.6	2.657	26	167.5	1.748	
6	147.5	2.441				
7	149.9	2.34	STR 5 EL. -13. NO 27			
8	153.4	2.299	NO	DIST.	F.S.	
9	155.8	2.33	28	190.	2.082	
10	152.9	2.298	29	137.2	1.737	
11	150.9	2.317	30	138.2	1.721	
12	157.8	2.361	31	144.1	1.714	
13	160.7	2.403	32	158.3	1.756	
			33	166.1	1.837	

STR 4 EL. -5. NO 14

NO	DIST.	F.S.		STR 6 EL. -20. NO 34		
15	137.	1.761	E. H.	NO	DIST.	F.S.
16	122.6	2.265		35	190.	2.58
17	127.	2.072		36	147.	2.069
18	129.9	1.974		37	164.6	2.247
19	132.4	1.871				
20	133.8	1.835				
21	135.8	1.789				
22	137.2	1.756	E. H.			

AFTER SELECTED WEDGES,PLACE CROSSHAIRS AT ADDITIONAL P.W. LOCATIONS
(N,S,E = COMPLETE STRATA & D,R = REDRAW)
1 = END, 2 = PLOT SECTION, 3 = NEW SECTION
4 = OK. MORE, 5 = SPOOL DETAIL DATA



DI W1 1-1000

**** STABILITY WITH UPLIFT ****

LAKE PONT.LA. & VIC. CITRUS LAKFRONT LE.
IHNC TO PARIS ROAD, PIPE CROS. STA. 49+52 B/L
8 PROFILES
1VERTICALS
UPLIFT WITH 1 PIEZOMETRIC GRADE LINES

* * STRATUM 3 ACT. WEDGE LOC. 90137.0 EL. -5.0 PASS.WEDGE LOC. 170.0 EL. -5.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-5.0	1849.	1031.	472.	419.	419.
58.0	-5.0	1849.	1031.	472.	419.	419.
58.5	-5.0	1848.	1031.	471.	419.	419.
67.0	-5.0	1730.	1031.	404.	387.	387.
78.5	-5.0	1879.	1031.	489.	427.	427.
81.0	-5.0	1967.	1008.	553.	457.	457.
95.0	-5.0	2485.	880.	927.	630.	630.
100.0	-5.0	2484.	834.	952.	642.	642.
105.0	-5.0	2482.	788.	978.	654.	654.
134.0	-5.0	1393.	522.	503.	433.	433.
137.0	-5.0	1309.	495.	470.	418.	418.
FAILURE SURFACE IN STRATA 3 EL. -5.0 DIST. 137.0 STRENGTH 470.0						
142.0	-5.0	1151.	449.	405.	999999.	405.
144.0	-5.0	1075.	430.	372.	999999.	372.
149.0	-5.0	885.	385.	289.	999999.	289.
152.0	-5.0	770.	357.	239.	999999.	239.
155.0	-5.0	653.	330.	187.	287.	187.
155.5	-5.0	632.	325.	177.	282.	177.
160.0	-5.0	601.	325.	159.	274.	159.
202.0	-5.0	515.	275.	138.	264.	138.
300.0	-5.0	515.	275.	138.	264.	138.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -5.0 DP 1452. RP 1[illegible]

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
137.0	-5.0	10190.	12294.	0.	8463.	2.53

CRIT. ACTIVE LOC 137.0 EL -5.0 DA 10190. RA 12294.

DIS.	EL.	DP	RP	DB	RB	FS
180.0	-5.0	1352.	1300.	0.	9982.	2.67
139.7	-5.0	4884.	5894.	0.	1218.	3.18

DP RP RB

142.6	-5.0	3384.	4540.	0.	2438.	2.83
144.6	-5.0	2949.	3768.	0.	3178.	2.66
147.5	-5.0	2360.	2650.	0.	4168.	2.44
149.9	-5.0	1986.	2021.	0.	4885.	2.34
153.4	-5.0	1671.	1568.	0.	5720.	2.30
155.8	-5.0	1598.	1535.	0.	6193.	2.33
152.9	-5.0	1701.	1602.	0.	5613.	2.30
150.9	-5.0	1871.	1838.	0.	5143.	2.32
157.0	-5.0	1578.	1506.	0.	6529.	2.36
160.7	-5.0	1547.	1467.	0.	7006.	2.40

* * STRATUM 4 ACT. WEDGE LOC. 105.0 EL. -5.0 PASS.WEDGE LOC. 170.0 EL. -5.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-5.0	1849.	1031.	419.	498.	419.
58.0	-5.0	1849.	1031.	419.	498.	419.
58.5	-5.0	1848.	1031.	419.	497.	419.
67.0	-5.0	1730.	1031.	387.	454.	387.
78.5	-5.0	1879.	1031.	427.	508.	427.
81.0	-5.0	1967.	1008.	457.	549.	457.
95.0	-5.0	2485.	880.	630.	784.	630.
100.0	-5.0	2484.	834.	642.	800.	642.
105.0	-5.0	2482.	788.	654.	816.	654.
134.0	-5.0	1393.	522.	433.	517.	433.
137.0	-5.0	1309.	495.	418.	496.	418.
142.0	-5.0	1151.	449.	388.	999999.	388.
144.0	-5.0	1075.	430.	373.	999999.	373.
149.0	-5.0	885.	385.	334.	999999.	334.
152.0	-5.0	770.	357.	311.	999999.	311.
155.0	-5.0	653.	330.	287.	318.	287.
155.5	-5.0	632.	325.	282.	312.	282.
160.0	-5.0	601.	325.	274.	300.	274.
202.0	-5.0	515.	275.	264.	287.	264.
300.0	-5.0	515.	275.	264.	287.	264.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -5.0 DP 1407. RP 2808.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
105.0	-5.0	25408.	15970.	0.	27570.	1.93
110.0	-5.0	26018.	16791.	0.	24396.	1.79
115.0	-5.0	24994.	17559.	0.	21411.	1.77
120.0	-5.0	22574.	17626.	0.	18617.	1.85
125.0	-5.0	19227.	17473.	0.	16013.	2.06
130.0	-5.0	15328.	15940.	0.	13599.	2.33
135.0	-5.0	11834.	13891.	0.	11374.	2.70
140.0	-5.0	8176.	9721.	0.	9300.	3.23

CRIT. ACTIVE LOC 115.0 EL -5.0 DA 24994. RA 17559.

DIS.	EL.	DP	RP	DB	RB	FS
137.0	-5.0	4764.	7175.	0.	12884.	1.76
122.6	-5.0	10667.	10723.	0.	4168.	2.26
127.0	-5.0	8822.	9570.	0.	6381.	2.07
129.9	-5.0	7689.	8822.	0.	7775.	1.97
132.4	-5.0	6196.	8723.	0.	8887.	1.87
133.8	-5.0	5729.	8852.	0.	9532.	1.83
135.8	-5.0	5130.	7699.	0.	10371.	1.79
137.2	-5.0	4695.	7095.	0.	10987.	1.76
136.3	-5.0	4982.	7431.	0.	10578.	1.78
137.7	-5.0	4560.	6934.	0.	11190.	1.75
164.6	-5.0	1462.	2914.	0.	19943.	1.72
167.5	-5.0	1432.	2891.	0.	20742.	1.75

** STRATUM 5 ACT. WEDGE LOC. 105.0 EL. -13.0 PASS.WEDGE LOC. 170.0 EL. -13.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	UT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-13.0	2785.	1531.	656.	814.	656.
58.0	-13.0	2785.	1531.	656.	814.	656.
58.5	-13.0	2784.	1531.	656.	813.	656.
67.0	-13.0	2666.	1531.	613.	737.	613.
78.5	-13.0	2815.	1531.	667.	834.	667.
81.0	-13.0	2903.	1508.	708.	906.	708.
95.0	-13.0	3421.	1380.	943.	1326.	943.
100.0	-13.0	3420.	1334.	959.	1354.	959.
105.0	-13.0	3418.	1288.	975.	1383.	975.
134.0	-13.0	2329.	1022.	676.	849.	676.
137.0	-13.0	2245.	995.	655.	812.	655.
142.0	-13.0	2092.	949.	616.	743.	616.
144.0	-13.0	2018.	930.	596.	707.	596.
149.0	-13.0	1828.	885.	543.	613.	543.
152.0	-13.0	1710.	857.	511.	554.	511.
155.0	-13.0	1589.	830.	476.	493.	476.
155.5	-13.0	1568.	825.	470.	482.	470.
160.0	-13.0	1537.	825.	459.	462.	459.

SHEAR STRENGTHS ARE EQUAL 455.0 AT DIST. 173.1

280.0	-13.0	1451.	775.	446.	439.	439.
300.0	-13.0	1451.	775.	446.	439.	439.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -13.0 DP 9590. RP 11348.

ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	F
105.0	-13.0	46877.	24751.	0.	43137.	2.13
110.0	-13.0	48148.	25623.	0.	38390.	1.95
115.0	-13.0	47471.	25903.	0.	33902.	1.88
120.0	-13.0	45136.	26090.	0.	29671.	1.89
125.0	-13.0	41349.	25692.	0.	25699.	1.98
130.0	-13.0	36609.	24958.	0.	21985.	2.16
135.0	-13.0	31216.	23082.	0.	18527.	2.45
140.0	-13.0	26380.	20560.	0.	15273.	2.81

CRIT. ACTIVE LOC 115.0 EL -13.0 DA 47471. RA 25903.

DIS.	EL.	DP	RP	DB	RB	FS
190.0	-13.0	9098.	11084.	0.	42924.	2.08
137.2	-13.0	14730.	14114.	0.	16861.	1.74
138.2	-13.0	14325.	13634.	0.	17495.	1.72
144.1	-13.0	12206.	13408.	0.	21141.	1.71
158.3	-13.0	9902.	11538.	0.	28521.	1.76
166.1	-13.0	9692.	11407.	0.	32108.	1.84

** STRATUM 6 ACT. WEDGE LOC. 105.0 EL. -20.0 PASS.WEDGE LOC. 170.0 EL. -20.0

ASSUMED FAILURE SURFACE DATA

DIST.	ELEV.	WT.	UPLIFT	STR 1	STR 2	STR USED
0.0	-20.0	3639.	1969.	1085.	1085.	1085.
58.0	-20.0	3639.	1969.	1084.	1084.	1084.
59.5	-20.0	3638.	1969.	1084.	1084.	1084.
67.0	-20.0	3520.	1969.	1008.	1008.	1008.
78.5	-20.0	3669.	1969.	1104.	1104.	1104.
81.0	-20.0	3757.	1946.	1176.	1176.	1176.
95.0	-20.0	4275.	1817.	1596.	1596.	1596.
100.0	-20.0	4274.	1772.	1625.	1625.	1625.
105.0	-20.0	4272.	1726.	1654.	1654.	1654.
134.0	-20.0	3183.	1460.	1119.	1119.	1119.
137.0	-20.0	3099.	1432.	1082.	1082.	1082.
142.0	-20.0	2946.	1386.	1013.	1013.	1013.
144.0	-20.0	2872.	1368.	977.	977.	977.
149.0	-20.0	2682.	1322.	883.	883.	883.
152.0	-20.0	2564.	1295.	824.	824.	824.
155.0	-20.0	2443.	1267.	763.	763.	763.
155.5	-20.0	2422.	1262.	753.	753.	753.
160.0	-20.0	2391.	1262.	733.	733.	733.
202.0	-20.0	2305.	1212.	709.	709.	709.
300.0	-20.0	2305.	1212.	709.	709.	709.

ASSUMED CRIT. PASSIVE LOC. 170.0 EL. -20.0 DP 22769. RP 26328.

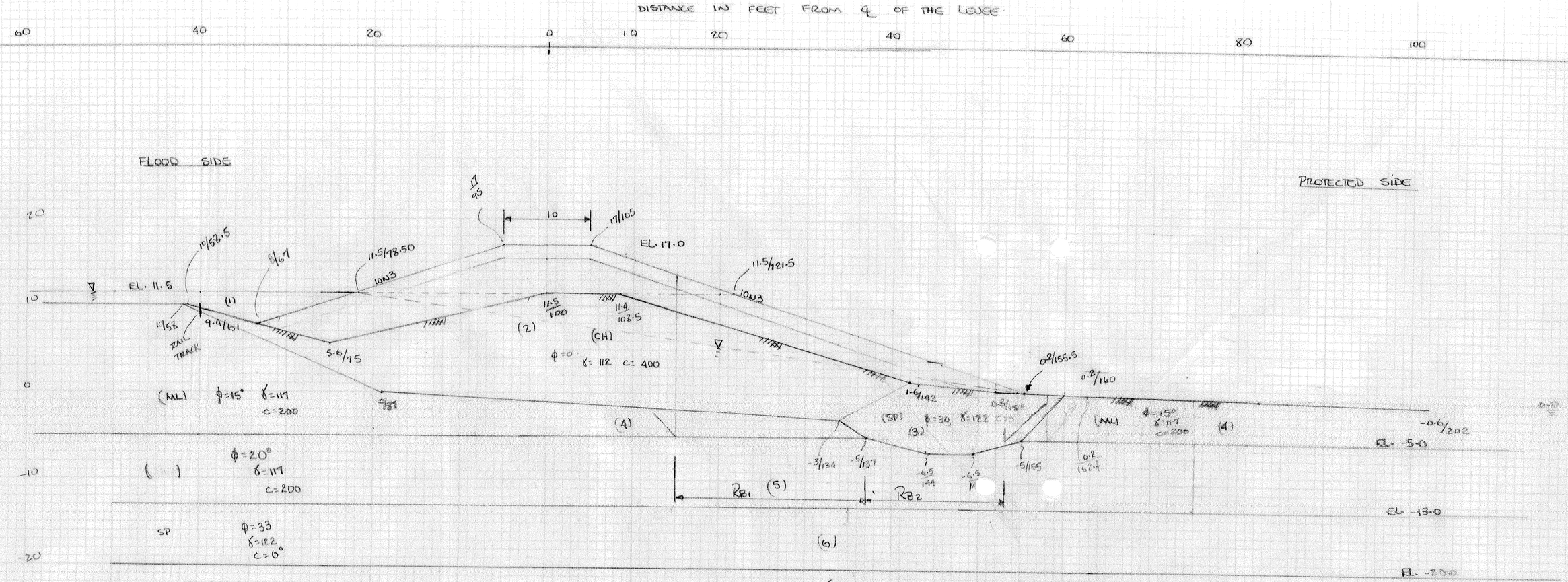
ACTIVE WEDGE DATA

DIST.	ELEV.	DA	RA	DB	RB	FS
105.0	-20.0	71824.	35203.	0.	71353.	2.71
110.0	-20.0	73464.	36130.	0.	63315.	2.48
115.0	-20.0	72940.	36138.	0.	55739.	2.36
120.0	-20.0	70526.	35651.	0.	48622.	2.32
125.0	-20.0	66497.	35146.	0.	41967.	2.37
130.0	-20.0	61138.	33820.	0.	35772.	2.50
135.0	-20.0	54876.	32398.	0.	30034.	2.76
140.0	-20.0	48453.	29542.	0.	24660.	3.14
145.0	-20.0	42652.	26462.	0.	19649.	3.64

CRIT. ACTIVE LOC 120.0 EL -20.0 DA 70526. RA 35651.

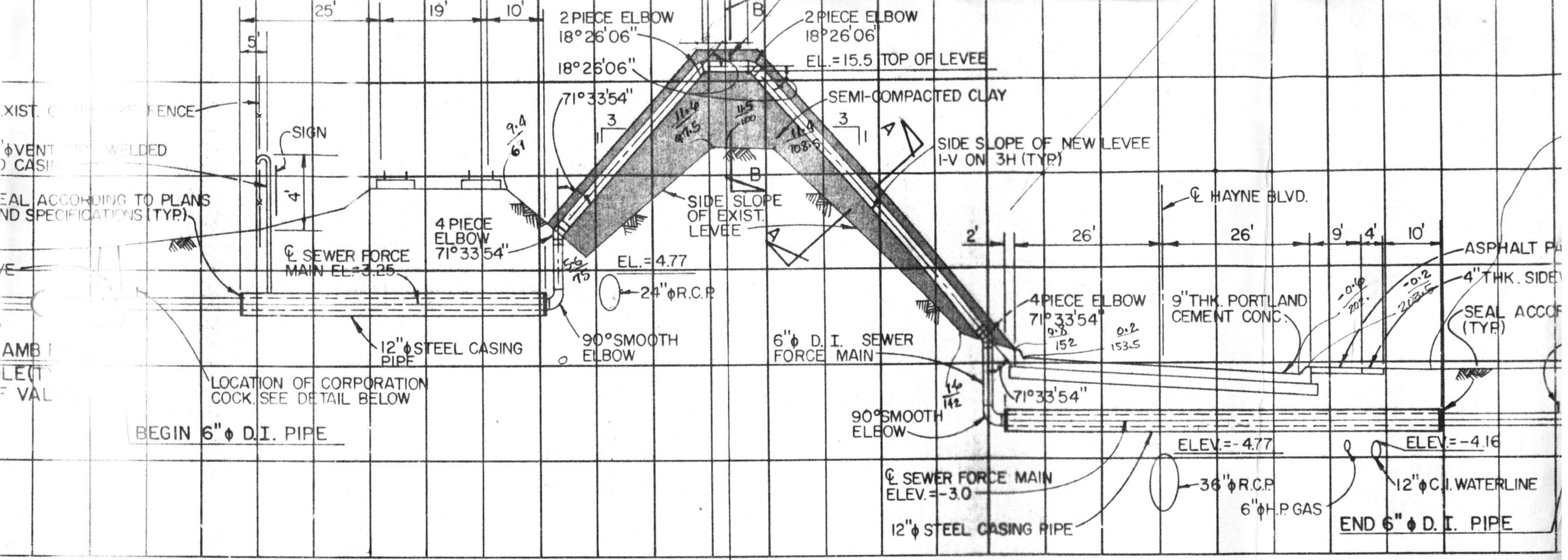
DIS.	EL.	DP	RP	DB	RB	FS
190.0	-20.0	82219.	25914.	0.	63055.	2.58
147.0	-20.0	34565.	28563.	0.	30870.	2.07
164.6	-20.0	22985.	26485.	0.	44691.	2.25

EOT..

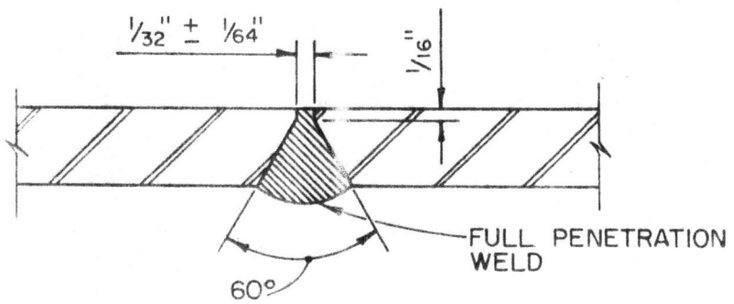


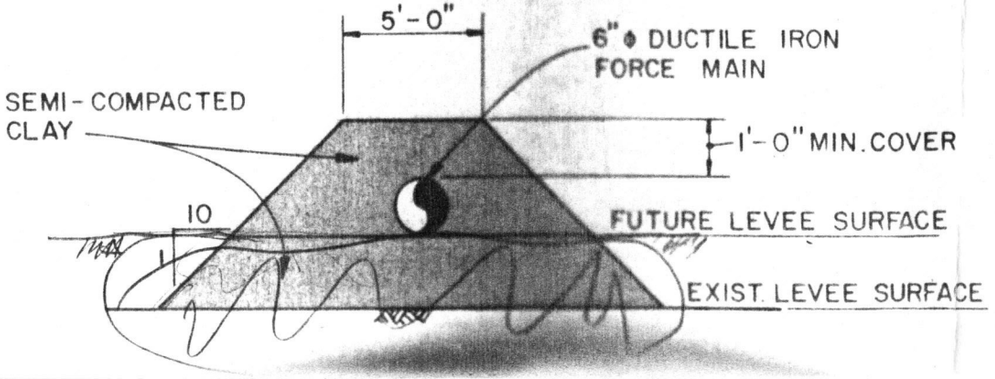
$$FS = \frac{17559 + 1602 + (5613 + 10884)}{24994 - 1701} = 1.53$$

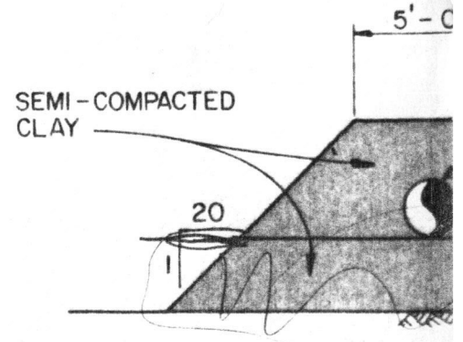
LAKE PONTC. LA. & VICINITY
HIGH LEVEL PLAN
DESIGN MEMORANDUM NO. 14 - GENERAL DESIGN
CITRUS LAKEFRONT LEVEE - IHNC TO PARIS ROAD
PIPE LINE CROSSING AT
Approx. STA. 49+52 B/L.

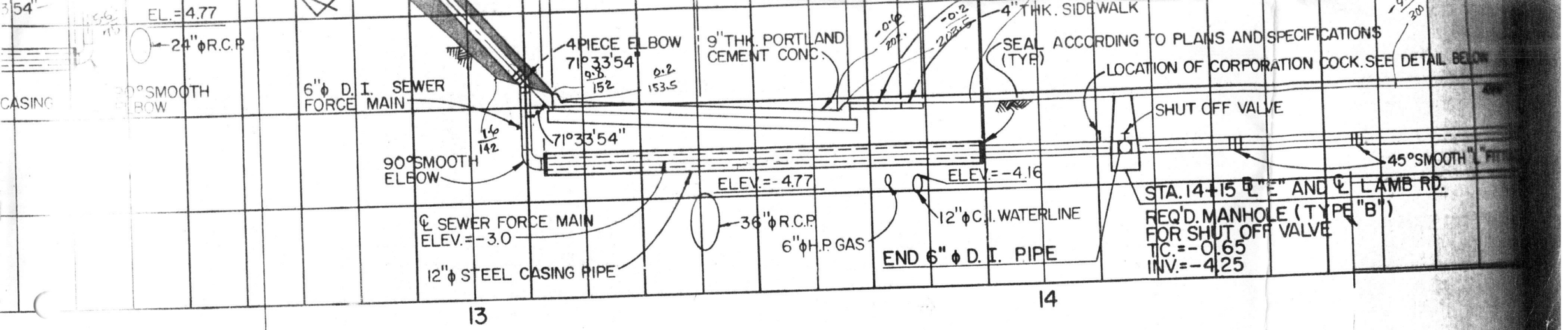

25'
19'
10'
5'
2 PIECE ELBOW 18°26'06"
2 PIECE ELBOW 18°26'06"
18°26'06"
EL.=15.5 TOP OF LEVEE
71°33'54"
SEMI-COMPACTED CLAY
SIGN
SIDE SLOPE OF NEW LEVEE 1-V ON 3H (TYP.)
SIDE SLOPE OF EXIST. LEVEE
4 PIECE ELBOW 71°33'54"
℄ SEWER FORCE MAIN EL.=3.25
EL.=4.77
24"φ R.C.P.
12"φ STEEL CASING PIPE
90° SMOOTH ELBOW
6"φ D.I. SEWER FORCE MAIN
LOCATION OF CORPORATION COCK. SEE DETAIL BELOW
BEGIN 6"φ D.I. PIPE
℄ HAYNE BLVD.
2'
26'
26'
9'
4'
10'
4 PIECE ELBOW 71°33'54"
9"THK. PORTLAND CEMENT CONC.
4"THK. SIDE
SEAL ACCO (TYP.)
71°33'54"
90° SMOOTH ELBOW
ELEV.=-4.77
ELEV.=-4.16
℄ SEWER FORCE MAIN ELEV.=-3.0
36"φ R.C.P.
6"φ H.P. GAS
12"φ C.I. WATERLINE
12"φ STEEL CASING PIPE
END 6"φ D.I. PIPE
12
13
14

℄ OF LEVEE

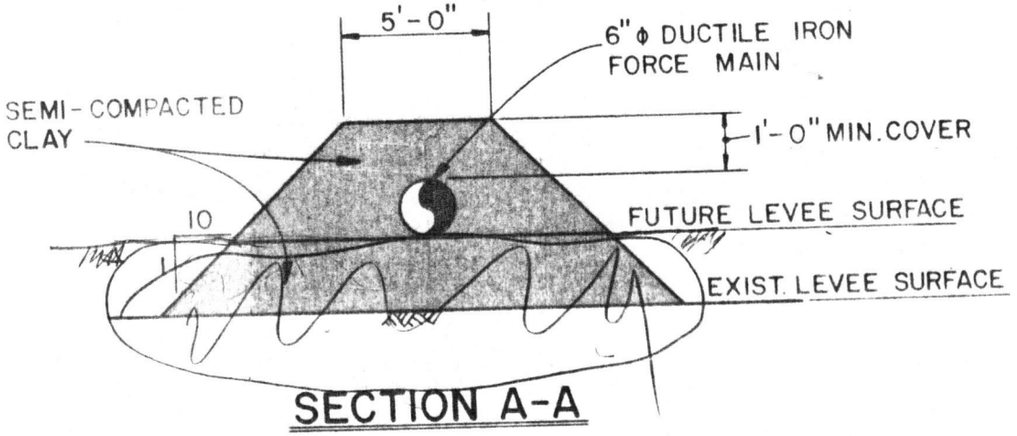

1/32" ± 1/64"
1/16"
FULL PENETRATION WELD
60°


5'-0"
6"φ DUCTILE IRON FORCE MAIN
SEMI-COMPACTED CLAY
1'-0" MIN. COVER
10
1
FUTURE LEVEE SURFACE
EXIST. LEVEE SURFACE


5'-0
SEMI-COMPACTED CLAY
20
1



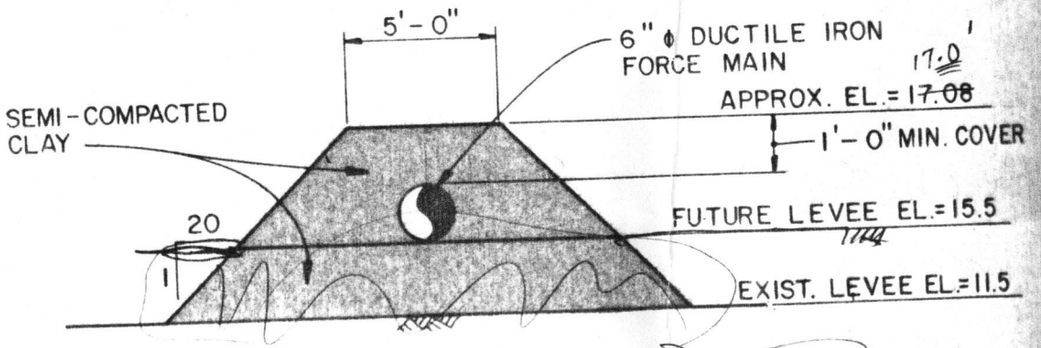
℄ OF LEVEE



SECTION A-A

FORCE MAIN AT LEVEE SIDE SLOPE

N.T.S.



SECTION B-B

FORCE MAIN CROSSING AT LEVEE CROWN

N.T.S.

CELMN-ED-FS (CELMN-ED-DL/21 Sep 87)
SUBJECT: Review of Plans and Specifications for Citrus Lakefront Levee Backfill flotation Channels

TO C/Des Br FROM C/F&M Br DATE 24 Sep 87 CMT 2
Richardson/cl/1031

We have reviewed the subject plans and specifications and have no comments to offer.

WD ALL ENCL

RODNEY P. PICCIOLA
Chief, Foundations and Materials Branch

Jim:
We have NO comments.

Jose Lizarribar
1007
23 Sep 87

9/23

FILE COPY

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
~~ENGWD~~ CELNN-ED-DL	Review of Plans and Specifications for Citrus Lakefront Levee Backfill Flotation Channels

TO C/F&M Br 9/22 FROM C/Des Br DATE 21 Sep 87 CMT 1 MR. WRIGHT/2721

Emergency Contract

1. Please review the enclosed plans and specifications in sufficient detail to detect and correct errors or conflicts and return them at the earliest practicable date, but not later than 25 Sep 87, along with any comments and recommendations you consider necessary or desirable. All major comments on the drawings and/or specifications must be addressed in the responding DF. Only minor comments should be marked on the drawings and specifications

2. Estimated total cost of work, $98,200, beginning in fiscal year 88.

3. All review work should be charged to cost account no. BEC21304L10P170.

~~In addition to the above:~~

~~a.( ). Please send a copy of your review comments to Construction~~ Division (LMNCD-I) in addition to your normal distribution.

b.( ). The Area Engineer will comply with subparagraph e, Inspection of Site, para. 1-7 of CDOM 1180-1-12, titled "Office Memorandum for Supervision, Inspection, and Administration of Contracts" dated September 1981.

c.( ). Construction Division will include liquidated damage information.

d.( ). Construction Division will initiate request (copy to Engineering Division) for authority to use Clause 52.236-16 ALT 1 in accordance with FAR 36.516.

e.( ). (For Maintenance Dredging Projects Only) Operations Division will include the status of compliance with Federal Regulation, Title 33 CPR, Part 209.145.

f.( ). Planning Division's review will include endangered species, cultural resources and EIS pertinent to these plans and specifications. For maintenance dredging projects and any other appropriate projects involving dredging, please send a copy of your review comments to Operations Division ~~(NOD-ND)~~.

g.( ). If forwarded to LMVD for review, Planning Division will furnish ata prescribed in paragraph 18(f) of LMVD Supplement 1, dated 30 Jun 82 to ER 1110-2-1200.

h.( ). Cost Engineering and Specifications Section will include a statement indicating the use of the Clause in FAR 52.236-7009(b)(1) or FAR 52.236-7009(b)(2) (if Mobilization and Demobilization exceeds $50,000) and provide a cost estimate based on the enclosed plans and specifications.

i.( ). Procurement and Supply Division, Construction Division, and Operations Division review will evaluate the effectiveness of biddability, constructibility, and operability in accordance with ER 415-1-11 and LMVD Suppl 1 to ER 415-1-11.

j.( ). The plans and specifications will be forwarded to LMVD for review; therefore, Project Management Branch should provide the appropriate programming data required for the submital letter.

3 Encl
(3 cys each item for Const Div)
(3 cys plans and 1 copy spec for Plng Div)
(5 cys each item for Appropriate Area Office)
1. Specifications
2. Plan, file no. H-8-30323
~~3. Data required for FAR 52.236-16 Add't request~~

Please note that your response is requested by phone immediately with subsequent DF to follow. District Eng. Request expediency in processing this contract in order to reduce Corps liability at Citrus.

BS

Judlin

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

SOLICITATION: LAKE PONTCHARTRAIN LA. & VICINITY, LAKE PONTCHARTRAIN HIGH LEVEL PLAN, CITRUS LAKEFRONT LEVEE,

FOR: BACKFILL FLOTATION CHANNELS (AT MOBILIZATION SITE NO. 1 AND NO. 2) ORLEANS PARISH, LOUISIANA

TO OPEN:

I. NOTE THE AFFIRMATIVE ACTION PROGRAM REQUIREMENT OF THE EQUAL OPPORTUNITY CLAUSE WHICH MAY APPLY TO THE CONTRACT RESULTING FROM THIS SOLICITATION.

II. NOTE THE CERTIFICATION OF NONSEGREGATED FACILITIES IN THIS SOLICITATION. Bidders, offerors and applicants are cautioned to note the "Certification of Non-segregated Facilities" in the solicitation. Failure of a bidder or offeror to agree to the certification will render his bid or offer non-responsive to the terms of solicitations involving awards of contracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity clause.

BIDS MUST PROVIDE FULL, ACCURATE AND COMPLETE INFORMATION AS REQUIRED BY THIS SOLICITATION AND ITS ATTACHMENTS. THE PENALTY FOR MAKING FALSE STATEMENTS IN BIDS IS PRESCRIBED IN 18 U.S.C. 1001. (FAR 52.214-4 APR 1984)

DESCRIPTION AND MAGNITUDE OF WORK:

THE WORK CONSISTS OF BACKFILLING FLOTATION ACCESS CHANNELS AT MOB. SITE NO. 1 AND 2 WITH FILL MATERIAL AVAILABLE FROM DESIGNATED BORROW AREAS; THE REMOVAL OF FILL MATERIAL FROM THE PROXIMITY OF CAMPSITES NEAR MOB. SITE NO. 1; AND ALL INCIDENTAL WORK.

CAUTION TO BIDDERS: In delivery of hand-carried bids, bidders are cautioned to allow sufficient time for delays which may be encountered as a result of frequent trains which are subject to block all access roads to place of bid opening for various lengths of time. Such delays DO NOT permit acceptance or consideration of late bids.

BEC2130AL10P500

MADE WRONG

Sealed bids in ONE COPY for the work described herein will be received until 2:00 P.M. * LOCAL TIME AT THE PLACE OF BID OPENING

at the office of the District Engineer, U. S. Army Engineer District, New Orleans, Corps of Engineers, Foot of Prytania Street, New Orleans, La., and at that time publicly opened.

Information regarding bidding material, bid guarantee, and bonds.

Specifications, Solicitation No. DACW29- * , Bidding Schedule, drawings listed in paragraph SC-3 of the Specifications, Contract Clauses (Construction Contracts) dated _____, in __ pages. Wage Determination Decision No. *

The following provisions apply to bids in excess of $25,000.00:

(a) Bid Bonds. Each bidder shall submit with his bid a Bid Bond (Standard Form 24) with good and sufficient surety or sureties acceptable to the Government in the penal sum of twenty percent (20%) of the bid price or $3,000,000 whichever is lesser. The bid bond penalty may be expressed in terms of a percentage of the bid price or may be expressed in dollars and cents.

(b) Performance and Payment Bonds. Within 7 days after the prescribed forms are presented to the bidder to whom award is made for signature, a written contract on the form prescribed by the specifications shall be executed and two bonds, each with good and sufficient surety or sureties acceptable to the Government furnished: namely a performance bond (Standard Form 25) and a payment bond (Standard Form 25A). The penal sums of such bonds will be as follows:

(1) Performance Bond. The penal sum of the performance bond shall equal one hundred percent (100%) of the contract price.

(2) Payment Bond.

a. When the contract is $1,000,000 or less, the penal sum will be fifty percent (50%) of the contract price.

b. When the contract price is in excess of $1,000,000 but not more than $5,000,000, the penal sum shall be forty percent (40%) of the contract price.

c. When the contract price is more than $5,000,000, the penal sum shall be $2,500,000.

Bonds shall be furnished by the Contractor to the Government prior to commencement of contract performance.

*To be filled in by Contracting Div prior to advertisement.

INSTRUCTIONS TO BIDDERS

1. Each bidder shall, upon request of the Contracting Officer, furnish a list of the plant available to the bidder and proposed for use on the work.

2. Sets of drawings, reduced to half-size and specifications will be furnished upon receipt of payment of $ * per set. If individual plan sheets are requested, they will be furnished at the rate of $ .32 for half-size and $1.40 for full size, for each sheet requested but with a minimum charge of $1.00. The maximum charge shall not exceed the charge for a full set of plans. No refund of the payment for drawings will be made and the drawings need not be returned to the District Engineer. Additional copies of the specifications alone will be furnished an applicant at the rate of $5.00 per copy. Payments shall be made by: company check, money order, or cashier check, and delivered to the Finance and Accounting Officer, U. S. Army Engineer District, New Orleans. Checks and money orders should be made payable to "FAO, USAED, New Orleans District".

3. SITE OF THE WORK. Bidders are advised that for purpose of applicability of Davis-Bacon Act and other contract labor standards provisions, "the site of the work" under the contract to be awarded pursuant to this Invitation may not be limited to the physical place(s) where the construction called for in the contract will remain when work on it has been completed. The "site of work" may include other adjacent or nearby property used by the Contractor or subcontractors during such construction. For example fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, tool yards, etc., will be considered part of the site of the work provided: they are dedicated exclusively or nearly so to the performance of the contract and are so located in proximity to the actual construction location that it would be reasonable to include them (1971 NOV).

4. ARITHMETIC DISCREPANCIES.

(a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by bidders:

(1) Obviously misplaced decimal points will be corrected:

(2) In case of discrepancy between unit price and extended price the unit price will govern:

(3) Apparent errors in extension of unit prices will be corrected; and

(4) Apparent errors in addition of lump-sum and extended prices will be corrected;

*To be filled in by Contracting Div prior to advertisement.

(b) For the purposes of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, extensions, and totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

5. LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWAL OF BIDS (APR 1984)

(a) Any bid received at the office designated in the soliciation after the exact time specified for receipt will not be considered unless it is received before award is made and it:

(1) Was sent by registered or certified mail not later than the fifth calendar day before the date specified for the receipt of bids (e.g., a bid submitted in response to a solicitation requiring receipt of bids by the 20th of the month must have been mailed by the 15th); or

(2) Was sent by mail (or was a telegraphic bid if authorized), and it is determined by the Government that the late receipt was due solely to mishandling by the Government after receipt at the Government installation.

(b) Any modification or withdrawal of bid is subject to the same conditions as in paragraph (a) above.

(c) The only acceptable evidence to establish the date of mailing of a late bid, modification or withdrawal sent either by registered or certified mail is the U. S. or Canadian Postal Service postmark on the wrapper or on the original receipt from the U. S. or Canadian Postal Service. If neither postmark shows a legible date, the bid, or modification or withdrawal shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U. S. or Canadian Postal Service on date of mailing. Therefore, bidders should request the postal clerk to place a hand cancellation bull's-eye postmark on both the receipt and the envelope or wrapper.

(d) The only acceptable evidence to establish the time of receipt at the Government installation is the time/date stamp of that installation on the bid wrapper or other documentary evidence of receipt maintained by the installation.

(e) Notwithstanding paragraph (a) above, a late modification of an otherwise successful bid that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

(f) A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and that person signs a receipt for the bid. (FAR 52.214-7)

6. WORK TO BE PERFORMED BY CONTRACTOR'S OWN ORGANIZATION.

Within 7 days after award the successful bidder/contractor shall furnish the Contracting Officer a description of the items of work which will be performed with its own forces and the estimated cost of those items. (See paragraph SC-16 contained in the Special Clauses of the specifications.)

7. EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (1982 JUNE OCE). Whenever a contract or modification of contract price is negotiated, the Contractor's cost proposals for equipment ownership and operating expenses shall be determined in accordance with the requirements of paragraph SC-4 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE, contained in the Special Clauses section of the specifications. A copy of EP 1110-1-8 "Construction Equipment Ownership and Operating Expense Schedule" is available for review at the office stated in paragraph 10 below "Site Visit Assistance" or at the New Orleans District Office, Attn: C. E. Settoon (telephone number 504-862-2726).

8. PRECONSTRUCTION CONFERENCE. The successful bidder and all known subcontractors will be required to attend a preconstruction conference prior to commencement of work. The successful bidder will also be required to conduct a preconstruction conference with each subcontractor who was not represented at the initial Government-conducted conference. Subcontractor conferences will be held in the presence of a designated Government Representative. When conferences are with second or lower tier subcontractors, attendance of representatives of the prime contractor, all higher tier subcontractors, and the Government will be required.

9. QUANTITIES. Estimates of quantities involved in certain items of work for which bids are being solicited on a lump sum or job basis have been made for the use of the Government. Copies of these quantity estimates may be obtained by contacting the District Engineer, ATTN: C. E. SETTON, CEMN-ED-DE, U. S. Army Engineer District, New Orleans, Foot of Prytania Street, P. O. Box 60267, New Orleans, LA, 70160-0267. It is expressly understood that the accuracy of these estimates is in no ways warranted and that the furnishing of this information to a bidder will not relieve him of his responsibility to estimate the quantities involved. It is further to be expressly understood that in no case will such estimates be used as a basis of a claim against the Government.

10. SITE VISIT ASSISTANCE.

Assistance in visiting the site of the work may be obtained upon calling the Area Engineer:

MR. Chester J. Ashley
New Orleans Area Office
P.O. Box 60267
New Orleans, Louisiana 70160-0267
Telephone: Area Code 504-862-1200

11. PROGRAM DATA. Public Law 298, 89TH Congress of 27 October 1965.

AUTHORITY:

APPROPRIATION: 96X3122, Construction General

12. ORDER OF PRECEDENCE - SEALED BIDDING (JAN 1986). Any inconsistency in this solicitation or contract shall be resolved by giving precedence in the following order: (a) the Schedule (excluding the specifications); (b) representations and other instructions; (c) contract clauses; (d) other documents, exhibits, and attachments; and (e) the specifications. (FAR 52.214-29)

13. SOLICITATION DEFINITIONS - SEALED BIDDING (JUL 1987). "Offer" means "bid" in sealed bidding. "Solicitation" means an invitation for bids in sealed bidding. "Government" means United States Government. (FAR 52.214-1)

14. ACKNOWLEDGMENT OF AMENDMENTS TO INVITATIONS FOR BIDS (APR 1984). Bidders shall acknowledge receipt of any amendment to this solicitation (a) by signing and returning the amendment, (b) by identifying the amendment number and date in the space provided for this purpose on the form for submitting a bid, or (c) by letter or telegram. The Government must receive the acknowledgment by the time and at the place specified for receipt of bids. (FAR 52.214-3)

15. FALSE STATEMENTS IN BIDS (APR 1984). Bidders must provide full, accurate, and complete information as required by this solicitation and its attachments. The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001. (FAR 52.214-4)

16. SUBMISSION OF BIDS (APR 1984).

(a) Bids and bid modifications shall be submitted in sealed envelopes or packages (1) addressed to the office specified in the solicitation and (2) showing the time specified for receipt, the solicitation number, and the name and address of the bidder.

(b) Telegraphic bids will not be considered unless authorized by the solicitation; however, bids may be modified or withdrawn by written or telegraphic notice, if such notice is received by the time specified for receipt of bids. (FAR 52.214-5)

NOTE: For transmission of telegrams, please give Western Union the following TWX number: New Orleans District: 810-951-5262
Answer Back: USA-DIS-ENG-N.O.

NOTE: "Offerors should make sure that the enclosed bid label is placed on the outside of the envelope that will actually arrive at New Orleans District Mail Room."

17. EXPLANATION TO PROSPECTIVE BIDDERS (APR 1984). Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective bidders before the submission of their bid. Oral explanations or instruction given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders as an amendment to the solicitation, if that information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders. (FAR 52.214-6)

18. PREPARATION OF BIDS - CONSTRUCTION (APR 1984).

(a) Bids must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a bid must initial each erasure or change appearing on any bid form.

(b) The bid form may require bidders to submit bid prices for one or more items on various bases, including-

(1) Lump sum bidding;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of subparagraph (1) through (3) above.

(c) If the solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.

(d) Alternate bids will not be considered unless this solicitation authorizes their submission. (FAR 52.214-18)

19. BID GUARANTEE (APR 1984).

(a) Failure to furnish a bid guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid.

(b) The offeror (bidder) shall furnish a bid guarantee in the form of a firm commitment, such as a bid bond, postal money order, certified check, cashier's check, irrevocable letter of credit, or, under Treasury Department regulations, certain bonds or notes of the United States. The Contracting Officer will return bid guarantees, other than bid bonds, (1) to unsuccessful bidders as soon as practicable after the opening of bids, and (2) to the successful bidder upon execution of contractural documents and bonds (including any necessary coinsurance or reinsurance agreements), as required by the bid as accepted.

(c) If the successful bidder, upon acceptance of its bid by the Government within the period specified for acceptance, fails to execute all contractual documents or give a bond(s) as required by the solicitation within the time specified, the Contracting Officer may terminate the contract for default.

(d) Unless otherwise specified in the bid, the bidder shall (1) allow 60 days for acceptance of its bid and (2) give bond within 7 days after receipt of the forms by the bidder.

(e) In the event the contract is terminated for default, the bidder is liable for any cost of acquiring the work that exceeds the amount of its bid, and the bid guarantee is available to offset the difference. (FAR 52.228-1)

20. CONTRACT AWARD - SEALED BIDDING - CONSTRUCTION. (FE. 1986)

(a) The Government will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the Government, considering only price and the price-related factors specified elsewhere in the solicitation.

(b) The Government may reject any or all bids, and waive informalities or minor irregularities in bids received.

(c) The Government may accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the solicitation or the bid. (FAR 52.214-19)

21. MODIFICATIONS PRIOR TO DATE SET FOR OPENING BIDS. The right is reserved, as the interest of the Government may require, to revise or amend the specifications and/or drawings prior to the date set for opening bids. Such revisions or amendments, if any, will be announced by an amendment or amendments to this Invitation for Bids. Copies of such amendments as may be issued will be furnished to all prospective bidders. If the revision or amendments are of a nature which require material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the District Engineer will enable bidders to revise their bids. In such case, the amendments will include an announcement of the new date for opening bids.

22. GOVERNMENT'S PRIVILEGE IN MAKING AWARDS. The Government further reserves the right to make award on any or all schedules of any bid, unless the bidder qualifies such bid by specific limitation; also to make award to the bidder whose aggregate bid on any combination of bid schedules is low. For the purpose of this Invitation for Bids, the word "item" shall be considered to mean "schedule".

23. INFORMATION CONCERNING THIS INVITATION OR THE AWARD. Prospective bidders may submit inquiries concerning this invitation or award of the contract by writing the District Engineer, Department of the Army, New Orleans District, Corps of Engineers, P. O. Box 60267, New Orleans, LA 70160-0267 or by calling (COLLECT CALLS NOT ACCEPTED) Mrs. Glynn S. Davis, Contracting Division, Area Code (504) 862-2880 for information.

24. VALUE ENGINEERING. Special attention is invited to the Contract Clause entitled "Value Engineering--Construction". The New Orleans District policy to authorize immediate payment to Contractors for their portion of VECP savings is an important step in providing adequate incentives to Contractors for their support of this program. Carefully review the contract documents for potential savings and submit ideas promptly upon award to maximize savings.

25. SIZE STANDARDS FOR SMALL BUSINESS CONCERNS. The Standard Industrial Classification for the construction described herein is classified under the Standard Industrial Classification manual as Number * . For purposes of this procurement a small business concern is defined as a concern whose average annual sales or receipts of the concern and its affiliates for the preceding three financial years has not exceeded $ * million.

SCHEDULE H - Annual Receipts Size Standards
For Purpose of Bidding For Construction
Contracts - Special Trade Contractors

Census Classification Code	Industry, Subindustry, or Class of Products	Average 3-year Annual Receipts Size Standard (maximum in million)
1711	Plumbing, Heating (Except Electric), and Air Conditioning	$7
1721	Painting, Paper Hanging, and Decorating	$7
1731	Electric Work	$7
1741	Masonry, Stone Setting, and other Stonework	$7
1742	Plastering, Drywall, Acoustical and Insulation Work	$7
1743	Terrazzo, Tile, Marble, and Mosaic Work	$7
1751	Carpentering and Flooring	$7
1752	Floor Laying and other Floor Work, not Elsewhere Classified	$7
1761	Roofing and Sheet Metal Work	$7
1771	Concrete Work	$7
1781	Water Well Drilling	$7
1791	Structural Steel Erection	$7
1793	Glass and Glazing Work	$7
1794	Excavating and Foundation Work	$7
1795	Wrecking and Demolition Work	$7
1796	Installation or Erection of Building Equipment, Not Elsewhere Classified	$7
1799	Special Trade Contractors, Not Elsewhere Classified	$7

*To be filled in by Contracting Div prior to advertisement.

26. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (APR 1984).

(a) The offeror's attention is called to the Equal Opportunity clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

(b) The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade	Goals for female participation for each trade
*	*

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs Office.

(c) The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction", and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

(d) The Contractor shall provide written notification to the Director, Office of Federal Contract Compliance Programs, within 10 working days following award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the -

(1) Name, address, and telephone number of the subcontractor;
(i) Employer identification number of the subcontractor;
(2) Estimated dollar amount of the subcontract;
(3) Estimated starting and completion dates of the subcontractor; and
(4) Georgraphical area in which the subcontract is to be performed.

(e) As used in this Notice, and in any contract resulting from this solicitation, the "covered area" is the _____**_____. (FAR 52.222-23)

**To be filled in by Contracting Div prior to advertisement.

27. NOTICE OF TOTAL SMALL BUSINESS SET-ASIDE (APR 1984).

(a) Definition. "Small business concern" as used in this clause, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation.

(b) General. (1) Offers are solicited only from small business concerns. Offers received from concerns that are not small business concerns shall be considered nonresponsive and will be rejected. (2) Any award resulting from this solicitation will be made to a small business concern.

(c) Agreement. A manufacturer or regular dealer submitting an offer in its own name agrees to furnish, in performing the contract, only end items manufactured or produced by small business concerns inside the United States, its territories and possessions, the Commonwealth of Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. However, this requirement does not apply in connection with construction or service contracts. (FAR 52.219-6)

~~27. PRE-AWARD INFORMATION (EFARS 53.2/9000-1 (a) 5-1984 OCT). Each bidder~~ shall, upon request of the Contracting Officer, furnish a statement of whether he is now or ever has been engaged in any work similar to that covered by the specifications herein, the dollar value thereof, the year in which such work was performed, and the manner of its execution, and giving such other information as will tend to show the bidder's ability to prosecute the required work. The "such other information" referred to above shall include but is not limited to the following:

(a) The name and address of the office or firm under which such similar work was performed.

(b) A list of key personnel available for the instant project and their qualifications.

(c) A copy of bidder's latest financial statement, including the names of banks or other financial institutions with which the bidder conducts business. If the financial statement is more than 60 days old, a certificate should be attached stating that the financial condition is substantially the same, or if not the same, the changes that have taken place. Such statement will be treated as confidential.

~~NOTE: The above clause is to be used in DREDGING specs, (omit the small business clause when using this clause).~~

NOTICE TO BIDDERS:

In accordance with Engineer Federal Acquisition Regulation Supplement 14.407-8(b), bidders are on notice of the requirement to notify the District Commander, within five (5) days after the opening of bids, of any intention to protest the reasonableness of the Government estimate. All such protests or notices of intent to protest shall be sent to the designated individual set forth below.

28. SERVICE OF PROTEST (JAN 1985). Protests, as defined in Federal Acquisition Regulation (FAR) 33.101, shall be served on the Contracting Officer by obtaining written and dated acknowledgement of receipt from Mrs. Margie B. Drude, Chief, Contracts Award Section, Corps of Engineers, P.O. Box 60267, New Orleans, Louisiana 70160-0267. Phone: Area Code 504-862-2875. (FAR 52.233-2)

29. PROTEST AFTER AWARD (JUN 1985).

(a) Upon receipt of a notice of protest (as defined in FAR 33.101) the Contracting Officer may, by written order to the Contractor, direct the Contractor to stop performance of the work called for by this contract. The

order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Upon receipt of the final decision in the protect, the Contracting Officer shall either -

(1) Cancel the stop-work order; or

(2) Terminate the work covered by the order as provided in the Default, or the Termination for Convenience of the Government, clause of this contract.

(b) If a stop-work order issued under this clause is canceled either before or after a final decision in the protest, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule or contract price, or both, and the contract shall be modified, in writing, accordingly, if-

(1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and

(2) The Contractor requests an adjustment within 30 days after the end of the period of work stoppage; provided, that if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the request at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

(d) If a stop-work order is not canceled and the work covered by the order is terminated for default, the Contracting Officer shall allow, by equitable adjustment or otherwise, reasonable costs resulting from the stop-work order.

(e) The Government's rights to terminate this contract at any time are not affected by action taken under this clause. (FAR 52.233-3)

30. CERTIFICATION OR DISCLOSURE OF OWNERSHIP OR CONTROL BY A FOREIGN GOVERNMENT THAT SUPPORTS TERRORISM (FAR 52.225.xxx).

(a) Except as listed in paragraph (b) below, the bidder (offeror) certifies that no country identified by the Secretary of State as having repeatedly provided support for acts of international terrorism (i.e., Cuba, Iran, Libya, Syria or South Yemen) has a significant interest in the bidder (offeror) or in the entity which has mined, produced, or manufactured the product to be furnished under any contract resulting from this solicitation.

(b) Firm/Country.

NONDOMESTIC CONSTRUCTION MATERIALS:

As required by the contract clause entitled "BUY AMERICAN ACT - CONSTRUCTION MATERIALS (APR 1984)", the following is a list of items of Nondomestic Construction Materials the bidder proposes to use, showing quantity, unit price, and intended use of each item:

Item	Quantity	Unit Price	Intended Use

SOLICITATION, OFFER, AND AWARD *(Construction, Alteration, or Repair)*	1. SOLICITATION NO. DACW29-	2. TYPE OF SOLICITATION ☐ SEALED BID *(IFB)* ☐ NEGOTIATED *(RFP)*	3. DATE ISSUED	PAGE OF PAGES 1 of 2

IMPORTANT – The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.

7. ISSUED BY CODE W42HEM	8. ADDRESS OFFER TO
U.S. Army Engineer District, New Orleans Corps of Engineers P.O. Box 60267 New Orleans, LA 70160-0267	U.S. Army Engineer District, New Orleans Corps of Engineers P.O. Box 60267 New Orleans, LA 70160-0267

9. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE NO. *(Include area code) (NO COLLECT CALLS)*
	Mrs. Glynn S. Davis	Area Code 504-862-2880

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS *(Title, identifying no., date)*:

Information regarding bidding material, bid guarantee, and bonds. This Invitation for Bids consists of the attached specifications, Invitation No. DACW29- Instructions to Bidders: Solicitation, Offer and Award (Standard Form 1442); Bidding Schedule; Drawings listed in paragraph SC-3: Representations and Certifications; Contract Clauses, dated , in pages. and Secretary of Labor Wage Determination Decision No.

11. The Contractor shall begin performance within 10 calendar days and complete it within 50 calendar days after receiving ☐ award, ☒ notice to proceed. This performance period is ☒ mandatory, ☐ negotiable. *(See* paragraph SC-1 .*)*

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? *(If "YES," indicate within how many calendar days after award in Item 12B.)*	12B. CALENDAR DAYS
☒ YES ☐ NO	

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 0 copies to perform the work required are due at the place specified in Item 8 by 2:00 P.M. *(hour)* local time _____ *(date)*. If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☒ is, ☐ is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 30 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

OFFER *(Must be fully completed by offeror)*

14. NAME AND ADDRESS OF OFFEROR *(Include ZIP Code)*	15. TELEPHONE NO. *(Include area code)*
	16. REMITTANCE ADDRESS *(Include only if different than Item 14)*
DUNS NO.	
CODE FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within _____ calendar days after the date offers are due. *(Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.*

AMOUNTS ▶

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS
(The offeror acknowledges receipt of amendments to the solicitation — give number and date of each)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*	20B. SIGNATURE	20C. OFFER DATE

AWARD *(To be completed by Government)*

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN ▶ *(4 copies unless otherwise specified)*	ITEM 27	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO ☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )
26. ADMINISTERED BY CODE U.S. Army Engineer District, New Orleans Corps of Engineers P.O. Box 60267 New Orleans, LA 70160-0267		27. PAYMENT WILL BE MADE BY Disbursing Officer U.S. Army Engineer District, New Orleans P.O. Box 60267 New Orleans, LA 70160-0267

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT *Contractor is required to sign this document and return _____ copies to issuing office.)* Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.

☐ 29. AWARD *(Contractor is not required to sign this document.)* Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN *(Type or print)*		31A. NAME OF CONTRACTING OFFICER *(Type or print)*	
30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

★ U.S. Government Printing Office: 1995—477-064/39131

BF-2

SOLICITATION NO. DACW29-

BIDDING SCHEDULE
(To be attached to Bid Form)

Item No.	Description	Estimated Quantity	Unit	Unit Price	Estimated Amount
1.	Mobilization and Demobilization	Lump Sum	LS		
2.	Mobilization Site 1	Lump Sum	LS		
3.	Mobilization Site 2	Lump Sum	LS		

$ _____

Award will be made as a whole to one bidder.

~~NOTE: Bidders shall furnish unit prices for all items listed on schedule~~ of bid items which require unit prices. If the bidder fails to insert a unit price in the appropriate blank for required items but does furnish an extended total or an estimated amount for such items, the Government will deem his unit price to be the quotient obtained by dividing the extended estimated amount for that line item by the quantity. IF THE BIDDER OMITS BOTH THE UNIT PRICE AND THE EXTENDED ESTIMATED AMOUNT FOR ANY REQUIRED ITEM, HIS BID WILL ~~BE DECLARED NON-RESPONSIVE.~~

REPRESENTATIONS AND CERTIFICATIONS

1. CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985).

(a) The offeror certifies that -

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of negotiated soilcation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory -

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated and will not participate in any action contrary to subparagraph (a)(1) through (a)(3) above

_____

_____

(Insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure. (FAR 52.203-2)

2. CONTINGENT FEE REPRESENTATION AND AGREEMENT (APR 1984).

(a) Representation. The offeror represents that, except for full-time bona fide employees working solely for the offeror, the offeror -
(Note: The offeror must check the appropriate boxes. For interpretation of the representation, including the term "bona fide employee", see Subpart 3.4 of the Federal Acquisition Regulation).

(1) / / has, / / has not employed or retained any person or company to solicit or obtain this contract; and

(2) / / has, / / has not paid or agreed to pay to any person or company employed or retained to solicit or obtain this contract any commission, percentage, brokerage, or other fee contingent upon or resulting from the award of this contract.

(b) Agreement. The offeror agrees to provide information relating to the above Representation as requested by the Contracting Officer and, when subparagraph (a)(1) or (a)(2) is answered affirmatively, to promptly submit to the Contracting Officer

(1) A completed Standard Form 119, Statement of Contingent or other fees, (SF 119); or

(2) A signed statement indicating that the SF 119 was previously submitted to the same contracting office, including the date and applicable solicitation or contract number, and representing that the prior SF 119 applies to this offer or quotation. (FAR 52.203-4)

3. PARENT COMPANY AND IDENTIFYING DATA (APR 1984).

(a) A "parent" company, for the purpose of this provision, is one that owns or controls the activities and basic business policies of the bidder. To own the bidding company means that the parent company must own more than 50 percent of the voting rights in that company. A company may control a bidder as a parent even though not meeting the requirement for such ownership if the parent company is able to formulate, determine, or veto basic policy decisions of the offeror through the use of dominant minority voting rights, use of proxy voting, or otherwise.

(b) The bidder / / is, / / is not (check applicable box) owned or controlled by a parent company.

(c) If the bidder checked "is" in paragraph (b) above, it shall provide the following information:

Name and Main Office, Address of Parent Company (Include Zip Code)	Parent Company's Employer's Identification Number

.....

(d) If the bidder checks "is not" in paragraph (b) above, it shall insert its own Employer's Identification Number on the following line (FAR 52.214-08)

_____

4. TYPE OF BUSINESS ORGANIZATION - SEALED BIDDING (JUL 1987). The bidder, by checking the applicable box, represents that -

(a) It operates as / / a corporation incorporated under the laws of the State of _____, / / an individual, / / a partnership, / / a nonprofit organization, or / / a joint venture.

(b) If, the bidder is a foreign entity, it operates as / / an individual, / / a partnership, / / a nonprofit organization, / / a joint venture, or / / a corporation, registered for business in _____. (FAR 52.214-2)
(country)

5. SMALL BUSINESS CONCERN REPRESENTATION (MAY 1986). The offeror represents and certifies as part of its offer that it / / is, / / is not, a small business concern and that / / all, / / not all, end items to be furnished will be manufactured or produced by a small business concern in the United States, its teritories or possessions, Puerto Rico or the Trust Territory of the Pacific Islands. "Small business concern", as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the size standards in this solicitation. (FAR 52.219-1)

6. SMALL DISADVANTAGED BUSINESS CONCERN REPRESENTATION (APR 1984).

(a) Representation. The offeror represents that it / / is, / / is not, a small disadvantaged business concern.

(b) Definitions.

"Asian-Indian American", as used in this provision, means a United States citizen whose origins are in India, Pakistan, or Bangladesh.

"Asian-Pacific American", as used in this provision, means a United States citizen whose origins are in Japan, China, the Philippines, Vietnam, Korea, Samoa, Guam, the U. S. Trust Territory of the Pacific Islands, the Northern Mariana Islands, Laos, Cambodia, or Taiwan.

"Native-Americans", as used in this provision, means American Indians, Eskimos, Aleuts, and native Hawaiians.

"Small business concern", as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Small disadvantaged business concern", as used in this provision, means a small business concern that (1) is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business having at least 51 percent of its stock owned by one or more socially and economically disadvantaged individuals and (2) has its management and daily business controlled by one or more such individuals.

(c) Qualified Groups. The offeror shall presume that socially and economically disadvantaged individuals include Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asia-Indian Americans, and other individuals found to be qualified by the SBA under 13 CFR 124.1. (FAR 52.219-2)

7. WOMEN-OWNED SMALL BUSINESS REPRESENTATION (APR 1984).

(a) Representation. The offeror represents that it / / is, / / is not, a women-owned small business concern.

(b) Definitions.

"Small business concern", as used in this provision, means a concern, including its affiliates, that is independently owned and operated, not dominate in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121.

"Women-owned", as used in this provision, means a small business that is at least 51 percent owned by a woman or women who are U. S. citizens and who also control and operate the business. (FAR 52.219-03)

8. CERTIFICATION OF NONSEGREGATED FACILITIES (APR 1984).

(a) "Segregated facilities", as used in this provision, means any waiting rooms, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees, that are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin because of habit, local custom, or otherwise.

(b) By the submission of this offer, the offeror certifies that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments, and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The offeror agrees that a breach of this certification is a violation of the Equal Opportunity clause in the contract.

(c) The offeror further agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will-

(1) Obtain identical certifications from proposed subcontractors before the award of subcontracts under which the subcontractor will be subject to the Equal Opportunity clause;

(2) Retain the certifications in the files; and

(3) Forward the following notice to the proposed subcontractors (except if the proposed subcontractors have submitted identical certifications for specific time periods);

NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENT
FOR CERTIFICATIONS OF NONSEGREGATED FACILITIES

A Certification of Nonsegregated Facilities must be submitted before the award of a subcontract under which the subcontractor will be subject to the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e. quarterly, semiannually, or annually).

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001. (FAR 52.222-21)

9. PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (APR 1984). The offeror represents that-

(a) It / / has, / / has not, participated in a previous contract or subcontract subject either to the Equal Opportunity clause of this solicitation, the clause originally contained in Section 310 of Executive Order No. 10925, or the clause contained in Section 201 of Executive Order No. 11114;

(b) It / / has, / / has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards. (FAR 52.222-22)

10. CLEAN AIR AND WATER CERTIFICATIONS (APR 1984).

(a) Any facility to be used in the performance of this proposed contract is / /, is not / /, listed on the Environmental Protection Agency List of Violating Facilities; and

(b) The offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from the Administrator, or a designee, of the Environmental Protection Agency, indicating that any facility that the offeror proposes to use for the performance of the contract is under consideration to be listed in the EPA List of Violating Facilities; and

(c) The offeror will include a certification substantially the same as this certification, including this paragraph (c), in every nonexempt subcontract. (FAR 52.223-1)

11. DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER REPORTING (1980 DEC).

In the block with its name and address, the offeror should supply the Data Universal Numbering System (DUNS) Number applicable to that name and address. The DUNS Number should be preceded by "DUNS". If the offeror does not have a DUNS Number, it may obtain one from any Dun and Bradstreet branch office. No offeror should delay the submission of its offer pending receipt of its DUNS Number.

NOTE: A DUNS Number must be furnished, in accordance with the above clause. A Contractor bidding on a Government contract can be assigned a DUNS Number by calling (215) 776-4388 and stating that it is bidding on a Government contract and then supplying its name and address. No other information is required by Dun and Bradstreet. If the Contractor fails to mention the work will be under Government contract, it will be required to go through the normal Dun and Bradstreet classification procedure.

12. DEFINITION OF SMALL BUSINESS CONCERN.

(a) Explanation of Term. "Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR 121. (FAR 19-101)

(b) Size Standards for Contruction and Special Trades.

(1) Construction. A concern is small if its average annual receipts for its preceding 3 fiscal years did not exceed $17 million. However, if 75 percent or more of the work (in terms of dollar value) called for by the contract is classified in one of the industries, subindustries, or classes of products listed in this paragraph, the concern is small if its average annual receipts for its preceding 3 fiscal years did not exceed the size standard for that industry, subindustry, or class of products. (See Division C, "Contract Construction", of the SIC Manual.)

(2) Dredging. A concern is small if (1) its average annual receipts for its preceding 3 fiscal years did not exceed $13.5 million, and (2) at least 40 percent of the yardage in the contract's plans and specifications is dredged with equipment owned by the concern or obtained from another small business dredging concern. (FAR 19.102-1)

13. DEBARRED OR SUSPENDED BIDDERS. By entering into this contract, the Contractor certifies that neither he nor any person or firm who has an interest in the Contractor's firm is a person ineligible to be awarded Government contracts by virtue of being suspended or debarred in accordance with FAR subpart 9.4.

~~(Jul 87)~~

INDEX

PART I - SPECIAL CLAUSES

(JUL 87)

SPECIFICATIONS

PART I - SPECIAL CLAUSES

SC-1 COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (FAR 52.212-3 - 1984 APR). The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 50 calendar days after the date of receipt by him of notice to proceed. The time stated for completion shall include final cleanup of the premises.

SC-2 LIQUIDATED DAMAGES. (FAR 52.212-5 - 1984 APR).

a. If the Contractor fails to complete the work within the time specified in the contract, or any extension, the Contractor shall pay to the Government as liquidated damages, the sum of $ for each day of delay.

b. If the Government terminates the Contractor's right to proceed, the resulting damage will consist of liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the Government in completing the work.

c. If the Government does not terminate the Contractor's right to proceed, the resulting damage will consist of liquidated damages until the work is completed or accepted.

SC-3 CONTRACT DRAWINGS AND SPECIFICATIONS. (DFARS 52.236-7002 - 1965 JAN).

a. Five sets (unless otherwise specified herein) of large scale contract drawings, and specifications will be furnished the Contractor without charge except applicable publications incorporated into the technical specifications by reference. Additional sets will be furnished on request at the cost of reproduction. The work shall conform to the following contract drawings all of which form a part of these specifications and are available in the office of the U.S. Army Engineer District, New Orleans, Corps of Engineers, Foot of Prytania Street, New Orleans, Louisiana.

Title	File No. and	Drawing No.
Lake Pontchartrain, Louisiana and Vicinity, Lake Pontchartrain High Level Plan, Citrus Lakefront Levee, Backfill Flotation Channels (Mobilization Site No. 1 and 2)	H-8-30323	1 thru 4

11. Notification of Noncompliance. The Contracting Officer will notify the Contractor of any noncompliance with the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or his representative at the site of the work, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

12. Payment. Separate payment will not be made for providing and maintaining an effective Quality Control program as required above, and all costs associated therewith shall be included in the applicable unit prices or lump sum prices contained in the Bidding Schedule. (ER 1180-1-6)

SC-4 EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE. (EFARS 52.2/9108(f) - 1985 JAN).

a. Allowable cost for construction and marine plant and equipment in sound workable condition, owned or controlled and furnished by a Contractor or Subcontractor at any tier shall be based on actual cost data when the Government can determine both ownership and operating costs for each piece of equipment or equipment groups of similar serial and series from the Contractor's accounting records. When both ownership and operating costs cannot be determined from the Contractor's accounting records, equipment costs shall be based upon the applicable provisions of EP 1110-1-8, "Construction Equipment Ownership and Operating Expense Schedule," Region III. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the Contracting Officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retrospective pricing, the schedule in effect at the time the work was performed shall apply.

b. Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(2)(ii) and FAR 31.205-36, substantiated by certified copies of paid invoices. Rates for equipment rented from an organization under common control, lease-purchase or sale-leaseback arrangements will be determined using the schedule except that rental costs leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated

b. Omissions from the drawings or specifications or the mis-description of details of work which are manifestly necessary to carry out the intent of the drawings and specifications or which are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

c. The Contractor shall check all drawings furnished him immediately upon their receipt and shall promptly notify the Contracting Officer of any discrepancies. Figures marked on drawings shall in general be followed in preference to scale measurements. Large scale drawings shall in general govern small scale drawings. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors which might have been avoided thereby.

~~SC-4 CONTRACTOR QUALITY CONTROL (CQC) (31 JULY 1986).~~

1. General. The Contractor shall establish and maintain an effective quality control system in compliance with the contract clause entitled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to provide materials, equipment, workmanship, fabrication, construction and operations which comply with contract requirements. The system shall cover construction operations both onsite and offsite, and shall be keyed to the proposed construction sequence.

2. Coordination Meeting. Before start of construction, the Contractor shall meet with the Contracting Officer (CO) or his authorized representative (COR) and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both onsite and offsite work, and the interrelationship of the Contractor's management and control with the Government's inspection. Minutes of the meeting shall be prepared and signed by both the Contractor and the CO or COR. The minutes shall become a part of the contract file. There may also be occasions when subsequent conferences will be called to reconfirm mutual understandings.

3. Quality Control Plan.

a. General. The Government will consider an interim plan for the first 30 days of operation. However, the Contractor shall furnish for approval by the Government, not later than 15 days after receipt of Notice to Proceed, the Contractor Quality Control (CQC) Plan within which he proposes to implement the ~~requirements of Contract Clause entitled "Inspection of~~

next sheet is page SC-8

lessees are allowable. Costs for major repairs and overhaul are unallowable.

c. When actual equipment costs are proposed and the total amount of the pricing action is over $25,000, cost or pricing data shall be submitted on Standard Form 1411, "Contract Pricing Proposal Cover Sheet." By submitting cost or pricing data, the Contractor grants to the Contracting Officer or an authorizing representative the right to examine those books, records, documents and other supporting data that will permit evaluation of the proposed equipment costs. After price agreement the Contractor shall certify that the equipment costs or pricing data submitted are accurate, complete and current.

NOTE: A copy of the manual can be obtained from the Government Printing Office (GPO) ~~schedule will be provided to the successful~~ bidder upon request, others may obtain copies at their request from OCE Publications Depot, 2803 52nd Ave., ~~Hyattville, Md. 20718, telephone (301)436-2063.~~ by calling Area Code (202) 783-3238. The cost will be $9.50.

SC-5 PHYSICAL DATA (FAR 52.236-4 - 1984 APR). Data and information furnished or referred to below is for the Contractor's information. The Government will not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

a. The indications of physical conditions on the drawings and in the specifications are the result of site investigations by surveys and borings.

b. Field notes, representative soil samples, field and laboratory test results, and other data on which this information is based are available at U.S. Army Engineer District, New Orleans, Corps of Engineers, Attn: LMNED, Foot of Prytania Street, P.O. Box 60267, New Orleans, Louisiana 70160-0267, and access thereto may be had upon request.

c. Weather Conditions. Data on weather conditions may be obtained from the National Weather Service.

d. Transportation Facilities. (1) The sites of work are accessible by water transportation from Lake Pontchartrain.

e. Hydrographs shown on the drawings do not constitute a prediction.

SC-6 LAYOUT OF WORK. (EFARS 52.2/9108 (a) - 1965 APR OCE).

a. The Government will establish base lines and bench marks at the site of the work as shown on the drawings.

(2) Vehicular and equipment access across railroad tracks will not be allowed unless permission is received from Southern Railway Systems and a copy of that permission is provided to the Contracting Officer.

b. From the base lines and bench marks established by the Government, the Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary modifications to the contract work. All layout work shall be witnessed and approved by the CO prior to beginning any other work and payment for such layout shall be distributed throughout the existing bid items.

c. The Contractor shall furnish, at his own expense, such stakes, templates, platforms, equipment, tools and material, and all labor as may be required in laying out any part of the work from the base lines and bench marks established by the Government. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other marks established by the Contracting Officer until authorized to remove them, and if such marks are destroyed, by the Contractor or through his negligence, prior to their authorized removal, they may be replaced by the Contracting Officer, at his discretion, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

~~SC-8 QUANTITY SURVEYS (FAR 52.236-16) - 1984 APR).~~

a. Quantity surveys will be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

b. The Government will conduct the original and final surveys and make the computations based on them. The Contractor shall conduct the surveys for any periods for which progress payments are requested and shall make the computations based on these surveys. All surveys conducted by the Contractor shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance.

c. Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

~~*SC-8 QUANTITY SURVEYS (FAR 52.236-16) (ALTERNATE 1) 1984~~ APR).

a. Quantity surveys shall be conducted, and the data derived from these surveys shall be used in computing the quantities of work performed and the actual construction completed and in place.

b. The Contractor shall conduct the original and final surveys and surveys for any periods for which progress payments are requested. All these surveys shall be conducted under the direction of a representative of the Contracting Officer, unless the Contracting Officer waives this requirement in a specific instance. The Government shall make such computations as are necessary to determine the quantities of work performed or finally in place. The Contractor shall make the computations based on the surveys for any periods for which progress payments are requested.

c. Promptly upon completing a survey, the Contractor shall furnish the originals of all field notes and all other records relating to the survey or to the layout of the work to the Contracting Officer, who shall use them as necessary to determine the amount of progress payments. The Contractor shall retain copies of all such material furnished to the Contracting Officer.

~~*Division Approval is required to use this FAR Clause for the Contractor to make quantity surveys.~~

SC-9 DAMAGE TO WORK (EFARS 52.2/9109 (c) 1966 MAR OCE). The responsibility for damage to any part of the permanent work shall be as set forth in the Contract Clauses of the contract entitled "Permits and Responsibilities." However, if, in the judgment of the Contracting Officer, any part of the permanent work performed by the Contractor is damaged by flood, earthquake, hurricane or tornado, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor shall make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit price or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to the Contract Clause entitled, "Changes" will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities,

materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense, regardless of the cause of such damage.

SC-8 SAFETY PROVISIONS.

a. Accident Investigations and Reporting. Refer to Oct 84 revised edition of EM 385-1-1, para. 02.A.01. Accidents shall be investigated by the immediate supervisor of the employee(s) involved and reported to the Contracting Officer or his representative within one working day after the accident occurs. A report of all mishaps occurring on the project shall be submitted to the Contracting Officer's Representative within four calendar days following the incident. All data reported must be complete, timely and accurate. A follow up report shall be submitted when the estimated lost time days differs from actual lost time days.

b. Accident Prevention Program. Refer to Contract Clause entitled "Accident Prevention" of this contract. Within 15 days after receipt of Notice to Award of the contract, and at least 7 days prior to the prework conference, four copies of the Accident Prevention Program shall be submitted to the Contracting Officer for review and approval. The program shall be prepared in the following format.

(1) An executed LMV Form 358R, Administrative Plan.

(2) An executed LMV Form 359R, Activity Hazard Analysis.

(3) A copy of company policy statement of accident prevention and any other guidance statements normally provided new employees.

(4) When marine plant and equipment are in use under a contract, the method of fuel oil transfer shall be included on LMV Form 414R, Fuel Oil Transfer. (Refer to 33 CFR 156).

The Contractor shall not commence physical work at the site until the program has been approved by the Contracting Officer, or his authorized representative. At the Contracting Officer's discretion, the Contractor may submit his Activity Hazard Analysis only for the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase. Also refer to Section 1 of EM 385-1-1, revised Oct 84.

c. Daily Inspections. The Contractor shall institute a daily inspection program to assure safety requirements are being fulfilled. Reports of daily inspections shall be maintained at the jobsite ~~in accordance with SC-1, subparagraph 10~~. The reports shall be records of the daily inspections and resulting actions. Each report shall include, as a minimum, the following:

(1) Phase(s) of construction underway during the inspection.

(2) Locations of areas where inspections were made.

(3) Results of inspections, including nature of deficiencies observed and corrective action taken, or to be taken, date, and signature of the person responsible for its contents.

d. Revised ~~*Safety Sign. The Contractor shall furnish, erect, and~~ maintain a safety sign at the site, as located by the Contracting Officer. The sign shall conform to the requirements of this paragraph and the drawing included at the end of these Special Clauses. The lettering shall be black, the castle red, and the background white. When placed on a floating plant, the sign may be half size. Upon request, the Government will furnish two decals of the engineer castle. The sign shall be erected as soon as practicable, but not later than 15 calendar days after the date established for commencement of work. The data required shall be current.

~~*[NOTE: The above paragraph is mandatory when the length of the contract is expected to be more than 90 days.]~~

e. Machinery and Mechanized Equipment. Machinery and mechanized equipment used under this contract shall comply with the following:

(1) When a rubber-tired front-end loader, bulldozer, etc., is operated on a floating plant, either a bumper or curb with a minimum height of one-third of the outside diameter of the largest tire on this equipment, a barge tied alongside, or other means approved in writing by the Contracting Officer shall be used to prevent equipment from moving or falling into the water.

(2) The stability of crawler, truck, and wheel-mounted cranes shall be assured.

(a) The manufacturer's load-rating chart may be used to determine the maximum allowable working loading for each particular crane's boom angle provided:

1. a test load, with a boom angle of 20 degrees, confirms the manufacturer's load-rating table;

2. there has been no change in the boom or other structural members; and

3. there has been no change in the machine's original counterweight.

(b) Stability tests are required, however, if:

1. there is no manufacturer's loading chart securely fixed to the operator's cab;

2. there has been a change in boom or other structural members; or

3. there has been a change in the counterweight. The test shall consist of lifting a load with the boom in the least stable undercarriage position and at an angle of 20 degrees above the horizontal. The test shall be conducted under close supervision on a firm, level surface. The load that tilts the machine shall be identified as the test load. The test load moment (in ft-lbs) shall then be calculated by multiplying the horizontal distance (in ft) from the center of rotation of the machine to the test load, times the test load (in lbs). Three-fourths of this test load moment shall then be used to compute the maximum allowable operating loads for the boom at 20, 40, 60, and 80 degrees above horizontal. From these maximum allowable operating loads, a curve shall be plotted and posted in the cab of the machine in sight of the operator. These values shall not be exceeded except in the performance test described below. The test load shall never exceed 110 percent of the manufacturer's maximum rated capacity.

(c) In lieu of the test and computations above, the crane may be load tested for stability at each of the four boom positions listed above.

(3) Performance tests shall demonstrate the strength, capability, and adequacy of power, brakes, clutches, and controls to safely maneuver 125 percent of the maximum allowable load as determined above for the 80-degree position or the manufacturer's rated load for the 80-degree position, whichever is applicable. A performance test shall be conducted after each stability test, when the crane is placed in service on a project, and at least every 12 months.

(4) Inspections shall be made which will ensure a safe and economical operation of both cranes and draglines. Specific inspections and their frequencies are listed on the appropriate

checklists noted below. Results of inspections and tests for cranes shall be recorded on the Safety Inspection Check List, LMV Form 326R, and inspection results for draglines shall be recorded on LMV Form 373R. Copies of the inspections and tests shall be available at the jobsite for review. All stability and performance tests on cranes and all complete dragline inspections shall be witnessed by the Contracting Officer or his authorized representative.

(5) A complete dragline inspection shall be made:

(a) at least annually;

(b) prior to the dragline being placed in operation; and

(c) after the dragline has been out of service for more than 6 months.

f. Crane Boom Stops. The following requirements are to be used in lieu of section 18.C.19 of EM 385-1-1, U.S. Army Corps of Engineers, Safety and Health Requirements Manual:

(1) All mobile cranes with cable-supported booms (except draglines) shall be equipped with boom stops to resist the boom falling backwards. At the angle specified by the crane manufacturer, the boom stop shall limit the movement of that portion of the boom below the point at which the boom stop acts on the boom. The boom stops shall provide energy withstanding resistance to the backward movement of the boom through an angular movement of approximately the last 5 degrees (over travel) about the boom foot pin.

(2) The boom stop manufacturer shall certify that the boom stop has been designed, functionally tested and manufactured such that it will fulfill the requirement of SAE J220, Crane Boom Stops (May 1971). (Pre 1971 cranes will essentially meet the requirements of SAE J220 except for paragraph 4.1.) Also, a crane/boom stop field test will be conducted. The object of this test is to verify the proper setup of the boom stops and functioning of the boom hoist disengaging device. This test will be conducted prior to initiating the load performance test required by EM 385-1-1 sections 18.C.01 and 18.D.01 Deficiencies noted should be corrected prior to the load performance test. Test procedures are as follows:

Step 1. Check for availability of operator manual(s).

Step 2. Make sure crane is level with outriggers (if so equipped) in place.

Step 3. Check boom and boom stops for misalignment,

Step 4. Check boom stop pins (at connections) for lubrication, wear and damage.

Step 5. Check boom angle indicator with inclinometer for correctness.

Step 6. Check boom hoist disengaging device for proper adjustment and proper angle in accordance with the operator manual(s).

Step 7. Check for proper operational setup of the boom stops and boom hoist disengaging device by physically booming up the boom just to the point where the boom and boom stops touch for cantilever/scissors type or to the point of compression of telescoping types as long as the boom does not go beyond the point of operation of the boom hoist disengaging device. It is not the intent of this test to override the boom hoist disengaging device.

(3) By 1 July 1988 all cranes with cable supported booms (except draglines) shall be equipped with a properly functioning boom hoist disengaging device which shall automatically and completely disengage the boom hoisting power from the boom hoist drum when the boom has reached its highest rated angle. When power is thus disengaged, the boom hoist drum shall automatically be restrained from motion in the lowering direction under any rated condition.

(4) All cranes will at all times have a current set of operator manual(s) (instructions) for the particular model/type/class crane. Operator manual(s) MUST be located in the crane cab prior to testing and must remain there. When operator manual(s) are not in the language of the operator, basic operating instructions must accompany the manual and be presented in a manner (language and/or diagrams, pictures, sketches, etc.) the operator can comprehend. If the manual(s) and/or basic operating instructions become unavailable due to unusual circumstances (stolen, lost, mutilated, destroyed, etc.) then a deadline for replacement will be established by the designated authority.

g. Haul Roads. (EFARS 52.2/9008 - 1985 JAN). Whenever practical, one-way haul roads shall be used on this contract. Haul roads built and maintained for this work shall comply with the following:

(1) One-way haul roads for off-the-road equipment; e.g., belly dumps, scrapers, and off-the-road trucks shall have a

minimum usable width of 25 ft. One-way haul roads for over-the-road haulage equipment only (e.g., dump trucks, etc.) may be reduced to a usable width of 15 ft. When the Contracting Officer determines that it is impractical to obtain the required width for one-way haul roads (e.g., a road on top of a levee), a usable width of not less than 10 feet may be approved by the Contracting Officer, provided a positive means of traffic control is implemented. Such positive means shall be signs, signals, and/or signalmen and an effective means of speed control.

(2) Two-way haul roads for off-the-road haulage equipment shall have a usable width of 60 feet. Two-way haul roads for over-the-road haulage equipment only may be reduced to a usable width of 30 feet.

(3) Haul roads shall be graded and otherwise maintained to keep the surface free from potholes, ruts, and similar conditions that could result in unsafe operation.

(4) Grades and curves shall allow a minimum sight distance of 200 feet for one-way roads and 300 feet for two-way roads. Sight distance is defined as the centerline distance an equipment operator (4.5 feet above the road surface) can see an object 4.5 feet above the road surface. When conditions make it impractical to obtain the required sight distance (e.g., ramps over levees), a positive means of traffic control shall be implemented.

(5) Dust abatement shall permit observation of objects on the roadway at a minimum distance of 300 feet.

(6) Haul roads shall have the edges of the usable portion marked with posts at intervals of 50 feet on curves and 200 feet (maximum) elsewhere. Such markers shall extend 6 feet above the road surface and, for nighttime haulage, be provided with reflectors in both directions.

h. Means of Escape for Personnel Quartered, or Working, on Floating Plant. Two means of escape shall be provided for assembly, sleeping, and messing areas on floating plants. For areas involving 10 or more persons, both means of egress shall be through standard size doors opening to different exit routes. Where nine or fewer persons are involved, one of the means of escape may be a window (minimum dimensions 24 in. by 36 in.) which leads to a different exit route. Refer to Section 26 of EM 385-1-1, revised Oct 84.

i. Emergency Alarms and Signals.

(1) Alarms. Emergency alarms shall be installed and maintained on all floating plant requiring a crew where it is possible for either a passenger or crewman to be out of sight or

hearing from any other person. The alarm system shall be operated from the primary electrical system with standby batteries on trickle charge that will automatically furnish the required energy during an electrical-system failure. A sufficient number of signaling devices shall be placed on each deck so that the sound can be heard distinctly at any point above the usual background noise. All signaling devices shall be so interconnected that actuation can occur from at least one strategic point on each deck.

(2) Signals.

(a) Fire Alarm Signals. The general fire alarm signal shall be in accordance with paragraph 97.13-15b of the Coast Guard Rules and Regulations for Cargo and Miscellaneous Vessels, Sub-Chapter I, 1 Sep 77 (CG 257).

(b) Abandon Ship Signals. The signal for abandon ship shall be in accordance with paragraph 97.13-15c of the reference cited in (a) above.

(c) Man-Overboard Signal. Hail and pass the word to the bridge. All personnel and vessels capable of rendering assistance shall respond.

j. Hurricane Plan. A detailed plan for protection and evacuation of personnel and plant, in the event of an impending hurricane or storm, is required as an enclosure to the Contractor's Accident Prevention Program. This plan shall be submitted to the Contracting Officer, or his representative, for review prior to the preconstruction conference. The plan shall include at least the following:

(1) The time each phase of the plan will be put in effect. The time shall be the number of hours remaining for the storm to reach the worksite if it continues at the predicted speed and direction.

(2) The safe harbor for personnel and plant specifically identified.

(3) The name of the boat which will be used to move the plant, its type, capacity, speed, and availability.

(4) The estimated time necessary to move the plant to the safe harbor after movement is started.

~~[NOTE: THE ABOVE PARAGRAPH IS MANDATORY WHEN FLOATING PLANT WILL BE WORKING SOUTH OF LATITUDE 30°00', OR EAST OF LONGITUDE 90°30' WHEN SOUTH OF LATITUDE 31°00.]~~

next sheet is page SC-20

~~items. In the event the Contractor fails to furnish the required~~ facilities, the Government may elect to procure the required facilities and deduct all costs from amounts due or to become due under this contract.

c. The Contractor shall provide daily janitorial services for this and other buildings at the site throughout the life of the contract. The cost of this service shall be distributed throughout the existing bid items and there shall be no separate payment.

*SC-12 PROJECT SIGN. Prior to commencement of work, the Contractor shall construct a project sign at the site of the work at a location directed by the Contracting Officer. The sign, which will identify the work with the Corps of Engineers, shall conform to the requirements of the drawing attached at the end of the Special Clauses. The background of the sign shall be white, the letters black, and the castle red. The castle insignia may be either solid or in outline. No separate payment will be made for the construction and erection of the project sign and all costs in connection therewith will be considered an incidental obligation of the Contractor. Upon completion of the work, the sign shall become the property of the Contractor and shall be removed from the job site.

~~*NOTE: Project sign is not required on dredging jobs and jobs that are less than 120 days.~~

SC-9 RIGHTS-OF-WAY.

a. Rights-of-way for construction purposes and for access through private lands to the work site will be furnished by the Government without cost to the Contractor, as shown on the contract drawings. If the right-of-way for access is used by the Contractor, he shall, at his expense, be required to do all work necessary to make such right-of-way suitable for traveling to and from the work site. Upon completion of the contract work, any such access roadway and right-of-way furnished by the Government shall be left in a condition satisfactory to the Contracting Officer.

b. The Contractor shall procure, without expense or liability to the Government, all additional lands, access roads, or rights-of-way desired for his own convenience in the performance of the work. The Contractor shall notify the Contracting Officer of his intention and, if required by the Contracting Officer, secure clearances from both the Louisiana State Historical Preservation Office and the Louisiana Archaeological and Antiquities Commission. Any agreements or permits with levee boards, parishes, or political subdivisions

for moving material and equipment will also be the responsibility of the Contractor. Any delays to the Contractor resulting from delays in procuring such additional lands, access roads, right-of-way, or permits for moving material and equipment for his own use will not be made a basis of any claim for increase in the cost or time of performance of the work. The Contractor shall make his own investigations to determine the conditions, restrictions, and difficulties which may be encountered in the transportation of material and equipment to the work site.

SC-14 WORK IN QUARANTINED AREA (EFARS 52.2/9108 (d) 1968 MAY OCE). The work called for by this contract involves activities in parishes quarantined by the Department of Agriculture to prevent the spread of certain plant pests which may be present in the soil. The Contractor agrees that all construction equipment and tools to be moved from such parishes shall be thoroughly cleaned of all soil residues at the construction site with water under pressure and that hand tools shall be thoroughly cleaned by brushing or other means to remove all soil. In addition, if this contract involves the identification, shipping, storage, testing, or disposal of soils from such a quarantined area, the Contractor agrees to comply with the provisions of ER 1110-1-5 and attachments, a copy of which will be made available by the Contracting Officer upon request. The Contractor agrees to assure compliance with this obligation by all subcontractors.

SC-15 SUBMITTALS. Within 15 days after receipt of notice to proceed, the Contractor shall complete and submit to the Contracting Officer, in duplicate, submittal register ENG Form 4288 listing all submittals and dates. In addition to those items listed on ENG Form 4288, the Contractor will furnish submittals for any deviation from the plans or specifications. The scheduled need dates must be recorded on the document for each item for control purposes. In preparing the document, adequate time (minimum of 30 days or more) will be allowed for review and approval and possible resubmittal. Scheduling shall be coordinated with the approved progress schedule. The Contractor's Quality Control representative shall review the listing at least every 30 days and take appropriate action to maintain an effective system. Copies of updated or corrected listings shall be submitted to the Contracting Officer at least every 60 days in the quantity specified. Payment will not be made for any material or equipment which does not comply with contract requirements. (ER 415-1-10 May 1984)

NOTE: The submittal listing in tabular form, of technical items the Contractor shall submit to the Contracting Officer, as indicated in the contract requirements is attached at the end of the Special Clauses. This register is not necessarily complete, and the Contractor shall be responsible for developing a comprehensive register.

SC-16 CERTIFICATES OF COMPLIANCE (EFARS 52.2/9108 (c) - 1969 MAY OCE). Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in 3 copies. Each certificate shall be signed by an official authorized to certify in behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet specified requirements.

~~SC-17 AVAILABILITY OF SPECIFICATIONS, STANDARDS AND~~ DESCRIPTIONS. Specifications, standards, and descriptions cited in this solicitation are available as indicated below:

a. Unclassified Federal, Military and Other Specifications and Standards (Excluding Commercial), and Data Item Descriptions.

(1) Availability of Specifications Listed in the DOD Index of Specifications and Standards (DODISS) (FAR 52.210-2 1984 APR). Single copies of specifications cited in this solicitation may be obtained by submitting a written request to the supply point listed below. The request must contain the title of the the specification, its number, date, applicable amendment(s), and the solicitation or contract number. In case of urgency, telephone or telegraphic requests are acceptable. Voluntary standards, which are not available to offerors and comprehensive from Government sources, may be obtained from the organization responsible for their preparation, maintenance, or publication. Submit request on DD Form 1425 (Specifications and Standards Requistion) to:

Commanding Officer
U.S. Naval Publications and Forms Center
5801 Tabor Avenue
Philadelphia, Pa. 19120

Telex Number	834295
Western Union Number	710-670-1685
Telephone Number	(215)697-3321

(2) Availability of Descriptions Listed in DOD Directive 5000.19-L, Volume II (FAR 52. 210-7001 1984 APR). Copies of the Acquisition Management Systems and Data Requirements Control List, DOD Directive 5000.19-L, Volume II, may also be ordered from the supply point listed herein. When requesting a data item description, the request shall cite the ~~applicable data item number set forth in the solicitation.~~

~~Submit request on DD Form 1425 to: The Department of Defense~~ Index of Specifications and Standards (DODISS), Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402.

(3) When requesting a specification or standard, the request shall indicate the title, number, date and any applicable amendment thereto by number and date. When requesting a data item description, the request shall cite the applicable data item number set forth in the solicitation. When DD Form 1425 is not available, the request may be submitted in letter form, giving the same information as listed above, and the solicitation or contract number involved. Such requests may also be made to the activity by Telex No. 834295, Western Union No. 710-670-1685 or telephone (area code 215-697-3321) in case of urgency. (DOD FAR Supp. 52.210-70001.)

b. Commercial Specifications, Standards and Descriptions. These specifications, standards and descriptions are not available from Government sources. They may be obtained from the publishers.

SC-18 COMMERCIAL WARRANTY. The Contractor agrees that the standard commercial equipment furnished under this contract shall be covered by the most favorable commercial warranties the manufacturer gives to any customer for such equipment, and that the remedies provided herein are in addition to and do not limit any rights afforded to the Government by any other clause of this contract. Two copies of the warranties shall be furnished by the ~~Contractor to the Contracting Officer.~~

SC-19 MOBILIZATION AND DEMOBILIZATION, PAYMENT ITEM NO. 1 (DFARS 52.236-7009 (b) (2) - 1985 DEC.).

a. All costs connected with the mobilization and demobilization of all of the Contractor's plant and equipment will be paid for at the contract lump sum price for this item. Sixty percent (60%) of the lump sum price will be paid to the Contractor upon completion of his mobilization at the work site. The remaining forty percent (40%) will be paid to the Contractor upon completion of demobilization.

b. In the event the Contracting Officer considers that the amount in this item (60%), which represents mobilization and (40%) which represents demobilization, does not bear a reasonable relation to the cost of the work in this contract, the Contracting Officer may require the Contractor to produce cost data to justify this portion of the bid. Failure to justify such price to the satisfaction of the Contracting Officer will result in payment of actual mobilization costs, as determined by the

Contracting Officer at the completion of mobilization, and actual demobilization costs, as determined by the Contracting Officer at the completion of demobilization, and payment of the remainder of this item in the final payment under this contract. The determination of the Contracting Officer is not subject to appeal.

SC-13 ENVIRONMENTAL LITIGATION (1974 NOV OCE).

a. If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the Contracting Officer, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the Contracting Officer in the administration of this contract under the terms of the "Suspension of Work" clause of this contract. The period of such suspension, delay or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.

b. The term "environmental litigation", as used herein, means a lawsuit alleging that the work has an adverse effect on the environment or that the Government has not duly considered, either substantively or procedurally, the effect of the work on the environment.

SC-14 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER.

a. This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with the Contract Clauses entitled "Default (Fixed Price Construction)." The listing below defines the monthly anticipated adverse weather for the contract period and is based upon historical precipitation data for the geographic location of the project.

MONTHLY ANTICIPATED ADVERSE WEATHER CALENDAR DAYS

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
*( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )	( )

b. (1) The above schedule of anticipated adverse weather will constitute the base line for monthly (or portion thereof) weather time evaluations. Upon acknowledgement of the notice to

proceed and continuing throughout the contract on a monthly basis, actual adverse weather days will be recorded on a calendar day basis (include weekends and holidays) and compared to the monthly anticipated adverse weather in subparagraph a. above. For purposes of subparagraph b, the term actual adverse weather days shall include days impacted by actual adverse weather days.

(2) The number of actual adverse weather days shall be calculated chronologically from the first to the last day in each month. Once the number of actual adverse weather days anticipated in subparagraph a. above have been incurred, the Contracting Officer will examine any subsequently occurring adverse weather days to determine whether a contractor is entitled to a time extension. These subsequently occurring adverse weather days must prevent work for 50 percent or more of the Contractor's work day and delay work critical to the timely completion of the project. The Contracting Officer will convert any delays meeting the above requirements to calendar days and issue a modification in accordance with the Contract Clauses entitled "Default (Fixed-Price Construction)."

c. The Contractor's schedule must reflect the above anticipated adverse weather delays on all weather dependent activities.

*Monthly adverse weather days will be supplied by Construction Division during local review.

NOTE: The following clause is applicable on construction contracts of $500,000 or more if all rating elements are satisfactory and on construction contracts of $10,000 or more if any element of performance is either unsatisfactory or outstanding. The clause is also applicable on construction contracts of $10,000 or more which are terminated for default and those of $100,000 or more which are terminated for the convenience of the Government.

SC-15 PERFORMANCE EVALUATION OF CONTRACTOR. (EFARS 52.2/9006 - 1985 JAN). As a minimum, the Contractor's performance will be evaluated upon final acceptance of the work. However, interim evaluation may be prepared at any time during contract performance when determined to be in the best interest of the Government.

The format for the evaluation will be SF 1420, and the Contractor will be rated either outstanding, satisfactory, or unsatisfactory in the areas of Contractor Quality Control, Timely Performance, Effectiveness of Management, Compliance with Labor Standards, and Compliance with Safety Standards. The Contractor will be advised of any unsatisfactory rating, either in an individual element or

in the overall rating, prior to completing the evaluation, and all Contractor comments will be made a part of the official record. Performance Evaluation Reports will be available to all DOD Contracting offices for their future use in determining Contractor responsibility, in compliance with FAR 36.201(c)(1).

SC-16 PERFORMANCE OF WORK BY CONTRACTOR (FAR 52.236-1 - 1984 APR). The Contractor shall perform on the site, and within his own organization, work equivalent to at least twenty percent (20%) of the total amount of the work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract, if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government.

SC-17 UTILITIES AND IMPROVEMENTS.

a. All known utilities within the limits of the work, such as pipes, communication lines, power lines, etc., that would interfere with construction work will be removed, modified or relocated by local interests or utility companies at no cost to the Contractor unless otherwise noted in the plans and/or specifications. The Contractor, however, shall cooperate with the authorities or company representatives and shall conduct his operations in such manner as to result in a minimum of inconveniences to the owners of said utilities. The Contractor shall be required to give the Contracting Officer 30 days written notice prior to the date utilities must be moved.

b. Any unidentified pipes or structures which may be found within the limits of the work during the course of construction shall not be disturbed nor shall construction or excavation be performed at these locations unless and until approved by the Contracting Officer. Payment for ordered excavation, if any, will be made in accordance with the Contract Clause entitled "Differing Site Conditions."

SC-18 WEEKENDS, HOLIDAYS, AND NIGHTS. When the Contractor elects to work on weekends, holidays, and nights, notice shall be given to the Contracting Officer, in writing, sufficiently in advance of commencement of such operations to permit suitable arrangements for inspection to be made. Adequate lighting for thorough inspection of night operations shall be provided by the Contractor at his own expense.

next sheet is page SC-32

~~e. If, upon the expiration of sixty (60) calendar days after~~ the beginning of the fiscal year following an exhaustion of ~~funds~~, the Government has failed to reserve sufficient additional funds to cover payments otherwise due, the Contractor, by written notice delivered to the Contracting Officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be considered a termination for the convenience of the Government.

f. If at any time, it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the Contractor because of work performed and to be performed under the contract during the fiscal year, the Government reserves the right, after notice to the ~~Contractor, to reduce said reservation by the amount of such excess.~~

SC-19 MISPLACED MATERIAL. (DFARS 52.236-7006 - 1965 JAN). Should the Contractor, during the progress of the work, lose, dump, throw overboard, sink, or misplace any material, plant, machinery, or appliance, which in the opinion of the Contracting Officer may be dangerous to or obstruct navigation, the Contractor ~~Officer~~ shall recover and remove the same with the utmost dispatch. The Contractor shall give immediate notice, with description and location of such obstructions, to the Contracting Officer or inspector, and when required shall mark or buoy such obstructions until the same are removed. Should he refuse, neglect, or delay compliance with the above requirements, such obstructions may be removed by the Contracting Officer, and the cost of such removal may be deducted from any money due or to become due the Contractor, or may be recovered under his bond. The liability of the Contractor for the removal of ~~a vessel wrecked or sunk without fault or negligence~~ shall be limited to that provided in Sections 15, 19 and 20 of the River and Harbor Act of March 3, 1899. (33 U.S.C. 410 et seq.)
hazard to navigation created in the performance of their contract

SC-20 SIGNAL LIGHTS. The Contractor shall display signal lights and conduct his operations in accordance with the General Regulations of the Department of Army and of the Coast Guard governing lights and day signals to be displayed by towing vessels with tows on which no signals can be displayed, vessels working on wrecks, dredges, and vessels engaged in laying cables or pipes or in submarine or bank protection operations; lights to be displayed on dredge pipelines, and day signals to be displayed by vessels of more than 65 feet in length moored or anchored in a fairway or channel, and the passing by other vessels or floating plants working in navigable channels, as set forth in commandant U. S. Coast Guard Instruction M16672.2, Navigation Rules: International - Inland (COMDTINST M16672.2), or 33 CFR 81, Appendix A (International) and 33 CFR 84 through 33 CFR 90 (Inland) as applicable.

SECTION 1- EXCAVATION AND BACKFILL

1. SCOPE. The work covered by this section consists of furnishing all plant, labor, materials, and equipment, and performing all operations necessary for flotation access, for stockpiling materials, for excavation in borrow areas, for removal of material under campsites, and for backfill operations at each mobilization site, all as specified herein or as shown on the drawings.

2. QUALITY CONTROL. The Contractor shall establish and maintain quality control for backfill and excavation operations to assure compliance with contract requirements, and maintain records of his limited to the following:

(1) Borrow Areas. Location, limits, allowable depths, actual location and limits of excavation as to bottom depths, widths, distance from baseline, smooth transition slopes.

(2) Traverses. Locations and dimensions.

(3) Layout and Surveys. Accurancy and timeliness. Layout of work and surveys consisting of prior to backfilling operations and finals upon completion.

(4) Backfill of Fill Areas. Verify backfilling of fill areas with available borrow material.

3. EXCAVATION.

3.1 General. The rights-of-way and earth material for backfill will be furnished without cost to the Contractor, at locations specified herein and shown on the drawings. The material necessary for the backfill operations can be obtained adjacent to each

flotation channel and procured from borrow areas provided along the shoreline. The bottom of the pits excavated under this contract shall be left relatively smooth and sloped to provide a smooth transition area. Any excavation below the depths and slopes specified herein, or shown on the drawings, shall be backfilled by the Contractor, at his expense, to the specified permissible excavation line.

3.2 The elevations and contours shown on the drawings are representative of conditions that existed May/June 1987, and do not necessarily represent existing conditions.

3.3 Excavation of Flotation Channels and Borrow Areas.

3.3.1 Flotation. Flotation excavation that may be required for access to each work area shall be stockpiled adjacent to the channel. The Contractor shall upon leaving each work area proceed to backfill the access channel with the material from the disposal area. The right-of-way for flotation and any additional channel excavation for access at each mobilization site will be furnished without cost to the Contractor, at locations specified herein and/or shown on the drawings.

3.3.2 Borrow If the channel between Borrow Areas "C", and "D" requires excavation for flotation, the Contractor may cut access but shall not exceed the depth needed for flotation, and the material shall be placed within the adjacent borrow areas "C", and "D". The excavated material shall be utilized in the Contractors backfilling operations only after exhaustion of available material from Borrow Areas "A", and "B". The Contractor shall make a smooth transition between the borrow cut line and the lake bottom natural ground within the 20 foot transition Area designated on the drawings.

A box cut within this transition area will not be permitted. Construction easement for access and backfilling operations will be furnished at the following locations.

(1) Mobilization Site No. 1, baseline station 107+00 to 116+50, extending lakeward 400 feet and baseline station 110+50 to 115+50, extending 600 feet lakeward.

(2) Mobilization Site No. 2, baseline station 195+00 to 205+00, extending 1000 feet into the lake.

3.4 Work In The Vicinity Of Camp "A", And "B".

3.4.1 Removal Of Material Under Camps and Walkways. The Contractor shall remove shell material manually from under camps and walkways, and within the buffer zone limits stated in 1-3.4.2.

3.4.2 Removal of Material Around Camps and Buffer Zones. During the degrading operation in borrow area "A" at Mobilization Site No. 1, the Contractors equipment shall be maintained at a 5 foot clearance from each camp structure and a 3 foot clearance from each walkway structure.

3.4.3 No Work Area. The Contractor shall not work within the "No Work Area" indicated on the contract drawings. Degrading and excavation operations shall be done outside the twenty foot perimenter around the septic tank. Extreme precautions shall be taken to avoid damage to the septic tank system. The Contractor will be responsible for any damages to the septic tank system caused by his operations, and will be required to repair the system at his own expense.

3.4.4 Equipment. The Contractor shall provide the types of equipment as necessary to perform the required excavation and degrading according to the site conditions and proximity of the

borrow areas.

4. BACKFILL

4.1 Backfill Material. The character of backfill material to be used for backfilling operations consists predominently of sand and shell. The limits of the backfill area as shown on the drawings for placement of the excavated material shall be plainly marked by the Contractor with conspicous buoys or stakes.

4.2 Fill Area. The flotation channels shall be backfilled with material as specified in 1-4.1, transported, and deposited in the fill area from borrow areas located along the shoreline (Borrow Areas A, and B) and from the adjacent borrow areas located on each side of the flotation channels. The Contractor shall first use backfill material from Borrow Area "A", then Borrow Area "B". Backfill material from Borrow Areas "C", and "D" shall be used only after exhausting Borrow Areas "A", and "B". The location of the borrow areas and extent of excavation is shown on the drawings.

5. TOLERANCES. The excavation shall be constructed as nearly as practicable to the theoretical section shown on the drawings. To cover inaccuracies of scrapping operations, a vertical working tolerance of 3/10 of one foot below el. -1.5 for excavation in Borrow Areas "A", and "B", and 5/10 of one foot for Borrow Areas "C", and "D", below the theoretical bottom grade will be permitted.

6. EXCESSIVE EXCAVATION. Excessive excavation is hereby determined to be any excavation which is in excess of the theoretical section shown on the drawings. The Contractor shall be responsible for damages causes by excessive excavation.

7. MEASUREMENT AND PAYMENT. No measurement will be made for work required by this section. Payment for work specified in this section

will be made at the aplicable contract lump sum price for "Mobilization Site 1", and "Mobilization Site 2". Price and payment shall constitute fill compensation for furnishing all plant, labor, equipment, materials, except earth materials, backfilling, excavation, including excavation of flotation channels, and all other incidental work.

~~(JAN 77)~~
~~(FEB 82)R~~
~~(ENVIRO)~~

~~PART II TECHNICAL PROVISIONS~~

SECTION 2 - ENVIRONMENT PROTECTION

-1. SCOPE. The work covered by this section consists of, furnishing all labor, materials and equipment and performing all work required for the prevention of environmental pollution during and as the result of construction operations under this contract except for those measures set forth in other ~~Technical~~ Provisions of these Technical Specifications. For the purpose of this specification, environmental pollution is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for esthetic and recreational purposes. The control of environmental pollution requires consideration of air, water, and land, and involves noise, solid waste-management and management of radiant energy and radioactive materials, as well as other pollutants.

-2. QUALITY CONTROL.

-2.1 General. The Contractor shall establish and maintain quality control for environment protection to assure compliance with contract specifications and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Submit plan of Environmental Pollution Control.

(2) Procure applicable Federal, State, and Local regulations on pollution control.

(3) Air Pollution - Checks made on dust smoke, noise.

(4) Water Pollution - Checks made on disposal of water, oil, etc.

(5) Land Pollution - Checks made on disposal of debris, restoration of temporary construction sites, etc.

(6) Training Course for Employees.

-2.2 Reporting. The original and two copies of these records, as well as the records of corrective action taken, shall be furnished the Government daily. ~~Format of report shall be as prescribed in~~

-3. APPLICABLE REGULATIONS. In order to prevent, and to provide for abatement and control of any environmental pollution arising from construction activities in the performance of this contract, the Contractor and his subcontractors shall comply with all applicable Federal, State, and Local laws, and regulations concerning environmental pollution control and abatement.

-4. NOTIFICATION. The Contracting Officer will notify the Contractor in writing of any non-compliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice,

immediately take corrective action. Such notice, when delivered to the Contractor or his authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time or for excess costs or damages by the Contractor.

-5. SUBCONTRACTORS. Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

-6. IMPLEMENTATION. Within 10 days after receipt of notice to proceed, the Contractor shall:

(1) submit in writing his proposals for implementing this section for environmental pollution control and disposal of debris.

(2) meet with representatives of the Contracting Officer to develop mutual understandings relative to compliance with this provision and administration of the environmental pollution control program.

-7. PROTECTION OF LAND RESOURCES.

-7.1 General. The land resources within the project boundaries and outside the limits of permanent work performed under this contract~~*STATE AREAL OR VERTICAL LIMITS WHERE APPLICABLE~~ shall be preserved in their present

condition or be restored to a condition after completion of construction that will appear to be natural and not detract from the appearance of the project. The Contractor shall confine his construction activities to areas defined by the plans or specifications, including borrow areas to be cleared. The following additional requirements are intended to supplement and clarify the requirements of ~~General Provisions~~ Contract Clauses for "Protection of Existing Vegetation, Structures, Utilities, and Improvements," "Operations and Storage Areas" and "Cleaning Up".

-7.2 Prevention of Landscape Defacement. Except in areas ~~*(specified)~~ marked on the plans to be ~~cleared~~ excavated ~~and as provided in -7.3~~, the Contractor shall not deface, injure, or destroy trees or shrubs, nor remove or cut them without the approval of the Contracting Officer. Felling of trees shall be performed in such a manner as to avoid damage to trees to be left standing. Where trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's operations or equipment, he shall protect adequately such trees. Earth that is displaced into uncleared areas shall be removed. All monuments and markers shall be protected before beginning operations near them. Any trees or other landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the Contractor's expense. Trees that are scarred shall be immediately painted with an acceptable tree wound paint. Any trees which are damaged beyond restoration shall be removed and disposed of as directed in 2-1.

-7.3 Temporary Excavation and Embankments. If the Contractor proposes to construct temporary roads or embankments and excavation for

~~*MODIFY AS REQUIRED~~

plant and/or work areas, he shall obtain approval of the Contracting Officer prior to start of such temporary work.

-7.4 Post-Construction Cleanup or Obliteration. The Contractor shall obliterate all signs of temporary construction facilities such as ~~(haul roads)~~, work areas, ~~structures, foundations of temporary structures~~, stockpiles of excess or waste materials upon completion of construction. The Contractor will be required to restore the construction area to ~~near~~ natural conditions which will permit the growth of vegetation.

-7.5 Recording and Preserving Historical and Archeological Finds. All items having any apparent historical or archeological interest which are discovered in the course of any construction activities shall be carefully preserved. The Contractor shall leave the archeological find undisturbed and shall immediately report the find to the Contracting Officer so that the proper authorities may be notified.

-8. PROTECTION OF WATER RESOURCES.

-8.1 Contamination of Water. The Contractor shall not pollute lakes, ditches, rivers, bayous, canals, waterways, or reservoirs with fuels, oils, bitumens, calcium chloride, insecticides, herbicides, or other similar materials harmful to fish, shellfish, or wildlife, or materials which may be a detriment to outdoor recreation.

~~*DELETE INAPPLICABLE PROVISIONS~~
~~**INSERT LOCATION LIMITS AS REQUIRED~~

-8.2 Disposal of Materials. The methods and locations of disposal of materials, wastes, effluents, trash, garbage, oil, grease, chemicals, etc., within the right-of-way limits shall be such that harmful debris will not enter lakes, ditches, rivers, bayous, canals, waterways, or reservoirs by erosion, and thus prevent the use of the area for recreation or present a hazard to wildlife.

-8.3 Erosion Control. Surface drainage from cuts and fills within the construction limits, whether or not completed, and from borrow and waste disposal areas, shall, if turbidity producing materials are present, be held in suitable sedimentation ponds or shall be graded to control erosion within acceptable limits. Temporary erosion and sediment control measures such as berms, dikes, drains, or sedimentation basins, if required to meet the above standards, shall be provided and maintained until permanent drainage and erosion control facilities are completed and operative. The area of bare soil exposed at any one time by construction operations shall not exceed that necessary to perform the work. Stream crossings by fording with equipment shall be limited to control turbidity and in areas of frequent crossings temporary culverts or bridges shall be installed. Any temporary culverts or bridges shall be removed upon completion of the project. Fills and waste areas shall be constructed by selective placement to eliminate silts or clays on the surface that will erode and contaminate adjacent streams.

~~FEB 82~~

-9. PROTECTION OF FISH AND WILDLIFE. The Contractor shall at all times perform all work and take such steps required to prevent any interference of disturbance to fish and wildlife ~~**(refer to specific species as required)~~. The Contractor will not be permitted to alter water flows or otherwise disturb native habitat adjacent to the project area which are critical to fish or wildlife.

-10 JANITOR SERVICES.* The Contractor shall furnish daily janitorial services for all the offices, shops, laboratories, or other buildings being used by the Contractor or Government employees, whether existing or Contractor furnished, and perform any required maintenance of the facilities and grounds during the life of the contract. Toilet facilities shall be kept clean and sanitary at all times. Services shall be performed at such a time and in such a manner to least interfere with the operations but will accomplished only when the buildings are in daily use. Services shall be accomplished to the satisfaction of the Contracting Officer. The Contractor shall also provide daily trash collection and cleanup of the buildings and adjacent outside areas, snow removal as required, and small dispose of all discarded debris, ~~(aggregate samples)* (and concrete test samples)*~~ in a manner approved by the Contracting Officer.

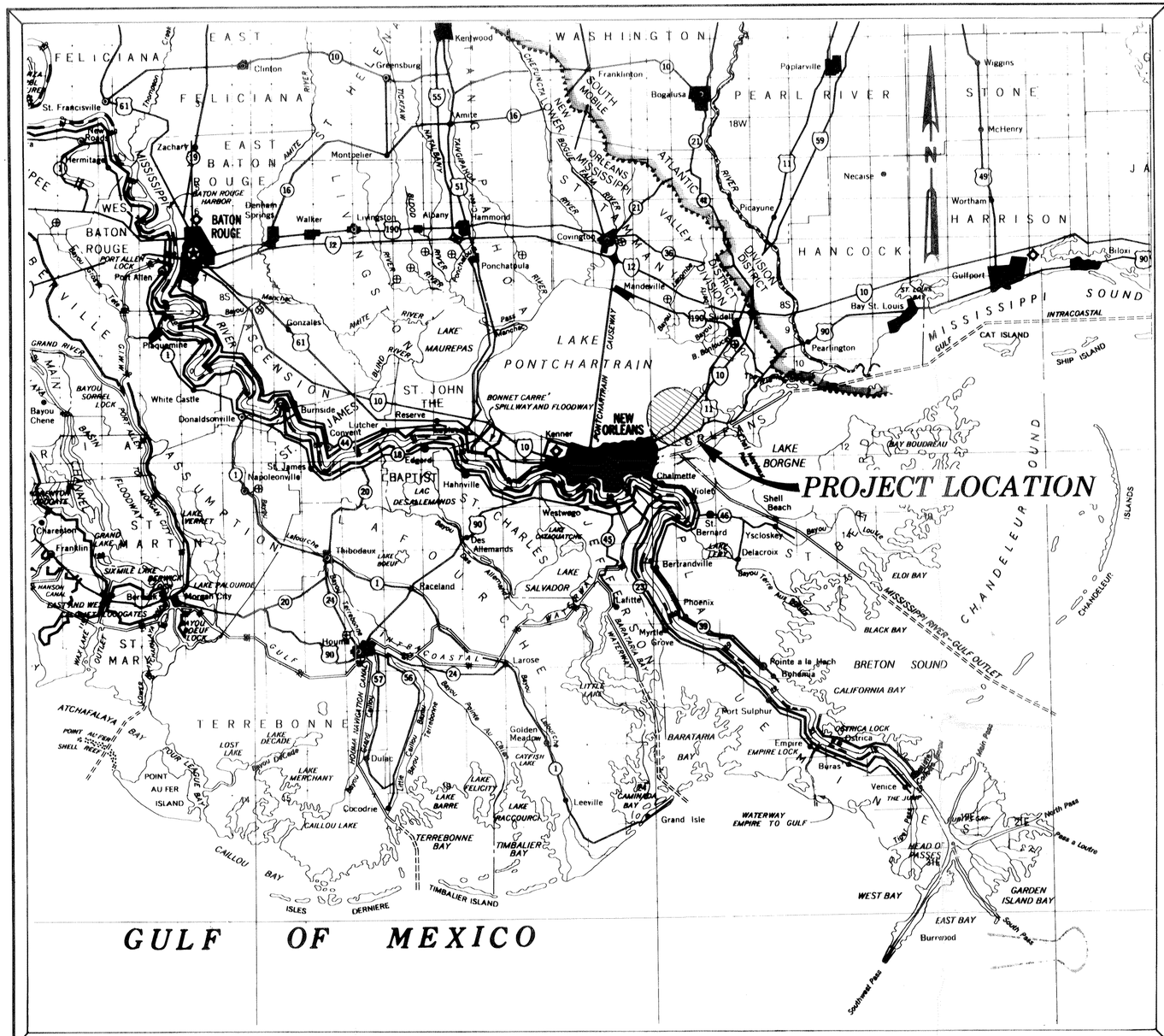
~~-12. DISPOSAL OF CLEARED AND GRUBBED MATERIAL AND OTHER DEBRIS.~~

*USE IF APPLICABLE
**MODIFY AS REQUIRED

All debris resulting from construction operations on this contract shall be disposed of in accordance with 1- .

-1. MAINTENANCE OF POLLUTION CONTROL FACILITIES DURING CONSTRUCTION. During the life of this contract the Contractor shall maintain all facilities constructed for pollution control under this contract as long as the operations creating the particular pollutant are being carried out or until the material concerned has become stabilized to the extent that pollution is no longer being created. Early in the construction period the Contractor shall conduct a training course that will emphasize all phases of environmental protection.

2-1. MEASUREMENT AND PAYMENT. No separate measurement or payment will be made for environment protection. Payment for the work covered under this section will be distributed throughout the existing bid items.



VICINITY MAP

LOCATION MAP

SCALE OF MILES

2 0 2 4 6 8 10 Miles

TABULATION OF BENCH MARK

BENCH MARK 204 L.A. GEODETIC SURVEY DISK
EL 6.158 N.G.V.D.

DESCRIPTION: AT N.O., ABOUT 1.15 MILES NORTHEAST ALONG HAYNE BLVD. FROM THE CROSSING OF DOWNMAN ROAD, SET ON THE SHOULDER OF THE SOUTHERN RAILWAY WHICH PARALLELS HAYNE BLVD. 44 FT. NORTHEAST OF THE EXTENDED CENTERLINE OF DRUM ST., 125 FT. NORTHWEST OF THE CENTERLINE OF HAYNE BLVD. 10 FT. SOUTHEAST OF THE SOUTHEAST RAIL OF THE SOUTHEAST TRACK 20FT. NORTHEAST OF SEMAPHORE NO. 1892, 7 1/2 FT. NORTHEAST OF THE EAST CORNER OF A CONCRETE BATTERY BOX, ABOUT 2 FT. BELOW THE TRACK AND SET IN THE TOP OF A CONCRETE POST ABOUT 18 INCHES UNDERGROUND.

INDEX TO DRAWINGS

DWG.	TITLE
1.	LOCATION MAP, VICINITY MAP, AND INDEX
2.	PLAN, MOBILIZATION SITE NO. 1
3.	PLAN, MOBILIZATION SITE NO. 2
4.	SAGE HYDROGRAPHS

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
LAKE PONTCHARTRAIN HIGH LEVEL PLAN
CITRUS LAKEFRONT LEVEE
BACKFILL FLOTATION CHANNELS
(AT MOBILIZATION SITE NO.1 AND NO.2)

REVISION	DATE	DESCRIPTION	BY

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

SUBMITTED:
CHIEF DESIGN BRANCH
APPROVED:
CHIEF ENGINEERING DIVISION
APPROVED:
COLONEL, C.E. DISTRICT ENGINEER

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
LAKE PONTCHARTRAIN HIGH LEVEL PLAN
CITRUS LAKEFRONT LEVEE
BACKFILL FLOTATION CHANNELS
LOCATION MAP, VICINITY MAP AND INDEX TO DRAWINGS

DESIGNED BY: T. WRIGHT
DRAWN BY: T. WRIGHT
CHECKED BY: R.P. LEE
SUBMITTED:
DATE: SEPT.'87
PLOT SCALE: AS SHOWN
DESIGN FILE:
SPEC. NO.
FILE NO. H-8-30323
DWG. 1 OF 4

SAFETY IS A PART OF YOUR CONTRACT

N

TO N. O. AIRPORT

CONSTRUCTION EASEMENT LIMIT

600'

STA. 110+50 B/L

LIMITS OF BORROW AREA "D"

LIMITS OF BORROW AREA "C"

R-10+00

LIMIT OF ADJACENT BORROW

R-9+00

R-8+00

R-7+00

R-6+00

R-5+00

STA. 115+50 B/L

R-4+00

100±

2' Max. Cut

EDGE OF HOLE

AREA TO BE FILLED

LIMIT OF ADJACENT

LAKE PONTCHARTRAIN

LIMITS OF BORROW AREA "A"

180'

5'

AVAILABLE BORROW (DEGRADE TO EL:-1.5)

UNDER CAMPS (SEE NOTE 5)

CAMP "A"

5'CL.(Typ.)

CAMP "B"

400'

320'

MANDATORY BORROW AREA TO BE DEGRADED TO EL-1.5

EDGE OF SHELL BARRIER

NO WORK AREA SEPTIC TANK

20'

3'CL.

490'

20'CL.

R-3+00

LIMITS OF BORROW AREA "B"

R-2+00

AVAILABLE BORROW (DEGRADE TO EL.-1.5)

5'CL.

165'

R-0+00

APPROX. STA. 113+00 B/L

STA. 116+50 B/L

Toe of Forshore Dike

C/L EXISTING FORESHORE DIKE

83'

C/L South Rail (Reference Point)

STA. 107+00 B/L

STA. 109+07 B/L C/L WALKWAY

STA. 112+00 B/L

STA. 114+00 B/L

HAYNE BLVD.

CROWDER RD.

EXISTING "DANGER" SIGN (TYP) AND TIMBER PILING TO REMAIN (TYP.)

ADJACENT BORROW

20'

Approx. 100'

2' Max. Cut

FILL AREA

N/G

MAKE SMOOTH TRANSITION

BORROW CUT LINE

SECTION (A)

NOT TO SCALE

PLAN

NOT TO SCALE

1. DEGRADING EQUIPMENT SHALL REMAIN 5' CLEAR OF CAMPS AND 3' CLEAR OF WALKWAY STRUCTURES.
2. BORROW AREA "B" SHALL BE USED AFTER BORROW AREA "A"
3. UNCONTROLLED MOSAIC PREPARED FROM AERIAL PHOTOS TAKEN 1985, PHOTO DOES NOT REPRESENT CURRENT LAKE CONDITIONS.
4. FILL MATERIAL BENEATH CAMP "A" AND CAMP "B" STRUCTURE AND WALKWAY SHALL BE DEGRADED TO EL.0.0 MANUALLY. EXTREME CAUTION SHALL BE TAKEN WHEN WORKING BENEATH CAMP STRUCTURES, AS TO AVOIDING DAMAGE OR DISTURBANCE OF CAMP SUPPORT TIMBER PILINGS
5. CONTOURS WERE TAKEN FROM SURVEY DATED JUN'87. IMPORTANT, CONTRACTOR VERIFY SURVEY IN THE FIELD.

VALUE INCENTIVE CLAUSES ENGINEERING "YOUR KEY TO HIGHER PROFITS"

REVISION	DATE	DESCRIPTION	BY

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

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
LAKE PONTCHARTRAIN HIGH LEVEL PLAN

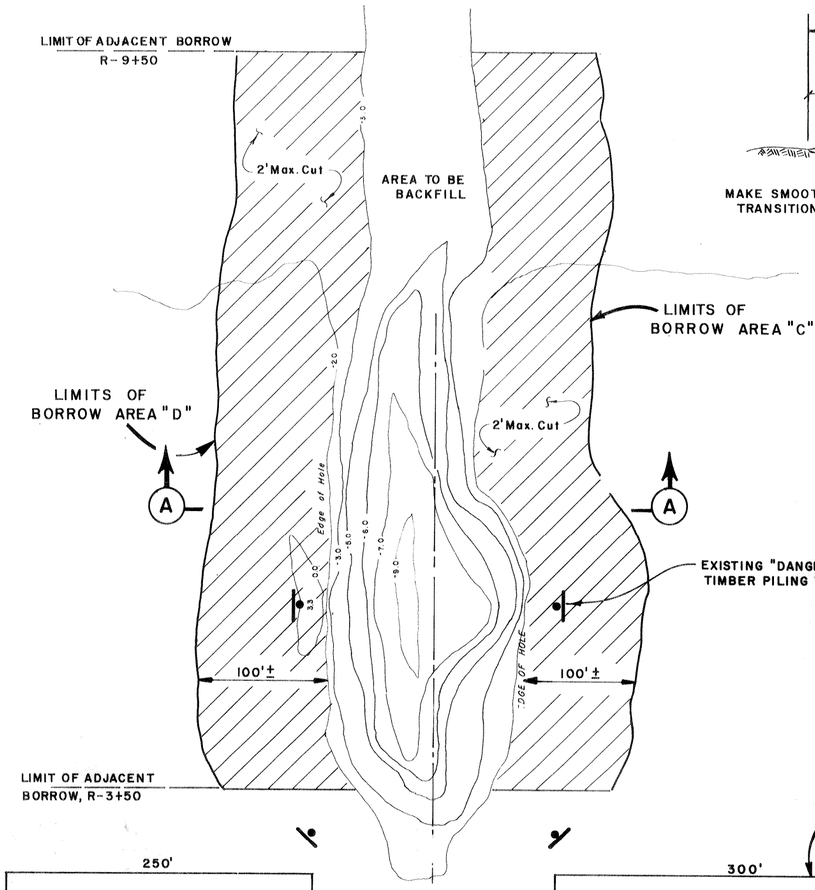
CITRUS LAKEFRONT LEVEE
BACKFILL FLOTATION CHANNELS
ORLEANS PARISH, LOUISIANA

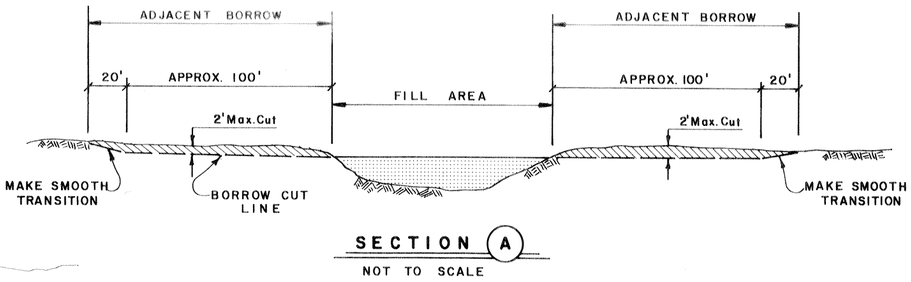
PLAN
MOBILIZATION SITE NO. 1

DESIGNED	DRAWN	CHECKED	DATE	SCALE	FILE NO.
T.W.W.	T.W.W.	R.P.L.	SEPT. 1987	AS SHOWN	H-8-30323

SUBMITTED: ..... SPEC. NO.: DACW29 - DWG. 2 OF 4

SAFETY IS A PART OF YOUR CONTRACT





SECTION A

NOT TO SCALE

TOWARD N.O. AIRPORT

R-9+00

R-8+00

R-7+00

R-6+00

R-5+00

R-4+00

R-3+00

R-2+00

R-1+00

R-0+00

CONSTRUCTION EASEMENT 1000'±

N

LIMITS OF BORROW AREA "A"

250'

260'

AVAILABLE BORROW (DEGRADE TO EL-0.5)

20'CL

LIMITS OF BORROW AREA "B"

300'

AVAILABLE BORROW (DEGRADE TO EL-0.5)

STA. 204+00 B/L 260'

STA. 205+00 B/L CONSTRUCTION EASEMENT 1000'

STA. 195+00 B/L

C/L FORESHORE DIKE

Toe of Foreshore Dike

83'

C/L South Rail (Reference Point)

STA. 194+48 B/L

STA. 196+50 B/L

STA. 199+00 B/L

STA. 200+00 B/L

STA. 201+00 B/L

HAYNE BLVD.

LAKE PONTCHARTRAIN

PLAN

NOT TO SCALE

UNCONTROLLED MOSAIC PREPARED FROM AERIAL PHOTOS TAKEN 1895, PHOTO DOES NOT REPRESENT CURRENT LAKE CONDITIONS.

NOTES

1. CONTOURS WERE TAKEN FROM SURVEY DATED JUN'87 IMPORTANT, CONTRACTOR VERIFY SURVEY IN THE FIELD.

VALUE ENGINEERING INCENTIVE CLAUSES "YOUR KEY TO HIGHER PROFITS"

REVISION	DATE	DESCRIPTION	BY

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

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
LAKE PONTCHARTRAIN HIGH LEVEL PLAN

CITRUS LAKEFRONT LEVEE
BACKFILL FLOTATION CHANNELS
ORLEANS PARISH, LOUISIANA

PLAN
MOBILIZATION SITE NO. 2

DESIGNED	DRAWN	CHECKED	DATE	SCALE	FILE NO.
T.W.W.	T.W.W.	R.P.L.	SEPT. 1987	AS SHOWN	H-8-30323

SUBMITTED: ..... ENGINEER

SPEC. NO.: DACW29 -

DWG. 3 OF 4

GAGE READINGS IN FEET N.G.V.D.

GAGE READINGS IN FEET N.G.V.D.

NOTE:
INNER HARBOR NAVIGATION CANAL NEAR SEABROOK BRIDGE, NEW ORLEANS, LA.
GAGE ZERO, N.G.V.D.
STATION 76060

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

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
LAKE PONTCHARTRAIN HIGH LEVEL PLAN
CITRUS LAKEFRONT LEVEE
BACKFILL FLOTATION CHANNELS

STAGE HYDROGRAPHS

DESIGNED BY: T.WRIGHT DRAWN BY: T.WRIGHT CHECKED BY: R.P.LEE SUBMITTED:	DATE: SEPT.'87	SCALE: N/A	FILE NO. H-8-30323
	SPEC.NO. DACW29-		DWG. 4 OF 4

E-334

ENGINEERING DIVISION
Permit Review Sheet

SUBJECT: L. Pont. 492
Appl S&WB for revised plans for dredging, fill, etc at Citrus Canal

LMN
_____ ED-A _____

SUSPENSE:*
_____ ED-S _____
_____ ED-SP _____
_____ ED-SR _____
_____ ED-SD _____

SUSPENSE:*
_____ ED-H _____
_____ ED-HD _____
_____ ED-HC _____
_____ ED-HH _____

SUSPENSE:* 13 Nov
2 ED-F _____
_____ ED-FG _____
~~ED-FD~~ _____
✓ ED-FS _____

SUSPENSE:* ~~14~~ Nov
1 ED-D _____
3L ED-DL _____
@ ED-DW → _____
_____ ED-DR _____
_____ ED-DD _____
_____ ED-DG _____

*If suspense date cannot be met, furnish Secretary, Chief of Eng Div, the date it can be met.

ED-FS No objection. However, we have just reviewed Permit No. E-301 in which the Contractor submitted an alternate plan where he was not relocating the railroad tracks. JR 14 Nov 86

Plans forwarded with original

FILE

Continue comments on separate sheet if necessary

LMN Form 744 5 Apr 83 (Previous Edition Obsolete)

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNOD-SP(Lake Pontchartrain) 492	Appl by New Orleans Sewerage & Water Board for revised plans for dredging, fill, riprap, pilings, & dolphins, in Lake Pontchartrain at Citrus Canal, in New Orleans, Louisiana, in Orleans Parish

TO	FROM	DATE	CMT 1
C/Engr Div	C/Reg Func Br Ops Div	5 Nov 1986 Mrs. Champagne/mmn/2295	

Forwarded for comment and return.

for Nancy L. Champagne
RONALD J. VENTOLA
Chief, Regulatory Functions Branch
Operations Division

Encl
Appl & Dwgs

PEPPER AND ASSOCIATES, INC.
CONSULTING ENGINEERS
3012 26TH STREET
JEROME PEPPER, P. E. METAIRIE, LOUISIANA 70002 504: 837-7330

November 5, 1986

U. S. Army Corps of Engineers
Permit Section - Room 287
P. O. Box 60267
New Orleans, Louisiana 70160

ATTN: Ms. Nancy Champagne

RE: LMNOD-SP (Lake Pontchartrain) 492

Gentlemen:

In accordance with our telephone conversation with Ms. Nancy Champagne on November 4, 1986, we enclose herewith for your use two full-size sets of plans for the above referenced project which includes Sheet Nos. 3, 4, 6, 7, 9, 10, 11, 11a, 11b, 11c, 11d, and 12 of the construction plans for the Citrus Pumping Station relative to our Coastal Use Permit.

Please be advised the only difference between this permit request and our original permit request is the additional work required to remove and replace the foreshore protection in order to construct the temporary railroad by-pass.

During the interim period between our original application and the present time, the Corps of Engineers constructed a riprap foreshore levee protection in the area in which we proposed to construct a temporary railroad by-pass. Consequently, it is now necessary to remove the riprap for construction of the embankment and then replace the riprap after temporary embankment is no longer required.

In addition, we attach a copy of a letter dated September 15, 1986, extending our permit to February 17, 1986, signed by Mr. Henry Schorr.

If we can be of any further assistance, please do not hesitate to contact our office.

Very truly yours,

PEPPER & ASSOCIATES, INC.

Jerome Pepper

Jerome Pepper
President

JP/db

Hand delivered

DEPARTMENT OF THE ARMY
NEW ORLEANS DISTRICT, CORPS OF ENGINEERS
P.O. BOX 60267
NEW ORLEANS, LOUISIANA 70160-0267

REPLY TO
ATTENTION OF

September 15, 1986

Operations Division
Permits Section

SUBJECT: LMNOD-SP(Lake Pontchartrain)492

Sewerage and Water Board of New Orleans
City Hall, Civic Center
New Orleans, Louisiana 70165

Gentlemen:

As requested in your letter dated September 2, 1986, the authorization granted by the Secretary of the Army in permit dated February 17, 1984, from the District Engineer at New Orleans, Louisiana, to dredge and maintain an area and install and maintain a 1000 CFS pumping station, concrete box culverts, piling, dolphins, riprap, and fill, at New Orleans, Louisiana, in Orleans Parish, is specifically extended to February 17, 1989.

The conditions to which the work is made subject, excepting the time limit for completion, remain in full force and effect.

This is the last extension of time which will be granted for this permit without full permit reprocessing. If the work is not completed by the date granted under this letter, it will be necessary for you to reapply for a permit to perform any work after that date. You then must submit a new completed application form, permit drawings indicating work completed and remaining, and request new letters of no objection. It is possible that, as a result of the new evaluation, your request for a time extension could be denied or the authorization for the portion of your project not completed could be significantly modified.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

FILE
DISTRIBUTION:

PEPPER & ASSOCIATES, INC.
RECEIVED
SEP 19 1986
NEW ORLEANS, LA.

Henry R. Schorr
Chief, Operations Division
for
Lloyd K. Brown
Colonel, Corps of Engineers
District Engineer

DIES

E-255

ENGINEERING DIVISION
Permit Review Sheet

SUBJECT:
CMT 3 - Appl 80 PSI to constant manhole in Citrus Lakefront Levee

LMN
_____ ED-A _____

ED-FS No objection provided the attached comments are resolved. 9/8/86
JR

SUSPENSE:*
_____ ED-S _____
_____ ED-SP _____
_____ ED-SR _____
_____ ED-SD _____

SUSPENSE:*
_____ ED-H _____
_____ ED-HD _____
_____ ED-HC _____
_____ ED-HH _____

Extended to 5 Sep JR

SUSPENSE:* 29 Aug
1 ED-F _____
_____ ED-FG _____
_____ ED-FD _____
✓ ED-FS _____

SUSPENSE:*
_____ ED-D _____
2 ED-DL _____
_____ ED-DW _____
_____ ED-DR _____
_____ ED-DD _____
_____ ED-DG _____

*If suspense date cannot be met, furnish Secretary, Chief of Eng Div, the date it can be met.

9/9
FILE

Continue comments on separate sheet if necessary

LMN Form 744 5 Apr 83 (Previous Edition Obsolete)

F&M BRANCH COMMENTS ON
APPLICATION by NOPSI to CONSTRUCT MANHOLES in CITRUS LAKEFRONT LEVEE

1. Borings indicate that the foundation in this area consists of previous sands and silts below the levee embankment. The manhole excavations penetrate into sands and the upward flow of groundwater into the excavations will cause stability problems. The contractor should be required to control groundwater such that no water enters the excavation through the bottom or sides.

2. Excavation backfill above el-3 N.G.V.D. should be compacted impervious clay material instead of compacted sand as proposed.

3. A section of the existing conduit and casing should be removed so that it is no closer than two feet from either manhole. The conduit and casing should be plugged with concrete and the area backfilled with compacted impervious clay material.

4. It is anticipated that up to a foot of long term settlement can occur at this location after the levee grade increase. Therefore, the concrete envelope crossing the levee should be designed to take anticipated differential settlements.

9/8/86
JR

LMNOD-OP

TO: C/Engr Div FROM: C/Ops Div DATE: 25 Aug 86 CMT 3
Mr. Baldini/cj/2356

1. Additional information regarding subject request, including "new" crossing of the Citrus Lakefront levee from Pepper and Assoc. Inc. is forwared for review, comment and return.

2. Note also letter from Boh Bros. Constr. Co. regarding the use of solid wood sheeting as shoring for construction of the previously approved manhole on the protected side of the levee. Note provision "b" of our letter of no objection dated 24 June 86, copy enclosed.

R J Baldini

C.J. NETTLES
Chief, Operations Division

4 Encls
Added 3
1. Orig ltr dtd 19 May 86 w/drwg
2. Ltr dtd 19 Aug 86 w/drwg
3. Ltr dtd 28 July 86
4. Ltr dtd 24 June 86

E-116 HYDRAULICS

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGO

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNOD-OP	Req by NOPSI to Constr. Manhole in Citrus Lakefront Levee, Vic. L.S. 62+00, 59+65 ?, in New Orleans, LA

TO C/Engr Div FROM C/Ops Div DATE 27 May 86 CMT 1

Mr. Baldini/bml/2356

Letter dated 19 May 86 with drawing OE-86-0059-1 is forwarded for review, comment and return.

Encl
as

C. O. NETTLES
Chief, Operations Division

LMNED-

TO C/Operations Division FROM C/Engineering Division DATE 16 June 86 CMT 2

T. WRIGHT/2721

The Engineering Division has no adverse comments regarding the subject permit request provided the following changes and/or additions are made an integral part of our letter of no objection. Written verification of these provisions should be requested and the agreements made part of our files. Accomplishment of the above negates the necessity of further review of the permit request by Engineering Division.

a. Due to stability, the Applicant's Contractor shall submit their excavation plans for our review and approval prior to construction operations.

b. To Avoid confusion in this area, the applicant shall require his contractor to coordinate his construction operation with the Corps Resident Office. Currently, Citrus Levee is being enlarged by COE contractor, Luhr Bros. Inc. Estimate of completion in this area is Sept'86.

Frederic M. Chatry
Chief, Engineering Div

CF: w/o incl
C/F&M Br

DA FORM AUG 80 2496 PREVIOUS EDITIONS WILL BE USED ☆ U.S. Government Printing Office: 1983—406-862

MAY 22 1986

NEW ORLEANS PUBLIC SERVICE INC.

POST OFFICE BOX 60340

NEW ORLEANS, LOUISIANA 70160

595-2362

AREA CODE 504

317 BARONNE STREET

ENGINEERING DEPARTMENT

May 19, 1986

Mr. R. F. Baldini, Jr.
Chief, Flood Control
Permits Section
Operations Division
Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

SUBJECT: Underground Electric Construction in Toe of Levee on Haynes Blvd. between Curtis Dr. and Lamb Dr.

Dear Mr. Baldini:

Enclosed for your information are two (2) copies of New Orleans Public Service Inc. (NOPSI) Drawing Number OE-86-0059-1. This drawing delineates the construction requirements for NOPSI's proposed underground electric distribution system rearrangement at the subject location.

Rearrangement of the electric distribution system at this location is necessary in order to accommodate the combined loads of South Shore Harbor Marina and the New Orleans Lakefront Airport's existing, and future load requirements.

All proposed construction works by NOPSI will be performed within the State of Louisiana Highway Department's right-of-way. However, the toe of the levee extends inside of this right-of-way where work is to be performed, to the northern curb-line of Haynes Blvd. Accordingly, permission from the Corps of Engineers is requested to perform work in the area of the levee as delineated on the above referenced NOPSI drawing.

The proposed construction works to be performed was discussed with Mr. Ronald P. Lee, of the Corps of Engineers Levee Section. Mr. Lee indicated that the proposed construction would not affect the integrity of the levee. Also, a formal request for construction approval has been submitted to Mr. C. E. Bailey, Chief Engineer, Board of Levee Commissioners, Orleans Levee District.

Should you have any questions please contact me. I can be contacted by telephone at 595-2362.

Sincerely,

Ronald E. Roberts
Division Engineer

RER:11

Encl 1

PEPPER AND ASSOCIATES, INC.
CONSULTING ENGINEERS
3012 26TH STREET
JEROME PEPPER, P. E. METAIRIE, LOUISIANA 70002 504: 837-7330

August 19, 1986

Mr. C.E. Bailey
Chief Engineer
New Orleans Levee Board
Suite 202
Administration Building
New Orleans Lakefront Airport
New Orleans, Louisiana 70126

RE: Permit Request for Levee Crossing - South Shore Harbor Primary Service

Dear Mr. Bailey:

A meeting was held on July 25, 1986, with representatives of the Office of Public Works, Department of Transportation; Office of Highways, Louisiana Department of Transportation; the U.S. Army Corps of Engineers; NOPSI; Orleans Levee Board and Pepper and Associates, Inc.

The purpose of this meeting was to discuss the objections the Office of Public Works raised to the construction of an electrical manhole by NOPSI at the toe of the levee slope on the Hayne Blvd. side of the levee.

After much discussion concerning the integrity of the levee, it was agreed we would submit a typical section of the crossing showing construction features from the south side of Hayne Blvd. to the north side of the levee and connecting to the existing 30" casing under the railroad tracks. Also, NOPSI prepared a revised plan of their installation for your review.

It was also agreed we would furnish additional information regarding construction techniques used in and around the existing levee.

We herewith formally request that a permit be issued for a levee crossing of primary electrical service for South Shore Harbor based on the attached plans, consisting of:

(1) Drawing No. 4114-07-10A by Pepper and Associates, Inc.

(2) Drawing No. OE-86-0059-1 prepared by NOPSI.

A brief description of construction techniques and work involved is as follows:

(1) Jack 2 - 5" conduits under Hayne Blvd.

(2) Remove an existing NOPSI manhole on the north side of Hayne Blvd. and backfill with sand, as described in a letter from Boh Brothers Construction Co., Inc., dated July 28, 1986, attached hereto.

Encl 2

(3) Installation of a new pre-cast concrete manhole 5' wide, 7'-6" long, with 6'-6" interior headroom height.

(4) Existing 4" conduit presently running through the levee will be abandoned and plugged at both ends with concrete.

(5) 4 - 5" PVC conduits crossing the levee will transition to flat run to minimize depth of intrusion of levee section, as shown on the attached plan.

(6) New pre-cast concrete manhole will be installed by Orleans Electric on the north side of the levee, between the levee and railroad embankment to receive the duct run across the levee and connecting to the existing 30" casing.

In essence, this is really not an additional crossing, but replacement and enlargement of the existing crossing which has been deemed inadequate for service requirements on the north side of the levee for both the airport and South Shore Harbor.

We believe the plans as submitted have responded to the questions and objections raised at the above referenced meeting at the Department of Public Works.

It should be noted that NOPSI has increased the voltage rating of service from 13.8 KV to a nominal 24 KV. This increase in voltage service should provide ample primary service for both New Orleans Lakefront Airport and South Shore Harbor in the foreseeable future, including construction of Phase II of South Shore Harbor.

Your prompt attention and review of this request would be sincerely appreciated.

Very truly yours,

PEPPER & ASSOCIATES, INC.

Jerome Pepper
President

JP/dm
Enclosures
CC: Dept. of Public Works
Corps of Engineers
N.O.P.S.I.

BOH BROS. CONSTRUCTION CO., INC.

GENERAL CONTRACTORS
AUTHORIZED DEALER - ARMCO METAL BUILDINGS

SINCE 1909

LA. LICENSE NO. 2179

730 S. TONTI STREET
P. O. DRAWER 53266
NEW ORLEANS, LA. 70153
PHONE 504/821-2400

July 28, 1986

Department of the Army
New Orleans District
Corp of Engineers
Post Office Box 60267
New Orleans, LA 70160-0267

Attention: Mr. Albert Guillot, Acting Chief
Operations Division, Flood Control

Gentlemen:

We have been requested by NOPSI to jack and bore two (2) each 5" PVC electrical ducts under the roadway at Haynes Blvd. between Curtis Drive and Lamb Road, and to build a concrete manhole, the centerline of which will be six feet north of the north curb. This manhole will be precast reinforced concrete with outside dimensions of 6'4" X 8'10" X 9'4" depth below curb.

Our experience in this area has shown us that to excavate this manhole, it will be necessary to use solid wood sheeting which we will extract or leave in place at your discretion. We intend to backfill all excavations with compacted sand.

We understand that it will be necessary for us to work in cooperatiion with the contractor who is presently raising the levee in this location.

Sincerely,

BOH BROS CONSTRUCTION CO., INC.

H. E. "Mickey" Landry
General Superintendent
Utilities Division

lbl

Encl 3

June 24, 1986

Operations Division
Flood Control

Mr. C. E. Bailey, Chief Engineer
Board of Commissioners
Orleans Levee District
202 Administration Building
New Orleans Lakefront Airport
New Orleans, Louisiana 70126

Dear Mr. Bailey:

We have received a letter request dated May 19, 1986, similar request sent to your Board, from New Orleans Public Service, Inc., concerning permission to construct a manhole in the landside of the Citrus lakefront levee, vicinity of levee station 62+00, at New Orleans, Louisiana, in Orleans Parish.

The applicant should be advised that there is ongoing construction work in this area to enlarge the Citrus lakefront levee and that the work is scheduled to be completed by September 1986. However, we have no objection to your Board's issuance of a permit for the proposed work provided:

a. The work is accomplished in accordance with the above referenced letter and accompanying drawing.

b. The applicant's contractor submits a copy of his excavation plan to our office for review and approval prior to commencing construction.

c. The applicant's contractor coordinates his work with our levee contractor so that the applicant's work does not interfere with our enlargement project. The applicant should contact Mr. Ward Purdum, Project Engineer, Corps of Engineers, New Orleans Resident Office, at (504) 862-1220, to coordinate his work with ours, as referenced in the second paragraph.

d. That should changes in the location or section of the existing levee and/or river, or in the generally prevailing conditions in the vicinity, be required in the future in the public interest, the applicant shall make changes in the project concerned, or in the arrangement thereof, as may be necessary to satisfactorily meet the situation and shall bear the cost thereof.

Encl 4

This letter of no objection is based upon engineering criteria, and no interpretation or comments regarding local laws, zoning, or ordinances concerning property rights, etc., have been made. Additionally, this letter of no objection does not obviate the applicant's requirement to obtain federal, state, or local permits required by law, and no work should commence until all necessary permits are acquired.

Please furnish this office a copy of your permit if the applicant's proposal is approved by your Board.

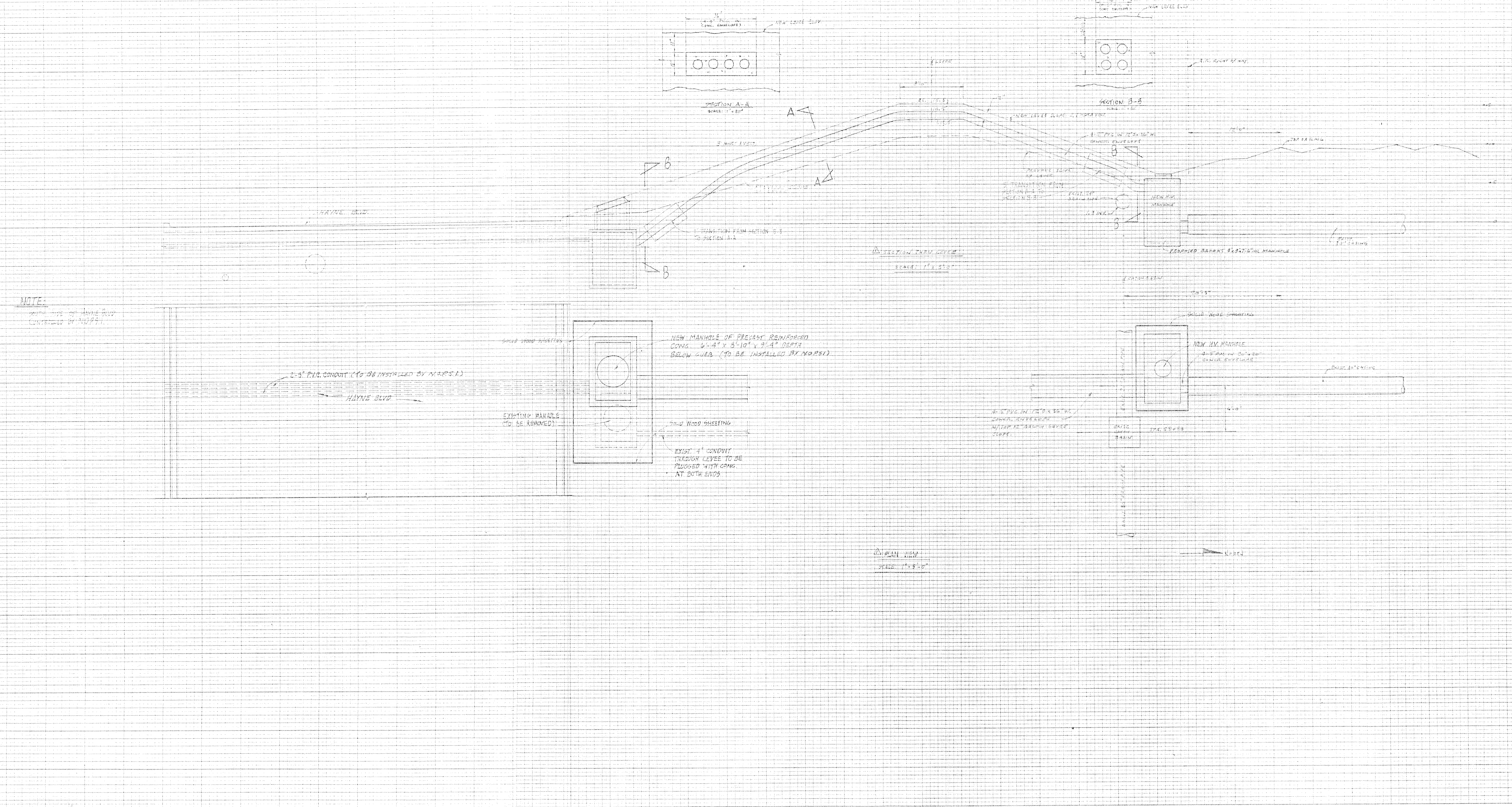
Sincerely,

Albert J. Guillot
Acting Chief, Operations Division

Copies Furnished:

LA DOTD, Baton Rouge
LA DOTD, New Orleans
New Orleans Public Service, Inc.

C/Engr Div
Resident Engr, NORO



1	8-4-86	Revisions As Sections Plan	R.J.
REV.	DATE	DESCRIPTION	BY

SOUTH SHORE HARBOR
SOUTH PENINSULA AND PIERS
UTILITY SERVICE
ELECTRICAL, WATER, AND SEWERAGE
PHASE I IMPROVEMENTS

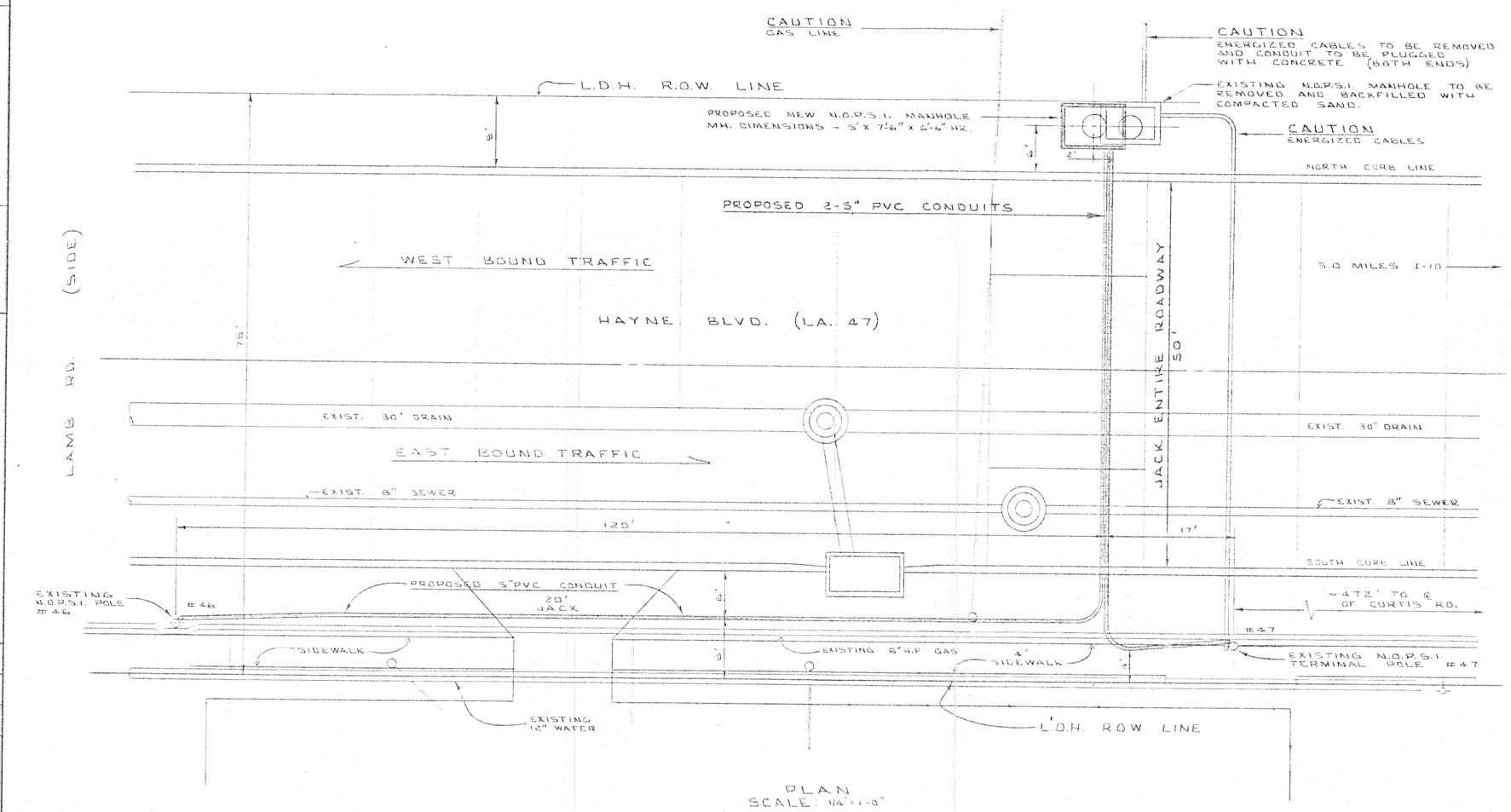
PEPPER & ASSOCIATES, INC.
CONSULTING ENGINEERS
3012 - 26th ST. METAIRIE, LA.

DR. A.J.T.
BOARD OF LEVEE COMMISSIONERS
ORLEANS LEVEE DISTRICT
OLB 6001-0314

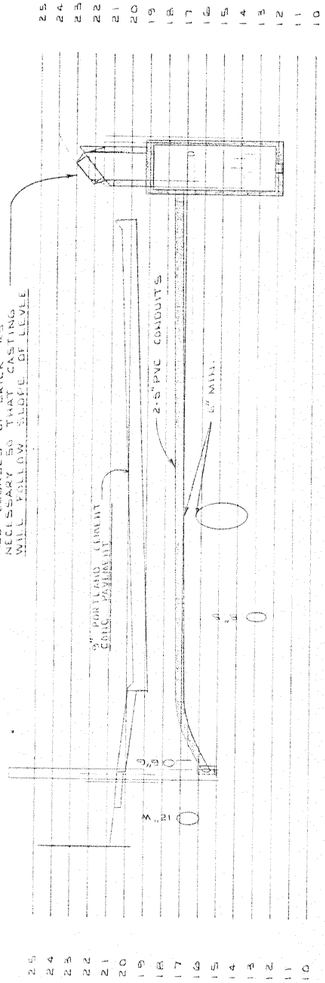
SCALE NONE
DWG. No. 4114-07-17A

SOUTH SHORE HARBOR PHASE I IMPROVEMENTS
ELECTRICAL DETAIL - PROPOSED MANHOLE M1

PLATE 3 FULL CROSS SECTION



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



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

PAVING RESTORATION NOTES:

1) ASPHALT BETWEEN CURB AND SIDEWALK WILL BE REPLACED AS REQUIRED BY L.D.H REPLACE IN KIND.

TRAFFIC CONTROL NOTES:

1. CONSTRUCTION TRAFFIC CONTROL SIGNS, BARRICADES, WARNING LIGHTS, DEVICES, AND METHODS, SHALL COMPLY WITH PART VI OF LOUISIANA DEPARTMENT OF HIGHWAYS "TRAFFIC CONTROL DEVICES MANUAL", UNLESS OTHERWISE DIRECTED IN THE FIELD BY THE TRAFFIC ENGINEERING DIVISION OF DEPARTMENT OF STREETS.
2. A DETOUR PLAN FOR TRAFFIC MOVEMENT SHOWING CONSTRUCTION BARRICADES, SIGNS AND LIGHTS IS REQUIRED FOR APPROVAL BY CITY OF NEW ORLEANS DEPARTMENT OF STREETS PRIOR TO CONSTRUCTION.
3. ALL TRAFFIC CONTROL DEVICES (ROADWAY MARKINGS, SIGNS, SIGNALS, SIGNAL CONTROLS) DESTROYED AS RESULT OF CONSTRUCTION WILL BE REPLACED PER CITY OF NEW ORLEANS SPECIFICATIONS AT NO COST TO CITY OF NEW ORLEANS.
4. CONSTRUCTION SUPERVISOR SHALL NOTIFY MR. BURAS, TRAFFIC ENGINEER, AT 586-4501, AT LEAST 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION IF PROJECT REQUIRES CHANGES OR MODIFICATIONS TO EXISTING TRAFFIC CONTROL SIGNS, PARKING METERS, ETC.

MAINTAIN 50% OF ROADWAY ACCESSIBLE TO VEHICULAR TRAFFIC AT ALL TIMES.

THE CONTRACTOR SHALL PLATE BRIDGE THE CONDUIT TRENCH IN THE ROADWAYS.
THE PLATES SHALL BE EQUIPPED WITH BOLTED ANGLES ON THE UNDERSIDE TO BE USED TO JAMB ANCHOR THE BRIDGING IN PLACE. THE PLATES SHALL REMAIN IN PLACE FROM 4:00 P.M. TO 6:00 A.M. AND FOR THE ENTIRE WEEKEND. THE MOTORING PUBLIC SHALL BE AFFORDED THE MAXIMUM ACCESS TO THE ROADWAYS AT ALL TIMES.

Sheet 1 of 2

NEW ORLEANS PUBLIC SERVICE INC.
ENGINEERING DEPARTMENT

SOUTH SHORE HARBOR
MANHOLE INSTALLATION
AND CONDUIT CONSTRUCTION
HAYNE BLVD. BETWEEN
CURTIS RD. & LAMB RD.

DATE 5-15-86
SCALE AS SHOWN

OE-86-0059-1

DEPARTMENT: DEPT. OF STREETS; DRAINAGE; SEWER & WATER; UTILITIES ENGINEER
APPROVED
DATE
NO
REVISION
BY
CK.
APP.
DRAWN BY
TRACED BY
CHECKED BY
GSP

ENGINEERING DIVISION Permit Review Sheet	SUBJECT: Req by NOPSI to construct manhole in Citrus lakefont levee in New Orleans
LMN ~~ED-A~~	LMNED-SR No Comment. [illegible] Expedite HC – No Objection [illegible] 6/3/86
SUSPENSE:* 29 May 2 ED-S [illegible] ED-SP 5/30 ED-SR [illegible] ED-SD	
SUSPENSE:* 3 Jun 3 ED-H [illegible] ED-HD ✓ ED-HC [illegible] ED-HH	ED-FS No OBJECTION, SK 6/4/86 Provided an excavation plan is submitted for review and approval. JR
SUSPENSE:* 5 Jun 4 ED-F ED-FG ED-FD ✓ ED-FS	
SUSPENSE:* 5 ED-D ED-DL ED-DW ED-DR ED-DD ED-DG	[illegible] FILE
*If suspense date cannot be met, furnish Secretary, Chief of Eng Div, the date it can be met.	Continue comments on separate sheet if necessary

LMN Form 744 5 Apr 83 (Previous Edition Obsolete)

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNOD-OP	Req by NOPSI to Constr. Manhole in Citrus Lakefront Levee, Vic. L.S. 62+00, in New Orleans, LA

TO C/Engr Div FROM C/Ops Div DATE 27 May 86 CMT 1

Mr. Baldini/bml/2356

Letter dated 19 May 86 with drawing OE-86-0059-1 is forwarded for review, comment and return.

Encl
as

C. O. NETTLES
Chief, Operations Division

DA FORM AUG 80 2496 PREVIOUS EDITIONS WILL BE USED

MAY 22 1986

NEW ORLEANS PUBLIC SERVICE INC.

POST OFFICE BOX 60340

NEW ORLEANS, LOUISIANA 70160

595-2362

AREA CODE 504 [illegible]

317 BARONNE STREET

ENGINEERING DEPARTMENT

May 19, 1986

Mr. R. F. Baldini, Jr.
Chief, Flood Control
Permits Section
Operations Division
Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160-0267

SUBJECT: Underground Electric Construction in Toe of Levee on Haynes Blvd. between Curtis Dr. and Lamb Dr.

Dear Mr. Baldini:

Enclosed for your information are two (2) copies of New Orleans Public Service Inc. (NOPSI) Drawing Number OE-86-0059-1. This drawing delineates the construction requirements for NOPSI's proposed underground electric distribution system rearrangement at the subject location.

Rearrangement of the electric distribution system at this location is necessary in order to accommodate the combined loads of South Shore Harbor Marina and the New Orleans Lakefront Airport's existing, and future load requirements.

All proposed construction works by NOPSI will be performed within the State of Louisiana Highway Department's right-of-way. However, the toe of the levee extends inside of this right-of-way where work is to be performed, to the northern curb-line of Haynes Blvd. Accordingly, permission from the Corps of Engineers is requested to perform work in the area of the levee as delineated on the above referenced NOPSI drawing.

The proposed construction works to be performed was discussed with Mr. Ronald P. Lee, of the Corps of Engineers Levee Section. Mr. Lee indicated that the proposed construction would not affect the integrity of the levee. Also, a formal request for construction approval has been submitted to Mr. C. E. Bailey, Chief Engineer, Board of Levee Commissioners, Orleans Levee District.

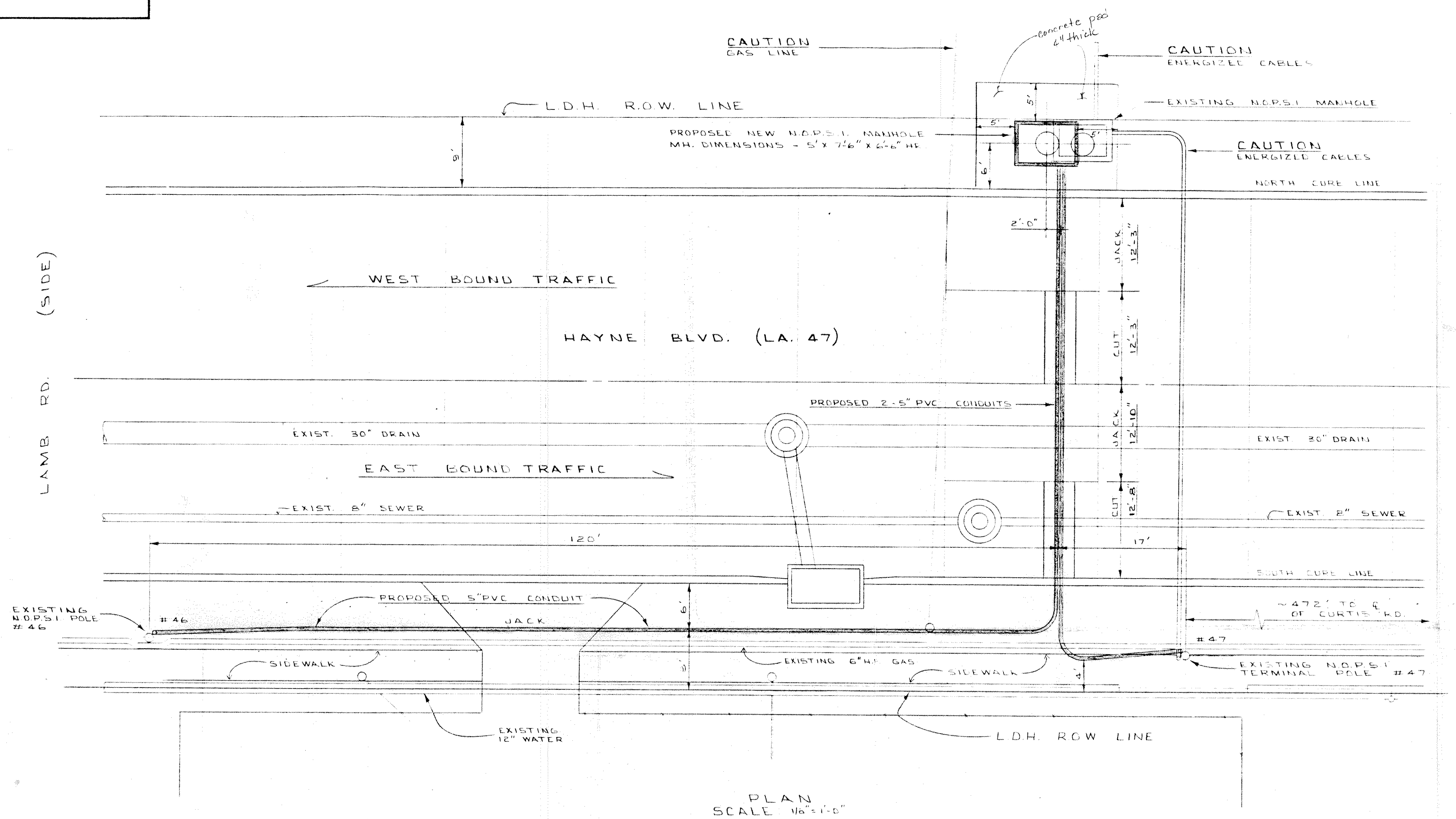
Should you have any questions please contact me. I can be contacted by telephone at 595-2362.

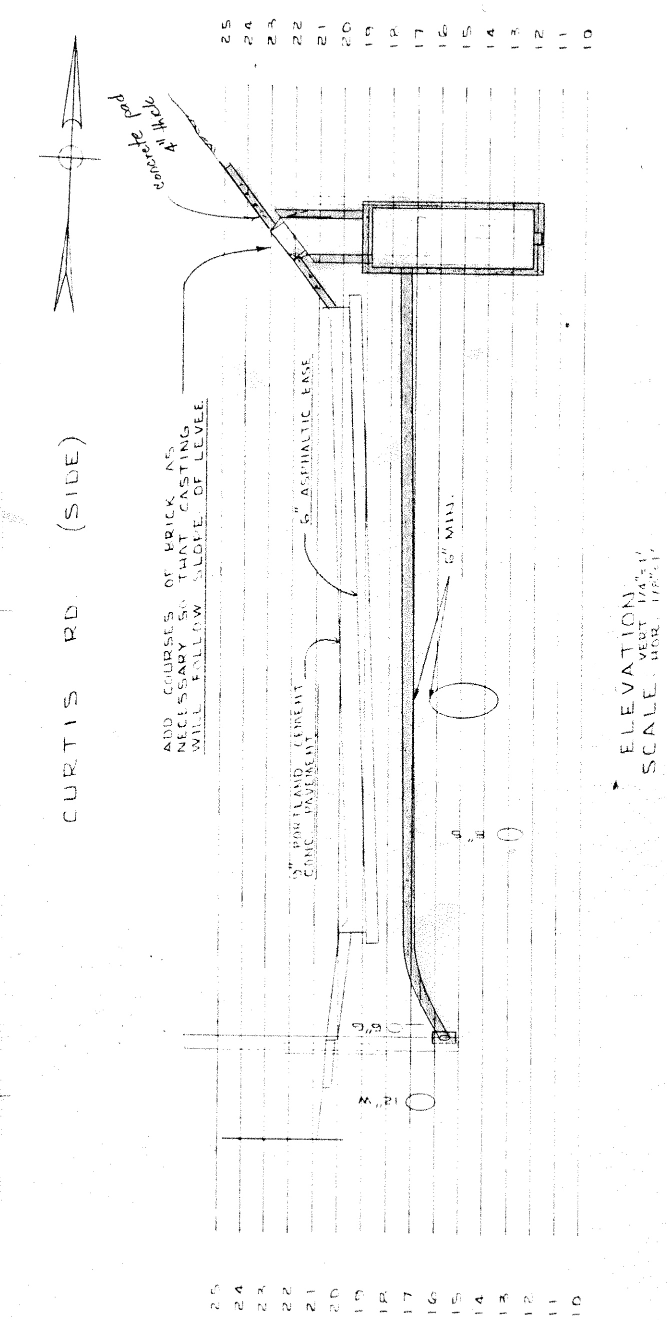
Sincerely,

Ronald E. Roberts
Division Engineer

RER:11

NEW ORLEANS B.P. 3-77 MC 3489





Proj Ops File Copy

PAVING RESTORATION NOTES:

1.) ENTIRE JOINT OF CUT SECTIONS WILL BE REPLACED AS REQUIRED BY L.D.H.

2.) ASPHALT BETWEEN CURB AND SIDEWALK WILL BE REPLACED AS REQUIRED BY L.D.H.

TRAFFIC CONTROL NOTES:

1. CONSTRUCTION TRAFFIC CONTROL SIGNS, BARRICADES, WARNING LIGHTS, DEVICES, AND METHODS, SHALL COMPLY WITH PART VI OF LOUISIANA DEPARTMENT OF HIGHWAYS "TRAFFIC CONTROL DEVICES MANUAL", UNLESS OTHERWISE DIRECTED IN THE FIELD BY THE TRAFFIC ENGINEERING DIVISION OF DEPARTMENT OF STREETS.
2. A DETOUR PLAN FOR TRAFFIC MOVEMENT SHOWING CONSTRUCTION BARRICADES, SIGNS AND LIGHTS IS REQUIRED FOR APPROVAL BY CITY OF NEW ORLEANS DEPARTMENT OF STREETS PRIOR TO CONSTRUCTION.
3. ALL TRAFFIC CONTROL DEVICES (ROADWAY MARKINGS, SIGNS, SIGNALS, SIGNAL CONTROLS) DESTROYED AS RESULT OF CONSTRUCTION WILL BE REPLACED PER CITY OF NEW ORLEANS SPECIFICATIONS AT NO COST TO CITY OF NEW ORLEANS.
4. CONSTRUCTION SUPERVISOR SHALL NOTIFY MR. BURAS, TRAFFIC ENGINEER, AT 586-4501, AT LEAST 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION IF PROJECT REQUIRES CHANGES OR MODIFICATIONS TO EXISTING TRAFFIC CONTROL SIGNS, PARKING METERS, ETC.

MAINTAIN 50% OF ROADWAY ACCESSIBLE TO VEHICULAR TRAFFIC AT ALL TIMES.

THE CONTRACTOR SHALL PLATE BRIDGE THE CONDUIT TRENCH IN THE ROADWAYS.
THE PLATES SHALL BE EQUIPPED WITH BOLTED ANGLES ON THE UNDERSIDE TO BE USED TO JAMB ANCHOR THE BRIDGING IN PLACE.
THE PLATES SHALL REMAIN IN PLACE FROM 4:00 P.M. TO 6:00 A.M. AND FOR THE ENTIRE WEEKEND. THE MOTORING PUBLIC SHALL BE AFFORDED THE MAXIMUM ACCESS TO THE ROADWAYS AT ALL TIMES.

NEW ORLEANS PUBLIC SERVICE INC.
ENGINEERING DEPARTMENT

SOUTH SHORE HARBOR
MANHOLE INSTALLATION AND CONDUIT CONSTRUCTION
HAYNE BLVD. BETWEEN CURTIS RD. + LAMB RD.

DATE 5-15-86
SCALE AS SHOWN

0E-86-0059-1

DRAWN BY GSP

LMNED-FS (4 Jun 79)
SUBJECT: Review of NOPSI Relocation Plans for Utility Lines over Citrus Lakefront Levee, Orleans Parish, LA

TO Asst. C/Design Br FROM C/F&M Br DATE 7 Aug 79 CMT 4
Mr. Richardson/mlm/406

1. We concur with the elimination of the seepage collars as discussed in para. 1e of CMT 3.

2. For reasons stated in para. 1a of our CMT 2 and the fact that the storm water elevation of 8.5 feet NGVD is above the floodside ground elevation of 6 feet NGVD, we feel it is necessary to completely remove all abandoned portions of the subject utilities. Therefore, we do not concur with leaving the existing utility lines in the base of the levee.

PICCIOLA

LMNED-DL

SUBJECT: Review of NOPSI Relocation Plans for Utility Lines over Citrus Lakefront Levee, Orleans Parish, LA

TO C/F&M Br FROM Asst. C/Design Br DATE 23 Jul 79 CMT 3
Mr. Lee/rp/532

1. We have reviewed your recommendations and determined the following.

a. Various alternative relocations have been discussed with the Orleans Levee District and NOPSI. One alternative considered was to construct a bridge structure for the lines prior to levee construction. Another alternative was to construct a temporary bypass during levee construction at the final crossing site. Cost estimates were made for each relocation plan. The original plan proposed by NOPSI, they say will cost about $60,000, and each of the alternative relocations with the additional work required will cost approximately $100,000. Also, since the airport is on the floodside and has a ground elevation of about 6 feet NGVD, it appears that susceptibility to seepage for this hurricane protection levee is little to none.

b. NOPSI will again be informed that 1-foot of long term settlement is anticipated and they should design their crossing accordingly.

c. In the area of the relocations behind the airport, the levee is to be constructed to elevation 11.5 feet NGVD and the gas and electric lines are to be placed in the levee 1-foot below the surface (elevation 10.5 feet NGVD). Since the design storm water table level for this levee is only elevation 8.5 feet NGVD, it is apparent that seepage collars are not necessary.

2. Because of the additional cost to protect against seepage, as compared to the possibility of seepage, we are going to proceed with the relocation plan as presented by the Orleans Levee District and NOPSI.

JUDLIN

DISPOSITION FORM

For use of this form, see AR 340-15, the proponent agency is TAGCEN.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-DL	Review of NOPSI Relocation Plans for Utility Lines over Citrus Lakefront Levee, Orleans Parish, LA

TO C/F&M Br 6/5/79 FROM Asst C/Design Br DATE 4 Jun 79 CMT 1
Mr. Steinwinder/jb/314

1. You are requested to review the attached data pertaining to utility relocations over the subject levee.

2. Your comments should be received by Design Br at COB 11 Jun 79.

JUDLIN

B.S.

3 Incl
1. Letter dtd 22 May 79
2. Dwg 15-3260-L
3. Dwg OD-79-0071

LMNED-FS

TO Asst C/Design Br FROM C/F&M Br DATE 8 Jun 79 CMT 2
Mr. Richardson/mlm/406

1. We have reviewed the subject relocations and have the following comments:

a. Inasmuch as the relocations are in an area where no levee exists, it is recommended that the utility lines be raised and all the abandoned portions completely removed. The levee foundation in this area is largely granular and potentially susceptible to seepage. Any potential seepage paths should be removed.

b. It is anticipated that 1 foot of after construction long term settlement will occur in this reach. Therefore, some provisions should be placed in the pipes and conduits to adjust for this amount of settlement.

c. Seepage collars should be provided at the levee centerline to provide positive cutoff of voids resulting from differential movement between the utility and surrounding soil, pipe damage, and improper construction procedures by contractors. The collars should extend 18 inches to the bottom and sides of the utility lines. Also, construction procedures should require placement of fill in 4-inch layers within 3 feet of the utility lines and compacted by power tampers to 90 percent density as per ASTM D 698-70. The area of compaction should extend across the full width of the levee crown.

2. It is requested that the final relocation plans be routed through this Branch for review.

wd all incl PICCIOLA

FILE

DA FORM 1 FEB 62 2496 REPLACES DD FORM 96, WHICH IS OBSOLETE.

☆ U.S. GPO:1977-0-765-124/152

NEW ORLEANS PUBLIC SERVICE INC.

POST OFFICE BOX 60340

NEW ORLEANS, LOUISIANA 70160

H. NORMAN FORD
DIRECTOR OF ENGINEERING

AREA CODE 504 586-2361
317 BARONNE STREET

May 22, 1979

Mr. Lawrence G. Bodet
Chief Engineer
Board of Levee Commissioners
Orleans Levee District
Suite 202 - Administration Building
New Orleans Lakefront Airport
New Orleans, Louisiana 70126

Dear Mr. Bodet:

Subject: Hurricane Protection Levee
IHNC to Paris Road

In response to your letter of March 20, 1979 and confirming the March 30, 1979 meeting in which representatives from the Corps of Engineers (Corps), Orleans Levee Board (OLB) and New Orleans Public Service Inc. (NOPSI) were in attendance, we are hereby forwarding for your approval, in concept, 3 sets of the following NOPSI prints: 15-3260-L and OD-79-0071.

These prints indicate the proposed relocation of the existing NOPSI underground gas and electric facilities that are in conflict with the proposed levee.

Your attention should be directed to the following:

1. Both the gas and electric facilities must remain in-service during the levee construction. NOPSI will commence, upon receiving written notification of completion of the proposed levee construction and authorization from the OLB, with the proposed relocation work.

2. The proposed gas and electric facilities will cross the new levee approximately 14-16 inches below the proposed finished grade (as shown on the preliminary plans).

3. Subsequent to the proposed relocations, the remaining gas and electric facilities will be abandoned in place. Sections will be removed from each end and the abandoned facilities will then be filled with bentonite drilling fluid, concrete or some other approved sealing agent.

4. At present the two conduit systems are owned and maintained

by the OLB. The primary cable at station 54+65 is owned by the OLB and maintained by NOPSI at the OLB's expense. The primary cable at station 33+40 is owned by NOPSI and maintained by NOPSI at the OLB's expense. Upon completion of the proposed relocations the OLB will retain ownership and maintenance responsibilities for the new conduit lines and manholes. The ownership of the cable shall be in accordance with the past policy, as outlined above.

5. Final relocation plans and cost estimates will be prepared and submitted at a later date, prior to the commencing of our relocation work, and subsequent to receiving the necessary approvals.

6. NOPSI will be reimbursed for all relocation expenses required for this project.

By copy of this letter, we request that the Corps of Engineers and the Office of Public Works review and comment on the proposed relocations and whether or not it meets with their approval.

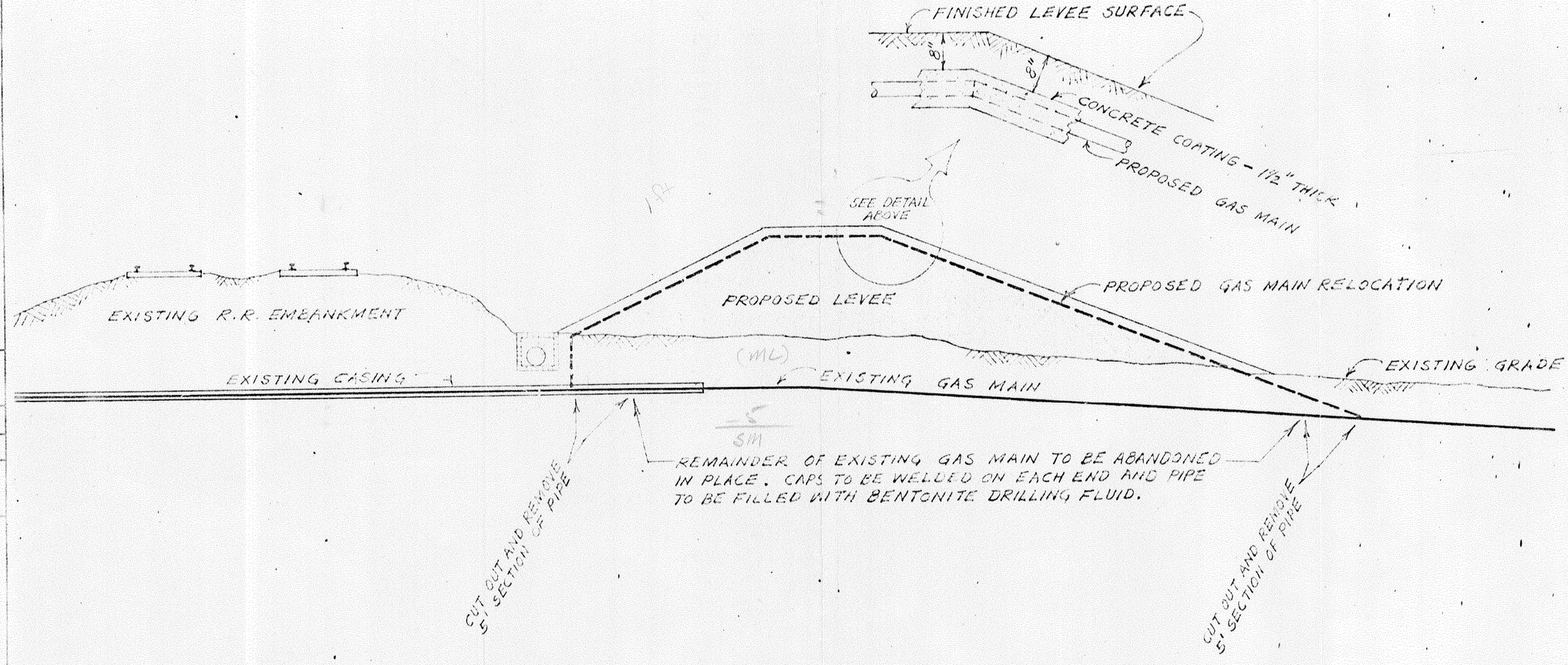
If you have any questions or require any additional information, please let me know.

Very truly yours,

H. N. Ford

HNF:md
Attachments
cc: Messrs. Frederic Chatry (w/Attachments)
A. E. Simpson (w/Attachments)

15-3260-L



NOTES: 4" GAS MAIN CROSSES PROPOSED LEVEE APPROX. AT STA. 32+00
2" " " " " " " " " 55+00

THESE TWO GAS MAINS ARE TO REMAIN IN USE DURING CONSTRUCTION OF LEVEE. RELOCATION IS TO BE DONE AFTER LEVEE CONTRACT IS FINISHED.

RELOCATED GAS MAINS ARE TO BE BOXED AND COATED WITH CONCRETE - 1½" MINIMUM THICKNESS.

NEW ORLEANS PUBLIC SERVICE INC.
ENGINEERING DEPARTMENT

METHOD FOR RELOCATION OF 4" AND 2" GAS MAINS OVER PROPOSED CITRUS LAKEFRONT LEVEE IN VICINITY OF N.O. AIRPORT

DATE MAY 1, 1979
SCALE 1" = 10'

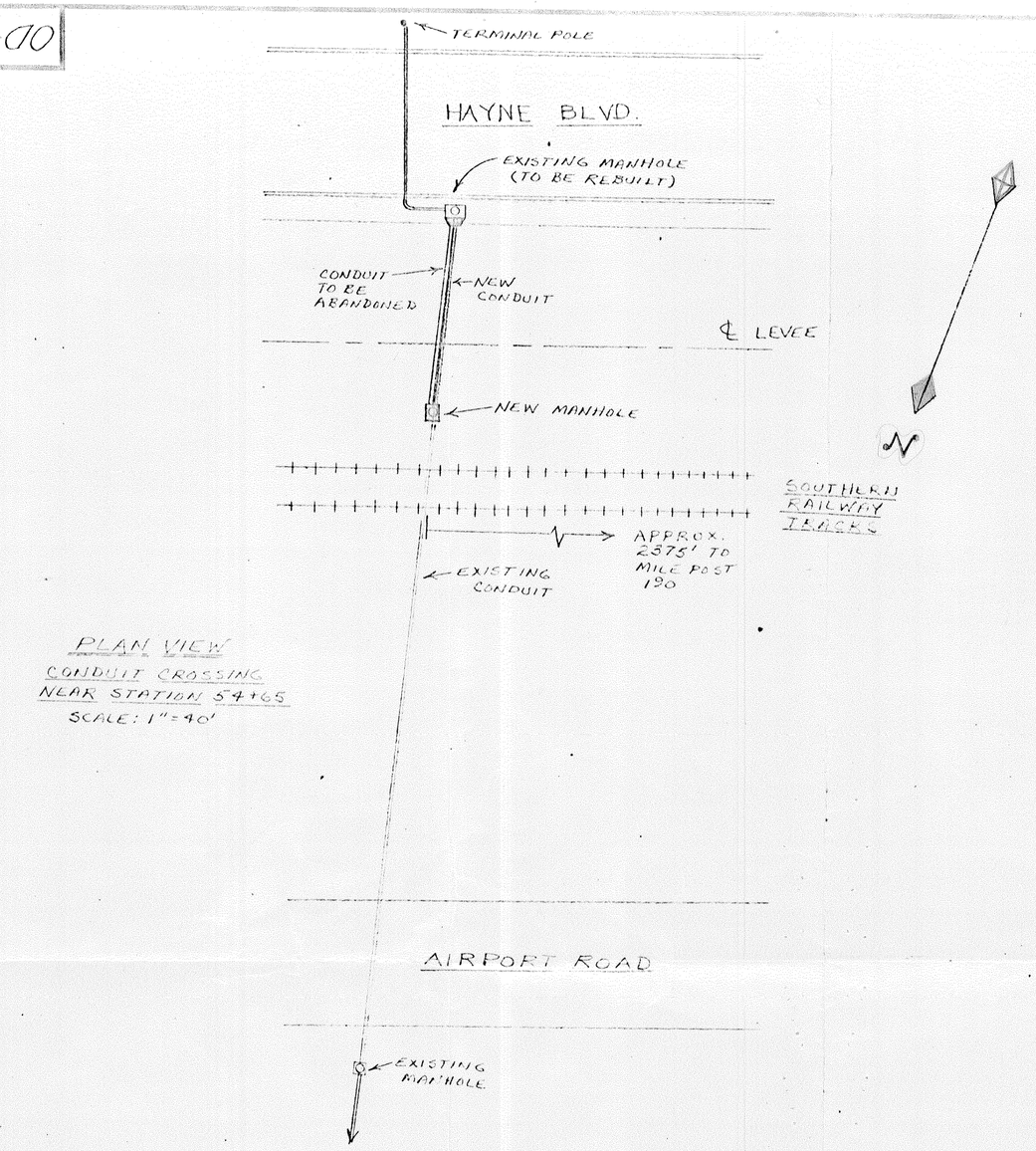
15-3260-L

REVISION	NO.	DATE	BY	CK.	APP.

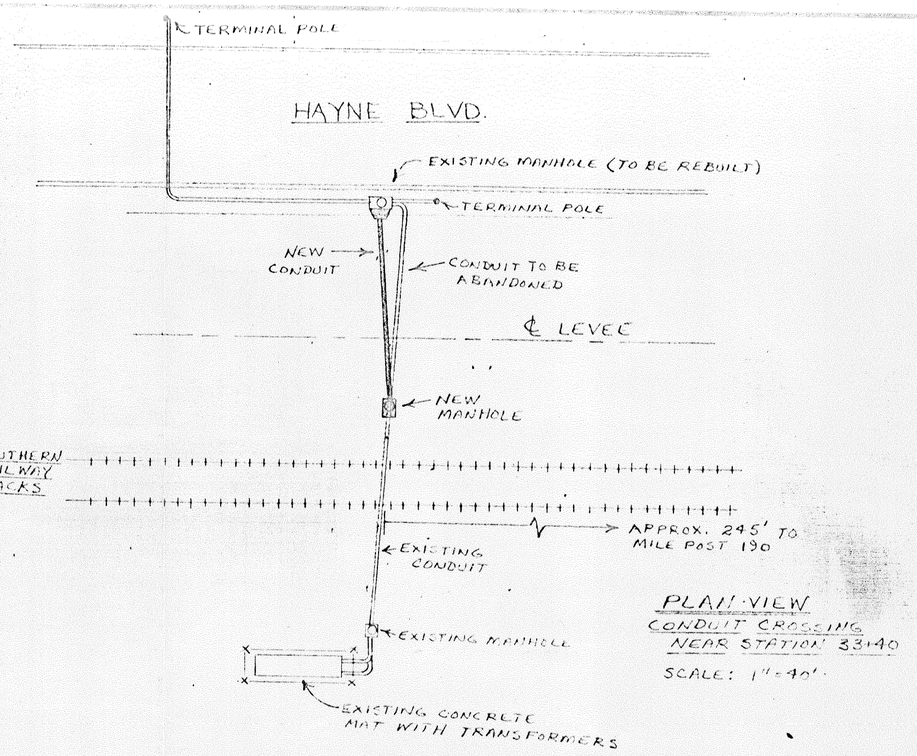
APPROVED	DATE

DRAWN BY	TRACED BY	CHECKED BY
R.L.B.		

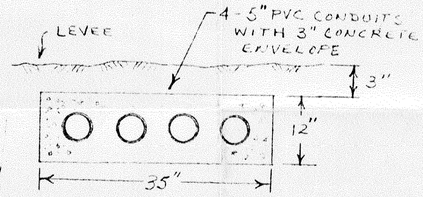
12.00-62-00



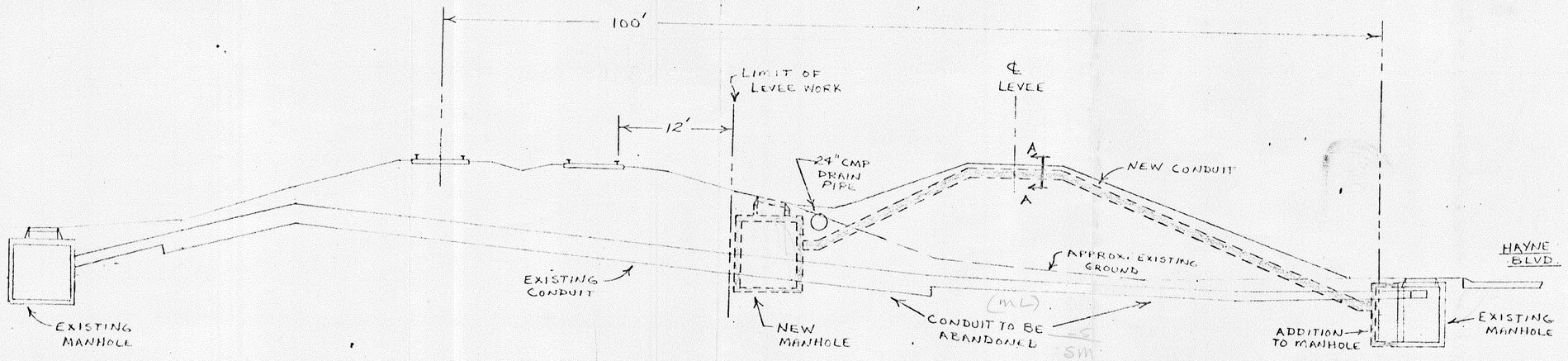
PLAN VIEW
CONDUIT CROSSING
NEAR STATION 54+65
SCALE: 1"=40'



PLAN VIEW
CONDUIT CROSSING
NEAR STATION 33+40
SCALE: 1"=40'



SECTION A-A
(AT CENTERLINE OF LEVEE)
SCALE: NONE



ELEVATION
CONDUIT CROSSING NEAR
STATION 33+40
SCALE: 1"=10'

NOTE: THE ELEVATION FOR CONDUIT CROSSING NEAR STATION 54+65 WILL BE SIMILAR TO ABOVE. ACTUAL DEPTHS OF CONDUIT AND MANHOLES MAY VARY.

N

REVISION	NO.	DATE	BY	APP.

DEPARTMENT	APPROVED	DATE
DEPT. OF STREETS		
DRAINAGE		
SEWER & WATER		
UTILITIES ENGINEER		

DRAWN BY	CHS	APPROVED	DATE
TRACED BY			5/18/79
CHECKED BY			

NEW ORLEANS PUBLIC SERVICE INC.
ENGINEERING DEPARTMENT

NEW ORLEANS LAKEFRONT AIRPORT

PRELIMINARY PLAN FOR RELOCATION OF UNDERGROUND PRIMARY CONDUIT SERVICES DUE TO CONSTRUCTION OF CITRUS LAKEFRONT LEVEE

DATE MAY 17, 1979
SCALE AS SHOWN

OD-79-0071

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-DL	Contract No. 85-C-0057, Citrus Lakefront Levee, Levee & Foreshore Protection

TO C/F&M Branch 3/19 FROM C/Des Branch DATE 18 Mar 86 CMT 1
Mr. Wright/cc/2721

1. Forwarded for your review and comments is the contractor's proposal for an alternate borrow area on the subject contract.

2. Your comments are required no later than 31 March 1986. If additional information is needed, please contact Julio Maldonado of Construction Divison at x2924 or Scott Young of New Orleans Resident Office at x1222.

Encl

WALTER D. JUDLIN, III
Chief, Design Branch

LMNED-FS

TO: C/Design Br FROM: C/F&M Br DATE: 26 Mar 86 CMT 2
Mr. Richardson/mlm/1031

1. We have reviewed the contractor's proposed alternate borrow source and have made a site visit to inspect the proposed borrow pit on 24 Mar 86.

2. Based on field inspection and the furnished borings which were not witnessed by a Corps representative, we have no objection to the contractor using the proposed alternate borrow source. However, it is recommended that three additional borings (located as shown on attached map (Encl 2)) be taken to better cover all the requested borrow area. These borings should be submitted for review before approval is given to borrow in the area they represent. The field inspection indicated there may be a difference in the material available in the area where these additional borings are located.

2 Encl
1. nc
Added 1 encl
2. Location Map

RODNEY P. PICCIOLA
Chief, Foundations & Materials Branch

3/20

FILE

LUHR BROS., INC.
CONTRACTORS
Heavy Construction & Marine Services
P O Box 7886 Alexandria, Louisiana 71306-0886
(318) 487-9263 & 487-9293

February 4, 1986
Serial Letter No. 0057-0021

Mr. Richard Hill
U. S. Army Corps of Engineers
New Orleans Resident Office
Foot of Poytania Street
New Orleans, Louisiana

RE: CONTRACT # DACW 29-C-85-0057
LAKE PONTCHARTRAIN, LA. & VICINITY
LAKE PONTCHARTRAIN HIGH LEVEL PLAN
LAKE PONTCHARTRAIN LEVEE & FORESHORE
PROTECTION, ORLEANS PARRISH, LOUISIANA

SUBJECT: CONTRACTOR FURNISHED BORROW AREA

Mr. Hill,

As you are well aware of, we have had great difficulty removing embankment material from our Lake Forest Pit off Bullard Ave. We therefore are requesting approval of an alternate source of material with the hope that construction of the levee may proceed much better.

The Borrow Area which we are requesting approval for is operated by Murphy Construction Co., Inc. and is located 3.6 miles East of Paris Road on Chef Highway and approximately 0.25 miles North. S. A. Laurent Construction Co. at the present time is also submitting a request for this same area and it is our hope that since the soil samples were taken jointly, duplication of information will not be required.

As with our present Borrow Area, this area is being utilized at the present time and upon completion will be a lake for a future housing development. It is, therefore, our belief that since the area is currently being utilized and degraded to the desires of the developer, an environmental assessment and a field investigation to determine culturel resources impacted will not be necessary.

We respectfully request your immediate attention to the above matter in order to allow us to continue with the embankment operation at the earliest possible date.

Sincerely Yours,

Luhr Bros., Inc.

Gene Mehrtens

Project Supt.

End 1

MURPHY CONSTRUCTION CO., INC.

P. O. BOX 1008
CHALMETTE, LOUISIANA 70044
Phones: 277-0022 271-4979 279-9975

February 6, 1986

Luhr Brothers, Inc.
7921 Bullard Road Suite 1A
Post Office Box 29974
New Orleans, Louisiana 70189

Re: Lake Pontchartrain Levee &
Foreshore Protection
Project # 850057
Contract # DACW 29-C-85-0057

Attention: Mr. Gene Mehrtens

Dear Gene:

This is a letter to confirm in writing our verbal agreement to furnish Luhr Brothers, Inc. with material from our mud pit to complete the above-referenced job according to plans and specifications of the U S Army Corps of Engineers.

I understand that it will require approximately 30,000 yards and we are looking forward to a long and pleasant business relationship.

Sincerely,

Lamont L Murphy

Lamont(Whip) Murphy
Secretary/Treasurer

LLM/jb

Gulf South Laboratories, Inc.
383 LAKE AVENUE • METAIRIE, LOUISIANA 70005 • (504) 832-5900
TESTING • INSPECTION • RESEARCH

January 17, 1986 GSL 2319

SUBJECT	:	Soil (Mechanical Analysis)
PROJECT	:	New Orleans Lakefront Levee London Ave. Canal to West End Blvd. - Hurricane Protection Project - Orleans Parish, La. Solicitation #DACW 29-85-C-0171
MATERIAL SUPPLIER	:	New Orleans East Corp. and Murphy Sand Co. (Joint Venture)
SUB CONTRACTOR	:	Boh Bros. Const. Co.
GENERAL CONTRACTOR/CLIENT	:	S. A. Laurent Const. Co. P. O. Box 5 Metairie, La. 70004

This report is concerned with the suitability of eight (8) material samples. These materials were sampled by a representative of Gulf South Laboratories and a representative of the contractor. The samples were placed in air tight zip-lock bags in order to maintain the moisture at the time of sampling.

The following ASTM laboratory procedures were employed in the analysis:

1.) ASTM Method D423 Test for Liquid Limits of Soils.
2.) ASTM Method D424 Test for Plastic Limit and Plasticity Index of Soils.

All tests were performed and checked by qualified technicians.

Test results of the eight (8) samples are:

Sample Identification	1A	1B	1C
Moisture Content	29.7%	32.3%	33.3%
Liquid Limit	55	51	36
Plastic Limit	40	14	23
Plasticity Index	15	17	13
Unified Soil Classification	OH	OH	CL
ASTM 3282-73 Soil Classification	A-7-5	A-7-5	A-6
Field Classification	Brown & Gray Sandy, Clay	Brown & Gray Sandy, Clay	Brown & Gray Sandy, Clay

Sample Identification	2A	2B
Moisture Content	32.1%	31.6%
Liquid Limit	50	33
Plastic Limit	32	22
Plasticity Index	18	11
Unified Soil Classification	OH	C-L
ASTM 3282-73 Soil Classification	A-7-5	A-6
Field Classification	Brown & Gray Sandy, Clay	Brown Sandy Clay

Sample Identification	3A	3B	3C
Moisture Content	29.6%	32.3%	32.0%
Liquid Limit	55	43	35
Plastic Limit	42	27	20
Plasticity Index	13	16	15
Unified Soil Classification	OH	OH	CL
ASTM 3283-73 Soil Classification	A-7-5	A-7-5	A-6
Field Classification	Brown & Gray Sandy, Clay	Brown & Gray Sandy, Clay	Gray Sandy Clay

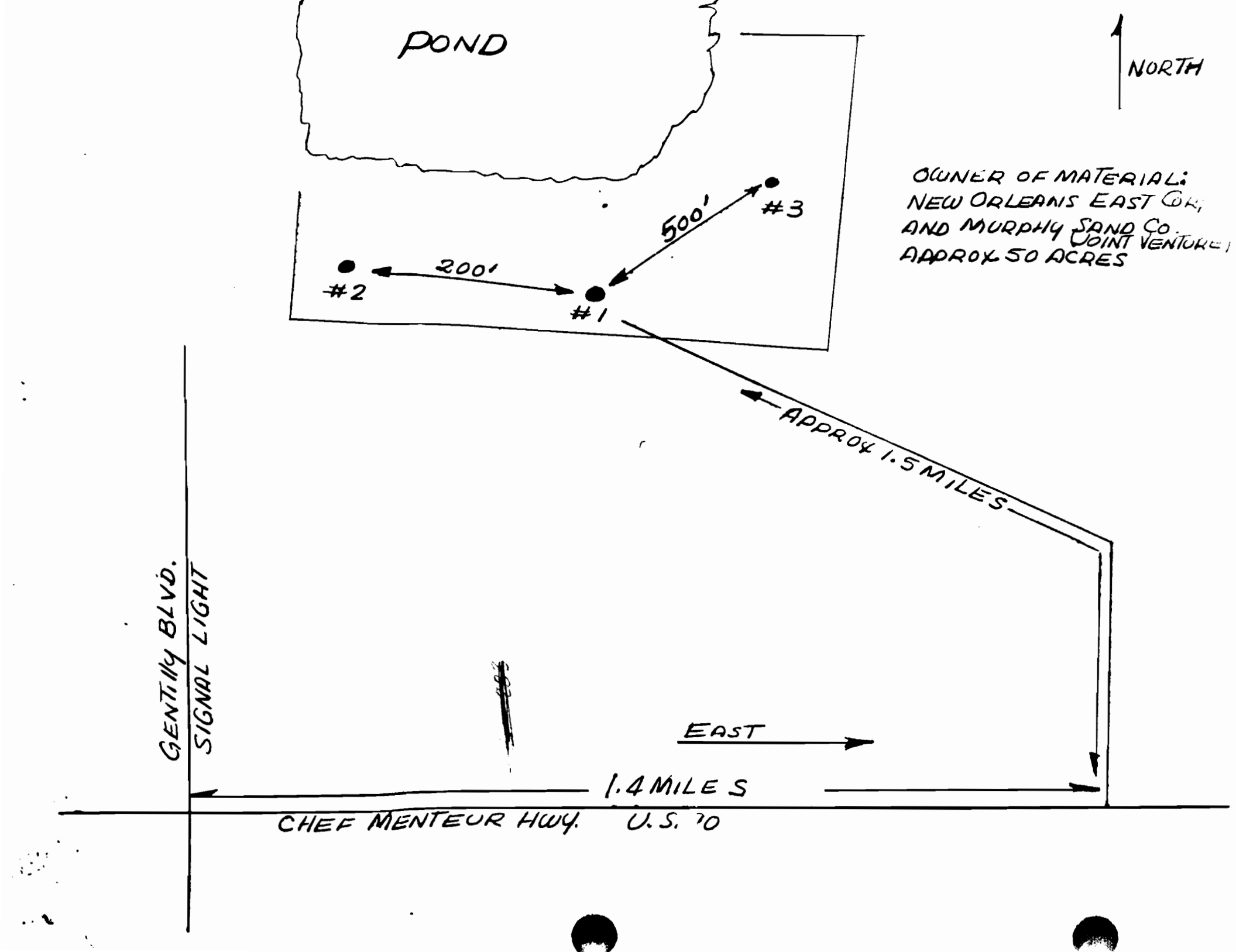
The owners of the borrow pit are New Orleans East Corp. and Murphy Sand Co. a joint venture. The pit is located approximately 1.4 miles east of the intersection of Gentilly Blvd. and Chef Menteur Hwy. (U.S. 90) and approximately 1.5 miles north and west of Chef Menteur Hwy. The borrow pit is approximately 50 acres. See enclosed map for sample locations.

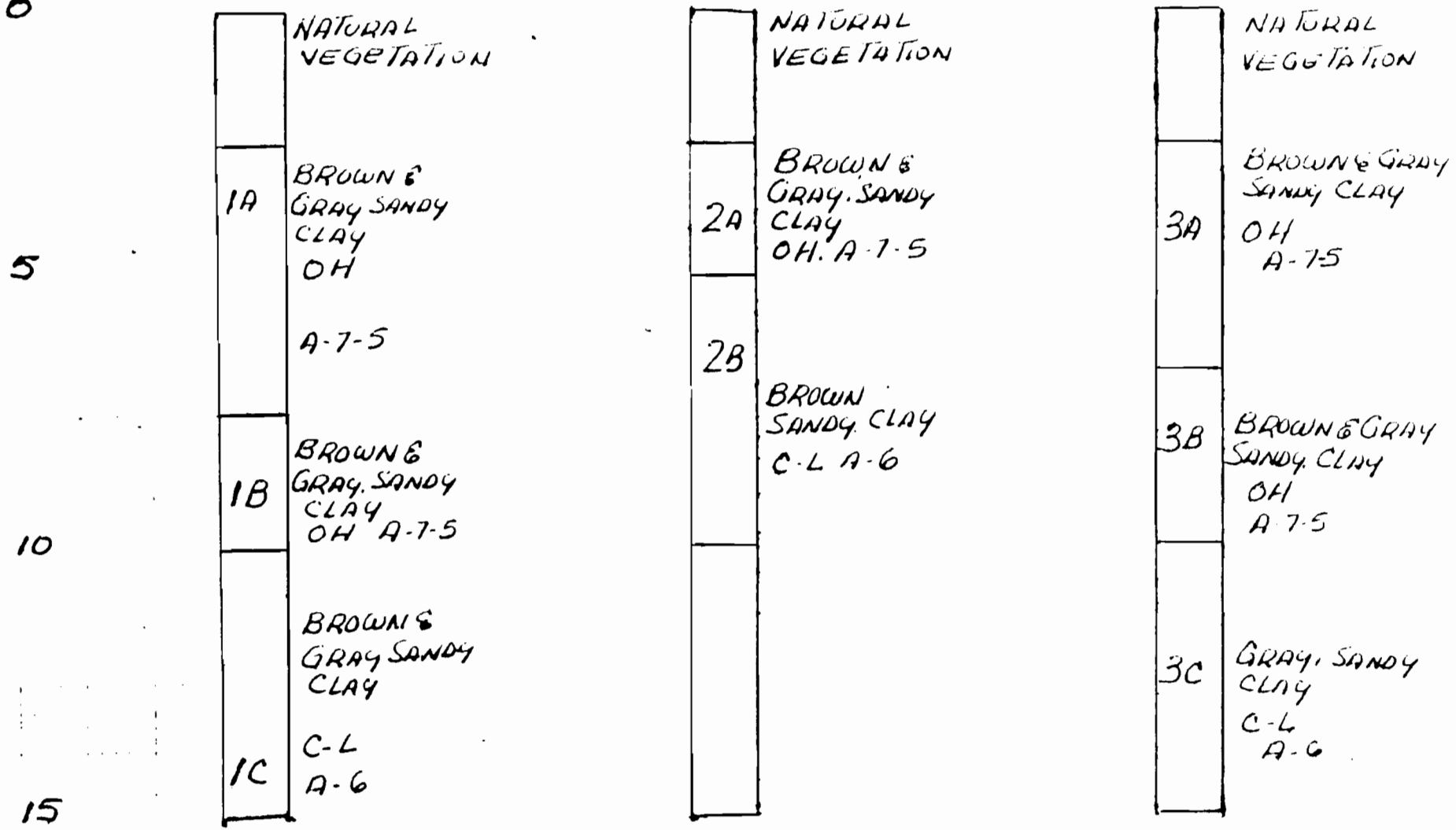
TECHNICIAN: P. Mire

Respectfully submitted,
GULF SOUTH LABORATORIES, INC.

Edward C. Cronic,
President

ECC/st
enclosures


POND
NORTH
OWNER OF MATERIAL:
NEW ORLEANS EAST CO.,
AND MURPHY SAND CO.
JOINT VENTURE
APPROX. 50 ACRES
#3
500'
200'
#2
#1
APPROX 1.5 MILES
GENTILLY BLVD.
SIGNAL LIGHT
EAST
1.4 MILES
CHEF MENTEUR HWY. U.S. 90


0
5
10
15
NATURAL VEGETATION
1A
BROWN & GRAY SANDY CLAY OH A-7-5
1B
BROWN & GRAY. SANDY CLAY OH A-7-5
1C
BROWN & GRAY SANDY CLAY C-L A-6
NATURAL VEGETATION
2A
BROWN & GRAY. SANDY CLAY OH. A-7-5
2B
BROWN SANDY CLAY C-L A-6
NATURAL VEGETATION
3A
BROWN & GRAY SANDY CLAY OH A-7-5
3B
BROWN & GRAY SANDY CLAY OH A-7-5
3C
GRAY. SANDY CLAY C-L A-6

NEW ORLEANS EAS
MANAGED BY TECON REALTY CORPORATI

13232 Chef Menteur Highway at Michoud Boule
P O Box 29188 New Orleans Louisiana 70
(504) 254-1400 • TELEX NO. 784256 NOELA

January 20, 1986

Mrs. C. Murphy
President
Murphy Construction Co., Inc.
P.O. Box 1008
Chalmette, Louisiana 70044

Re: Proposal for Lake Development & Construction

Dear Mrs. Murphy:

Job
The Fourteenth Eastern Corporation and Fourteenth Michoud Corporation for their own interest and the interest of their related development corporations (the "Owner") represented herein by Tecon Realty Corporation, the Owner's manager, offer to Murphy Construction Co., Inc. (the "Contractor") the right to enter upon its property in the Third Municipal District on that area shown and generally defined on Exhibit "A" annexed hereto, (the "Property") for the purpose of excavating two (2) lakes (the "Lakes") which Lakes shall be in the form set forth on Exhibit "A" or as the Lake specifications may hereafter be altered in Owner's sole discretion. Contractor shall conform all design and construction decisions to the sole discretion of Owner.

Term
This agreement shall continue for a period of two (2) years from the date hereof and may be renewed for a period of not more than three (3) additional years. Notwithstanding the term, either party unilaterally may by 120 days written notice terminate this agreement.

Price
Contractor may sell and provide dirt and other material excavated during the construction of the Lakes not otherwise required by Owner to third parties at whatever price Contractor may determine provided that for each cubic yard of such dirt or other material taken by Contractor from the Lakes Contractor shall pay to Owner a price of Fifty/100 ($.50) Dollars, payable monthly. This price of 50¢ per cubic yard payable to Owner is only applicable to sales of dirt and other material by Contractor to third parties and is not applicable to sales of dirt and material by Contractor to Owner. Owner shall have the right to inspect Contractor's records to confirm the amount of material taken by Contractor from the Property and may require such additional record keeping documents as Owner may in its reasonable discretion deem necessary.

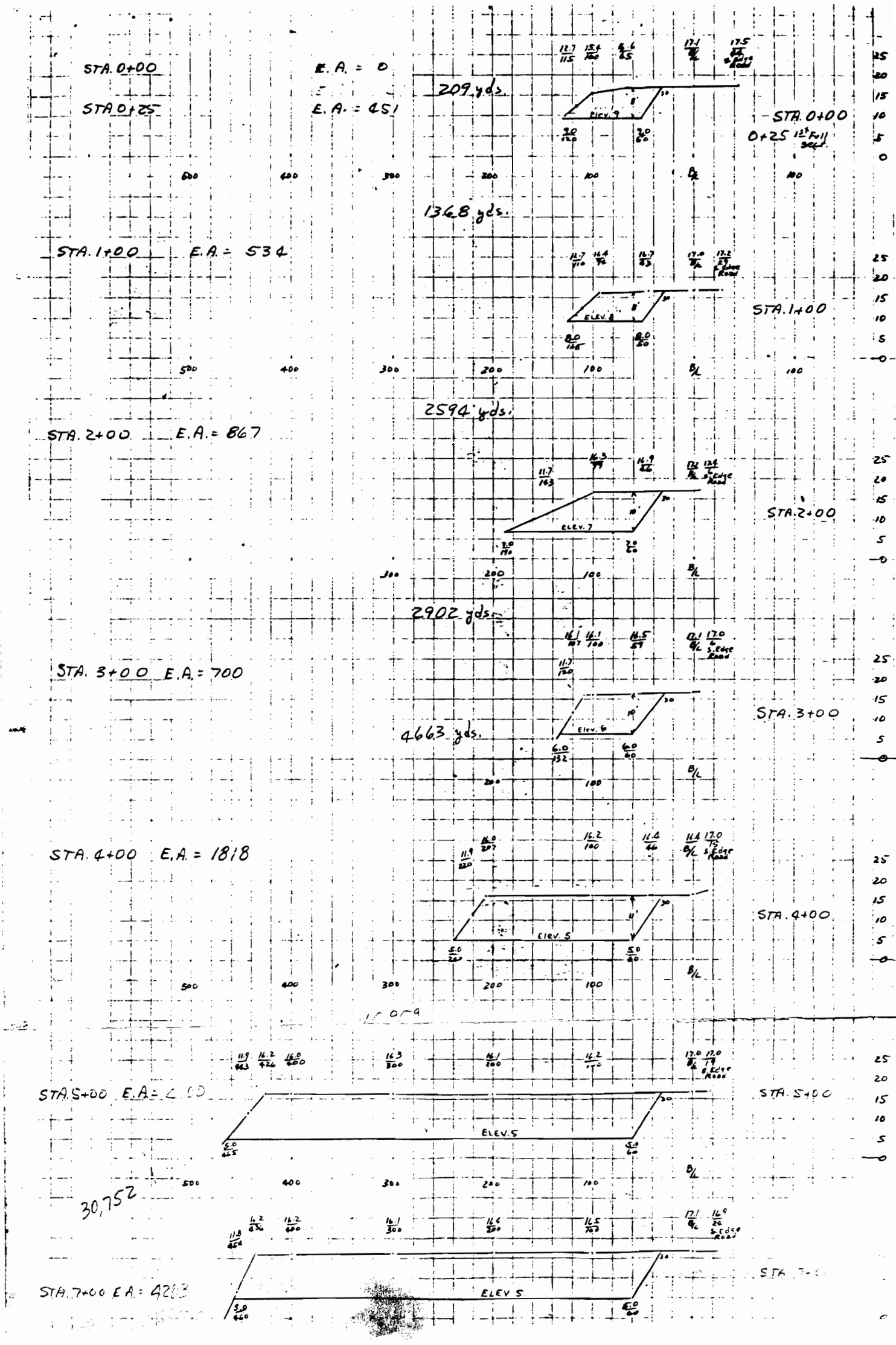
Payment to the Contractor for the job shall be in kind. Contractor shall provide dirt excavated from the Lakes to Owner delivered to any site located within the Property selected by the Owner at a price not to exceed $2.77 per cubic yard including any taxes as may now or hereafter be determined to be applicable.

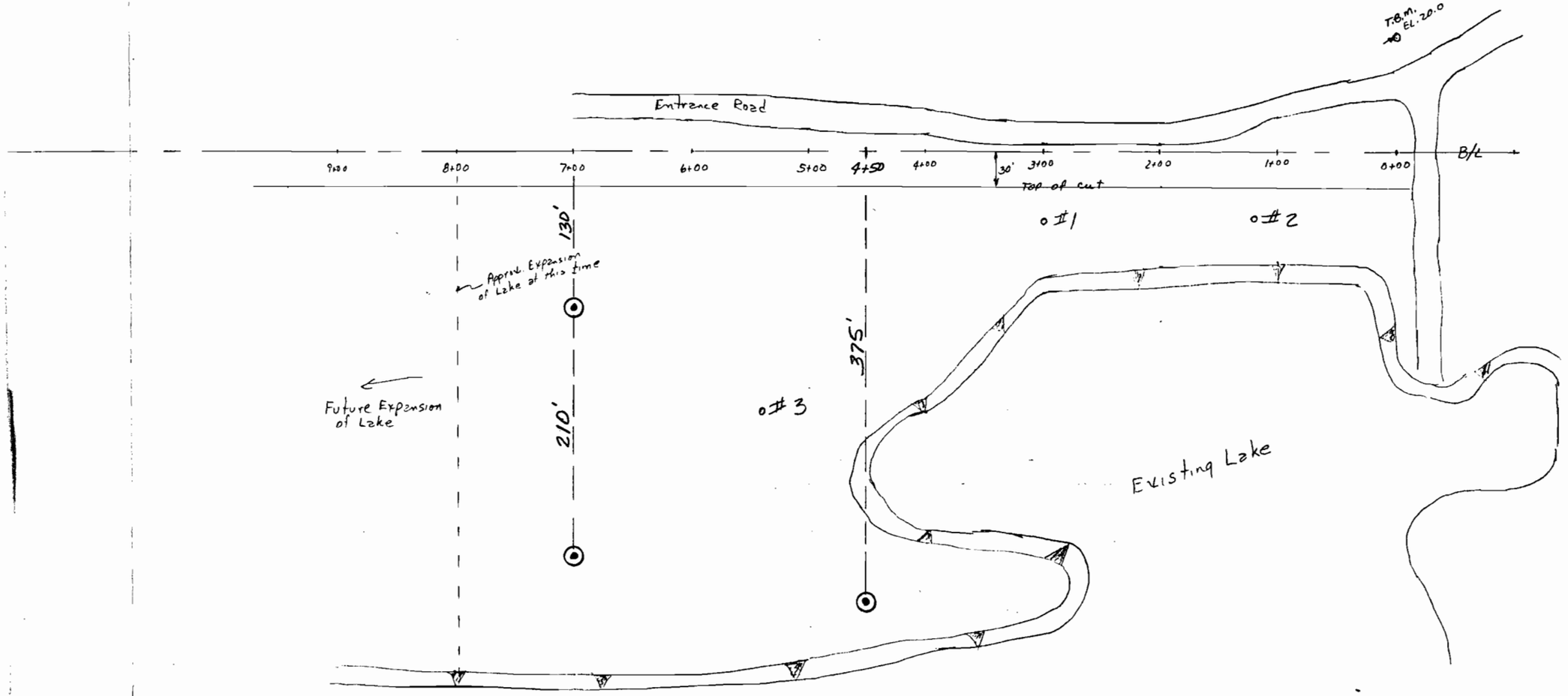
Murphy Pit Notes

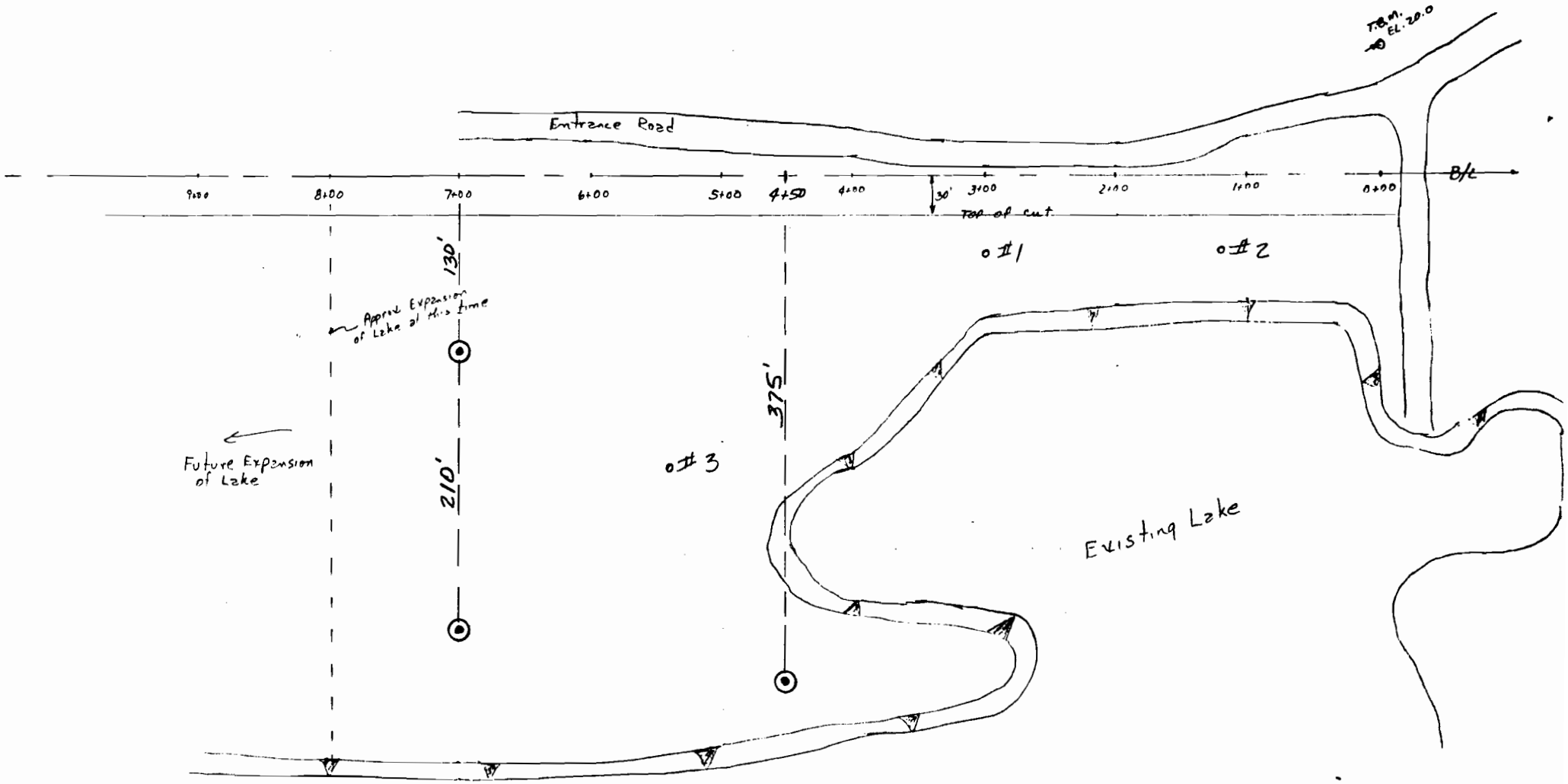
	+	H.I.	−	Elev.	
0+00	2.01	22.01		20.00	
1+00	1.84	21.84		20.00	
2+00	2.21	22.21		20.00	
3+00			5.02	17.19	T.P.
	4.73	21.92			
4+00			5.66	16.26	T.P.
	5.05	21.31			
5+00			5.26	16.05	
	5.86	21.91			
7+00			5.86	16.05	
	5.83	21.88			
			5.28	16.60	
	5.32	21.92			
			1.93	19.99	Found
				20.00	Given

Assumed Elev. Top East Edge of stump 77' North

12.7	15.6	16.6	17.1	17.5	17.9		
9.3	6.6	5.6	4.9	4.5	4.1		
115	100	65	B/L	40 S. Edge Road	97		
12.7	16.4	16.7	16.9	17.2			
9.1	5.4	5.1	4.9	4.6			
110	94	43	B/L	29			
11.7	16.3	16.9	17.2	17.4			
10.5	5.9	5.3	5.0	4.8			
143	99	46	B/L	6 S. Edge Road			
11.7	16.1	16.1	16.5	17.1	17.0		
10.2	5.8	5.8	5.4	4.8	4.9		
120	107	100	59	B/L	6 S. Edge Road		
11.9	16.0	16.2	16.4	16.4	17.0		
9.4	5.3	5.1	4.9	4.9	4.3		
220	207	100	46	B/L	15' S. Edge Road		
11.9	16.2	16.0	16.3	16.1	16.2	17.0	17.0
10.0	5.7	5.9	5.6	5.8	5.7	4.9	4.9
443	426	400	300	200	100	B/L	19 S. Edge Road
11.8	16.2	16.2	16.1	16.4	16.5	17.1	16.9
10.1	5.7	5.7	5.8	5.5	5.4	4.8	5.0
454	436	400	300	200	100	B/L	24 S. Edge Road


STA. 0+00
E. A. = 0
209 yds.
STA 0+25
E. A. = 451
STA. 0+00
0+25 12% Fill
1368 yds.
STA. 1+00
E.A. = 534
STA. 1+00
2594 yds.
STA. 2+00
E.A. = 867
STA. 2+00
2902 yds.
STA. 3+00
E.A. = 700
STA. 3+00
4663 yds.
STA. 4+00
E.A. = 1818
STA. 4+00
STA. 5+00
E.A. = 600
STA. 5+00
30,752
STA. 7+00
E.A. = 4203
ELEV. 9
ELEV. 8
ELEV. 7
ELEV. 6
ELEV. 5
ELEV. 5
ELEV. 5
B/L
S. Edge Road


T.B.M.
EL. 20.0
Entrance Road
9+00
8+00
7+00
6+00
5+00
4+50
4+00
30'
3+00
2+00
1+00
0+00
B/L
Top of cut
o #1
o #2
o #3
130'
210'
375'
Approx. Expansion of Lake at this time
Future Expension of Lake
Existing Lake



● Additional boring location

Encl 2

ROUTING OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE FOR APPROVAL

(Used to route ENG Form 4025 with items attached. Not to become a part of the Contractor's record.)

	TO:	FROM:	DATE
1	C/Const Div.	R/E New Orleans	31 July 85

The attached items listed on ENG Form 4025 are forwarded for approval action.

CONTRACT NUMBER	CONTRACTOR
DACW29-85-C-0057	Luhr Bros. Inc.
TRANSMITTAL NUMBERS Borrow Pit (Alternate) 9 & 10 Exc Plan	**PROJECT TITLE AND LOCATION** Citrus Foreshore Protection & Levee Enlargement

COMMENTS *(Attach additional sheet, if necessary.)*
Please forward to Engr Div.

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
2	Authorized	[signature]

	TO:	FROM:	DATE
2	C/ENG DIV	C/CONST DIV	2 AUG 85

COMMENTS *(Attach additional sheet, if necessary.)*
PLEASE REVIEW THE ABOVE STATED SUBMITTALS & FORWARD YOUR CMTS & RECOMS. TO THIS OFFICE

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
2 (2 cys)	DONALD F. HULL Chief, Construction Division	[signature]

	TO:	FROM:	DATE
3	C/Construction Division	C/Engineering Division	7 Aug 85

COMMENTS *(Attach additional sheet, if necessary.)*
"SEE ATTACHED SHEET"

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE
3	FREDERIC M. CHATRY, C/Engr. Div.	

	TO:	FROM:	DATE
4			

The following action codes are given to items listed on ENG Form 4025:

ACTION CODES

A - APPROVED AS SUBMITTED.
B - APPROVED, EXCEPT AS NOTED ON DRAWINGS. RESUBMISSION NOT REQUIRED.
C - APPROVED, EXCEPT AS NOTED ON DRAWINGS. REFER TO ATTACHED SHEET. RESUBMISSION REQUIRED.
D - WILL BE RETURNED BY SEPARATE CORRESPONDENCE.
E - DISAPPROVED (SEE ATTACHED)
F - RECEIPT ACKNOWLEDGED
G - OTHER *(specify)*

ACTION CODES TO BE INSERTED IN COLUMN G, SECTION I, ENG FORM 4025 *(Attach sheets, when required.)*

ITEM NO. *(Taken from ENG Form 4025)*								
CODE GIVEN								

REMARKS

NO. OF INCL.	TYPED NAME AND TITLE	SIGNATURE

ENG FORM 1 NOV 74 4026 EDITION OF NOV 66 MAY BE USED.

☆U.S. G.P.O. 1980-521-246/593

File 8/7/85

ENGINEERING DIVISION COMMENTS
on
ALTERNATE BORROW PIT
for CITRUS FORESHORE PROTECTION and LEVEE ENLARGEMENT
CONTRACT NO. DACW-29-85-C-0057

Only Boring A-1 of the eight (8) borings presented is located in the proposed pit, and it's location is very close to the eastern edge of the pit. The proposed borrow material indicated by Boring A-1 is acceptable, but will require some moisture control. Boring A-2 located approximately 110' outside the pit indicates an SM material on the surface. If sand is encountered in the proposed pit, the sand should not be used for borrow. The borings also indicate that silts and lean clays are present. It should be noted that these materials may be very susceptible to surface erosion during construction of the thin lift and steep slopes required in this contract.

Encl 3

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES, OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE
(Read instructions on the reverse side prior to initiating this form)

DATE: 25 July 1985

☒ NEW SUBMITTAL ☐ RESUBMITTAL

Section I — REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

TO:	FROM:	CONTRACT NO.	TRANSMITTAL NO. / PREVIOUS TRANS. NO. (If any)
Resident Engr., N.O.	Luhr Bros., Inc.	DACW 29-85-C-0057	9d10 / N/A

SPECIFICATION SEC. NO. (Cover only one section with each transmittal) 2-3.1 2-3.2.1

PROJECT TITLE AND LOCATION: Citrus Lakefront Levee & Foreshore Protection

a. ITEM NO.	b. DESCRIPTION OF ITEM SUBMITTED (Type, size, model number, etc.)	c. MFG. OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction No. 8)	d. NO. OF COPIES	CONTRACT REFERENCE DOCUMENT e. SPEC. PARA. NO.	CONTRACT REFERENCE DOCUMENT f. DRAWING SHEET NO.	g. VARIATION (See instruction No. 6)	h. FOR C E USE CODE
9	Contractor Furnished Borrow	---		2-3.1	--		
10	Borrow Area Excavation Plan combined	---		2-3.2.1	--		

REMARKS

I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated.

Luhr Bros., Inc.
Gene Mehrtens
NAME AND SIGNATURE OF CONTRACTOR

Section II — APPROVAL ACTION

INCLOSURES RETURNED (List by Item No.)	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

LUHR BROS., INC.
CONTRACTORS
Heavy Construction & Marine Services
P O Box 7886 Alexandria, Louisiana 71306-0886
(318) 487-9263 & 487-9293

25 July, 1985

Serial Letter No. 0057-0015

Mr. Norman C. Olson
U.S. Army Corps of Engineers
New Orleans Resident Office
145 Robert E. Lee Blvd.
Suite 400 West
New Orleans, Louisiana 70124

RE: CONTRACT # DACW29-C-85-0057
LAKE PONTCHARTRAIN, LA. & VIC.
LAKE PONTCHARTRAIN HIGH LEVEL PLAN
LAKE PONTCHARTRAIN LEVEE & FORESHORE PROTECTION, ORLEANS PARRISH, LA.

SUBJECT: CONTRACTOR FURNISHED BORROW AREA AND EXCAVATION PLAN

Mr. Olson:

Please find enclosed a packet containing information required by the Contract Specs. pertaining to Contractor Furnished Borrow Area and Excavation Plan.

The Borrow Area which we are requesting approval for is located approximately 1.3 miles south of Hayne Blvd., on Bullard Blvd. and approximately .25 mile east off Bullard Blvd.

The Borrow Area is being utilized at the present time and upon completion will be utilized as a lake for a future housing developement which will include an 18-hole golf course with additional small lakes. It is therefore our belief that since the area is currently being utilized and degraded to the desires of the developer, Lake Forest Inc., an Environmental Assessment and field investigation to determine cultural resources impacted will be unnecessary.

If this site was approved, the traffic pattern would be from the Pit, down Bullard Blvd. or Paris Road via I-10 to Hayne and back to the pit via Bullard Blvd. On Hayne Blvd., ramps would be places at required destinations to allow trucks access to the top of the levee. As you can see, this route is free of heavy traffic areas allowing

LUHR BROS., INC.
CONTRACTORS
Heavy Construction & Marine Services
P O Box 7886 Alexandria, Louisiana 71306-0886
(318) 487-9263 & 487-9293

for free flow of material and the safest possible situation.

We respectfully request your immediate attention to the above matter in order to allow us to commence with the embankment operation at the earliest possible date.

Very Truly Yours,

LUHR BROS., INC.

Gene Mehrtens

Gene Mehrtens
Project Supt.

bm

Enclosure

AGREEMENT OF SALE

Agreement made this _____ day of July, 1985 between Lake Forest, Inc., a Louisiana Corporation with a mailing address of 4949 Bullard Avenue, Suite 100, New Orleans, La., 70128 (hereinafter "Lake Forest") and ~~Lure~~ LUHR Bros., Inc., an Illinois Corporation with a mailing address of P.O. Box 69, Columbia, Illinois, 62236 (hereinafter "~~Lure~~ LUHR").

Lake Forest does hereby sell, transfer, and convey to ~~Lure~~ LUHR FIFTY THOUSAND (50,000) cubic yards of clay from borrow pit owned by Lake Forest and located along the Jahncke canal south of the Interstate 10 highway corridor.

~~Lure~~ LUHR shall be responsible to mine the clay from within the borrow pit and shall have access over and across the property owned by Lake Forest for the time period necessary to remove the 50,000 cubic yards in order to conduct its mining operations. ~~Lure~~ LUHR shall further be responsible to maintain the borrow pit and its roadways during the entire time period necessary for the conduct of its mining operations, to include pumping.

The purchase price for the clay is $1.20 per cubic yard removed. Payments toward the purchase price shall be made bi-weekly and shall be payable to Lake Forest, Inc.

In order to calculate the amount of each payment, Lake Forest shall cause Universal Land Surveyors, Inc. to survey the borrow pit to determine the number of cubic yards of clay removed by ~~Lure~~ LUHR. The amount calculated shall then be invoiced to ~~Lure~~ LUHR, and ~~Lure~~ LUHR shall pay the amount of each invoice within 5 days after receipt by ~~Lure~~ LUHR of such invoice. Failure to pay the invoiced amount within 5 days

of such receipt shall entitle Lake Forest to receive interest on the invoiced amount at the rate of twelve (12%) percent per annum. ~~Lure~~ LUHR shall not have the right to remove its equipment from the borrow pit until Lake Forest has received the final payment for all clay removed.

~~Lure~~ LUHR shall not have the right to allow any third parties or independent operators on the site of the borrow pit for any purpose without first identifying such third party or independent operator to Lake Forest and receiving approval from Lake Forest for such third party's or independent operator's entry onto the borrow pit site. Lake Forest may withhold such approval until it has received from the third party or independent operator a waiver of lien in form and substance satisfactory to attorneys for Lake Forest.

~~Lure~~ LUHR shall hold Lake Forest harmless and indemnify Lake Forest from and against any and all claims, demands, causes of action, or damages which Lake Forest may incur as a direct or indirect result of the sale of clay pursuant to this Agreement by Lake Forest to ~~Lure~~ LUHR.

~~Lure~~ LUHR shall cause any and all liens which may be filed against the property owned by Lake Forest and from which ~~Lure~~ LUHR will remove the clay to be cancelled of record whether by payment or by the posting of a surety bond.

The parties hereto have executed the foregoing Agreement of Sale on the dates indicated below.

DATE: 7/25/85

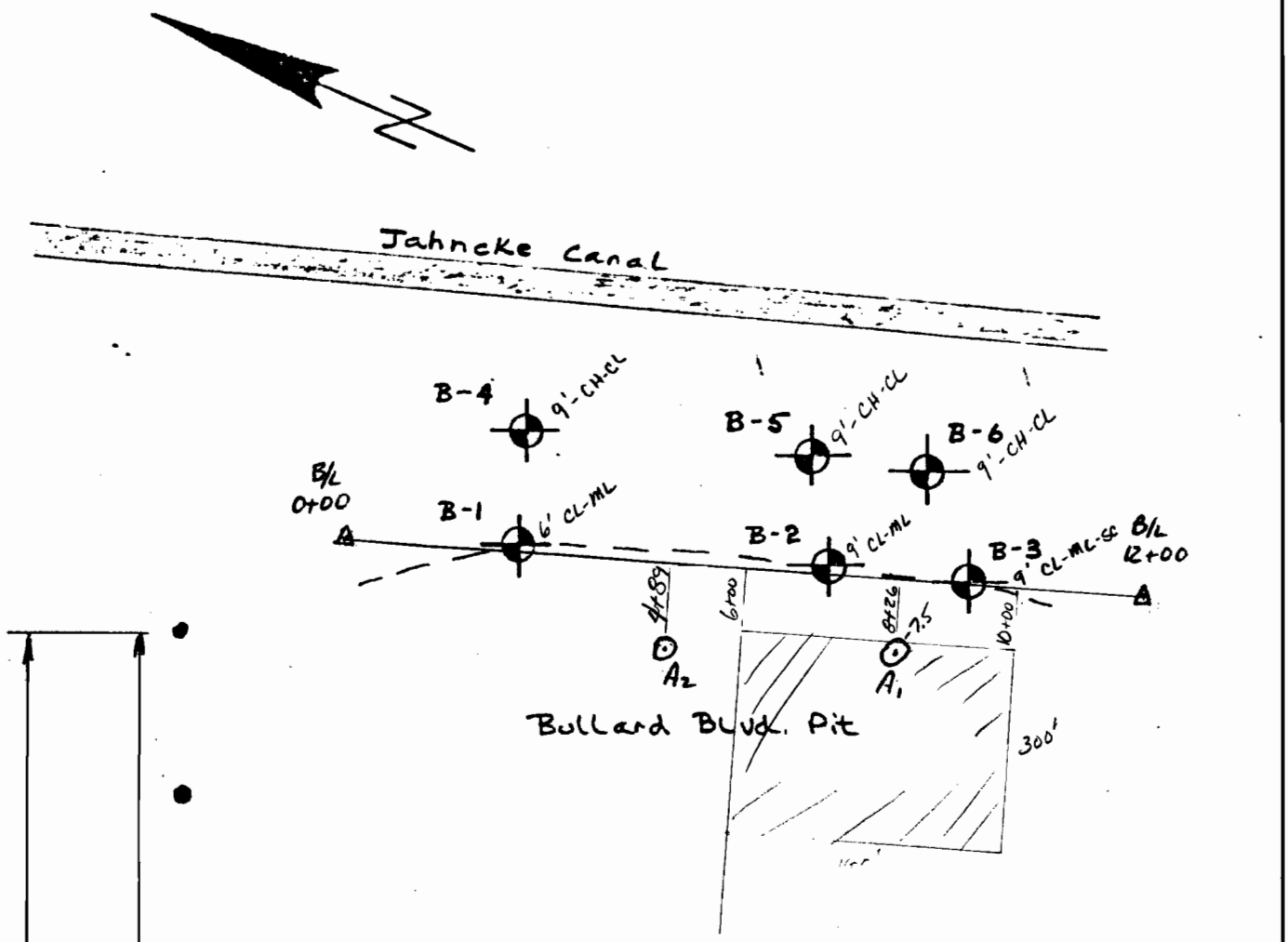
LAKE FOREST, INC.

BY: Donald E. Pate
DONALD E. PATE, President

DATE: _____

~~LURE~~ LUHR BROS., INC.

BY: _____
KENNETH SCHMIDT



Indicates Boring Locations

Fire Hydrant Installations

Scale = 1" = 300'

Luhr Bros., Inc.
Bullard Blvd. Pit
Citrus Lakefront Levee + Foreshore Protection

PITTSBURGH TESTING LABORATORY
Jefferson, Louisiana

MADE BY: L. Wilson DATE: 6/19/85	ORDER NO.
CH'KD. BY: DATE:	NO-1378
BORING LOCATION PLAN	PLATE NO. Fig. 1

Set on fifth fire hydrant from Bullard Ave + Sight 1st hydrant

All angles turned to Right.

	∠	Distance	EL
B1	233° 43' 50"	695.5'	11.3
B2	250° 03' 20"	1126.1'	10.8
B3	255° 50' 10"	1348.4'	11.4
B4	224° 47' 00"	823.9'	10.5
B5	242° 11' 20"	1175.1'	10.7
B6	247° 13' 30"	1335.1'	10.8
Base Line			
0+00	220° 46' 45"	551.9'	10.9
12+00	257° 30' 00"	1600'	10.9
1	273°-15'-10"	1236.1	
2	270°-14'-30"	811.9	

35-001

PTL-NEW ORLEANS
724 CENTRAL AVENUE
JEFFERSON, LOUISIANA 70121
504/733-8411

Pittsburgh Testing Laboratory

REPORT

ORDER NO. NO-1378

DATE June 24, 1985

Description	Proposed Borrow Area Citrus Lakefront Levee and Foreshore Protection
Location	Vicinity of Bullard Blvd. & I-10, New Orleans, La.
Client	Luhr Bros., Inc.
Reported to	Luhr Bros., Inc. Post Office Box 29974 New Orleans, La. 70189-0947

* *

On June 12 & 13, 1985, our representatives, C. Schinetsky and S. Stock, reported to the above project location for the purpose of making borings to obtain soil samples for classification.

Soil samples were obtained at six (6) seperate boring locations as specified at the site by a COE representative. A boring location plan is attached as Figure 1. Borings B-1 thru B-3 were made by hand augering horizontally to a depth of 1 ft. into the wall of the existing borrow pit, to a respective depth of 14 ft. Borings B-4 thru B-6, made outside the borrow pit area, were advanced to a depth of 11.5'. The logs of these borings are presented as Fig. 1-6. Representative portions of the soils encountered were placed in glass jars for preservation and returned to our laboratory for testing.

Visual classification was made and moisture content determined by a Pittsburgh Testing Laboratory soils technician, on all of the samples returned to us. As an aid to classification Atterberg Limits were performed on 22 of the soil samples. The results of these tests, Unified Soil Classifications and AASHTO designations are presented on the attached boring logs.

Technicians: C. Schinetsky, S. Stock

PITTSBURGH TESTING LABORATORY

F. R. Cerniglia
F. R. Cerniglia, Manager
New Orleans District

2cc-Client
bev

PITTSBURGH TESTING LABORATORY

734 CENTRAL AVENUE – JEFFERSON, LOUISIANA 70121

LOG OF BORING

Boring No. B-1

Sheet 1 of 1

Client Luhr Bros., Inc. Order No. NO-1378

Project Bullard Blvd. Pit, Lakefront Levee & Foreshore Protection

Boring Location See Fig. 1

Boring Begun ____ Boring Completed ____ Date 6/12/85

Ground Elevation 11.3' Datum ____

Ground Water Depth ____ Time ____ Date ____

Boring Depth 14.0' Boring Method Hand Auger* Bit Dia. ____

Field Party C. Schinetsky, S. Stock

FIELD DATA						LABORATORY DATA							
SAMPLE NO.	SAMPLE	DEPTH (feet)	BLOWS ON SPLIT-SPOON SAMPLER	POCKET PENETROMETER (tons/sq. ft.)	SYMBOLIC LOG	MATERIAL DESCRIPTION Consistency, color, type modifying characteristics	PLASTIC LIMIT, %	WATER CONTENT, %	LIQUID LIMIT, %	UNIT WEIGHT (lb/cu. ft.) DRY	UNIT WEIGHT (lb/cu. ft.) WET	SHEAR STRENGTH PARAMETERS ϕ (degrees)	SHEAR STRENGTH PARAMETERS C (psf)	TYPE OF TEST
1	■	0–2				Light brown SANDY SILTY CLAY CL, (A-6)	20	32	41					
		2.5												
2	■	3–4				Light brown SILT ML	NP	28	NP					
		4.5												
3	■	5–6				Gray CLAYEY SILT ML, (A-4)	24	39	33					
		1.0												
4	■	7–8				Fine gray SAND	NP	5	NP					
5	■	9–10				SP	NP	5	NP					
6	■	12–14				SP	NP	6	NP					
		14.0												
		15–30				End of Boring								

SAMPLE TYPE: Undisturbed; Split Spoon; No Recovery

SOIL TYPE: Clay, Clayey, Silt, Silty, Sand, Sandy, Fill, Peat — Predominant type shown heavy

Ground Water Level

TYPE OF TEST

Remarks: *6" Augar was used to advance boring to 1' vertical depth, samples were extracted with 2" auger.

FIGURE 2

PITTSBURGH TESTING LABORATORY

724 CENTRAL AVENUE – JEFFERSON, LOUISIANA 70121

LOG OF BORING

Boring No. B-2

Sheet 1 of 1

Client Luhr Bros., Inc. Order No. NO-1378

Project Bullard Blvd. Pit, Lakefront Levee & Foreshore Protection

Boring Location See Fig. 1

Boring Begun _____ Boring Completed _____ Date 6/12/85

Ground Elevation 10.8' Datum _____

Ground Water Depth _____ Time _____ Date _____

Boring Depth 14.0' Boring Method Hand Auger* Bit Dia. _____

Field Party C. Schinetsky, S. Stock

FIELD DATA: Sample No.	Sample	Depth (feet)	Blows on Split-Spoon Sampler	Pocket Penetrometer (tons/sq. ft.)	Symbolic Log	MATERIAL DESCRIPTION: Consistency, color, type modifying characteristics		LABORATORY DATA: Plastic Limit, %	Water Content, %	Liquid Limit, %	Unit Weight (lb/cu. ft.) Dry	Unit Weight (lb/cu. ft.) Wet	Shear Strength Parameters ϕ (degrees)	Shear Strength Parameters C (psf)	Type of Test
		0				Light brown SANDY SILTY CLAY	CL, (A-7)	22	32 42	59					
1		1													
		2													
						2.5									
		3				Gray CLAYEY SILT	ML, (A-4)	24	25 40	34					
2		4													
		5				5.0									
		6				Gray SANDY CLAY	CL, (A-7)	13	32 46	41					
3		7													
						7.5									
		8				Gray CLAYEY SILT	CL, (A-4)	21	32 37	30					
4		9				9.0									
		10				Fine gray SAND	SP	NP	6	NP					
5		11				11.0									
		12				Gray SANDY CLAY	CL, (A-7)	15	39	55					
6		13													
		14				14.0									
		15				End of Boring									
		16													
		17													
		18													
		19													
		20													
		21													
		22													
		23													
		24													
		25													
		26													
		27													
		28													
		29													
		30													

SAMPLE TYPE: Undisturbed; Split Spoon; No Recovery

SOIL TYPE: Clay, Clayey, Silt, Silty, Sand, Sandy, Fill, Peat — Predominant type shown heavy

Ground Water Level

TYPE OF TEST: UU Unconfined Compression; UU Unconsolidated – Undrained Triaxial; CU Consolidated – Undrained Triaxial; CD Consolidated – Drained Triaxial

Remarks: *6" Auger was used to advance boring to 1' vertical depth, samples were extracted with 2" auger.

FIGURE 3

PITTSBURGH TESTING LABORATORY

724 CENTRAL AVENUE – JEFFERSON, LOUISIANA 70121

LOG OF BORING

Boring No. B-3

Sheet 1 of 1

Client Luhr Bros., Inc. Order No. NO-1378

Project Bullard Blvd. Pit, Lakefront and Foreshore Protection

Boring Location See Fig. 1

Boring Begun _____ Boring Completed _____ Date 6/12/85

Ground Elevation 11.4' Datum _____

Ground Water Depth _____ Time _____ Date _____

Boring Depth 14.0' Boring Method Hand Auger* Bit Dia. _____

Field Party C. Schinetsky, S. Stock

FIELD DATA: Sample No.	Sample	Depth (feet)	Blows on Split-Spoon Sampler	Pocket Penetrometer (tons/sq. ft.)	Symbolic Log	MATERIAL DESCRIPTION: Consistency, color, type modifying characteristics		LABORATORY DATA: Plastic Limit, %	Water Content, %	Liquid Limit, %	Unit Weight (lb/cu. ft.) Dry	Unit Weight (lb/cu. ft.) Wet	Shear Strength Parameters ϕ (degrees)	Shear Strength Parameters C (psf)	Type of Test
		0													
1	■	1				Light brown SANDY SILTY CLAY	CL, (A-6)	21	18	38					
		2				2.5									
2	■	3				Gray SANDY CLAY	CH, (A-4)	22	42	70					
		4				5.0									
3	■	5				Light brown CLAYEY SAND	SC	NP	26	NP					
		6				7.0									
4	■	7				Gray CLAY	CH, (A-7)	19	40 75	74					
		8				9.0									
5	■	9				Fine gray SAND - some shells	SP	NP	11	NP					
		10													
6	■	11					SP	NP	7	NP					
		12				14.0									
		13				End of Boring									
		14													
		15													
		16													
		17													
		18													
		19													
		20													
		21													
		22													
		23													
		24													
		25													
		26													
		27													
		28													
		29													

SAMPLE TYPE

Undisturbed | Split Spoon | No Recovery

SOIL TYPE

Clay | Clayey | Silt | Silty | Sand | Sandy | Fill | Peat

Predominant type shown heavy

Ground Water Level

TYPE OF TEST

(UU) UNCONFINED COMPRESSION

(CU) UNCONSOLIDATED – UNDRAINED TRIAXIAL

(CD) CONSOLIDATED – UNDRAINED TRIAXIAL

(DS) CONSOLIDATED – DRAINED TRIAXIAL

Remarks: *6" Auger was used to advance boring to 1' vertical depth, samples were extracted with 2" auger

FIGURE 4

PITTSBURGH TESTING LABORATORY

724 CENTRAL AVENUE – JEFFERSON, LOUISIANA 70121

LOG OF BORING

Boring No. B-4

Sheet 1 of 1

Client Luhr Bros., Inc. Order No. NO-1378
Project Bullard Blvd. Pit, Lakefront Levee and Foreshore Protection
Boring Location See Fig. 1
Boring Begun ____ Boring Completed ____ Date 6/13/85

Ground Elevation 10.5' Datum ____
Ground Water Depth ____ Time ____ Date ____
Boring Depth 11.5' Boring Method Hand Auger Bit Dia. ____
Field Party C. Schinetsky, S. Stock

FIELD DATA: Sample No.	Sample	Depth (feet)	Blows on Split-Spoon Sampler	Pocket Penetrometer (tons/sq. ft.)	Symbolic Log	MATERIAL DESCRIPTION: Consistency, color, type modifying characteristics		LABORATORY DATA: Plastic Limit, %	Water Content, %	Liquid Limit, %	Unit Weight (lb/cu. ft.) Dry	Unit Weight (lb/cu. ft.) Wet	Shear Strength Parameters: ϕ (degrees)	Shear Strength Parameters: C (psf)	Type of Test
1	■	0				Light brown CLAY									
		1				- much decayed organic material	CH, (A-7)	26	32	64					
		2				2.5									
2	■	3				Light brown SILTY CLAY									
		4				- some decayed organic material - some fine sand	CL, (A-7)	16	33	56					
		5				5.0									
3	■	6				Light brown CLAYEY SILT	CL, (A-4)	19	39	29					
		7				- some decayed organic material - some fine sand									
4	■	8				- gray		17	37	29					
		9				9.0									
5	■	10				Fine gray SAND	SP	NP	15	NP					
6	■	11				11.5		NP	14	NP					
		12				End of Boring									
		13													
		14													
		15													
		16													
		17													
		18													
		19													
		20													
		21													
		22													
		23													
		24													
		25													
		26													
		27													
		28													
		29													
		30													

SAMPLE TYPE: Undisturbed; Split Spoon; No Recovery

SOIL TYPE: Clay, Clayey, Silt, Silty, Sand, Sandy, Fill, Peat — Predominant type shown heavy

Ground Water Level

TYPE OF TEST: (UC) UNCONFINED COMPRESSION; (UU) UNCONSOLIDATED – UNDRAINED TRIAXIAL; (CU) CONSOLIDATED – UNDRAINED TRIAXIAL; (CD) CONSOLIDATED – DRAINED TRIAXIAL

Remarks: ____

FIGURE 5

PITTSBURGH TESTING LABORATORY

724 CENTRAL AVENUE – JEFFERSON, LOUISIANA 70121

LOG OF BORING

Boring No. B-5

Sheet 1 of 1

Client Luhr Bros., Inc. Order No. NO-1378

Project Bullard Blvd. Pit, Lakefront Levee and Foreshore Protection

Boring Location See Fig. 1

Boring Begun _____ Boring Completed _____ Date 6/13/85

Ground Elevation 10.7' Datum _____

Ground Water Depth _____ Time _____ Date _____

Boring Depth 11.5' Boring Method Hand Auger Bit Dia. _____

Field Party C. Schinetsky, S. Stock

FIELD DATA						MATERIAL DESCRIPTION Consistency, color, type modifying characteristics		LABORATORY DATA							
SAMPLE NO.	SAMPLE	DEPTH (feet)	BLOWS ON SPLIT-SPOON SAMPLER	POCKET PENETROMETER (tons/sq. ft.)	SYMBOLIC LOG			PLASTIC LIMIT, %	WATER CONTENT, %	LIQUID LIMIT, %	UNIT WEIGHT (lb/cu. ft.) DRY	UNIT WEIGHT (lb/cu. ft.) WET	SHEAR STRENGTH PARAMETERS ϕ (degrees)	SHEAR STRENGTH PARAMETERS C (psf)	TYPE OF TEST
1		0				Light brown SILTY CLAY - some decayed organic material	CH, (A-7)	23	31	57					
		2.5													
2		3				Brown & gray CLAY - some decayed organic material	CH, (A-7)	27	43 49	69					
3		6				- gray - some fine sand	CL, (A-7)	17	32 39	49					
		7.5													
4		8				Gray CLAYEY SILT	CL, (A-6)	15	16 36	27					
		9.0													
5		10				Fine gray SAND - some clay	SP	NP	13	NP					
6		11.5						NP	9	NP					
						End of Boring									
		30													

SAMPLE TYPE: Undisturbed; Split Spoon; No Recovery

SOIL TYPE: Clay; Clayey; Silt; Silty; Sand; Sandy; Fill; Peat — Predominant type shown heavy

Ground Water Level

TYPE OF TEST

(UC) UNCONFINED COMPRESSION

(R) UNCONSOLIDATED – UNDRAINED TRIAXIAL

(R) CONSOLIDATED – UNDRAINED TRIAXIAL

(R) CONSOLIDATED – DRAINED TRIAXIAL

Remarks: _____

FIGURE 6

PITTSBURGH TESTING LABORATORY

734 CENTRAL AVENUE – JEFFERSON, LOUISIANA 70121

LOG OF BORING

Boring No. B-6

Sheet 1 of 1

Client Luhr Bros., Inc. Order No. NO-1378

Project Bullard Blvd. Pit, Lakefront Levee and Foreshore Protection

Boring Location See Fig. 1

Boring Begun ____ Boring Completed ____ Date 6/13/85

Ground Elevation 10.8' Datum ____

Ground Water Depth ____ Time ____ Date ____

Boring Depth 11.5 Boring Method ____ Bit Dia. ____

Field Party C. Schinetsky, S. Stock

FIELD DATA						LABORATORY DATA							
SAMPLE NO.	SAMPLE	DEPTH (feet)	BLOWS ON SPLIT-SPOON SAMPLER	POCKET PENETROMETER (tons/sq. ft.)	SYMBOLIC LOG	MATERIAL DESCRIPTION Consistency, color, type modifying characteristics		PLASTIC LIMIT, %	WATER CONTENT, %	LIQUID LIMIT, %	UNIT WEIGHT (lb/cu. ft.) DRY	UNIT WEIGHT (lb/cu. ft.) WET	SHEAR STRENGTH PARAMETERS ϕ (degrees)	SHEAR STRENGTH PARAMETERS C (psf)	TYPE OF TEST
1	■	0				Light brown CLAYEY SILT - some decayed organic material	CL, (A-4)	20	13	29					
		1													
		2				2.5									
2	■	3				Gray & brown CLAY - much decayed organic material	CH, (A-7)	20	31	52					
		4													
		5				5.0									
3	■	6				Gray & brown SILTY CLAY - much decayed organic material	CL, (A-7)	20	33	55					
		7				7.5									
4	■	8				Gray CLAYEY SILT	CL, (A-4)	19	32	27					
		9				9.0									
5	■	10				Fine gray SAND	SP	NP	9	NP					
		11													
6	■					11.5		NP	7	NP					
		12				End of Boring									
		13													
		14													
		15													
		16													
		17													
		18													
		19													
		20													
		21													
		22													
		23													
		24													
		25													
		26													
		27													
		28													
		29													
		30													

SAMPLE TYPE: Undisturbed, Split Spoon, No Recovery

SOIL TYPE: Clay, Clayey, Silt, Silty, Sand, Sandy, Fill, Peat — Predominant type shown heavy

Ground Water Level

TYPE OF TEST

(UC) UNCONFINED COMPRESSION

(UU) UNCONSOLIDATED – UNDRAINED TRIAXIAL

(CU) CONSOLIDATED – UNDRAINED TRIAXIAL

(CD) CONSOLIDATED – DRAINED TRIAXIAL

Remarks: ____

FIGURE 7

P.O. Drawer 52838
2540 Wyandotte Street
Baton Rouge, Louisiana 70892-2838
504 355-2561

Barry L. Moore & Associates, Inc.

July 11, 1985

LUHR Brothers
7921 Bullard Blvd.
New Orleans, La. 70127

Re: Bullard Soil Pit
New Orleans, La.

Dear Sir:

As per your request we conducted soil borings to determine the underlying soil strata of the referenced project, Atterberg limit tests, sieve analysis, and the determination of natural moisture contents were conducted as to classify the soil in accordance with the unified soil classification system.

Enclosed are the boring logs with the test results and depths of ground water.

If you have any questions please feel free to contact this office.

Very truly yours,

BARRY L. MOORE & ASSOCIATES, INC.

Barry L. Moore, Sr.
President

BLM,Sr/ef

Enclosures

Rt. 2, Box 228-M
Lafayette, LA 70507
318/896-0314

Quality Assurance Testing and Inspection

4335 Werner Dr.
New Orleans, LA 70126
504/245-1188

BULLARD SOIL PIT BORING A-1 DEPTH 0-1'

Sieve Size	% Passing
No. 10	97
No. 16	95
No. 40	91
No. 80	51
No. 200	11

LOG OF SOIL BORING

PROJECT: Luhr Brothers

JOB NO.: Bullard Pit

LOCATION (PARISH): Orleans

BORING NO.: A B-1

DATE: 7-11-85

DRILLING CONTRACTOR: Barry Moore & Associates, Inc.

TECH./ENGR.:

DRY AUGER / WASH BORING

DRILL RIG

GROUND WATER LEVELS	DEPTH (FEET)	SAMPLING	SPT (BLOWS/FOOT) OR P (TSF)	LABORATORY DATA: COMPRESSIVE STRENGTH (TSF)	MC (%)	DD (PCF)	LL (%)	PI (%)		DESCRIPTION OF STRATA
	0-1				20.2			NP	SM	* F.S.
▼	2.5'				43.7 (32)		32	15	CL_4	Gray Silty Clay
	5				39.3 (32)		27	8	CL_4	Gray Very silty Clay/trace fine sand
	7.5'				34.2 (32)		37	21	CL_4	Brown & gray silty clay
	10				24.0		50	34	CH_1	Brown & gray clay
	12.0				31.7		63	43	CH_3	" " "
	14.0				37.1		74	54	CH_3	" " "
	15									
	16.0				47.8 (43)		102	72	CH_4	" " "
	18.0				34.5		51	34	CH_1	" " "
	20				32.9		66	44	CH_3	" " "
	25				28.6			NP	ML	Gray silt
	27.5				44.1		43	25	CL	Med. gray silt clay
	30				43.1		47	21	CL	" " " "
	35									

KEY

- SHELBY TUBE
- STANDARD PENETRATION TEST
- GROUND WATER FIRST ENCOUNTERED
- STATIC GROUND WATER LEVEL (AFTER _____ HOURS)
- AUGER

P POCKET PENETROMETER
M C MOISTURE CONTENT
D D DRY DENSITY
L L LIQUID LIMIT
P I PLASTICITY INDEX

REMARKS

* Gradation Analysis Attached

Ground water encountered at 2'

LOG OF SOIL BORING

PROJECT: Luhr Brothers — JOB NO.: Bullard Pit

LOCATION (PARISH): Orleans — BORING NO.: ~~B~~A-2 — DATE: 7-11-85

DRILLING CONTRACTOR: Barry L. Moore & Associates, Inc. — TECH./ENGR.:

DRY AUGER / WASH BORING — DRILL RIG

GROUND WATER LEVELS	DEPTH (FEET)	SAMPLING	SPT (BLOWS/FOOT) OR P (TSF)	LABORATORY DATA: COMPRESSIVE STRENGTH (TSF)	MC (%)	DD (PCF)	LL (%)	PI (%)		DESCRIPTION OF STRATA
					19.8			NP	SM	Gray fine sand
	2.5'									
	5				33.7		23	5	CL	Gray clayey silt
	5.5-6'				25.3			NP	ML	Gray silt
	7.5'				37.2		30	12	CL	Gray clayey silt
▼	10									
	12.5'				27.6		46	30	CL	" " "
	15				28.4		50	36	CL	" " "
					29.5		47	31	CL	" " "
	17.5'				33 5		67	45	CH	Gray Clay
	20									
	22.5'				37.3		68	32	MH	Gray Clay
					32.7			NP	ML	Gray silt
	25									
	27.5'				31.0			NP	ML	" "
	30				44.0		45	26	CL	Gray clayey silt
	35									

KEY

- SHELBY TUBE
- STANDARD PENETRATION TEST
- GROUND WATER FIRST ENCOUNTERED
- STATIC GROUND WATER LEVEL (AFTER_____ HOURS)
- AUGER
- P POCKET PENETROMETER
- M C MOISTURE CONTENT
- D D DRY DENSITY
- L L LIQUID LIMIT
- P I PLASTICITY INDEX

REMARKS

Ground water encountered at 10'

	+	H.I.	−	Elev.
B.M.				15.72
	6.98	22.70		

X-SECTIONS TAKEN W/EDM

X-SECTIONS FOR BULLARD PIT
EAST SIDE OF EXISTING PIT ON UPPER ORIGINAL GROUND LEVEL.

0+00		22.70			
2+00		22.70			
4+00		22.70			
6+00		22.70			
8+00		22.70			

1

B.M. SOUTHEAST CORNER OF CONCRETE SLAB AT C/S ELECTRICAL JUNCTION BOX IN CENTER OF MEDIAN ON BULLARD BLVD. 1.3 MILES SOUTH OF HAYNE BLVD.

8.9	8.9	10.9	10.9	10.9
13.8	13.8	11.8	11.8	11.8
220	200	100	B/L	120
10.3	10.3	10.8	11.3	11.3
12.4	12.4	11.9	11.4	11.4
220	200	100	B/L	21
10.6	10.9	10.6	11.1	11.2
12.1	11.8	12.1	11.6	11.5
245	200	100	B/L	20
10.7	10.8	11.0	11.0	11.1
12.0	11.9	11.7	11.7	11.6
284	200	100	B/L	18
11.0	10.7	10.7	10.7	10.7
11.7	12.0	12.0	12.0	12.0
300	200	100	B/L	21

2	+	H.I.	−	ELEV.	
	X-SECTION	BULLARD PIT		CONT.	
10+00		22.70			
12+00		22.70			
15+00		22.70			
17+00		22.70			
19+00		22.70			
			4.26	18.44	
	3.63	22.07			
			6.35	15.72	ok

11.0	11.1	10.9	11.7	11.6
11.7	11.6	11.8	11.0	11.1
300	200	100	B/L	18
11.1	11.1	10.5	10.9	11.0
11.6	11.6	12.2	11.8	11.7
300	200	100	B/L	20
10.6	10.9	10.9	11.1	11.2
12.1	11.8	11.8	11.6	11.5
253	200	100	B/L	20
10.8	10.8	10.8	10.8	10.9
11.9	11.9	11.9	11.9	11.8
290	200	100	B/L	19
11.0	11.0	10.9	11.5	11.2
11.7	11.7	11.8	11.2	11.5
300	200	100	B/L	20

	+	H.I.	−	B.M.
				-6.80
	4.58	-2.22		

X-SECTIONS FOR BULLARD BLVD AT IN FLOOR OF EXISTING PIT.

2+00		-2.22		
4+00		-2.22		
5+00		-2.22		
6+00		-2.22		
7+00		-2.22		
8+00		-2.22		

3

TOP OF 1"x1" STAKE 20'± NORTH OF BORROW AREA STA. 6+00

All shots to Rt. of B/L

-2.5	-2.7	-5.6	-6.5	-7.3	-6.5	-7.0	-5.5
0.3	0.0	3.6	4.3	5.1	4.3	4.8	3.3
38	60	81	100	200	300	400	500
-2.4	-2.5	-5.6	-6.3	-7.4	-7.2	-7.5	-6.1
0.2	0.3	3.6	4.1	5.2	5.0	5.3	3.9
24	58	72	100	200	300	400	500
-3.6	-3.4	-6.0	-6.3	-7.5	-8.0	-8.2	-8.6
1.4	1.2	3.8	4.1	5.3	5.9	6.0	6.4
26	59	70	100	200	300	400	500
-6.9	-6.5	-7.3	-8.5	-8.5	-8.0	-6.5	
2.7	4.3	5.1	6.3	6.3	5.8	6.3	
26	71	125	165	245	365	465	
-4.7	-4.8	-8.2	-8.2	-8.1	-7.3	-8.5	-5.8	-7.6	-2.5
2.5	2.6	6.0	6.0	5.9	5.1	6.3	3.6	5.4	6.3
25	42	44	59	85	112	176	276	340	330
-8.4	-8.4	-8.2	-7.3	-8.0	-8.7	-8.4	-8.1	-7.6	-7.7	-8.7
6.2	6.2	6.0	5.1	5.8	6.5	6.2	5.9	5.4	6.5	6.5
24	40	69	110	160	210	271	310	389	438	458

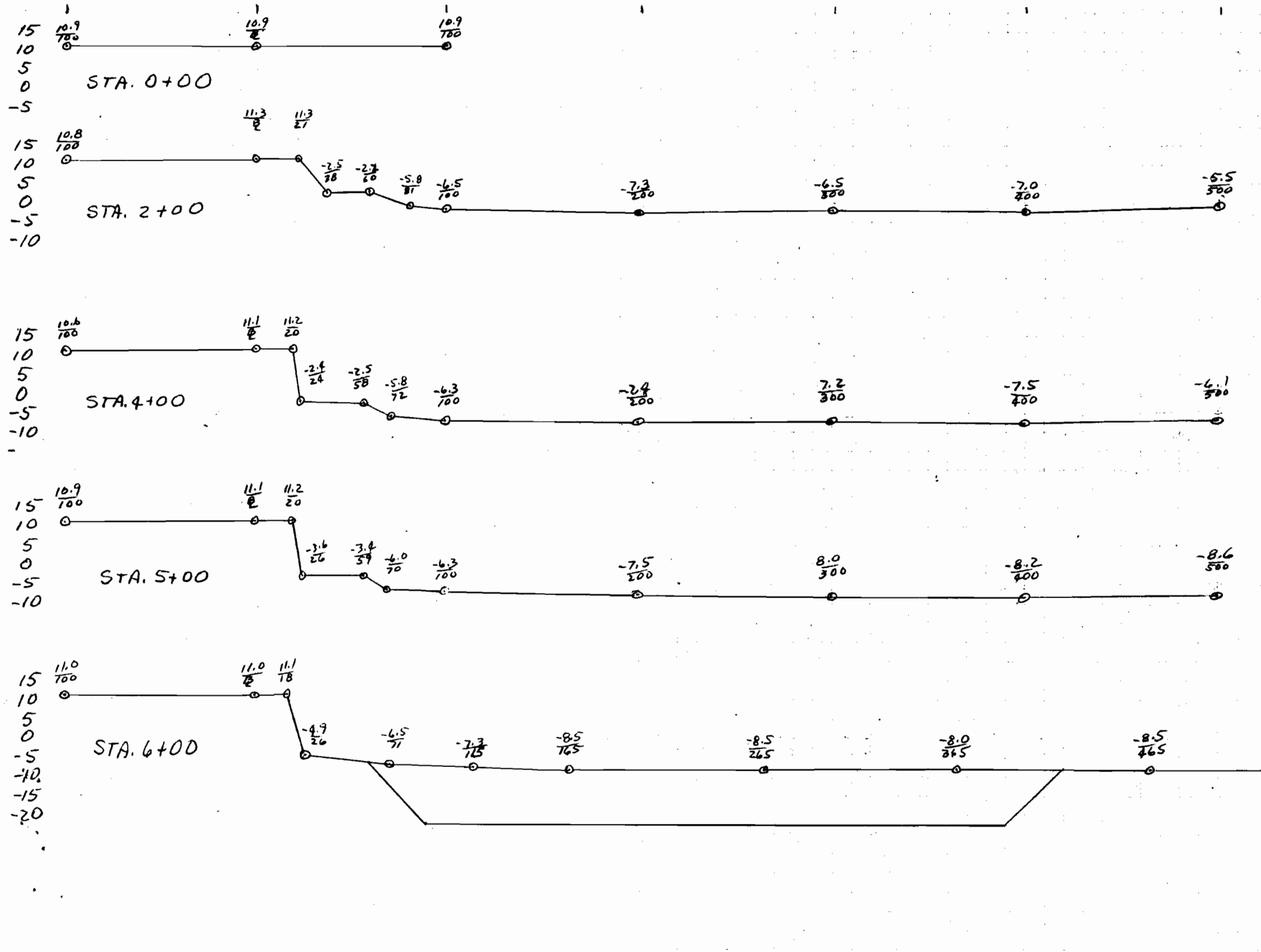
	+	H.I.	−	B.M.
X-SECT. BULLARD PIT BASE CONT.				
9+00		2.22		
10+00		2.22		
			-4.58	-4.80

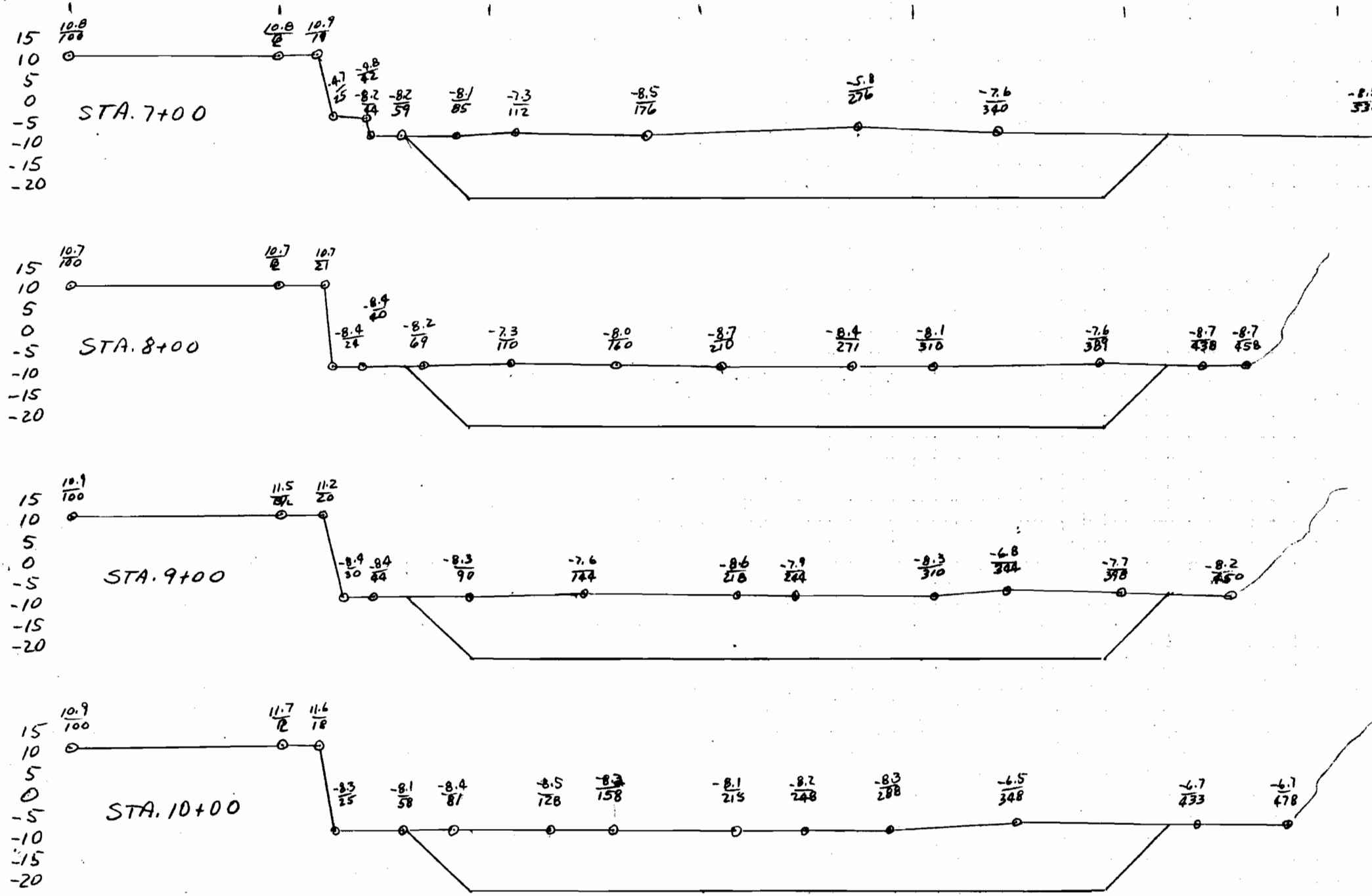
ALL SHOTS TO RT. OF B/L

-6.4	-6.4	-6.3	-7.6	-8.6	-7.9	-8.3	-6.8	-7.7	-8.2
6.2	6.2	6.1	5.4	6.4	5.7	6.1	4.6	5.5	6.0
30	44	90	144	218	240	310	344	378	450

-8.3	-8.1	-8.4	-8.5	-8.2	-8.1	-8.2	-8.3	-6.5
6.1	5.9	6.2	6.3	6.0	5.9	6.0	6.1	4.3
25	58	81	128	158	215	248	288	348

-6.7	-6.7
4.5	4.5
478	433


15
10
5
0
-5
-10
-15
-20
10.9 / 100
10.9 / ℄
10.9 / 100
STA. 0+00
10.8 / 100
11.3 / ℄
11.3 / 27
-2.5 / 38
-2.7 / 60
-5.8 / 81
-6.5 / 100
-7.3 / 200
-6.5 / 300
-7.0 / 400
-6.5 / 500
STA. 2+00
10.6 / 100
11.1 / ℄
11.2 / 20
-2.4 / 24
-2.5 / 58
-5.8 / 72
-6.3 / 100
-2.4 / 200
7.2 / 300
-7.5 / 400
-6.1 / 500
STA. 4+00
10.9 / 100
11.1 / ℄
11.2 / 20
-3.6 / 26
-3.4 / 39
-6.0 / 70
-6.3 / 100
-7.5 / 200
8.0 / 300
-8.2 / 400
-8.6 / 500
STA. 5+00
11.0 / 100
11.0 / ℄
11.1 / 18
-4.9 / 26
-6.5 / 71
-7.3 / 113
-8.5 / 165
-8.5 / 265
-8.0 / 365
-8.5 / 465
STA. 6+00



Depth of Excav. ≅ 15'

wide Deep Long
330 × 15 × 300 ÷ 27 = 55,000 cu. yds.

LMNED-DL

Citrus Lakefront Foreshore Protection and Orleans Levee District South Shore Harbor

C/H&H Br

C/Design Br

21 Sep 83
Mr. Lee/gsm/2717

1. As you may know, the Orleans Levee District is preparing to construct the South Shore Harbor east of and adjacent to the Orleans Lakefront Airport. Construction is scheduled to start in Jan 84.

2. The Levee District, by letter of 26 Aug 83 and in the meeting of 6 Sep 83, requested that the foreshore protection be deleted west of the St. Charles Pumping Station discharge canal, and the design section reduced for the next 300 feet eastward to only the net section (without the berm of 1V on 30H) with the net forehsore dike floodside slope of 1V on 3H extended down to the bottom of the boat ramp basin (el. -5.0 ft).

3. Using the marina plans provided by the Orleans Levee District A-E, please determine if the foreshore protection can be modified as requested. We will have F&M Br review it in light of your comments. Since we have only one set of the inclosure it is requested that they be returned with your comments.

4. You are requested to furnish your comments and recommendations by 28 Sep 83.

1 Incl
Plan & Sketches of South
Shore Harbor (3 dwgs)

WALTER D. JUDLIN, III
Chief, Design Branch

CF: w/o incl
C/F&M Br 9/21
C/Proj Mgmt Br

Memo of Meting

date 9-6-83

Time 10 AM

Place Levee Section Office

Attending

Type in from attached list

Subj: Citrus Lakefront Foreshore Protec
coordination w/ OLD Marina construc
and S&WB Citrus Pump Station constructio

1. Citrus Pump Station: Mr Pepper is to establ
an order of work for the Pump Sta. Contract
and give Mr. Magner the date the
pump station construction Lakesid
of the Levee will be completed. We wi
put in an order of work in our contract
to make our contruction in the area
start after that date. Mr. Magner
requested that the work be set
as the last item of work
in our contract. This could be
the best solution. It would give
us the most protection against

the pump station work delaying our work. Mr. Magner stated that he would want the work deleted from the contract rather than to pay the contractor for a delay. But it was agreed that it would be very bad if the foreshore work had to be deleted. Early in the meeting, Mr. Pepper and Mr. Mehta had suggested that they put our foreshore design section into their contract and their contractor construct the foreshore as he relocated the tracks back to the original location and all we would have to do would be to pay the S.F.W.B. for construction of that bid item. I told Mr. Pepper that based on past experience it was our policy not to

fund work in someone else's contract and it felt that orders of work in both contracts would be best ~~[illegible]~~ for everyone

Mr Mehta asked if some of the embankment material used to construct RR relocation could remain in place and we use it in our contract. I asked Jim Richardson to check the material to see if it would be acceptable for Corps.

2. OLD Marina

a. Mr. Magner stated that he had asked Mr. Pepper to set the limit of the foreshore protection in the vicinity of the St. Charles Pump Station discharge location so ~~as~~ the foreshore protection would not interfere with marina construction.

Mr Pepper discussed the overall marina plan and the elevations anticipated when completed. Mr. Magner requested that our office look at the marina's planned elevations and to determine what protection would be required at the R.R.

3

embankment, if any. He stated that upon completion of the marina the area would be high ~~like~~ like the Airport is now. I told him that we could have H&H review the design and determine what protection would be needed, if any. There was some discussion about the planned boat ramp and extension of the St. Charles discharge canal and what effect excavation for the ramp would have on the RR embankment and on our foreshore protection. Mr. Magner stated that he wanted the foreshore to extend as far west as possible but not to interfere with his planned boat ramp basin. He stated that with H&H Br. reviewing the marina construction plan, they can determine how far the protection

should extend and if a small section of protection would work at the boat ramp site. I asked Mr. Pepper to provide a section through the RR. embankment and show the proposed ~~cut~~ excavation for the ramp basin on it. Mr. Pepper said he would, ~~send it to Mr. Hagen~~

LMNED-FS

Citrus Lakefront-Foreshore Protection and Orleans Levee District South Shore Harbor

C/Des Br

C/F&M Br

16 ~~08~~ Nov 83
Mr. Alicea/ve/1026

1. Reference your LMNED-DL D.F. dated 5 Oct 83 subject as above. We have reviewed the proposed modified foreshore section and determined that this section does not meet stability requirements.

2. Our recommendations are as follows:

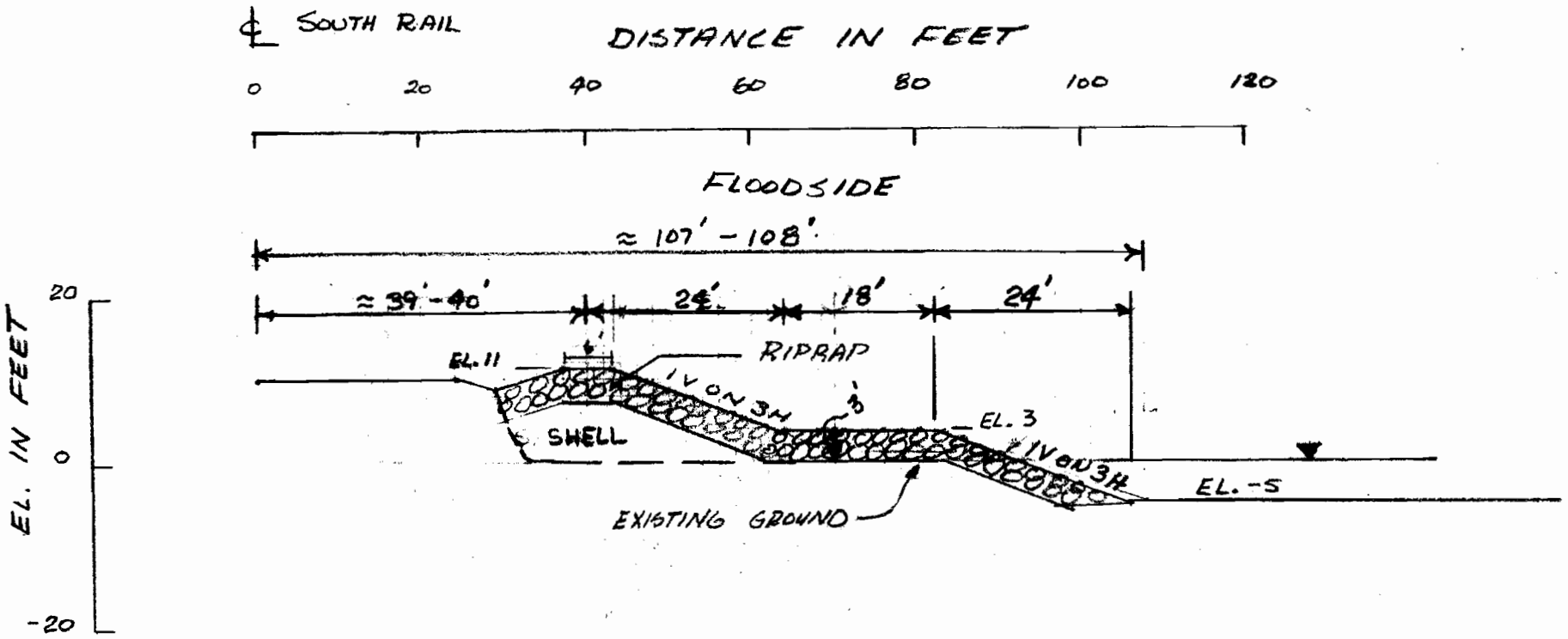
a. Construct an I-wall in order to meet your horizontal distance requirements. You should coordinate with Hyd and Hydro Br. for required elevation for wave action protection. (See incl. 1.)

b. The modified foreshore section can be stabilized by an 18 foot berm and a shell core. (See incl. 2 for details.)

2 Incl.
as

RODNEY P. PICCIOLA
Chief, Foundations and Materials Branch

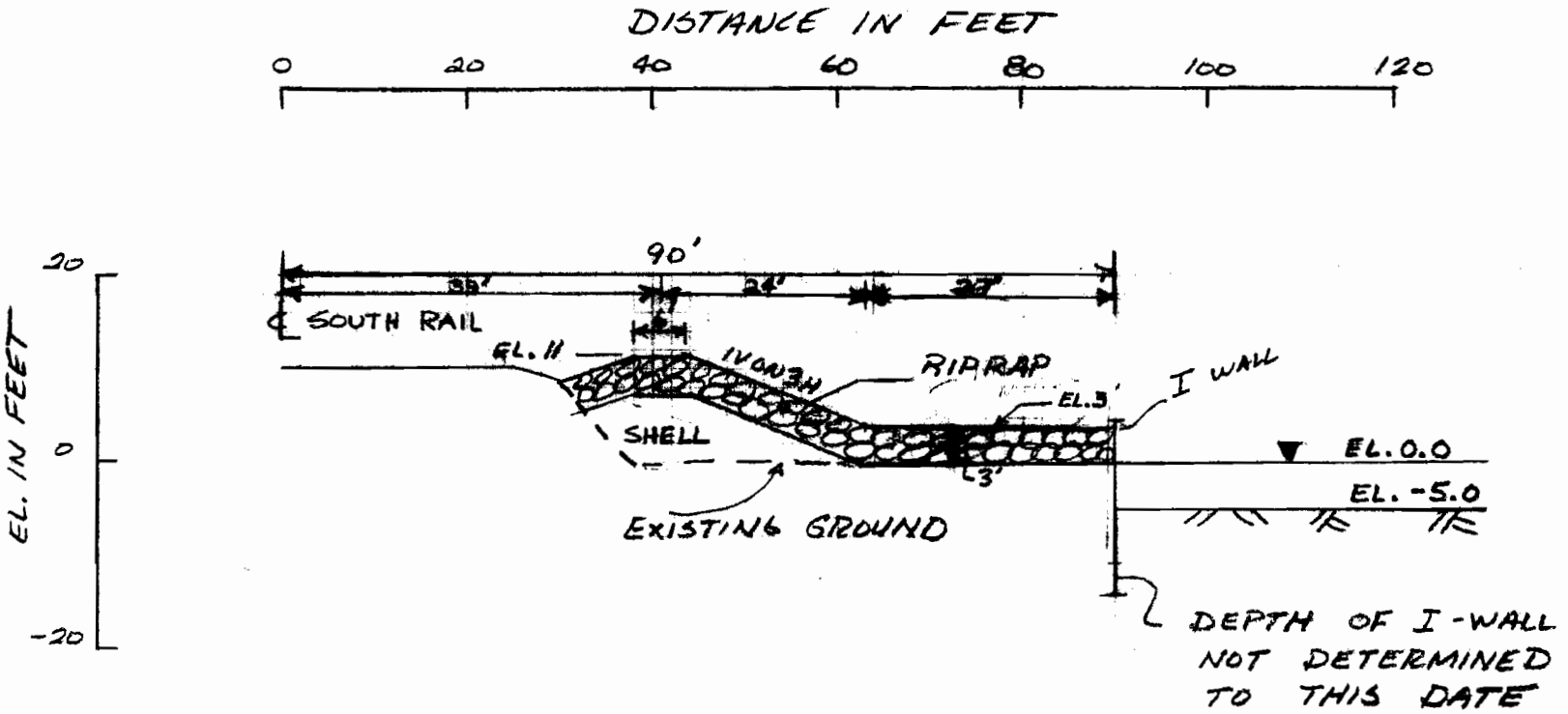
FILE



CITRUS LAKEFRONT HURR. PROTECTION
STA. 74+00 TO STA 77+00

Incl. 2

Nov. 1983



INCL. 1.

NOV. 1983

DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
LMNED-DL	Citrus Lakefront - Foreshore Protection and Orleans Levee District South Shore Harbor

TO: C/F&M Br

FROM: C/Des Br

DATE: 5 Oct 83

CMT 1

Mr. Wright/gsm/2721

1. Reference LMNED-DL dated 21 Sep 83, CMT 1, subject as above, copy furnished your office.

2. Using the marina plans provided by the Orleans Levee District A-E, please determine the stability requirements of this modified foreshore section (see incl 1). Kindly note that Hyd & Hydro Br has indicated no objection to this proposal provided the levee is modified to take care of overtopping.

3. You are requested to furnish your comments and recommendations by 12 Oct 83.

1 Incl
Plan & Sketches of South
Shore Harbor (3 dwgs)

WALTER D. JUDLIN, III
Chief, Design Branch

BS

LMNED-DL

Citrus Lakefront - Foreshore Protection and Orleans Levee District South Shore Harbor

C/F&M Br

C/Des Br

5 Oct 83
Mr. Wright/gsm/2721

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WALTER D. JUDLIN, III
Chief, Design Branch

SEA-PLANE RAMP

AIRCRAFT PAG CO

MOSQUITO CONTROL

℄ "C"

℄ LEVEE

STA. 13+50.12

BREAKWATER TOP OF CAP EL. 6.5

STA. 14+17

Existing tracks

Modified Section

90'

El 11.0 grass

El. 10.0 Design

1V on 3H

Boat launch canal

El. -5.0

SECTION (A) NTS

195'

105'

103'

Toe of slope El. -5.0

Toe of slope El. -5.0g

Toe of fore shore protection El. 0.5

MODIFIED USCE FORESHORE

℄ Track

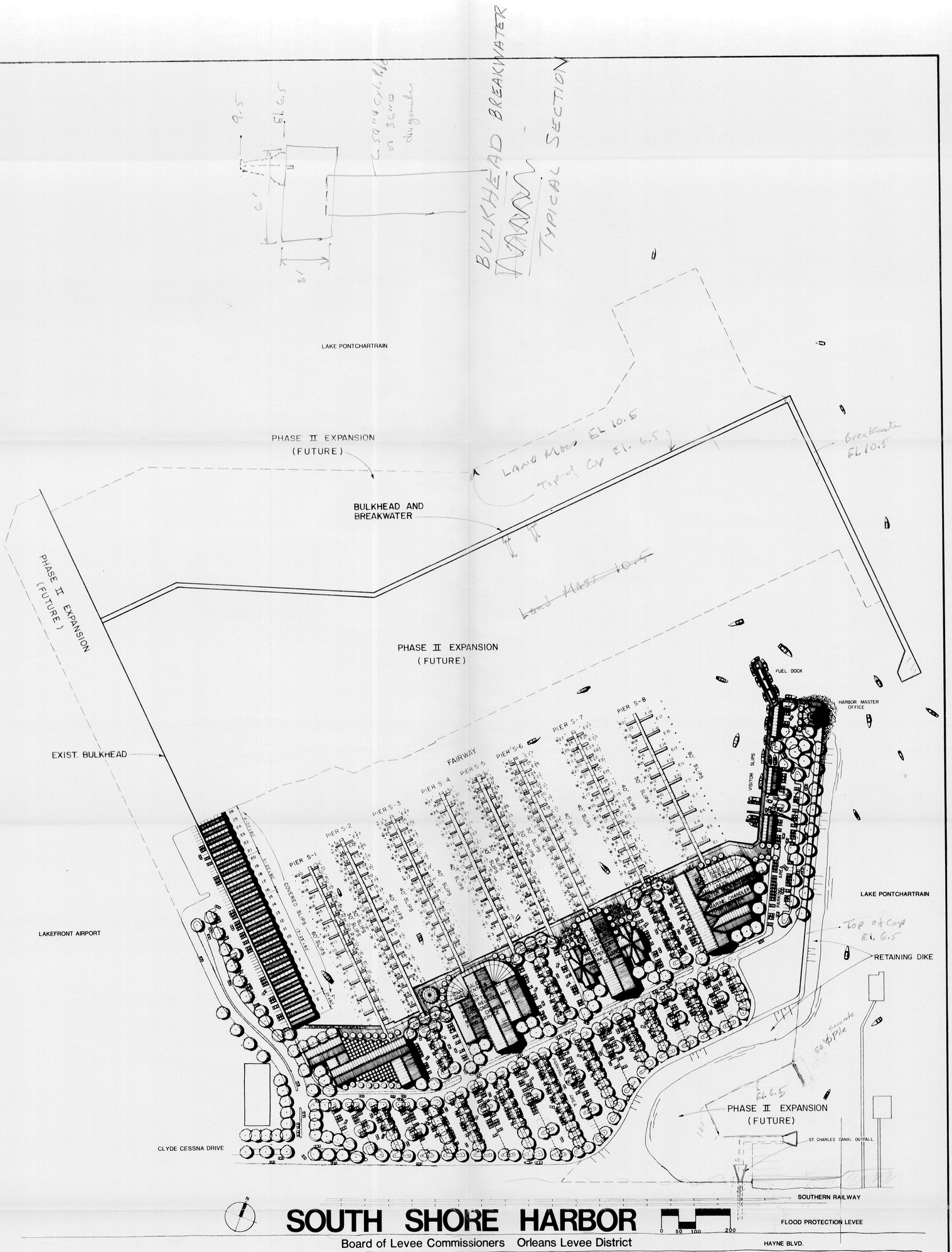
BEGIN USCE FULL SECTION FORESHORE

300'

1"=50'

BOAT LAUNCH SITE

IND. 1



SOUTH SHORE HARBOR

Board of Levee Commissioners Orleans Levee District

MASTER PLAN

PHASE I CONSTRUCTION

SLIPS RESERVED FOR BUILDING PARCEL LEASORS					
LOCATION	SLIP SIZE				TOTAL
	30'	40'	50'	60'	
PIER S-1	10			10	20
PIER S-3		10			10
PIER S-4	10				10
PIER S-6	10	10			20
PIER S-8			8		8
TOTAL	30	20	8	10	68

Pepper And Associates, Inc.
CONSULTING ENGINEERS

DECEMBER 1982
(REV. JULY 1983)

A# 28732

STA. 1+00

STA. 3+20

STA. 9+18.48

℄ EXIST SHEET PILE WALL

LAKEFRONT AIRPORT

STA. 21+69.46

STA. 22+69.46

STA. 119+79.92

STA. 120+16.67

STA. 121+14.69

STA. 121+51.44

STA. 31+40.96

STA. 104+71.14

STA. 104+03.6

STA. 102+95.77

STA. 114+91.14

STA. 115+65.15

STA. 116+01.90

6" CONCRETE PILE CAP

TEMPORARY EARTH CLOSURE LEVEE

ABANDONED CAMPS

EXIST RAILROAD R/W

100'

EXIST CAMP

400'

STA. 130+60.72

STA. 130+71.22 END CONC. CAP

90°

SOUTHERN RAILROAD

HAYNE BLVD.

ST. CHARLES OUTFALL CANAL

SCALE 1" = 100'-0"

℄ EARTH CLOSURE LEVEE

10'-0"

EL. = 6.5

WATER SIDE

FILL SIDE

TEMPORARY EARTH CLOSURE LEVEE

ELEV. = -1.0 (±)

TYPICAL LEVEE SECTION "A-A"

SCALE: 1" = 5'-0"

TYPICAL LEVEE SECTION "B-B"

SCALE: 1" = 5'-0"

SOUTH SHORE– TEMPORARY EARTH CLOSURE LEVEE

REV.	DATE	DESCRIPTION	BY

PEPPER & ASSOCIATES, INC.
CONSULTING ENGINEERS

DR. P.A.C.
TRC. P.A.C.
CK. J.C.M.
AP. J.P.
SCALE 1" = 100'-0"
DATE

GENERAL SUPERINTENDENT

DWG. No.

SET No. 4114-C SHEET No.