LAKE PONTCHARTRAIN, LA.
AND VICINITY
HURRICANE PROTECTION PROJECT

RELOCATION OF IH-NC FLOOD PROTECTION FRANCE ROAD TERMINAL NEW ORLEANS, LOUISIANA

Design Memorandum No. 2

General Design

Supplement No. 8A

VOLUME I - BASIC REPORT

October 15, 1997

FINAL REPORT

Submitted By:

PORT OF NEW ORLEANS

Prepared By:

Pyburn & Odom, Inc.
Engineers Scientists Planners Surveyors GIS Specialists

PYBURN & ODOM, INC.

Engineers • Scientists • Planners • Surveyors • GIS Specialists

March 19, 1998
(504-006)

Mr. Kyle C. Jones, P.E.
Director of Engineering
The Port of New Orleans
P. O. Box 60046
New Orleans, LA 70160

RE: Relocation of IH-NC Flood Protection
France Road Terminal
New Orleans, Louisiana
General Design Memorandum No. 2
General Design
Supplement No. 8A
Final Report

Dear Mr. Jones:

Transmitted herewith are twenty (20) sets of the Design Memorandum for the above referenced project. Each set contains three volumes. Volume I contains the Basic Report; Volume II contains Appendices A through C, which are the Geotechnical Report, Corps of Engineers Design Criteria and Guidance, and Pertinent Correspondence; and Volume III contains Appendix D, Typical Structural Design Computations. All COE's comments have been addressed and resolved.

An electronic version on disk of Volume I will be sent to you next week.

Should you have any questions or require any additional information, please let us know.

Sincerely,
PYBURN & ODOM, INC.

Raul S. Gonzalez, P.E.
Vice President of Engineering

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FINAL REPORT

10/15/97

RELOCATION OF IH-NC FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
GENERAL DESIGN MEMORANDUM NO. 2
GENERAL DESIGN
SUPPLEMENT NO. 8A

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FINAL REPORT

10/15/97

RELOCATION OF IH-NC FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
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PROJECT AUTHORIZATION

1. Authority. The Board of Commissioners of the Port of New Orleans plans to construct a floodwall to protect its France Road Terminal against tidal surges from the Gulf of Mexico and interconnecting water bodies. As shown on Plate W1, the terminal is located in New Orleans, Louisiana, being bounded in general by the Inner Harbor-Navigational Canal (IH-NC) on the east, France Road on the west, Interstate Highway I-10 on the north, and the Florida Avenue Canal on the south. In addition to two slips, designated Slips 3 and 4, the terminal contains six ship berths, designated Berths 1 through 6. Berths 1, 4, 5, and 6 have been constructed, whereas Berths 2 and 3 are available for future construction. Presently, the terminal lacks protection because it is east of and outside a segment of the existing IH-NC West Levee, which is part of the Lake Pontchartrain, Louisiana and Vicinity Hurricane Protection Project, originally constructed by the New Orleans District, U.S. Army Corps of Engineers and presently operated and maintained by the Orleans Levee District. In that the new floodwall will provide protection outside the present floodwall, it will become part of the same Hurricane Protection Project, being operated and maintained by the Orleans Levee District also.

2. Purpose and Scope. The purpose of the proposed floodwall is to provide an elevation of +15.0 ft. N.G.V.D. for flood protection of the France Road Terminal, utilizing a stillwater elevation of +13.0 ft. N.G.V.D. which thereby allows two feet of freeboard. The scope of the floodwall project consists of an existing cellular cofferdam and segments of I- or T-walls into which necessary roller or swing-type floodgates will be installed and through which the discharge pipelines of five pump stations (P2-P6) pass to empty interior site drainage into the IH-NC. Approximately 1.66 miles in total length, the alignment of the floodwall shown on

Plates W2-W5 extends over a series of reaches from a junction with the existing floodwall just south of the intersection of France Road and Almonaster Avenue south of Interstate Highway I-10 to another junction with the existing floodwall north of Berth 1. The alignment itself takes into account geotechnical considerations and also reflects, to the extent practicable, the operational needs of tenants located as shown on Plates W2-W5. Of the five pump stations for interior site drainage, four (P2-P5) are located within the Port's highly developed container terminal (Berths 2-6). This southern portion of the site is referred to as Area 1. The remaining pump station (P6) drains the largely undeveloped northern portion of the site referred to as Area 2. This station is located on the southern side of Slip 3 which became a collection pond by construction of a cofferdam across its mouth. The cofferdam and the five floodwall segments containing the discharge pipelines of the pump stations were installed by separate construction contracts prior to construction of the remaining floodwall. After acceptance of the new floodwall system by the OLD, the existing floodwalls and levees which have been bypassed will be removed, as needed to develop Port properties.

3. Agency Reviews, Permits, and Approvals. Coordination will be required with the following agencies: (1) Orleans Levee District, (2) New Orleans District of the U.S. Army Corps of Engineers, (3) Public Works and Flood Control of the Louisiana Department of Transportation and Development, and (4) New Orleans Public Belt Railroad. Informal contact has been maintained with these agencies in the development of the draft design memorandum which was circulated for formal review prior to preparation of this final report. The permitting agency for the floodwall is the Orleans Levee District, which will receive comments from other agencies reviewing a permit application to be submitted by the Port of New Orleans. Also, the U.S. Army Corps of Engineers is the permitting agency for dolphins and similar ancillary measures to be placed in the IH-NC to protect drainage outfall pipes since the IH-NC is a navigable waterway. This permit application also will be submitted by the Port of New Orleans. In addition, the Corps may also require a permit application from the Port for disposal of any dredged material in the IH-NC during construction. A determination of consistency with the Louisiana Coastal Resource Program will also be obtained by the Port of New Orleans.

4. Tenant Considerations. The preliminary engineering report submitted on July 9, 1990, included comments from tenants shown on Plates W2-W5 that have been taken into consideration during the development of this design memorandum. Informal contact has been maintained to obtain and reflect their comments on changes subsequent to this final report. Given site conditions and geotechnical considerations, all comments have been incorporated to the extent practicable.

LOCATION OF PROJECT

5. Project Location. As shown on Plates W2-W5 and in more detail on Plates W14-W32, the replacement floodwall for the France Road Terminal in New Orleans, Louisiana, is located generally along the west side of the IH-NC between a junction with the present floodwall just south of the intersection of France Road and Almonaster Avenue on the north and a second junction with the present floodwall on the south that is near the north end of Berth 1. The survey baseline for the floodwall commences at the northern terminus, proceeding southward and ending at the southern terminus. Of four original slips on the site, Slips 1 and 2 have been filled and are now within the container terminal in Area 1. Only Slips 3 and 4 remain. Slip 3 has been closed by a cellular cofferdam so as to serve as a collection pond from which the pump station (P6) discharges interior site drainage from Area 2 into the IH-NC. Proceeding from north to south, the alignment runs alongside France Road to a point where it turns east to run between the tenant areas of Pontchartrain Materials Corporation and Mechanical Equipment Company (MECO), thence around the MECO site and across the cofferdam near the mouth of Slip 3. Thereafter, it continues toward the IH-NC where it then runs south near top-of-bank on the landside of the canal to accommodate access ramps and pump stations along Berths 4-6 enroute to the southern terminus with the existing floodwall. The terminal serves primarily as a container terminal. North of that terminal is an industrial equipment manufacturer and a site for bulk materials handling. Railroad service by the New Orleans Public Belt Railroad includes a rail yard just west of France Road.

6. General. Flooding occurs when water in the IH-NC rises above approximate Elev. +2.5 to +3.0 ft. N.G.V.D. To protect against this and higher levels, on January 20, 1993, the Port authorized a net design grade for the floodwall of Elev. +15.0 ft. N.G.V.D. after receipt of comments during agency coordination. Several alignments have been studied for the undeveloped Area 2 to maximize its value to the Port. Those studies have resulted in the present alignment shown on Plate W2. Also, during agency coordination, design criteria and guidance were received from the New Orleans District, U.S. Army Corps of Engineers (See Appendix B.) for use in designing the various components of the floodwall. Protection criteria call for a top-of-wall elevation of +15.0 ft. N.G.V.D., a still water elevation of +13.0 ft. N.G.V.D., with no wave run-up requirements. Wall types consist of I- and T-walls, the former being limited in unsupported height from 8 to 8.5 ft. and the latter to be used when I-walls are not feasible. Sheet pile penetration of I-walls below the unsupported height is a minimum of three times the retained water depth. Penetration also may be governed by structural considerations or seepage requirements. Berms are used to reduce unsupported heights of I-walls. To expedite completion, the predicted settlement resulting from the weight of berms will be restricted to 6 inches, thereby permitting immediate capping of the I-walls. I-walls and berms will be constructed 6 inches above design grade when the predicted settlement is 6 inches or less. Pile-supported T-walls will be constructed to design grade. A cellular sheet pile cofferdam serves as the floodwall at the closure of Slip 3. Eight steel bottom roller or swing-type floodgates will be provided as necessary for required access, one at the Boh Brothers Construction lease site, one at the Pontchartrain Materials Corporation lease site, one at the MECO lease site, and one at each of the five existing ramps at the ship berths.

7. Floodwall Alignment. As shown on Plates W2-W5, the alignment of the floodwall extends over a series of fourteen reaches from the northernmost to the southernmost points of termination. Each reach generally is confined to a floodwall type before a major change in alignment, soil type, or wall type. Reaches 1 and 2 cover that portion of the floodwall that begins at the northernmost terminus and extends to Slip 3 at the MECO site. Proceeding southward, Reaches 3 through 9 cover that portion along Slip 3 and the cofferdam across Slip 3

to the container terminal behind Berths 6 and 5. Reaches 10 through 14 cover the container terminal to the southern terminus at Berth 1 where the survey baseline begins. USC&GS Benchmark S-189 of 1991, located near the intersection of France Road and the Florida Avenue Canal, serves as the reference point for design elevations. Due to local subsidence, its adjusted elevation of +2.11 ft. N.G.V.D. has been utilized for the proposed floodwall design. It will be necessary to demolish a portion of the existing railroad floodgate at the northern terminus, thereby temporarily interrupting flood protection and requiring the Contractor to provide interim protection in accordance with a plan to be submitted for prior approval. Floodwalls within the various reaches are described below:

a. Reach 1: Northern Terminus at Existing Floodwall Tie-In to Mouth of Slip 3 North of MECO, Near P.I. 6. The floodwall will be an I-wall. (Plates W6 and W14-W20)

b. Reach 2: Mouth of Slip 3, Near P.I. 6, North of MECO to North of Cellular Cofferdam Connection at Slip 3. A T-wall will be used (Plates W8 and W20-W22).

c. Reach 3: Termination of Reach 2 T-Wall at Slip 3 to North Cellular Cofferdam Connection. An I-wall will be used (Plate W22).

d. Reach 4: Cellular Cofferdam. A cellular sheetpile cofferdam previously constructed across Slip 3 will serve as the floodwall (Plates W22 and W23).

e. Reach 5: South Cofferdam Connection to Pump Station P6. A T-wall will be used (Plates W23).

f. Reach 6: Pump Station P6 to North of Pump Station P2. An I-wall will be used (Plates W23 and W24).

g. Reach 7: North of Pump Station P2 to South of Pump Station P2. A T-wall will be used (Plates W24 and W25).

h. Reach 8: South of Pump Station P2 to North of Floodgate No. 8 on North Ramp of Berth 4. An I-wall will be used (Plates W25-W29).

i. Reach 9: North to South of Floodgate No. 8 on North Ramp at Berth 4. A T-wall will be used (Plate W29).

j. Reach 10: South of Floodgate No. 8 on North Ramp at Berth 4 to North of Pump Station P5. An I-wall will be used (Plate W29).

k. Reach 11: North to South of Pump Station P5. A T-wall will be used (Plate W29).

l. Reach 12: South of Pump Station P5 to South of Floodgate No. 9 on South Ramp at Berth 4. An I-wall will be used (Plates W29 and W30).

m. Reach 13: South of Floodgate No. 9 on South Ramp at Berth 4 to South of Pump Station P3. A T-wall will be used (Plate W30).

n. Reach 14: South of Pump Station P3 to Southern Terminus at Existing Floodwall Tie-In North of Berth 1. An I-wall will be used (Plates W30-W32).

8. Basic Designs. Three wall types have been employed for the floodwall: (1) cantilevered I-wall, (2) pile-supported T-wall, and (3) sheetpile cellular cofferdam. Typical sections for Types (1) and (2) are shown in Plates W6-W8, S2, S4, and S5. The design of the I- and T-walls complies with the U.S. Army Corps of Engineers design criteria and guidance. Because it is more economical, the I-wall is preferred, provided its unsupported height does not exceed 8.0 ft., or 8.5 ft. in exceptional cases if required by site conditions. Berms are used to restrict unsupported height to required limits. Predicted settlement from berm use will be restricted to

6 inches, thereby permitting immediate capping of the walls. A greater predicted settlement would require a waiting period until sufficient settlement has occurred to permit capping. When I-walls are not feasible, pile-supported T-walls will be employed, thereby avoiding the use of berms with resulting subsidence. Also, T-walls will be used where bank stability so requires. In addition, potential settlement problems require that pile-supported floodgates be employed where passage through the floodwall is required. The existing cellular cofferdam is employed as a floodwall segment that also closes Slip 3 so that it can serve to collect interior site drainage for transfer to the IH-NC by Pump Station P6 for Area 2. The floodgates will be of the bottom roller or swing type. Sill elevations will be as high as possible to minimize frequency of operations. Typical details for swing gates are shown in Plates S70-S79A. Typical details for roller gates are shown in Plates S49A-S51A, S55A-S58A, and S86-S87. A summary of gate types and sill elevations is as follows:

TABLE 1

GATES

Gate No.	Type	Opening Width (ft.)	Sill Elev. (ft. N.G.V.D.)
1	Bottom Roller	45	5.5
2	Single Swing	25	8.0
3	Bottom Roller	20	7.0
5	Bottom Roller	48	10.18
6	Bottom Roller	78.25	10.53
7	Bottom Roller	43	9.3
8	Bottom Roller	50	10.44
9	Bottom Roller	43	10.56

HYDROLOGY AND HYDRAULICS

9. General. The preliminary engineering report submitted to the Port of New Orleans on July 9, 1990, contained analyses and recommended improvements with respect to interior site drainage that take into account the construction of the floodwall. Components of improvements

already completed consist of the upgrade of pump stations (P2-P5) for Area 1 and a new pump station (P6) for Area 2, as well as the cofferdam closing Slip 3. Construction for each pump station for Area 1 included an adjacent segment of T-wall through which the discharge pipelines pass. Similarly, adjacent to the pump station for Area 2, a segment of T-wall was constructed through which the discharge pipelines pass. In addition, the cellular cofferdam serves as a segment of floodwall that also closes Slip 3 to convert it into a collection pond with a new pump station for interior drainage from Area 2. The new floodwall and the separate projects to improve interior site drainage will result in changes to runoff patterns that warrant review by the Port of New Orleans and tenant activities insofar as plans for spill prevention are concerned. (See additional discussion in Paragraph 46, Environmental Impact.)

10. Water Surface Elevations. Whereas the existing floodwall was built to a net design elevation of +14.0 ft. N.G.V.D., as a result of agency coordination, the Port of New Orleans decided on January 20, 1993, to authorize this floodwall at a net design elevation of +15.0 ft. N.G.V.D., with a still water elevation of +13.0 ft. N.G.V.D. and no wave run-up requirements.

GEOLOGY

11. Physiography. Along the floodwall alignment, the physiography of the site is primarily a surface of former marsh derived from deposits of sediment during flooding of the Mississippi River, onto which various improvements, including fill materials, have been placed. With ground elevations ranging from +2.5 to +7.5 ft. N.G.V.D., that portion of the site along the alignment is subject to tidal overflow, although isolated lesser flood protection measures have been installed such as a short sheetpile wall and earthen levee at the site of one tenant, the Mechanical Equipment Company (MECO). Of four original slips connecting to the IH-NC, Slips 1 and 2 have been filled, Slip 3 has a cofferdam across it, and only Slip 4 remains. At its northernmost terminus, the alignment of the floodwall proceeds south from its junction with the existing floodwall along France Road then eastward toward the IH-NC just north of MECO. Along this portion of the alignment, the flood side of the floodwall is comprised of stockpiles primarily associated with operations for bulk materials handling. As the alignment proceeds

further south, it passes along the landside of MECO's sheetpile floodwall, after which it crosses Slip 3 in the form of a cellular cofferdam closure. Thereafter, the alignment continues southward on the landside near the top-of-bank, passing open storage areas until it reaches Berth 6. Along Berths 6, 5, and 4, the alignment proceeds further southward, generally parallel to the shoreline but with local changes in alignment to accommodate the berthing area, its access ramps, and the pump stations. Thereafter, the alignment proceeds on the landside near top-of-bank past future Berths 2 and 3 until it reaches its southernmost terminus where it rejoins with the existing floodwall near north of Berth 1.

12. General Geology. Soils on-site generally consist of fill materials and underlying layers derived from alluvial deposits of the Mississippi River that comprise clays, silts, and sands found in layers and lenses that generally increase from finer to coarser materials with increasing depth. Borings indicate depths below ground surface of 4 to 40 ft. of fill materials that consist mostly of sands and shells, below which are clays with some organic content, below which sands occur beginning at approximately Elev. -60 ft. N.G.V.D. The site is subject to areal subsidence due to consolidation of older sediments from the Mississippi River. Former Slips 1 and 2 (See Plates W25, W26, W28, and W29) contain fill materials. In general, groundwater levels in this low-lying area of marsh are relatively high, being subject to considerable variation.

13. Geotechnical Investigation. Soils investigations were conducted to develop data for use in analyses of foundations and bank slope stability along the alignment of the floodwall. The scope of the investigations included soil borings, laboratory testing of soil samples, determinations of soil reaches and parameters, and analyses of slope stability for I-walls (including use of berms) and T-walls (including floodgates), I- and T-wall analyses for lateral loads and seepage, pile load capacities, cellular cofferdam analysis, estimates of settlement, and other pertinent requirements. The results, including boring locations, and supplementary geotechnical information regarding the tenant area of Pontchartrain Materials Corporation are contained in the geotechnical report in Appendix A.

14. Subsidence and Seismic Activity. The alignment of the floodwall is subject to active subsidence. Although rates vary considerably in the general area, it is estimated that settlement

due to areal subsidence may occur at a rate of 0.25 ft./100 yrs., although localized subsidence may be greater due to variations in site conditions along the alignment. Berms used to restrict the unsupported height of I-walls will cause local settlement. Differential settlement between the I-walls and T-walls will occur due to areal subsidence. Also, normal fluctuations in groundwater levels and possible lowering of such levels due to improved drainage will contribute to differential settlement. Settlement due to lowering of groundwater levels may be on the order of 1 in./ft. of permanent lowering of the groundwater levels. Seismically, the site is located in an area of low seismicity.

15. Groundwater Resources. Groundwater aquifers exist at such depths as to be unaffected by the project. To determine groundwater conditions, an auger hole was drilled without the use of water during the drilling process approximately 25 ft. south of Boring 19 (Figure 1, Appendix A). Groundwater was encountered first at the 6-ft. depth, after which it rose to the 4-ft. depth after 6 hours. The depth to groundwater will vary with water level in the IH-NC, climatic/seasonal conditions, drainage improvements, and other factors. Significant variations may occur. If important to construction, the depth to groundwater should be established by the contractor immediately prior to initiation of work.

16. Mineral Resources. No hydrocarbon reservoirs or commercial dredging operations such as for sand and shell are located in the vicinity of the project.

17. Foundation Conditions. Borings indicate the thickness of fill materials ranges from a minimum of 4 ft. to a maximum of at least 40 ft. below the ground surface. A majority of the fill consists of loose sand and shells with the next component consisting of very soft to soft gray clay. Miscellaneous fill materials are present primarily around Slip 3 and include concrete and brick fragments, steel wire, gravel, wood, and other debris. Underlying the fill is a stratum of very soft to soft gray clay that extends from 46- to 56-ft. depths. The surface of this stratum contains layers of wood, humus, and organic clay at several boring locations. Underlying this is a stratum of soft to medium stiff gray clay and sandy clay that extends from 51- to 56-ft. depths. Below this is a stratum of loose to very dense sand, silty sand, and clayey sand that extends to the bottom of most borings which terminate at the 70-ft. depth. The final 1 to 7 feet

at a few borings consist of medium stiff to stiff gray or gray and tan clay and sandy clay and medium compact gray clayey silt.

FOUNDATION INVESTIGATION

18. General. Investigation and design for foundations address the three floodwall components of I-walls, T-walls, and cofferdam. Engineering analyses include slope stability for I-walls and T-walls, I- and T-wall analyses for lateral loads and seepage, pile load capacities, and cellular cofferdam analysis. The results of these analyses are contained in the geotechnical report in Appendix A. Four soil reaches (Reaches I-IV) were assigned, with soil borings and parameters shown on Figures 2-5, Appendix A. Reach III applies only to the unprotected frontage along the IH-NC at the Boh Bros. Construction lease site, and Reach IV applies only to the cofferdam.

19. Field Exploration. A total of 27 soil borings of the undisturbed sample type were drilled at the locations shown on Figure 1 of the geotechnical report in Appendix A. Borings 1-16 and 19-20 were drilled using a truck-mounted rotary type drill rig to a depth of 70 ft. below the ground surface. Boring 4 terminated in a thick deposit of shell at the 40-ft. depth, using the same rig. Borings 17, 18, and 22 in Slip 3 and Boring 21 in Slip 4 were drilled in water from a boat by use of hand equipment to depths of 32, 33, 70, and 70 ft., respectively. Boring logs are presented in Appendix A. In addition, undisturbed samples of cohesive or semi-cohesive subsoils were obtained at close intervals or changes in stratum by use of a 3-in. diameter thinwall Shelby tube sampling barrel. Cohesionless soils were sampled during the performance of in-situ Standard Penetration Tests. Supplementary field exploration regarding the tenant area of Pontchartrain Materials Corporation is also included in Appendix A.

20. Laboratory Tests. Soils mechanics laboratory tests were performed on undisturbed samples from the borings. Tests included natural water content, unit weight, and either unconfined compression shear or unconsolidated undrained triaxial compression shear. The results are recorded on the boring logs in Appendix A. A grain size analysis was performed on a sample of the shell fill, and the results are shown on a grain size distribution curve in

Appendix A. Supplementary laboratory tests regarding the tenant area of Pontchartrain Materials Corporation are also included in Appendix A.

FLOOD PROTECTION PLAN

21. Design Problems Considered. The flood protection plan consists of construction of segments of floodwall with gates using I-walls or T-walls as geotechnical and site conditions warrant. Design problems addressed include sheetpile penetration and berm heights for I-walls, floodwall offset to top-of-bank, seepage, slope stability, pile load capacity for T-walls and floodgates, and settlements.

22. I-Walls and Berms. The required penetration for I-wall sheetpiles is based upon the following U.S. Army Corps of Engineers design criteria (Appendix B): (1) a factor of safety of 1.5 applied to soil shear strengths for the load condition of still water level (Elev. +13.0 ft. N.G.V.D.), (2) a factor of safety of 1.0 for the load condition of top-of-wall (Elev. +15.0 ft. N.G.V.D.), and (3) a minimum "penetration to head" ratio of 3 to 1 wherein the head is the still water level. In addition, a berm with top elevation varying from Elev. +6.5 to +8.0 ft. N.G.V.D. with 10-ft. crown and 1V:3H slopes will be constructed throughout where existing ground surfaces typically range from average Elev. +3.0 to +6.0 N.G.V.D., with groundwater assumed to be at ground surface. Using the U.S. Army Corps of Engineers' computer program "CWALSHT," the computations contained in Appendix A are based on the required sheetpile penetrations to satisfy the governing criterion of minimum "penetration to head" ratio and the seepage requirements. In Reaches I and III, required sheetpile penetrations vary from Elev. -7.0 to -17.75 ft. N.G.V.D. (Figures 14-17, Appendix A), and to Elev. -24.0 ft. N.G.V.D. in Reach II (Figures 18-19, Appendix A). A 2-ft. wide and 6-ft. deep inspection trench along the alignment is necessary to avoid interference during installation due to the history of the site and the miscellaneous fill materials encountered. Special measures described in Paragraph 36, Appendix A, are needed between Borings 6-9 around Slip 3. Obstacle removal is needed before floodwall construction. Backfill for the inspection trench will be compacted cohesive soil as indicated in Paragraph 38, Appendix A. Also, special measures may be required to more

precisely locate the beginning and ending of the Soil Reach II limits. These special measures may include trenching or additional borings.

23. T-Walls. 14-in. square precast concrete piles will be used to support T-walls and floodgates. These will be seated firmly in the underlying dense sand stratum to optimize pile load capacity and minimize post-construction settlement. The T-walls and gates have been designed with a factor of safety of 2 with the pile capacities confirmed by a pile test program found in Appendix A. For the short segments of T-wall constructed with the pump stations where pile tests were not practical, a factor of safety of 3 was used. The need for jetting was not addressed by the test pile program; therefore, it is not recommended. Center-to-center spacing between piles within a group or row meets the specified geotechnical guidance in Appendix A. A reduction of the pile load capacity for a single pile due to the effect of group action has been made wherein piles are driven in rows or groups, with minimum center-to-center spacing between piles in a row or group determined by Figure 29, Appendix A, but not less than 3 ft. Adjacent facilities will be inspected carefully prior to pile driving operations to evaluate the potential effects of vibrations. If deemed necessary, such effects will be monitored using a seismograph. The sheetpile cut-off walls beneath the T-walls and floodgates will possess a minimum penetration of Elev. -16.5 ft. N.G.V.D. in Reach I and Elev. -28.0 ft. N.G.V.D. in Reach II. In Reach II, the sheetpile cutoff must provide additional resistance to improve the factor of safety to 1.3. Figures 20-21, Appendix A, show stability, sheetpile, and seepage analyses for Reaches I, II, and III.

24. Cofferdam. A 36-ft. diameter circular type cellular cofferdam utilizing 45° connecting arcs with 80-ft. long sheetpiles penetrating to at least Elev. -65.0 ft. N.G.V.D. is employed as the floodwall and closure near the mouth of Slip 3. Figure 6, Appendix A, shows the results of the cofferdam geotechnical analyses. The top of the cofferdam is constructed at Elev. +16.0 N.G.V.D. The sheetpiling was estimated to settle about 1-3 in.; the fill within the cofferdam was estimated to settle 8-10 ft. Straight web steel sheetpiles with a minimum ultimate interlock tension capacity of 16 kips/in. were used. The fill material was locally available river sand, dumped in place below water level, and placed above water level in uniform lifts no greater than 3 ft. thick. Fill should be added when the surface settles to Elev. +13.0 N.G.V.D. to maintain

the design grade of +15.0 N.G.V.D. On each side of the cofferdam, as shown on Plates S61 and S61A, a special transition section will serve to connect the cofferdam and the adjacent T-wall and I-wall while allowing differential settlement.

25. Slope Stability. Slope stability analyses used the U.S. Army Corps of Engineers' computer program "STABILITY WITH UPLIFT." Figures 7-13, Appendix A, show the results of slope stability analyses in Reaches I-III, including Slips 3 and 4 and an overlay procedure in Figure 10 for cross-section analysis in Reaches I-II. To provide a minimum factor of safety of 1.3 against a potential slope stability failure, the I-type floodwall should not be located closer than 55 ft. from top-of-bank where the existing ground surface is not higher than Elev. +4.0 ft. N.G.V.D. at top-of-bank, Elev. +5.0 ft. N.G.V.D. at the floodside toe of any berm, and Elev. +6.0 ft. N.G.V.D. beyond the protected side toe of the berm. Surcharge loads should not be located closer than 45 to 125 ft. from the floodwall, depending on their uniform density. A recommended typical cross-section superimposed on the existing profile will dictate bank degrading and filling. For Slip 3, the side slopes will not be steeper than 1V:3H, and top-of-bank will be degraded to Elev. 0.0 ft. N.G.V.D. for a horizontal distance of 36 ft. from the top of the side slope. Degrading operations will proceed from highest to lowest elevation, with the reverse procedure for backfilling. Backfill below Elev. -5.0 ft. N.G.V.D. will be crushed limestone. Spoil material will be removed immediately from the site instead of being stockpiled on the construction site. If site conditions so require, the I-wall with berm may be placed no closer than 30 ft. from top-of-bank, with the top-of-bank at Elev. +2.0 ft. N.G.V.D. increasing to Elev. +2.5 ft. N.G.V.D. at the toe of the berm and to Elev. +6.0 ft. N.G.V.D. beyond the protected side of the berm.

26. Settlements. Estimated settlement for I-walls with berms will not exceed 6 in. to allow immediate capping of the floodwall, with the predicted amounts accounted for in higher floodwall and berm heights for construction. Settlement should be negligible 15 ft. from the toe of the berm. Some differential settlement will occur between floodwall and pump stations due to on-going area subsidence and normal fluctuations in groundwater level and possible lowering of levels due to improved site drainage. Areal subsidence will depend mainly on the thickness of fill materials over the site, although localized subsidence may be greater due to variations in

site conditions along the alignment. Except for shell fill in portions of Slips 3 and 4, fill ranges between 10-16 ft. to yield an estimated ultimate settlement of 5-10 ft. However, much of this settlement is deep seated, and only a portion will contribute to differential settlement between the floodwall and pump stations. Further, a substantial amount of the ultimate settlement has occurred, and that remaining should occur slowly over a long period of time. Settlement from lower groundwater levels may be on the order of 1 in./ft. of permanent lowering of groundwater level. For T-walls and floodgates, settlement should not exceed 0.25 to 0.75 in., assuming piles are driven in single rows spaced at least 7 ft. between rows or in small groups in which the largest dimension of the group is less than 20% of the pile length, and individual pile groups have center-to-center spacing no closer than twice the largest group dimension. For the cofferdam, ultimate settlement of the fill surface may be 8 to 10 ft., and the sheetpiles 1 to 3 in. Periodic addition of fill will be needed. In the Pontchartrain Materials Corporation lease area, minimum offset distances from the floodwall have been prescribed by the Port for stockpiling of bulk materials.

SOURCES OF CONSTRUCTION MATERIALS

27. Sources of Construction Materials. Ready-mix concrete meeting design specifications is available from several local sources, as are sand and gravel. The concrete will not be subjected to any critical environmental or functional conditions. Because of the nature of local aggregates, low alkali cementious materials will be specified. Stone for rip-rap is available from Corps-approved sources in Arkansas, Missouri, Kentucky, and Illinois.

DESCRIPTION OF PROPOSED STRUCTURES AND IMPROVEMENTS

28. Floodwalls. Three types of floodwalls will be provided at the following locations:

a. I-walls: Reaches 1, 3, 6, 8, 10, 12, and 14.

b. T-walls: Reaches 2, 5, 7, 9, 11, and 13.

c. Cofferdam. Previously constructed at Reach 4.

29. Floodgates. Two types of steel floodgates will be provided at the following alignment locations:

a. Swing Gates: One swing gate will be located in Reach 1 at Station 17+19.62 for Gate No. 2.

b. Bottom Roller Gates: Seven bottom roller gates will be located in Reaches 1, 8, and 9 at Stations 4+26.38 for Gate No. 1, 27+60.00 for Gate No. 3, 51+27.41 for Gate No. 5, 59+10.62 for Gate No. 6, 66+62.03 for Gate No. 7, 69+10.53 for Gate No. 8, and 76+45.10 for Gate No. 9.

30. Drainage Facilities. The discharge pipelines of the five existing pump stations (P2-P6) for interior site drainage within Areas 1 and 2 pass through adjacent existing T-wall segments of the floodwall at Stations 47+53.46 for P2, 79+27.47 for P3, 63+24.93 for P4, 70+70.30 for P5, and 35+27.29 for P6.

STRUCTURAL DESIGN

31. Criteria for Structural Design. Structural design complies with standard engineering practice and the criteria set forth by the New Orleans District, U.S. Army Corps of Engineers (Appendix B), modified as needed by engineering judgement and experience to meet local conditions.

32. Basic Data. Basic data relevant to structural design are shown in the following table:

TABLE 2

RELEVANT STRUCTURAL DESIGN DATA

a.	Water Elevations	Elev. (ft. N.G.V.D.)
	Net Design Grade	+15.0
	Still Water Elevation	+13.0
	Wave Run-up	None
		Elev. (ft. N.G.V.D.)
b.	Floodwall Gross Grade	
	I-Wall	+15.5
	T-Wall	+15.0
	Cofferdam	+16.0
c.	Unit Weight	
	Water	62.4 pcf
	Steel	490 pcf
	Concrete	150 pcf
	Saturated Soil	115 pcf
d.	Design Loads	
	Wind Loads	50 psf
	Live Loads	AASHTO H20 Special Forklift Loads

33. Design Methods. Design of reinforced concrete is in accordance with the strength design method of the current ACI Building Code, as modified by the guidelines of "Strength Design Criteria for Reinforced Concrete Hydraulic Structures," EM 1110-2-2104, dated June 30, 1992. Basic minimum 28-day compressive strength concrete is 3,000 psi, except prestressed concrete piling for which the minimum is 5,000 psi. Pertinent stresses are tabulated below:

TABLE 3

PERTINENT STRESSES FOR REINFORCED CONCRETE DESIGN

f'_c	3,000 psi
f_y (Grade 60)	60,000 psi
Max. Flexural Reinforcement Ratio	0.375 x balance ratio
Min. Flexural Reinforcement Ratio	$200/f_y$
f'_c (for Prestressed Concrete Piles)	5,000 psi
f_y (for Prestressing Strand Grade 250)	250,000 psi
f_y (for Prestressing Strand Grade 270)	270,000 psi

Design of structural steel is in accordance with the AISC Manual of Steel Construction (Allowable Stress Design) along with guidelines of "Structural Design of Closure Structures for Local Flood Protection Projects," EM 1110-2-2705, dated March 31, 1994.

Loading:

Live Load

1. Basic Uniform Live Load = 850 pounds per square foot
2. Truck Loading - HS20-16, latest AASHTO Specifications
3. Forklift Loading - KALMAN LMV (See Plate S1 for more details)
4. Crane Load - BUCKNES 88B (See Plate S1 for more details)
5. Wind Load - For structures within 100 miles of hurricane shoreline, a wind load of 50 psf shall be considered

34. Location and Alignment. Shown on Plates W2-W5, the new floodwall will begin at a tie-in to the existing floodwall just south of the intersection of France Road and Almonaster Avenue. Generally, the floodwall runs alongside France Road to a point where it turns east and then south to and across the MECO site to the landside of top-of-bank along the shoreline of the IH-NC and Slip 3 to where a cofferdam across the slip also serves as the floodwall. The new floodwall proceeds along the berthing area to end at a tie-in to the existing floodwall just north

of Berth 1. The detailed location and alignment of the proposed floodwall are shown on Plates W14-W32. The detailed profile is shown on Plates W10-W13.

35. I-Type Floodwall. The I-wall will consist of sheetpiling driven into the existing ground as indicated on Plates W10-W13. In the MECO area, the existing temporary sheetpile floodwall on the floodside of the new floodwall becomes part of measures to protect against navigational hazards by use of rip-rap. For the new I-type floodwall, the upper portion of the sheetpiling will be driven to the required depth with 9 in. of the sheetpiling extending above ground surface, below which the concrete portion of the floodwall will extend 2 ft.

a. Loading Cases. In the design of the I-wall, the following loading cases were considered:

Case I: Water at Still Water Level (Elev. +13.0 ft. N.G.V.D.),
Q case F.S. = 1.5; S case F.S. = 1.3

Case II: Water at Net Design Grade (Elev. +15.0 ft. N.G.V.D.),
Q case F.S. = 1.0; S case F.S. = 1.0

b. Joints. Expansion joints (Plate S3) for the I-wall will be spaced approximately 30 ft. apart, adjusted to fall at sheetpile interlocks. To compensate for expansion, contraction, or displacement, three-bulb waterstops and premolded expansion joint fillers will be provided. Where the I-wall joins T-walls or floodgates, the deflection of the I-wall produces a greater displacement for which a special seal consisting of an L-type waterstop in a notch in the I-wall will compensate for horizontal and vertical displacements to prevent water from flowing through the joint (See Plates S7-S8.).

36. T-Type Floodwall. T-walls, including the monolithic base slabs of the floodgate sections, will consist of reinforced concrete walls (columns for gate monoliths) and base slabs supported on 14" square precast prestressed concrete piles with steel sheetpiling for seepage control. Existing access ramps will require modification to accommodate the gate monoliths. Pile load

tests have been performed, with the result that a factor of safety of two (F.S. = 2) was used for design. An exception is the existing T-wall sections through which the discharge pipelines of the existing pump stations pass. In this case, the number of piles is small and the walls were constructed prior to pile loading testing, with the result that a factor of safety of three (F.S. = 3) was used. Plates S4-S6 show sample details of T-walls. T-wall joints will be placed at center-to-center distances of approximately 38 to 40 ft. L-type waterstops will be used at connections between T- and I-walls.

a. Loading Cases. In the design of the T-wall, the following loading cases were considered:

(1) T-Wall.

Case I: Wall Dead Load (DL) + Water to Elev. 13.0 + Soil Load + Uplift Load (impervious cut-off wall).

Case II: {Wall DL + Water to Elev. 15.0 (low probability load) + Soil Load + Uplift (impervious cut-off)} x 0.75.

Case III: {Wall DL + Floodside Wind Load @ 50 psf + Soil} x 0.75.

Case IV: {Wall DL + protected side wind load @ 50 psf + Soil} x 0.75.

Case V: {Wall DL + soil} x 0.75.

Case VI: Case I with pervious cut-off.

Case VII: Case II with pervious cut-off.

For Load Case VI with pervious cut-off and Load Case VII with pervious cut-off, the following points should be noted:

(a) Soil pressures at rest were used for analysis as the wall movement was to be minimized. Passive pressures were neglected ($k_R = 0.50$).

(b) Wind load was based upon AASHTO load approved as per requirement of U.S. Army Corps of Engineers.

(c) A 1-ft. strip of wall is analyzed for all load cases and forces are multiplied by wall length for CPGA analysis.

(2) Gate Monolith.

Case I: Gate closed; water to Elev. 13.00.

Case II: Gate closed; water to Elev. 15.00 (75% forces).

Case III: Gate open; 2 fork lifts or 2 HS20-16 trucks on protected side edges of base slab.

Case IV: Gate open; 2 fork lifts or 2 HS20-16 trucks on floodside edge of base slab.

Case V: Gate open; 2 fork lifts or 2 HS20-16 trucks on protected side edge of base slab; wind from floodside (75% forces).

Case VI: Gate open; 2 fork lifts or 2 HS20-16 trucks on floodside edge of base slab; wind from protected side (75% forces).

Case VII: Gate closed; wind from floodside (75% forces).

Case VIII: Gate closed; wind from protected side (75% forces).

Case IX: Gate open; no wind, no water.

See Plate S1 for forklift and crane loading definitions. Refer to Appendix C, Volume III, for T-wall and monolith structural analyses.

b. Joints. Typical I-wall, T-wall, and cellular cofferdam connections with joint details are shown on Plates S3, S5, S7-S9, S61, and S61A.

37. Floodgates. Swing and roller gates will be constructed of structural steel. Floodgates were designed in accordance with EM 1110-2-2105, "Design of Hydraulic Steel Structures" and EM 1110-2-2705, "Structural Design of Closure Structures for Local Flood Protection Projects." Deflections were limited to 1/400 of the span length. Gate No. 6 was designed to span between the concrete end post, with the latching eye bolts in place, within the above deflection limitations. It was also designed to span between the two concrete end posts without the latching

eye bolts but with no deflection limitation. Swing gate details are shown on Plates S73-S79A. Roller gate details are shown on Plates S49A-S51A and S55A-S58A. Refer to Appendix C, Volume III, for floodgate structural analyses.

38. Cofferdam. The geotechnical report in Appendix A contains the cellular cofferdam analysis.

39. Cathodic Protection and Corrosion Control. With respect to cathodic protection for steel sheetpiling, all steel sheetpiling will be bonded together to obtain electrical continuity, and no corrosion protection measures will be provided. Cathodic protection can be installed in the future if the need arises. The sheetpiles will be bonded together with No. 6 reinforcing bar welded to the top of each sheetpile. Flexible jumpers insulated with cross-linked polyethylene will be welded or brazed to adjacent sheetpiles at the monolith joints 3 in. below the bottom of the concrete. As for corrosion control, all exposed ferrous metal components will be either galvanized, painted with a vinyl paint system, or will be stainless steel. Cellular cofferdam sheetpiles were made of corrosion-resistant steel, which also was coated for protection with C200 coal tar epoxy.

METHOD OF CONSTRUCTION

40. Method of Construction. Construction of the I-wall type floodwall will be accomplished by grading the existing ground, placing berms as necessary, driving sheetpiling to the required depth, and constructing the I-wall as required. Construction of the T-wall type floodwall will be accomplished by grading the existing ground, driving sheetpiling and prestressed concrete piles, and constructing the T-wall as required. Construction of the cofferdam was accomplished by driving sheetpiling to the required depth, and constructing the cofferdam as required. Construction of floodgates will be accomplished by prefabrication and installation on-site. Sheetpile installation and pile driving operations, as well as other construction operations, will cause vibrations which may affect nearby structures, pavements, and underground utilities. Paragraphs 60-62, Appendix A, provide applicable geotechnical guidance.

ACCESS ROADS

41. Access Roads. Access for construction will be by road and water. Almonaster Avenue on the north side of the project, France Road on the west, and various roads entering the terminal from France Road are available. Access by water is available from the IH-NC. The construction contractor will be required to obtain access roads from the Port in coordination with tenants and to maintain and repair them as may be necessary.

RELOCATIONS

42. General. Existing facilities requiring relocation for this project include, but are not necessarily limited to, the following: drainage facilities, portions of two buildings, and a pump station at the MECO site. New drainage facilities will be installed, and the portions of the buildings and the pump station will be removed.

REAL ESTATE REQUIREMENTS

43. General. In that the entire alignment of the new floodwall is located within the property owned by the Port of New Orleans, no real estate requirements are anticipated to accommodate the project.

AFFECTED ENVIRONMENT

44. General. A general environmental evaluation has been made based upon available data and observable factors at the site of the proposed floodwall alignment. The evaluation is not a full environmental impact assessment as it excludes soil, air, and water investigations, cultural and/or archaeological surveys, etc.

45. Existing Uses and Conditions. Presently, the terminal, manufacturing plant, and bulk storage areas are east and north of the existing floodwall to be relocated, south of the Interstate Highway I-10, and west of the IH-NC. Within the impact area, land use is in industrial and commercial use as warehousing or outdoor storage area. No archaeological or historically significant structures are evident. The remaining area is unused open land which is proposed by the Port as a future ship berth. That portion of the site is presently a grassed area with little vegetation and has been preloaded with river sand in anticipation of future development. Flora and fauna within the site proper and along the proposed construction zone are relatively insignificant as the area is highly urbanized in industrial use. The vegetation is basically scrub vegetation (volunteer willow, myrtle, and grasses). Soil characteristics were not determined (by contract), and the hydrology is basically tidal. Existing as well as past industrial activity has minimized terrestrial flora, fauna, and habitat. No sampling of aquatic biological features was obtained.

According to information provided by the Louisiana Department of Environmental Quality, Planning and Assessment Section, the IH-NC from the Mississippi River Lock to Lake Pontchartrain is defined as Water Quality Segment 041501. Present uses as defined by DEQ for this segment are primary contact recreation, secondary contact recreation, and wildlife propagation. The segment is assessed in terms of degree of support as fully supported but threatened. Suspected sources of effluent include industrial discharges, other discharges, and storm sewers. Suspected causes include salinity/total dissolved solids/chlorides, pathogen indicators, oil, and grease.

In Area 1, Pump Stations P2-P5 have been upgraded to increase capacity. For Area 2, on-site runoff has been directed to the collection pond behind the cofferdam closing Slip 3, where Pump Station P6 discharges the runoff into the IH-NC. Previously, each tenant was responsible for the quality of runoff from its respective site. With runoff from Area 2 channeled to the collection pond, the monitoring system for tracking runoff may require revision through coordination between the Port and its tenants.

46. Environmental Impact. According to field review as well as communications with representatives of the Louisiana Department of Wildlife and Fisheries, no critical, sensitive, or endangered species or habitat exist in the project area. No additional impact to existing water quality or present uses is anticipated. On occasion, water in the collection pond may be detained over extended periods of time. Temporary turbidity will occur during construction on the waterside of top-of-bank during bank slope degrading/backfilling. Applicable preventive measures to minimize runoff during construction will be required. Also, because of modifications to on-site drainage patterns, site-specific spill plans will require revision. Periodic monitoring of water quality in the collection pond is also a future consideration.

Because ambient air quality will be impacted only during construction by emissions from construction equipment, no significant impact on air quality is anticipated. According to representatives of the Louisiana Department of Culture, Recreation, and Tourism, no historical or archaeologically significant evidence exists within the project area; therefore, no impact is anticipated. No impact to existing noise levels other than temporary construction activities will occur as a result of this project. Because no changes in industrial uses are anticipated as a result of this project, no impact to the surrounding community is anticipated and no relocation is required. As a heavy commercial and industrial site, on-site aesthetics normally are not a significant consideration. However, construction of the floodwall at Elev. +15.0 ft. N.G.V.D. will enclose the site visually blocking previous site lines in some instances. No significant problems are anticipated. The Port will post appropriate warning designations where required.

47. Summary of Environmental Findings. No significant environmental impact is anticipated from the implementation of the proposed project. However, three items of significance have been identified. First, a 404 permit will be required to address dredging and disposal requirements resulting from construction activities. Previously designated disposal areas are proposed for reutilization. Based upon previous port projects, no wetland impacts are anticipated. Second, individual tenant spill plans and respective monitoring systems will require review and possible revision as a result of hydrologic modifications to the drainage system from implementation of the project. Coordination by the Port is required. The third issue relates to water quality conditions that may accumulate in the collection pond. Water quality there may

need to be monitored periodically for compliance with State water quality standards. Because collection and discharge of drainage into and from the pond is anticipated to be relatively frequent, significant water quality problems in the pond are not expected. However, without pre-construction modeling and testing, positive conclusions are not available. Should dissolved oxygen levels require improvement during periods of minimal rainfall activity, aeration may be a consideration for the future. A U.S. Army Corps of Engineers Section 404 permit application or a separate permit application to DEQ for water quality compliance certification may be needed.

COORDINATION WITH OTHER AGENCIES

48. General. Coordination has been carried out with the following agencies: (1) Orleans Levee District, (2) New Orleans District of the U.S. Army Corps of Engineers, (3) Office of Public Works of the Louisiana Department of Transportation and Development, and (4) New Orleans Public Belt Railroad.

ESTIMATE OF COST

49. General. The anticipated construction cost is approximately $12.6 million.

SCHEDULE FOR CONSTRUCTION

50. General. Plans and specifications have been submitted on schedule. This will allow for contract bid and award by Spring, 1998. One bid package will be issued, with the bidder having the option to bid the reach north of the cofferdam, the reach south of the cofferdam, or both.

OPERATION AND MAINTENANCE

51. General. Upon acceptance of the completed project, the Orleans Levee District will be responsible for operation and maintenance of the completed floodwall, including floodgates. Estimated annual operation and maintenance costs are as follows:

I. New System: 8,762 feet with 8 floodgates.

a. Floodwall Maintenance. Consists of inspecting, grass mowing, and wall cleaning and maintenance, approximately 1.7 mi., 4 times/year.	$8,500
b. Floodgate Operation. Consists of operation 4 times/year.	$5,000
c. Floodgate Maintenance. Consists of inspection and maintenance 4 times/year.	$4,500
Subtotal	$18,000
20% Contingency	3,600
TOTAL ANNUALIZED COST	$21,600

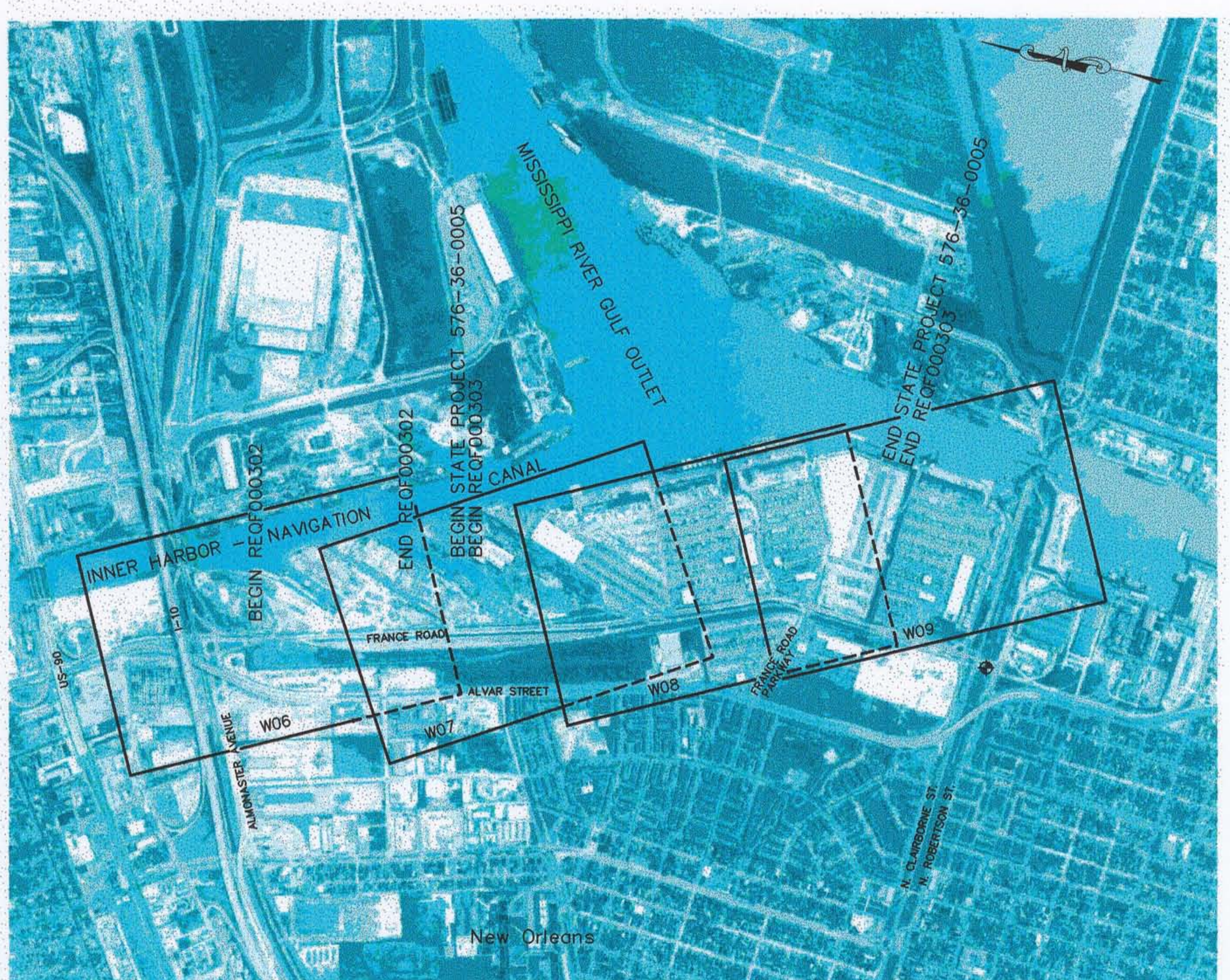
II. Existing System to be Taken out of Service: Approximately 8,300 feet with 3 floodgates. (Costs based on criteria for new system)

a. Floodwall Maintenance.	$8,300
b. Floodgate Operation.	$2,160
c. Floodgate Maintenance.	$1,980
Subtotal	$12,440
20% Contingency	2,488
TOTAL ANNUALIZED COST	$14,928

III. Based on these O&M cost estimates, the Orleans Levee District will realize a 30% increase in O&M costs between the two systems, primarily due to having five additional gates in the new system.

RECOMMENDATIONS

52. Recommendations. It is recommended that this design memorandum be approved as the basis for preparation of plans and specifications for the design works described herein.



VICINITY MAP
SCALE OF MILES
40 0 40 80 120 160 200

PROJECT BENCHMARK
S-189 (1991)
EL. 2.110 N.G.V.D.

NOTE:
ALL ELEVATIONS OF EXISTING FEATURES MAY BE OFF BY (2.247-2.110 =0.137) 0.14 DUE TO A CHANGE IN THE B.M. ELEV. WHEN THE SURVEY WAS MADE AND THE PRESENT B.M. ELEV. 2.110.

NOTE:
ELEVATIONS FOR ALL I-WALLS AND BERMS SHOWN IN THIS MEMORANDUM ARE CONSTRUCTION ELEVATIONS, DESIGN ELEVATIONS ARE 0.5' LOWER.

SCALE: 1"=600'
600' 0 600' 1200' 1800'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ALIGNMENT DWG INDEX SHEET

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=600'	PLOT DATE: 10/97	CADD FILE: INDEX
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W1

2

Oct 21, 1997 - 08:58:43 PAO FILE: G:\CAD\ACAD\504-005\IMAGE\IMAGE.DWG [Logic: Leslie P. Cheveda]

WALL LINE TABULATION

P.I.	W/L STATION	AZIMUTH	DISTANCE
EXIST. FLOODWALL	1+00.00		
		358°08'16"	118.96'
1	2+18.96		
		003°22'14"	100.42'
2	3+19.38		
		358°08'16"	1,091.49'
3	14+10.87		
		280°50'59"	453.18'
4	18+64.05		
		211°54'10"	369.70'
5	22+33.75		
		302°33'24"	269.87'
6	25+03.62		
		003°27'59"	110.65'
7	26+14.27		
		028°08'56"	165.03'
8	27+79.30		
		031°52'48"	430.59'
9	32+09.89		

WALL LINE LAYOUT

P.I.	W/L STATION	B/L STATION	OFFSET
EXIST. FLOODWALL	1+00.00		
1	2+18.96	● 305+89.70	−31.16'
2	3+19.38	● 306+89.70	−22.00'
3	14+10.87	● 317+96.68	−7.70'
4	18+64.05	● 324+08.11	−9.00'
5	22+33.75	● 327+77.81	−9.00'
6	25+03.62	331+86.80	18.94'
7	26+14.27	119+31.14	−17.63'
8	27+79.30	120+96.15	−15.27'
9	32+09.89	125+27.74 *	19.04'

● S/L STATIONING

* B/L EXTEN

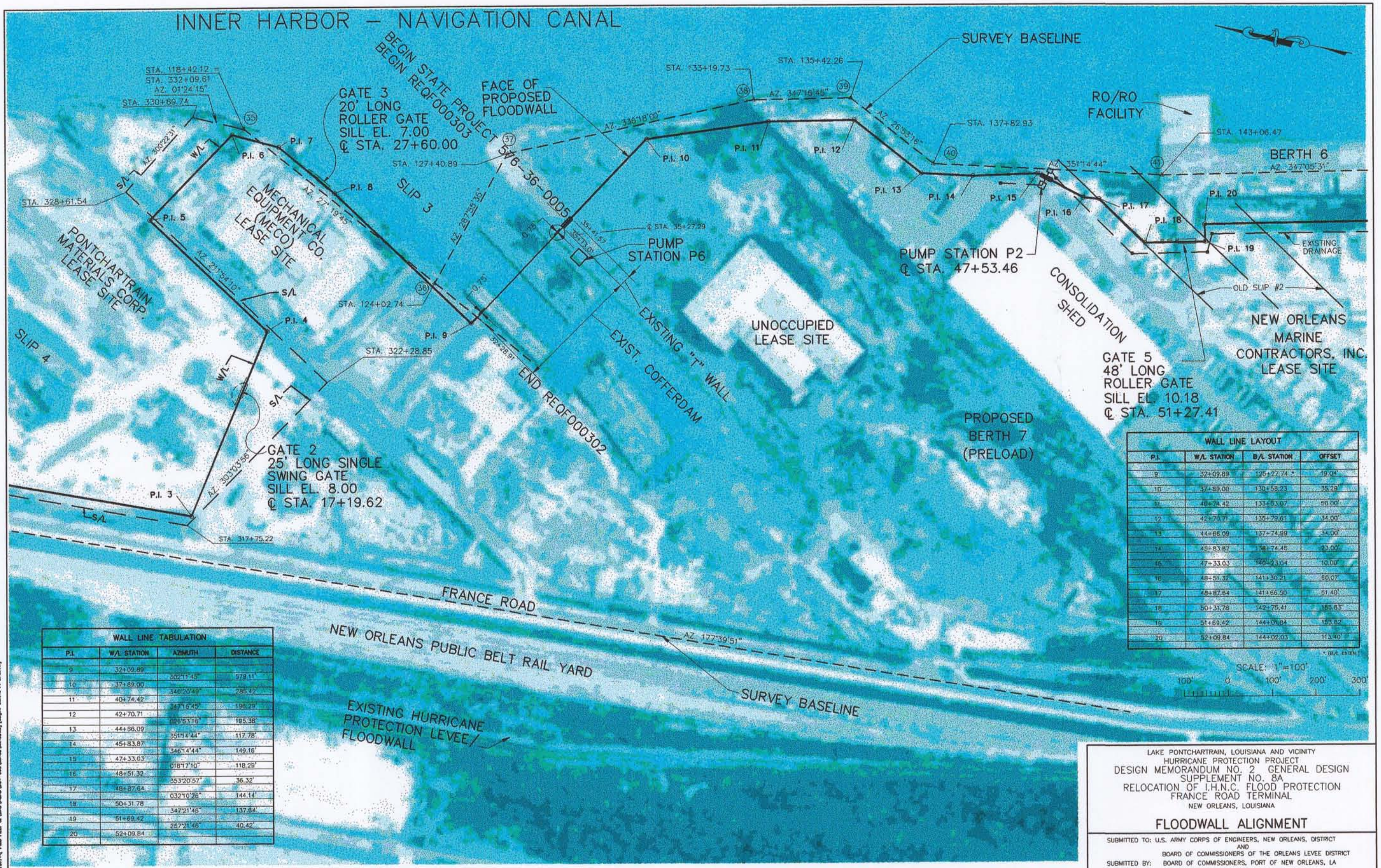
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODWALL ALIGNMENT

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D. DRAWN BY: L.P.C. CHECKED BY: H.C.D.	PLOT SCALE: 1"=100'	PLOT DATE: 10/97	CADD FILE: ALN1
	DATE: 10/97		FILE NO. 504-005

PLATE W2



WALL LINE TABULATION

P.I.	W/L STATION	AZIMUTH	DISTANCE
9	32+09.89		
		302°11'45"	579.11'
10	37+89.00		
		340°20'49"	285.42'
11	40+74.42		
		347°16'45"	196.29'
12	42+70.71		
		028°53'16"	195.38'
13	44+66.09		
		351°14'44"	117.78'
14	45+83.87		
		346°14'44"	149.16'
15	47+33.03		
		018°17'10"	118.29'
16	48+51.32		
		353°20'57"	36.32'
17	48+87.64		
		032°10'26"	144.14'
18	50+31.78		
		347°21'46"	137.64'
19	51+69.42		
		257°21'46"	40.42'
20	52+09.84		

WALL LINE LAYOUT

P.I.	W/L STATION	B/L STATION	OFFSET
9	32+09.89	125+27.74 *	19.04'
10	37+89.00	130+58.23	35.29'
11	40+74.42	133+53.07	50.00'
12	42+70.71	135+79.61	34.00'
13	44+66.09	137+74.99	34.00'
14	45+83.87	138+74.45	23.00'
15	47+33.03	140+23.04	10.00'
16	48+51.32	141+30.21	60.07'
17	48+87.64	141+66.50	61.40'
18	50+31.78	142+75.41	165.83'
19	51+69.42	144+01.84	153.62'
20	52+09.84	144+02.03	113.40'

* (B/L EXTEN.)

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODWALL ALIGNMENT

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D. DRAWN BY: L.P.C. CHECKED BY: H.C.D.	PLOT SCALE: 1"=100'	PLOT DATE: 10/97	CADD FILE: ALN2
	DATE: 10/97		FILE NO. 504-005

PLATE W3

WALL LINE TABULATION

P.I.	W/L STATION	AZIMUTH	DISTANCE
20	52+09.84		
		347°21'46"	700.79'
21	59+70.63		
		257°21'46"	8.51'
22	59+80.14		
		347°21'46"	461.06'
23	64+41.20		
		011°05'23"	78.33'
24	65+20.03		
		077°21'46"	52.50'
25	65+73.03		
		347°21'46"	691.75'
26	67+74.78		
		257°21'46"	30.00'
27	68+05.03		
		347°21'46"	198.50'
28	70+03.53		
		257°21'46"	26.82'
29	70+30.40		
		347°21'46"	129.91'
30	71+60.31		
		329°38'52"	46.17'
31	72+06.46		
		347°21'46"	352.69'
32	75+39.10		
		077°21'46"	33.00'
33	75+62.10		
		347°21'46"	131.51'
34	76+93.61		
		357°21'46"	44.55'
35	77+38.16		

WALL LINE LAYOUT

P.I.	W/L STATION	B/L STATION	OFFSET
20	52+09.84	144+02.03	113.40'
21	59+70.63	151+82.81	116.99'
22	59+80.14	151+92.85	107.48'
23	64+41.20	156+23.91	109.66'
24	65+20.03	156+96.38	141.93'
25	65+73.03	156+96.14	194.43'
26	67+74.78	158+97.89	195.38'
27	68+05.03	158+98.03	165.13'
28	70+03.53	160+98.53	166.07'
29	70+30.40	160+96.66	139.21'
30	71+60.31	162+26.56	139.82'
31	72+06.46	162+70.05	124.33'
32	75+39.10	166+03.67	125.90'
33	75+62.10	166+03.56	148.90'
34	76+93.61	167+67.89	136.04'
35	77+38.16	167+57.54	92.85'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODWALL ALIGNMENT

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=100'	PLOT DATE: 10/97	CADD FILE: ALN3CONS
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W4

WALL LINE LAYOUT			
P.I.	W/L STATION	B/L STATION	OFFSET
35	77+38.16	167+57.54	92.65'
36	79+79.00	169+92.06	37.83'
37	80+00.28	169+96.90	58.64'
38	81+75.50	171+68.60	14.75'
39	88+40.67	178+37.15	16.11'
40	88+62.36	178+37.15	5.56'

WALL LINE TABULATION			
P.I.	W/L STATION	AZIMUTH	DISTANCE
35	77+38.16		
		347°21'46"	240.84'
36	79+79.00		
		077°21'46"	21.28'
37	80+00.28		
		346°03'07"	175.27'
38	81+75.50		
		020°26'55"	665.12'
39	88+40.67		
		290°20'55"	21.69'
40	88+62.36		

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
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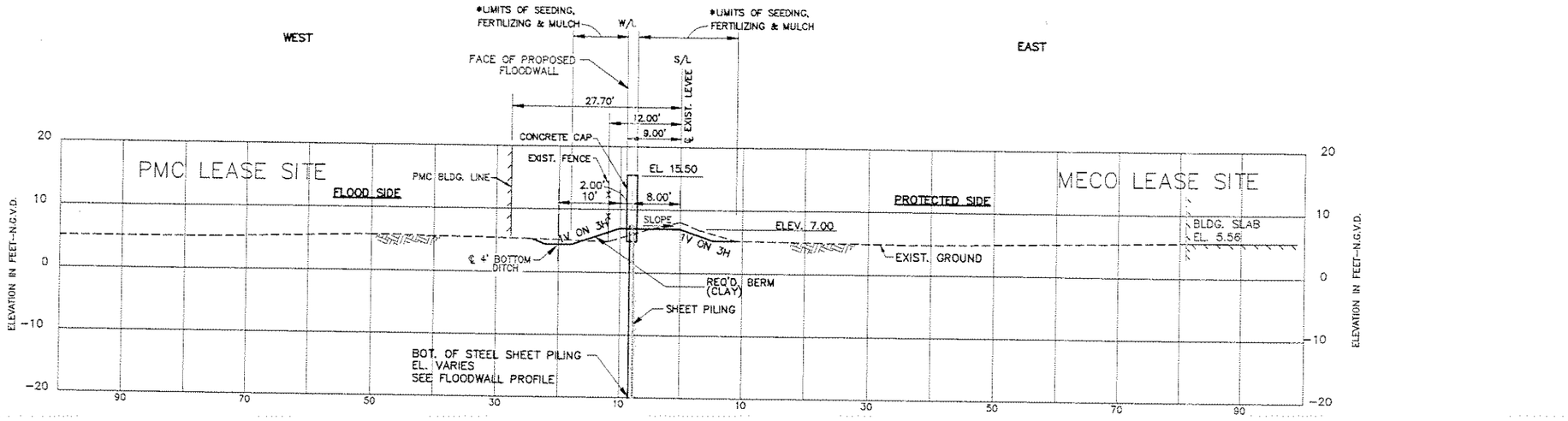
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

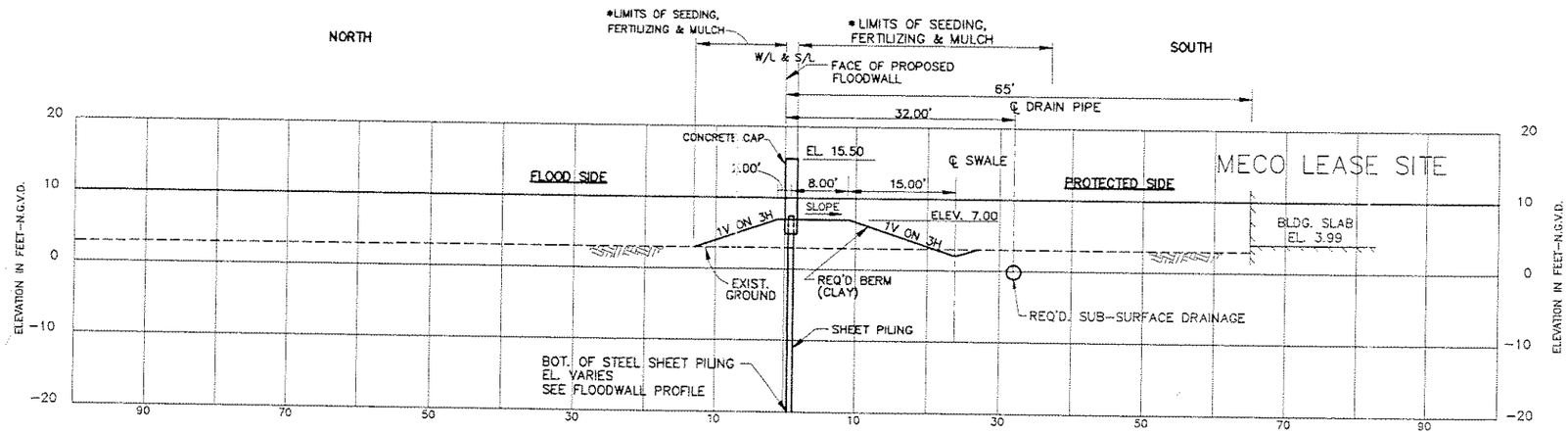
DESIGNED BY: H.C.D. DRAWN BY: L.P.C. CHECKED BY: H.C.D.	PLOT SCALE: 1"=100'	PLOT DATE: 10/97	CADD FILE: ALN4
	DATE: 10/97		FILE NO. 504-005

PLATE W5



TYPICAL I-WALL DESIGN SECTION
NORTH OF MECO
W/L STA. 18+64.05 TO W/L STA. 22+33.75

* LIMITS MEASURED FROM OUTSIDE TO OUTSIDE LIMITS OF CONSTRUCTION. DITCH BOTTOM AND FLOODWALL EXCLUDED.



TYPICAL I-WALL DESIGN SECTION
EAST OF MECO
W/L STA 22+33.75 TO W/L STA. 25+03.62

NOTE:

SECTIONS SHOWN ARE SITE SPECIFIC. FOR SECTIONS WITHIN STATION LIMITS THAT ARE NOT SHOWN, REFER TO THE CROSS SECTIONS.

FOR ELEVATIONS AND FLOODWALL TYPES AT SPECIFIC STATIONS, REFER TO FLOODWALL PROFILES.

HORZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'
10' 0 10' 20' 30'

NOTE:

ELEVATIONS FOR ALL I-WALLS AND BERMS SHOWN IN THIS MEMORANDUM ARE CONSTRUCTION ELEVATIONS, DESIGN ELEVATIONS ARE 0.5 FEET LOWER.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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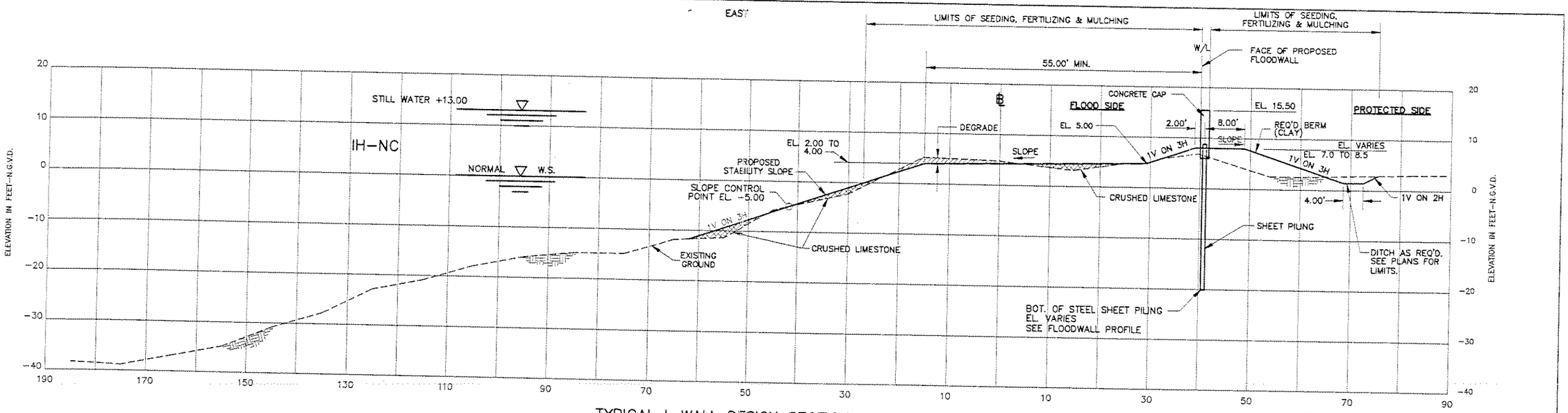
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

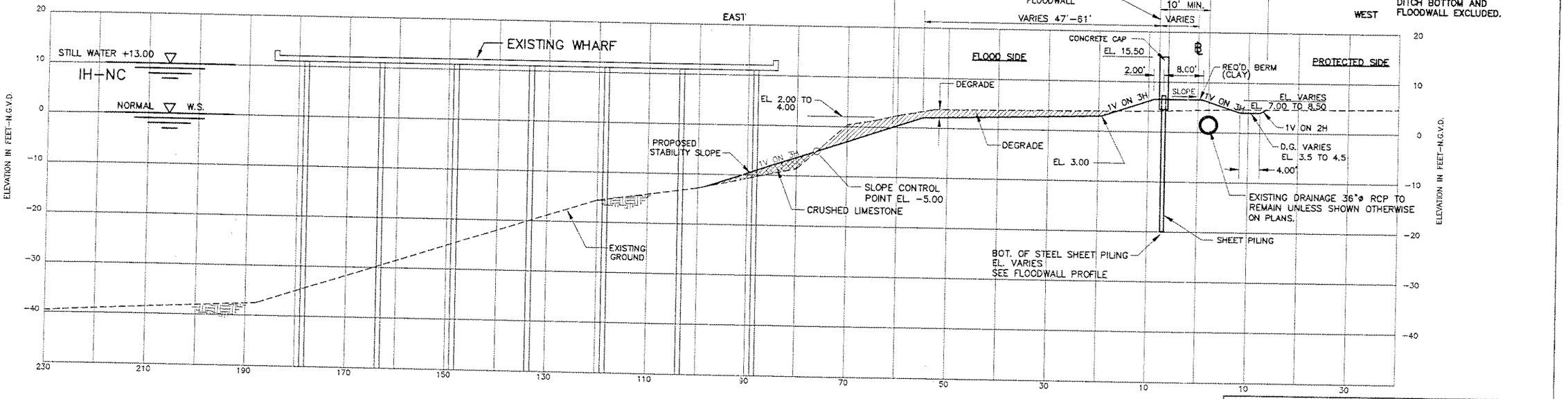
DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: XSEC-T(2)
DRAWN BY: L.P.C.	1"=10'	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

PLATE W6



TYPICAL I-WALL DESIGN SECTION

W/L STA. 37+89.00 TO W/L STA. 42+75.71
W/L STA. 80+00.28 TO W/L STA. 88+40.67



* LIMITS MEASURED FROM NORMAL WATER LINE TO OUTSIDE LIMITS OF CONSTRUCTION. DITCH BOTTOM AND FLOODWALL EXCLUDED.

TYPICAL I-WALL DESIGN SECTION BEHIND WHARVES

W/L STA. 52+09.84 TO W/L STA. 65+20.53
W/L STA. 67+40 TO W/L STA. 67+74.78
W/L STA. 72+06.48 TO W/L STA. 75+73.61

NOTE:

SECTIONS SHOWN ARE SITE SPECIFIC, FOR SECTIONS WITHIN STATION LIMITS THAT ARE NOT SHOWN, REFER TO THE CROSS SECTIONS.

FOR ELEVATIONS AND FLOODWALL TYPES AT SPECIFIC STATIONS, REFER TO FLOODWALL PROFILES.

HORZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'

10' 0 10' 20' 30'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
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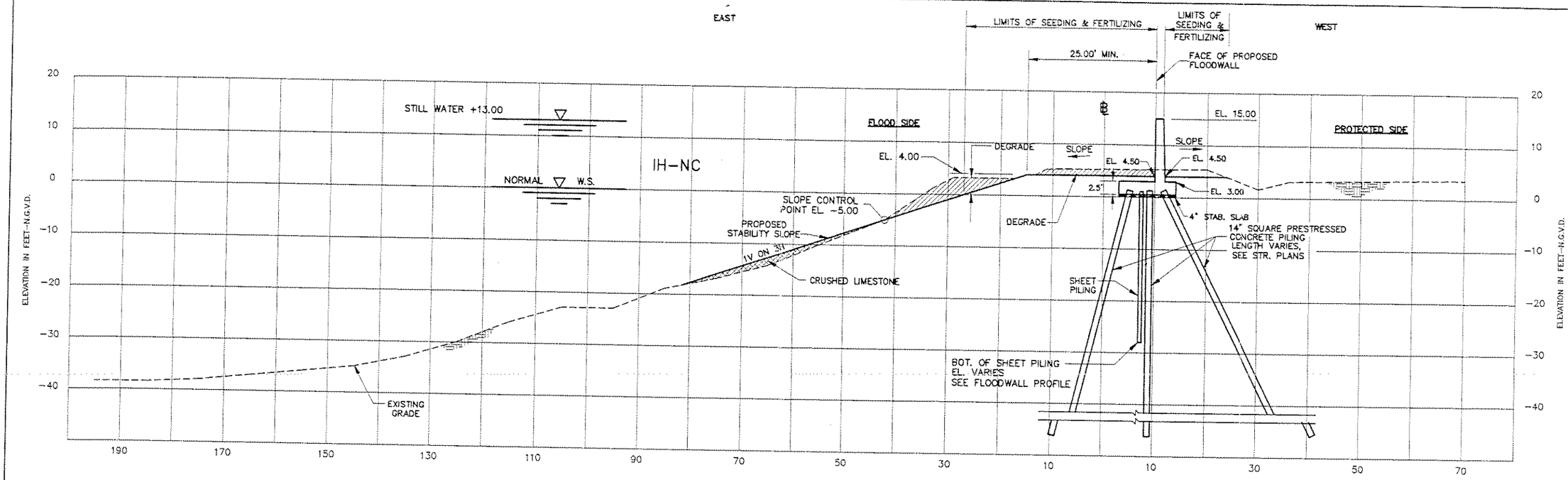
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

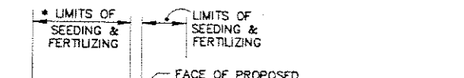
DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: XSEC-T(3)
DRAWN BY: H.C.D.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W7

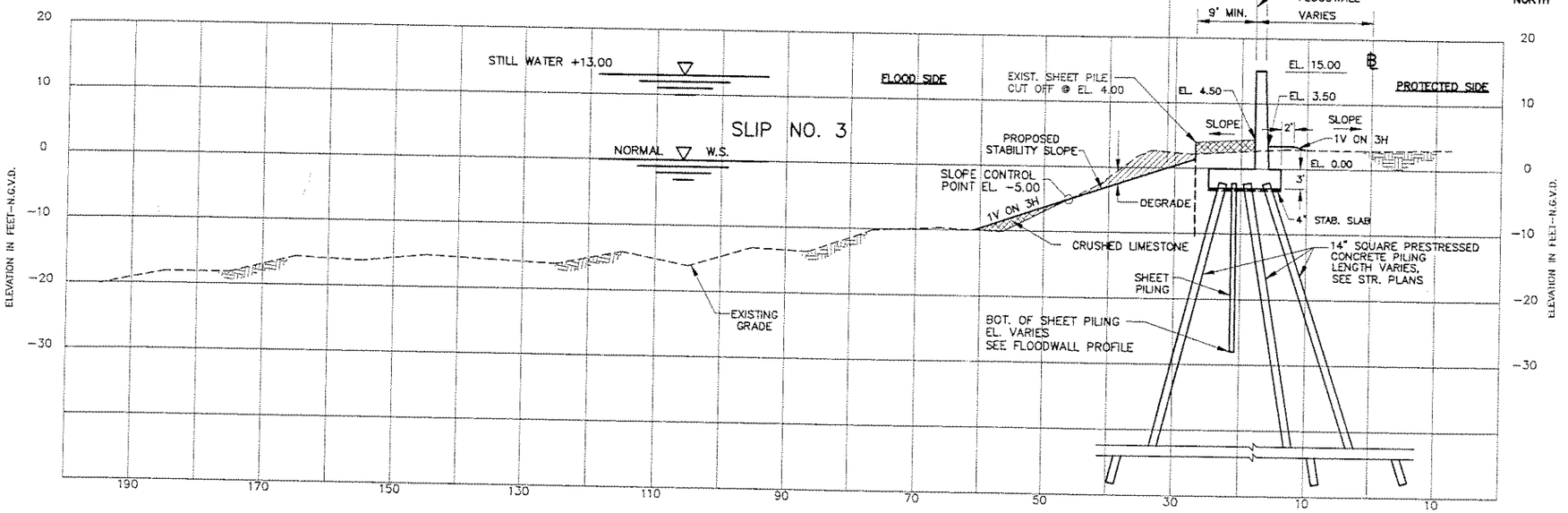


TYPICAL T-WALL SECTION

W/L STA. 42+75.71 TO W/L STA. 48+46.32
W/L STA. 68+10.03 TO W/L STA. 71+55.31
W/L STA. 77+43.16 TO W/L STA. 79+74.00



* LIMITS MEASURED FROM NORMAL WATER LINE TO OUTSIDE LIMITS OF CONSTRUCTION.



TYPICAL T-WALL SECTION AT MECO SITE

W/L 25+08.62 TO W/L STA. 30+70.00

HORZ. SCALE: 1"=10'
VERT. SCALE: 1"=10'

10' 0 10' 20' 30'

NOTE:

SECTIONS SHOWN ARE SITE SPECIFIC, FOR SECTIONS WITHIN STATION LIMITS THAT ARE NOT SHOWN, REFER TO THE CROSS SECTIONS.

FOR ELEVATIONS AND FLOODWALL TYPES AT SPECIFIC STATIONS, REFER TO FLOODWALL PROFILES.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
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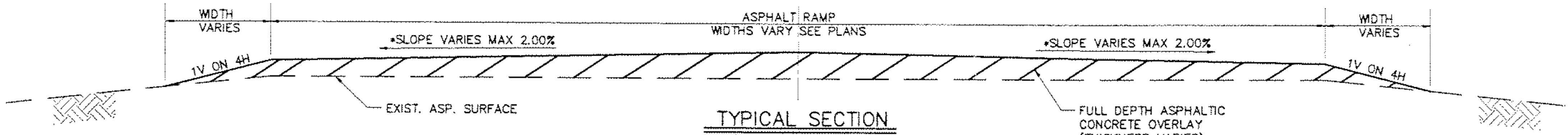
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

TYPICAL SECTIONS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: XSEC-T(4)
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W8



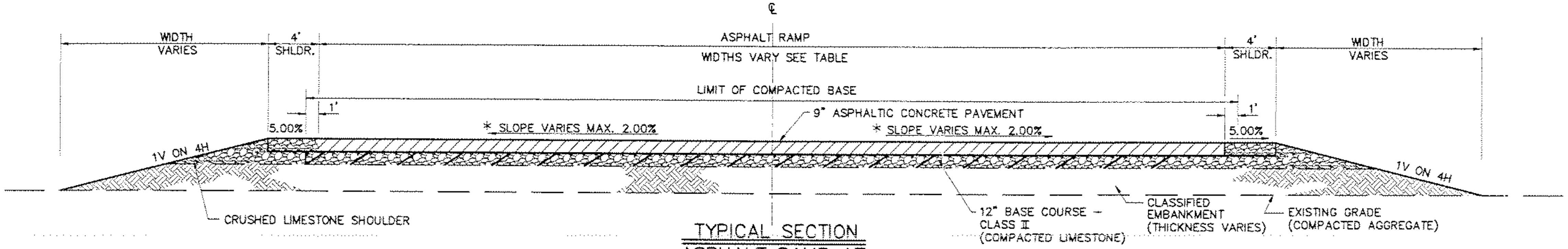
TYPICAL SECTION
ASPHALT OVERLAY
FOR RAMPS AT GATES 5,8 & 9
SCALE: HORIZ: 1"=5'
VERT: 1"=5'

* SLOPE VARIES
SEE PLAN DWGS.

GATE RAMP OR
APPROACH SLAB TABLE

RAMP	WIDTH
1	35'
2	24'
5	40'
8	50'
9	35'

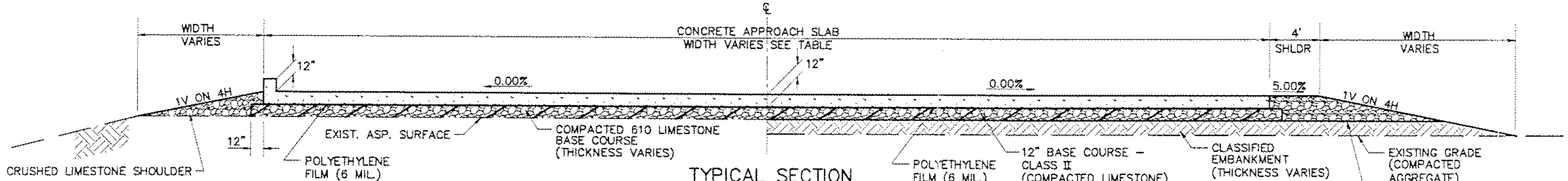
RAMPS 3 & 4 DELETED FROM PROJECT. RAMPS 6 & 7 ARE BRIDGE CROSSINGS. REFER TO STRUCTURE PLANS.



TYPICAL SECTION
ASPHALT RAMP AT
GATES 1 & 2
SCALE: HORIZ: 1"=5'
VERT: 1"=5'

NOTES:

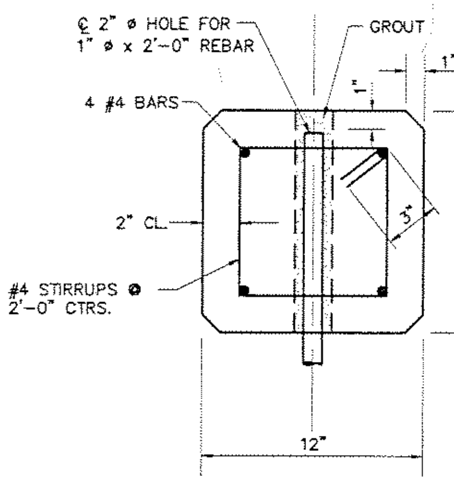
1. AREA TO RECEIVE REQUIRED ASPHALT OVERLAY SHALL BE CLEANED WITH A MECHANICAL SWEEPER REMOVING ALL LOOSE MATERIAL, DUST AND DIRT AND SHALL BE FREE OF SURFACE MOISTURE.
2. ASPHALT SHALL BE A TYPE III PLANT MIX AND SHALL CONSIST OF UNIFORM MIXS OF COARSE AGGREGATE, SAND AND ASPHALT MATERIALS CEMENT. ASPHALT MATERIALS AND CONSTRUCTION SHALL CONFORM TO LADOTD SPECIFICATIONS. WEARING COURSE AND BINDER COURSE SHALL BE PLACED IN LIFTS NOT EXCEEDING 2 1/2" THICK UNLESS APPROVED IN WRITING BY ENGINEER. THE ASPHALT OVERLAY SHALL CONSIST OF 2" WEARING COURSE ON EITHER A BINDER COURSE OF VARYING THICKNESS OR ON EXISTING PAVEMENT. A WEARING COURSE MAY BE SUBSTITUTED FOR THE BINDER COURSE IN ALL CASES. ASPHALTIC PRIME COAT AND TACK COATS SHALL BE USED IN ACCORDANCE WITH LADOTD SPECIFICATIONS, 1992 EDITION, SECTIONS 504 AND 505.
3. LIMESTONE BASE MATERIAL AND CONSTRUCTION SHALL CONFORM TO LADOTD SPECIFICATIONS.
4. FOR APPROACH SLAB DETAILS AND REINFORCING REFER TO THE STRUCTURE PLANS.
5. LIMESTONE BASE NOT REQUIRED UNDER APPROACH SLAB AT GATE 8.



HALF SECTION
FOR APPROACH SLABS
AT GATES 5,8 & 9

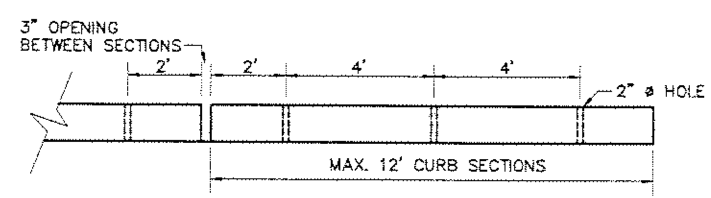
TYPICAL SECTION
CONCRETE APPROACH SLAB
SCALE: HORIZ: 1"=5'
VERT: 1"=5'

HALF SECTION
FOR APPROACH SLABS
AT GATES 1 & 2



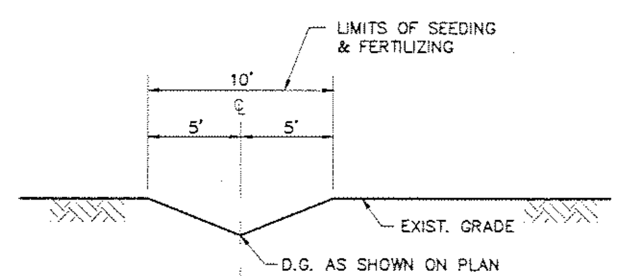
SECTION
N.T.S.

STA. 41+07 TO STA. 48+58
CONCRETE CURB DETAIL
PRECAST OR CAST-IN-PLACE



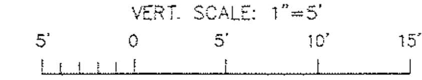
ELEVATION
N.T.S.

NOTE: THE CONTRACTOR HAS THE OPTION OF CONSTRUCTING PRECAST OR CAST-IN IN-PLACE 12"x12"x12' MAX. CONCRETE CURB



TYPICAL SECTION
SWALE DITCH
SCALE: HORIZ: 1"=5'
VERT: 1"=5'

HORZ. SCALE: 1"=5'
VERT. SCALE: 1"=5'



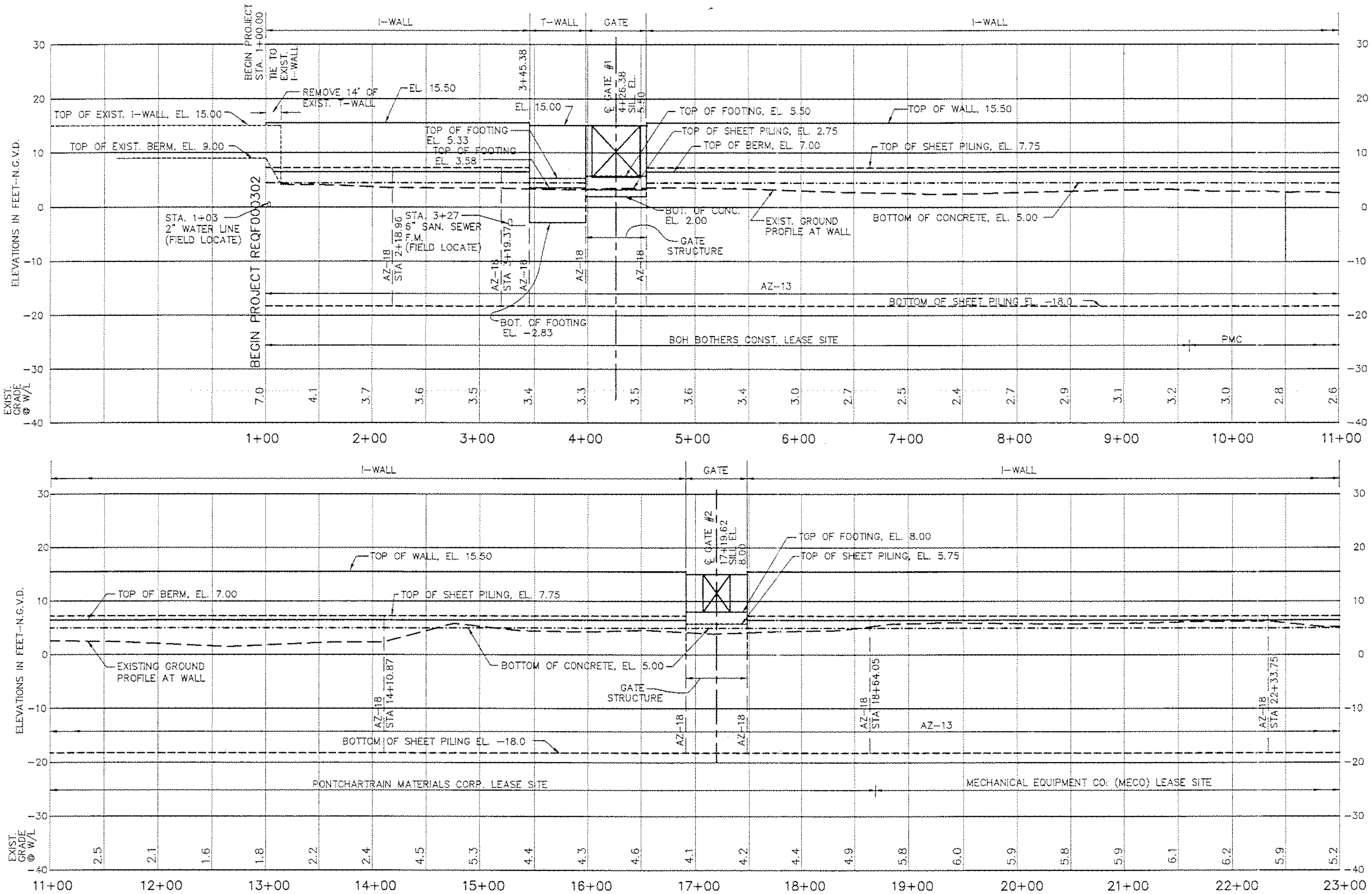
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

TYPICAL SECTIONS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: H.C.D.	PLOT SCALE: AS SHOWN	PLOT DATE: 10/97	CADD FILE: TYPRD
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W9



(HORZ.) SCALE: 1"=50'
50' 0 50' 100' 200'

(VERT.) SCALE: 1"=10'
10' 0 10' 20' 30'

NOTE:
CONTRACTOR SHALL NOT SUBSTITUTE SHEET PILE TYPE SHOWN WITHOUT PRIOR APPROVAL BY THE PROJECT ENGINEER.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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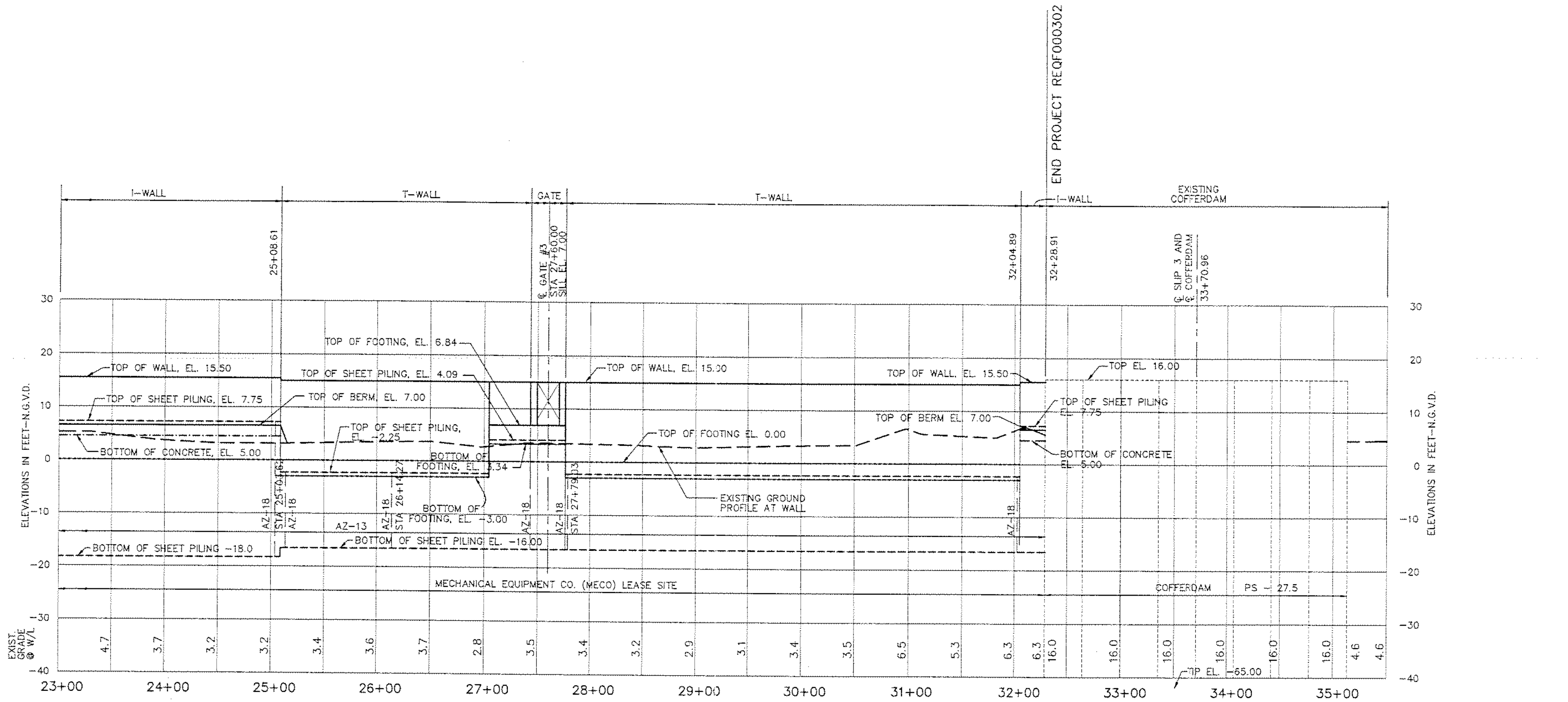
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODWALL PROFILE

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: H.C.D.	PLOT SCALE: AS SHOWN	PLOT DATE: 10/97	CADD FILE: PROF-H
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W10



(HORZ.) SCALE: 1"=50'
50' 0 50' 100' 200'

(VERT.) SCALE: 1"=10'
10' 0 10' 20' 30'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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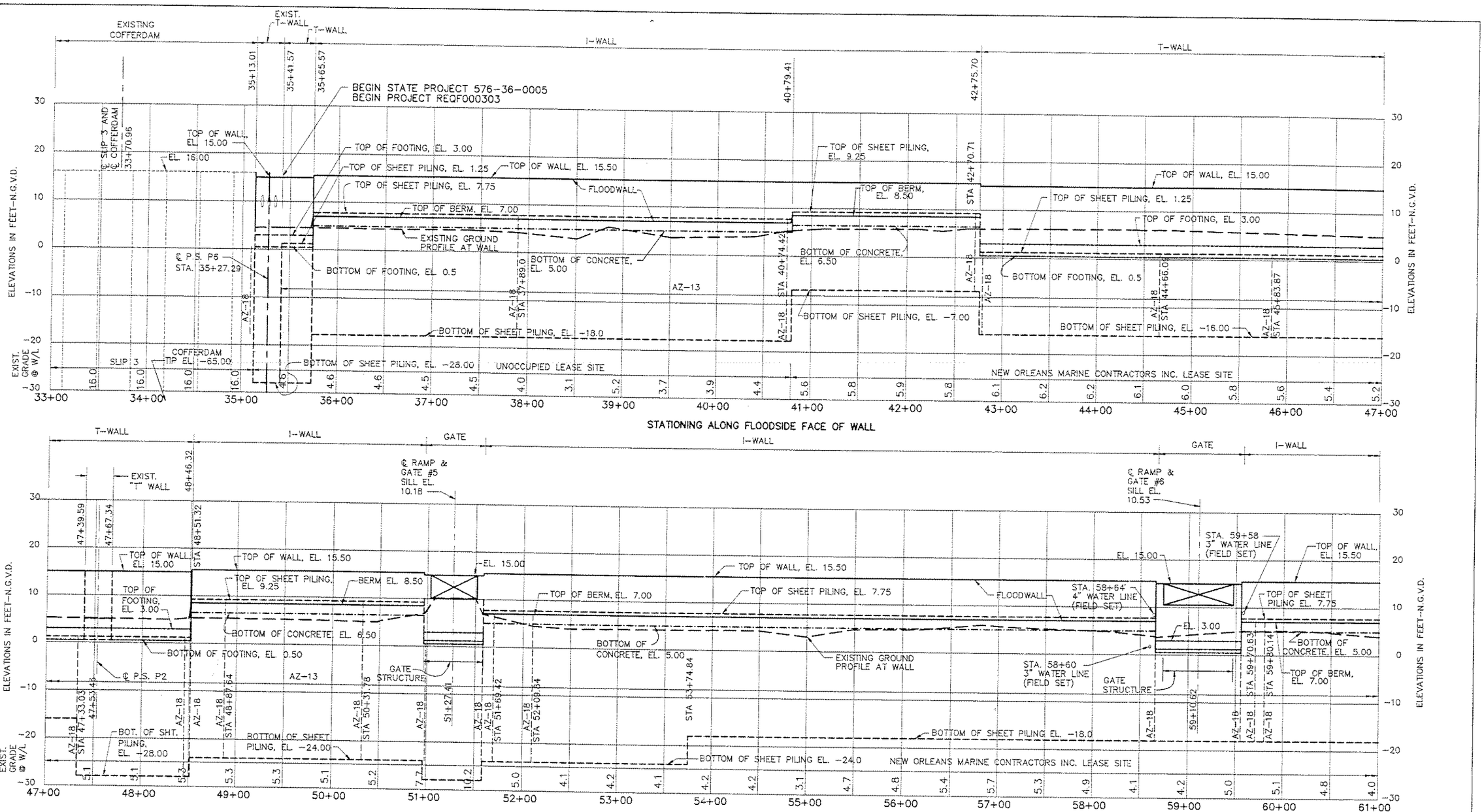
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: PROF-H
DRAWN BY: L.P.C.	AS SHOWN	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

PLATE W11



(HORZ.) SCALE: 1"=50'

50' 0 50' 100' 200'

(VERT.) SCALE: 1"=10'

10' 0 10' 20' 30'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
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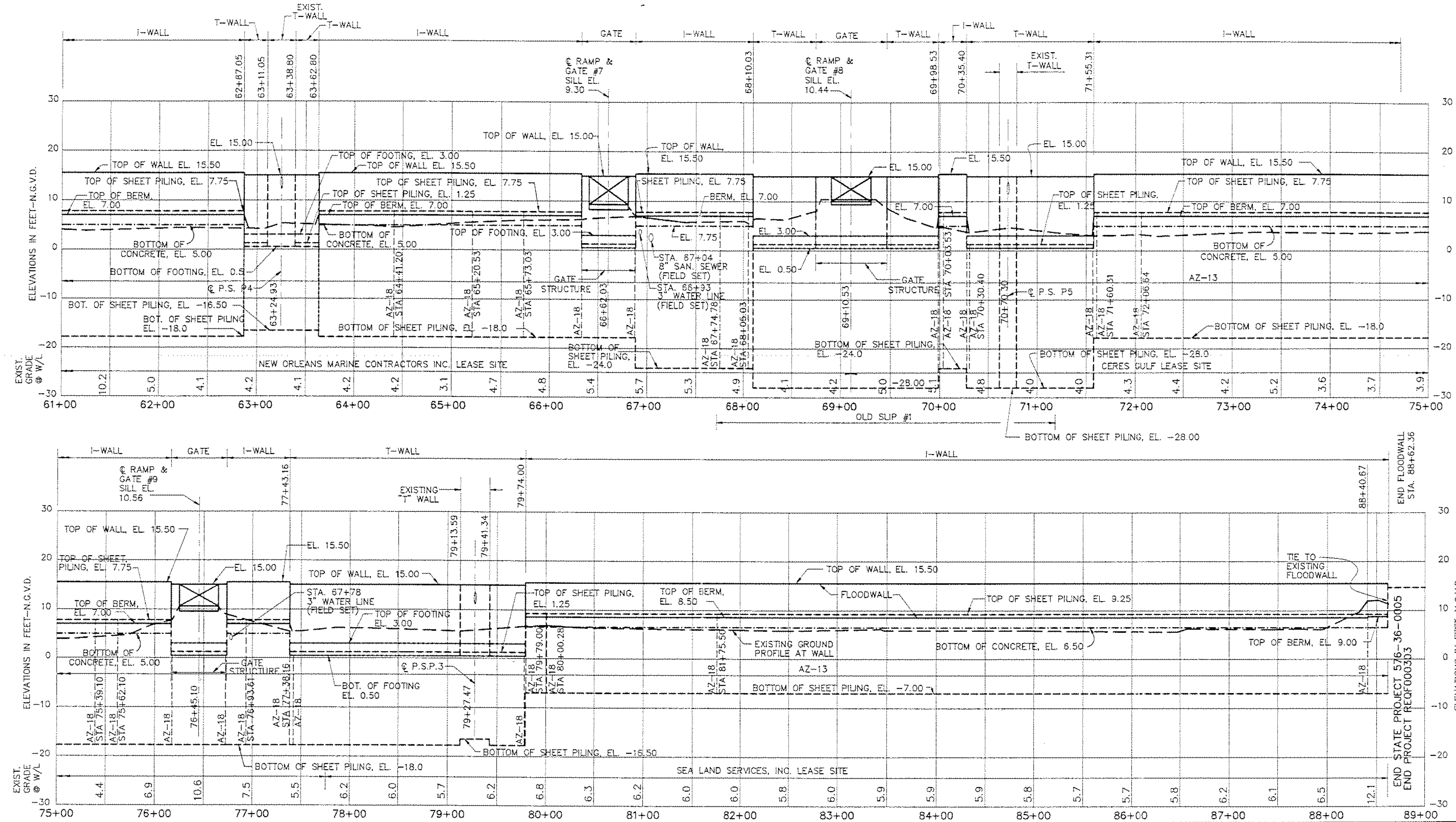
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: PROFMEND
DRAWN BY: L.P.C.	1"=100'	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

PLATE W12



LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODWALL PROFILE

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.O.	PLOT SCALE: 1"=100'	PLOT DATE: 10/97	CADD FILE: PROFMEND
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W13

NOTE:

ANY EXISING STOCKPILES IN THE FLOODWALL CONSTRUCTION AREA SHALL BE REMOVED BY THE TENANT.

CONTRACTOR TO REMOVE ALL EXISTING STRUCTURES WITHIN THE CONSTRUCTION AREA, UNLESS NOTED OTHERWISE.

PLOT SCALE : 1" = 20'

REOF000302
STA. 1+00.00
BEGIN PROJECT
TIE TO EXISTING
FLOODWALL

CONC. TANK PAD
LOADING SILO
RAMP
MET. BLDG.
FLOOD SIDE
EXISTING 4" GUARD POSTS W/CABLE
5+00
BOH BROTHERS CONSTRUCTION LEASE SITE
RAMP
6" PVC S. SEWER LINE
TELEPHONE
2"ø WATER
4"ø H.P. GAS
STOCKPILE
SUMP
GAS METER STA.
LOW AREA
4' BOT. DITCH
PLUG & ABANDON
EXISTING FLOODWALL
JCT. BOX
WATER M.H.
RAIL SWITCH
℄ STA. 304+84.00
EXIST. GATE
EXIST. FLOODWALL
CABLE MONUMENT
INSPECTION BOX
BURIED ELEC. CABLE
4"ø H.P. SEWER SERVICE
BASELINE
SURVEY LINE
PROTECTED SIDE
16"ø H.P. STEEL GAS MAIN (NOPSI)
STA. 3+95.88
END "T" WALL
BEGIN GATE STR.
STA. 3+44.88
END "I" WALL
BEGIN "T" WALL
STA. 2+04
REQ'D. S. SEWER M.H.
STA. 3+15
REQ'D. S. SEWER M.H.
39.5'LT. & 12'RT.
REMOVE EXIST. MANHOLE & PIPE
REQ'D. 6"x 109' PVC S. SEWER
S= -0.10% MIN.
P.I. 2 STA. 3+19.38
P.I. 1 STA. 2+18.96
REQ'D. "I" WALL
10' BERM
31.16'
REQ'D. 6"x 48' D.I. PIPE. THROUGH SHEET PILING.
REQ'D. 18"x 70' RCP
CURBED ISLAND
TRAILER (TO BE MOVED BY TENANT)
REQ'D. 6" M.J. GATE VALVE W/BOX
DRIVE
REQ'D. 6"x 106' DUCTILE IRON PIPE
REQ'D. 18"x 70' RCP
12" C.I. WATER MAIN
REMOVE EXIST. MANHOLE
EXIST. 18" RCP
MATCH EXIST. GRADE
℄ FRANCE ROAD
GATE 1
℄ STA. 4+26.38
REQ'D. ROLLER GATE
45' OPENING
SILL EL. 5.50
STA. 4+55.88
END GATE STR.
BEGIN I-WALL
STA. 4+58
REQ'D. S. SEWER M.H.
13' RT.
PROPOSED P.M.C. STOCKPILE LOCATION AND SIZE
STOCK PILE
HEIGHT 20'
40'
1V ON 2H
3:1
35'(MIN.)
10' BERM
22'
4' BOTTOM DITCH (SHAPE EXIST. DIT.) S= -0.10% MIN.
℄ P.B.R.R. COMM. TRACK (ABANDONED)
3'X5' CONC. INSP. BOX
3'X 5' CONC. INSPEC. BOX
R. R. SIGNAL
R. R. TRACK
F.H.A.
W.M.
40' R

SCALE: 1"=20'
20' 0 20' 40' 60'

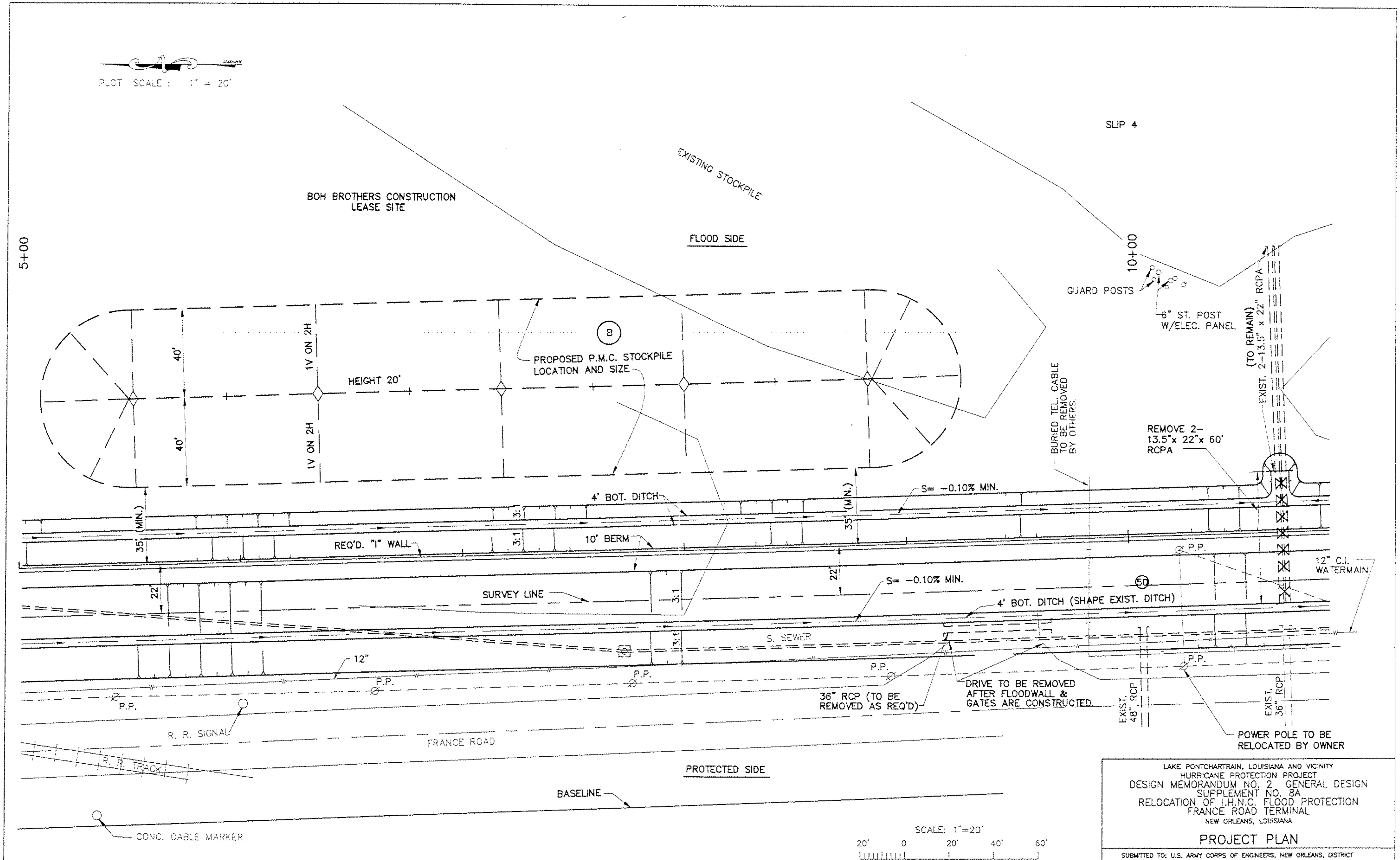
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: CVLP1DM
DRAWN BY: E.B.K.			FILE NO. 504-005
CHECKED BY: N.J.S.	DATE: 10/97		

PLATE W14


PLOT SCALE : 1" = 20'
SLIP 4
EXISTING STOCKPILE
BOH BROTHERS CONSTRUCTION
LEASE SITE
FLOOD SIDE
5+00
10+00
GUARD POSTS
6" ST. POST
W/ELEC. PANEL
(TO REMAIN)
EXIST. 2-13.5" x 22" RCPA
40'
40'
1V ON 2H
1V ON 2H
HEIGHT 20'
PROPOSED P.M.C. STOCKPILE
LOCATION AND SIZE
BURIED TEL. CABLE
TO BE REMOVED
BY OTHERS
REMOVE 2-
13.5"x 22"x 60'
RCPA
S= -0.10% MIN.
4' BOT. DITCH
35' (MIN.)
35' (MIN.)
3:1
10' BERM
REQ'D. "I" WALL
22'
22'
P.P.
12" C.I.
WATERMAIN
SURVEY LINE
S= -0.10% MIN.
4' BOT. DITCH (SHAPE EXIST. DITCH)
S. SEWER
12"
P.P.
36" RCP (TO BE
REMOVED AS REQ'D)
DRIVE TO BE REMOVED
AFTER FLOODWALL &
GATES ARE CONSTRUCTED
EXIST. 48" RCP
EXIST. 36" RCP
POWER POLE TO BE
RELOCATED BY OWNER
R. R. SIGNAL
FRANCE ROAD
R. R. TRACK
PROTECTED SIDE
BASELINE
CONC. CABLE MARKER
SCALE: 1"=20'
20' 0 20' 40' 60'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
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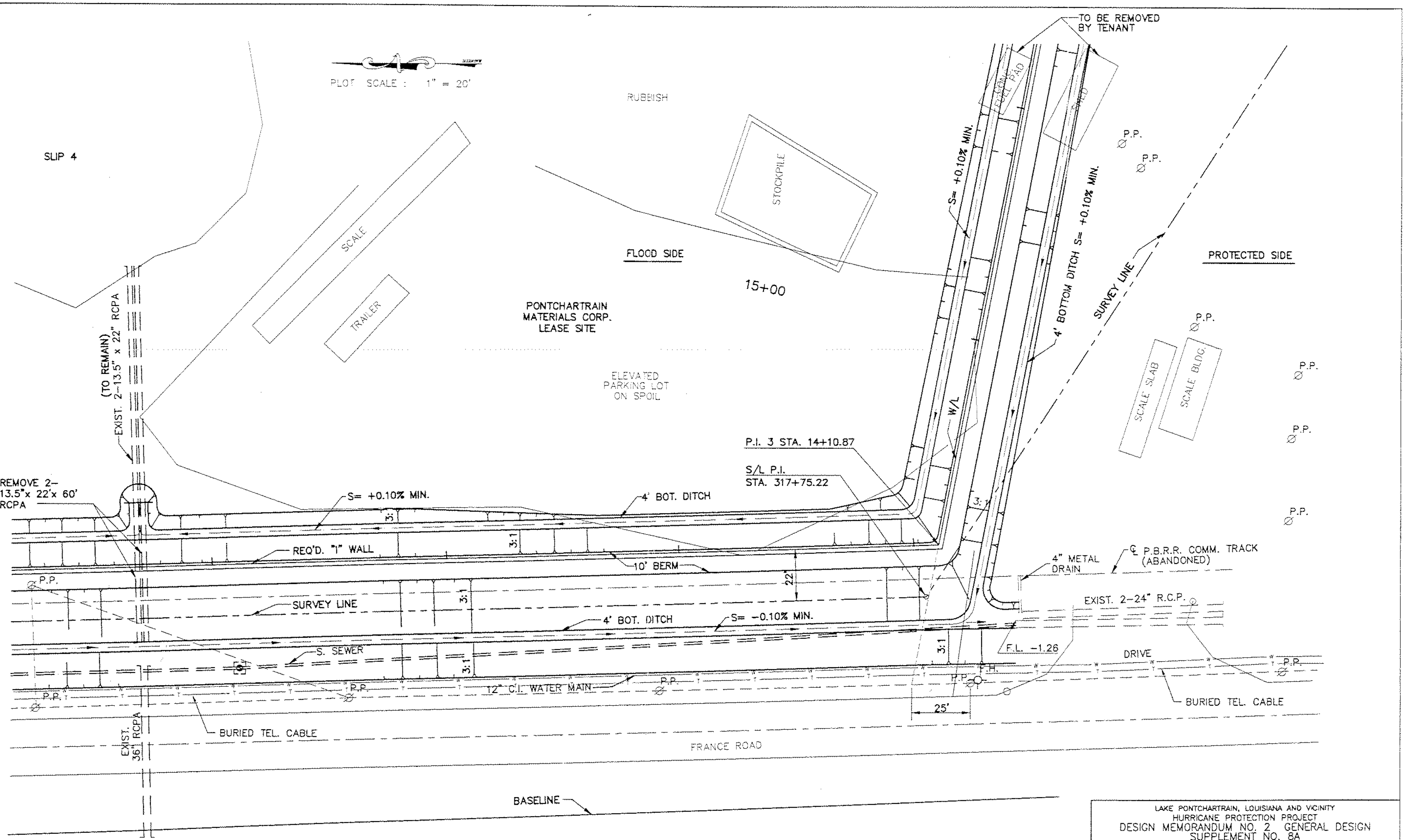
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: N.J.S.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: CVLP2DM
DRAWN BY: E.B.K.			FILE NO. 504-005
CHECKED BY: N.J.S.	DATE: 10/97		

PLATE W15



PLOT SCALE : 1" = 20'
SLIP 4
RUBBISH
SCALE
TRAILER
STOCKPILE
FLOOD SIDE
PROTECTED SIDE
15+00
PONTCHARTRAIN MATERIALS CORP. LEASE SITE
ELEVATED PARKING LOT ON SPOIL
TO BE REMOVED BY TENANT
S= +0.10% MIN.
4' BOTTOM DITCH S= +0.10% MIN.
SURVEY LINE
P.P.
SCALE SLAB
SCALE BLDG.
EXIST. 2-13.5" x 22" RCPA (TO REMAIN)
REMOVE 2- 13.5"x 22'x 60' RCPA
W/L
P.I. 3 STA. 14+10.87
S/L P.I. STA. 317+75.22
4' BOT. DITCH
REQ'D. "I" WALL
10' BERM
22'
3:1
℄ P.B.R.R. COMM. TRACK (ABANDONED)
4" METAL DRAIN
EXIST. 2-24" R.C.P.
S= -0.10% MIN.
F.L. -1.26
DRIVE
S. SEWER
12" C.I. WATER MAIN
F.H.
BURIED TEL. CABLE
25'
EXIST. 36" RCPA
FRANCE ROAD
BASELINE
SCALE: 1"=20'
20' 0 20' 40' 60'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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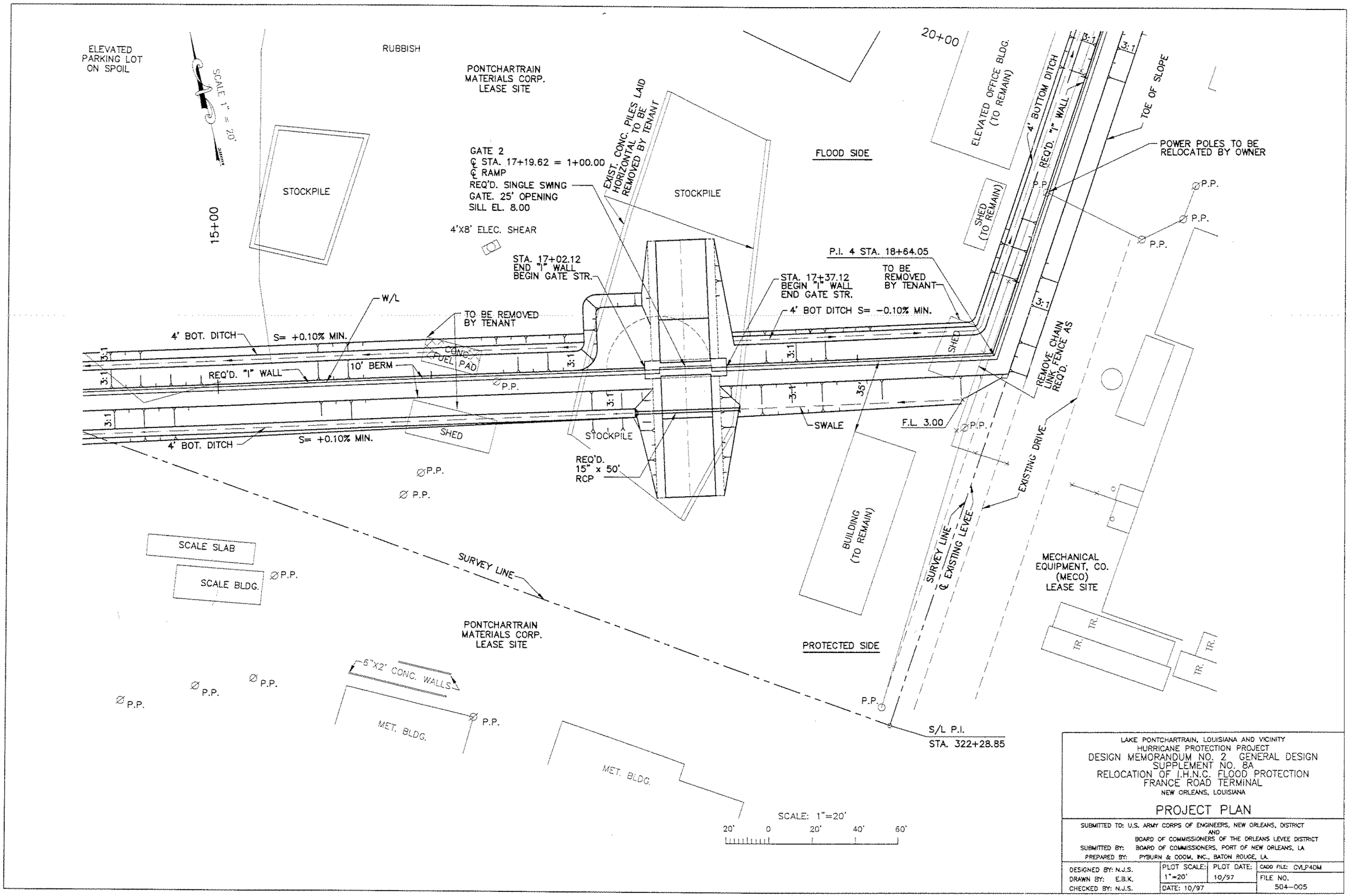
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: N.J.S.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: CVLP3DM
DRAWN BY: E.B.K.			FILE NO. 504-005
CHECKED BY: N.J.S.	DATE: 10/97		

PLATE W16



LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & CODM, INC., BATON ROUGE, LA.

DESIGNED BY: N.J.S.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: CVLP4DM
DRAWN BY: E.B.K.			FILE NO. 504-005
CHECKED BY: N.J.S.	DATE: 10/97		

PLATE W17

STOCKPILE

SCALE 1" = 20'

EXIST. STOCKPILE

PONTCHARTRAIN MATERIALS CORP. LEASE SITE

FLOOD SIDE

80'

20'

80'

1V ON 2H

HEIGHT 40'

A

PROPOSED P.M.C. STOCKPILE LOCATION & SIZE

1V ON 2H

ELEVATED OFFICE BLDG. (TO REMAIN)

SHED (TO REMAIN)

POWER POLE TO BE RELOC. BY OWNER

4' BOT. DITCH S= -0.10% MIN.

POWER POLE TO BE RELOC. BY OWNER

BUILDING (TO REMAIN)

REMOVE EXIST. CHAIN LINK FENCE

P.I. 5 STA. 22+33.75

60'(MIN.)

TO I.H.N.C.

P.P.

9'

3:1

SURVEY LINE

℄ EXIST. LEVEE

10' BERM

FENCE TO REMAIN

S/L P.I. STA. 328+61.54

REQ'D. "I" WALL

TOE OF FILL

EXISTING DRIVE

POWER POLE TO BE RELOC. BY OWNER

M1

EXIST. LEVEE SHALL BE REMOVED & GRADED TOWARDS IH-NG TO DRAIN AS DIRECTED BY THE ENGINEER.

SHED

SHED

REQ'D. 18"x 130' RCP

REMOVE CONC. SLAB

SURVEY LINE

℄ EXIST. LEVEE

SWALE

PROTECTED SIDE

MECHANICAL EQUIPMENT, CO. (MECO) LEASE SITE

65'

M2

BLDG.

W/L

SUPPLY YARD

BUILDING

SCALE: 1"=20'

20' 0 20' 40' 60'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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FRANCE ROAD TERMINAL
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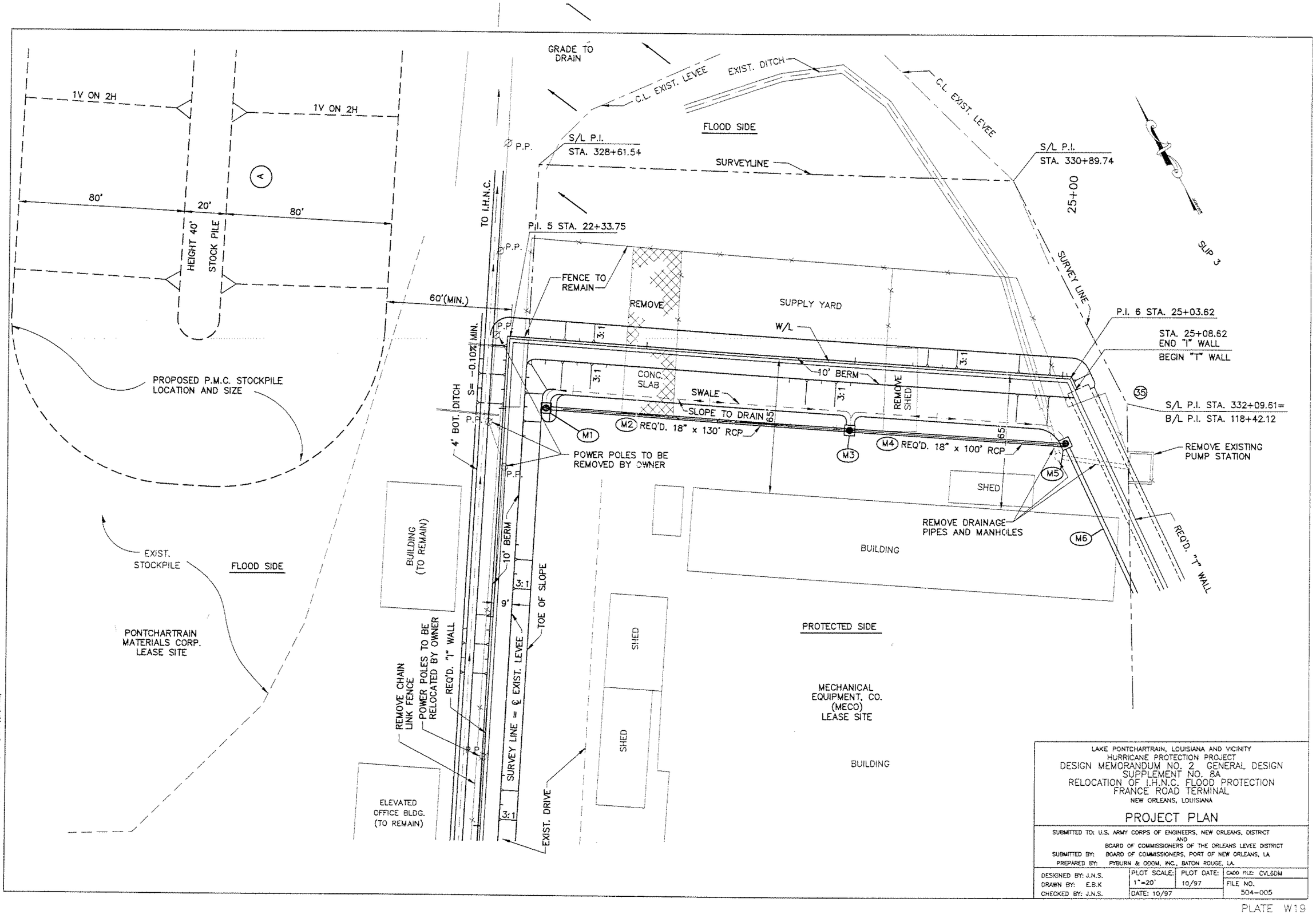
PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: N.J.S.	PLOT SCALE:	PLOT DATE:	CADD FILE: CVLP5DM
DRAWN BY: E.B.K.	1"=20'	10/97	FILE NO.
CHECKED BY: N.J.S.	DATE: 10/97		504-005

PLATE W18



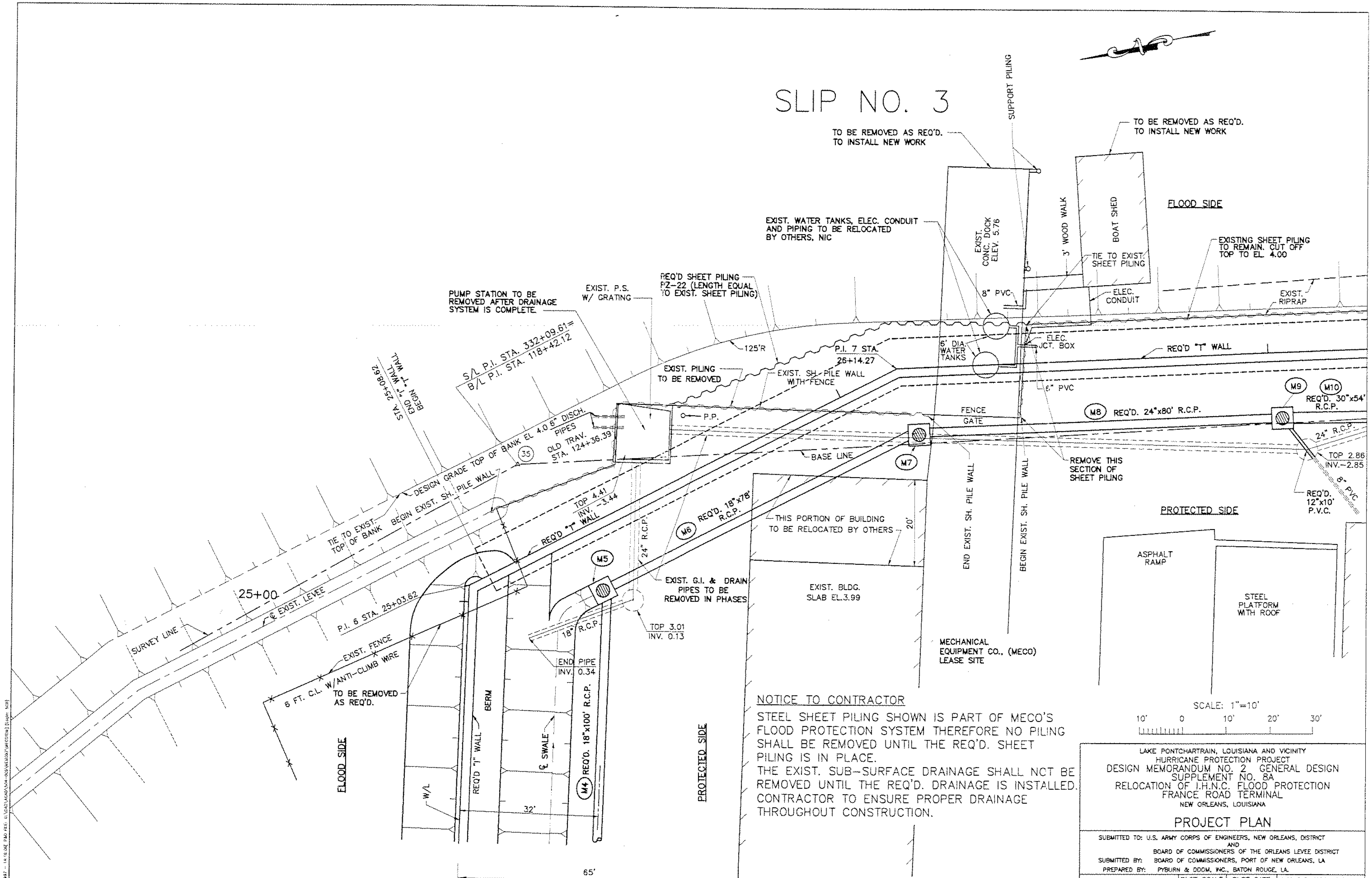
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.N.S.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: CVLSDM
DRAWN BY: E.B.K			FILE NO. 504-005
CHECKED BY: J.N.S.	DATE: 10/97		

SLIP NO. 3



NOTICE TO CONTRACTOR

STEEL SHEET PILING SHOWN IS PART OF MECO'S FLOOD PROTECTION SYSTEM THEREFORE NO PILING SHALL BE REMOVED UNTIL THE REQ'D. SHEET PILING IS IN PLACE.

THE EXIST. SUB-SURFACE DRAINAGE SHALL NOT BE REMOVED UNTIL THE REQ'D. DRAINAGE IS INSTALLED. CONTRACTOR TO ENSURE PROPER DRAINAGE THROUGHOUT CONSTRUCTION.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

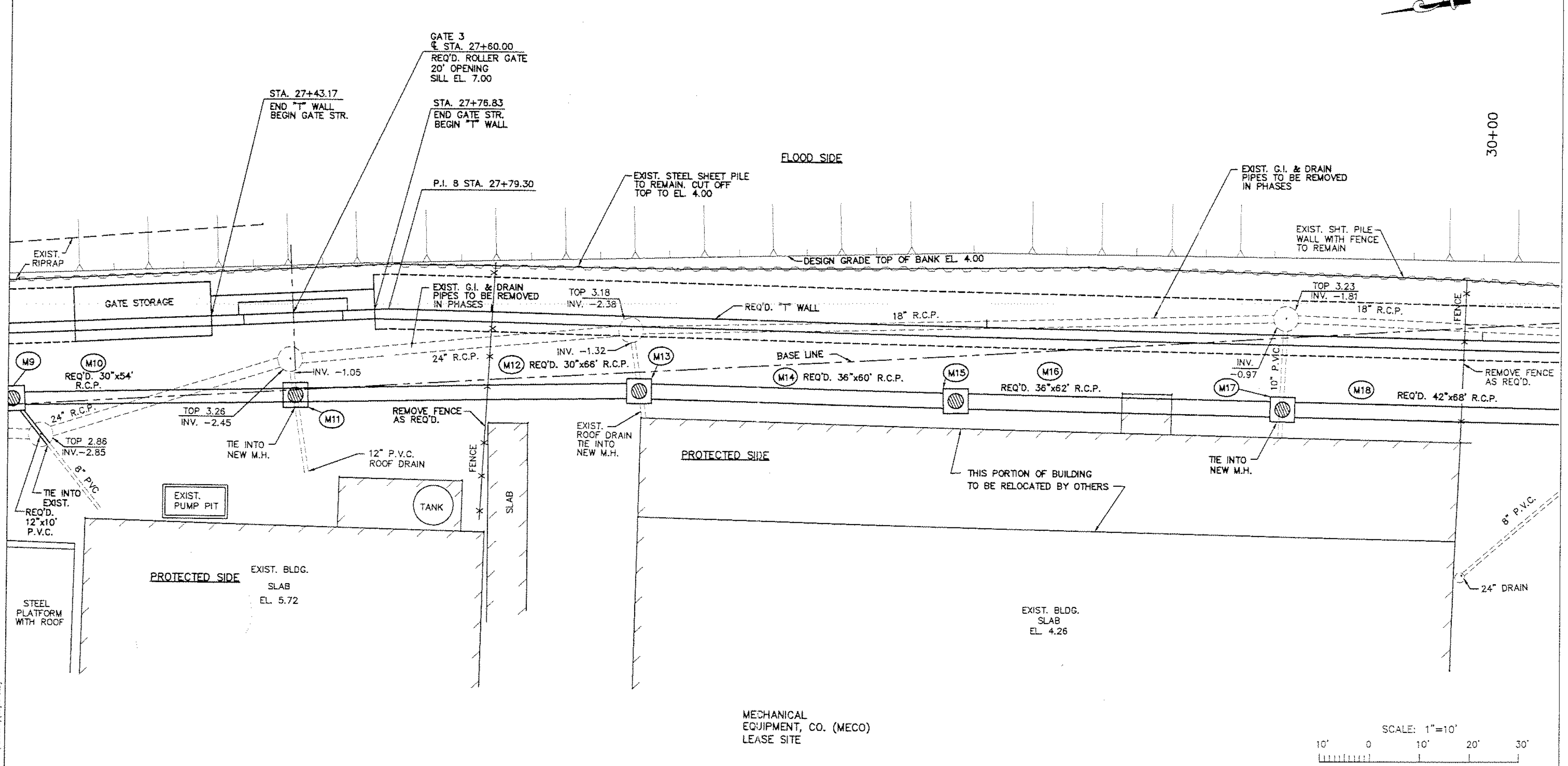
PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: MECO10M
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W20

SLIP NO. 3



LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: MECO2DM
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W21

SLIP NO. 3

BASE LINE

FLOOD SIDE

STA. 32+28.91
END "I" WALL
TIE TO COFFERDAM

END PROJECT REQF000302

℄ EXIST. COFFERDAM

W

REQ'D. RIP-RAP
130 LB. CLASS
W=8' L=10' T=3'
SEE DWG. W34

TOP OF EXIST. BANK

EXIST. SHEET PILE WALL
CUTOFF TOP TO EL. 4.00

REMOVE AS REQUIRED

DESIGN TOP OF BANK EL 4.0

END SH. PILE WALL

EXTENDED BASE LINE

EXTENDED
BASELINE

BASE LINE
INV.-0.04

℄ EXIST. LEVEE

REQ'D. "I" WALL

REQ'D. "I" WALL

P.I. 9 STA. 32+09.89

BERM EL. 8.00

STA. 32+04.89
END "I" WALL
BEGIN "I" WALL

REQ'D. 54"x88' C.M.P.

EXISTING C.L. FENCE
W/ RAZOR WIRE

M18 REQ'D. 42"x68' R.C.P.

M19

INV. 1.08

INV. 0.65

M20 REQ'D. 42"x142' R.C.P.

EXISTING FENCE REMOVE
AS REQUIRED

℄ EXIST. TO SWALE

TIE TO INLET

8" P.V.C.

REQ'D. 8"x12" P.V.C. W/ELBOW

8" P.V.C.

TIE IN

EXIST. SWALE
(TO BE FILLED &
GRADED TO DRAIN)

M22

M23 REQ'D. 48"x66"R.C.P.

M24

TIE BERM TO
EXIST. LEVEE

CONTRACTOR TO REMOVE
AND DISPOSE OF CONCRETE
EROSION PROTECTION ON LEVEE

PROTECTED SIDE

EXIST. SWALE
(TO BE FILLED &
GRADED TO DRAIN)

M21 REQ'D. 24"x120' R.C.P.

INV. -2.40

4' BOT. DITCH

℄ EXIST. LEVEE

DEGRADE EXIST. LEVEE
FILL IN DITCH AND
GRADE TO NEW GRATE
INLETS AS DIRECTED BY
THE ENGINEER

M26

INV. -2.20

M27 REQ'D. 18"x120' R.C.P.

INV. -1.70

GRATE ELEV. TO
BE SET IN FIELD

INV. -1.50

M28

1" ELEC. CONDUIT ATTACHED TO FENCE

EXIST. FENCE

NOTE: FOR DRAINAGE LAYOUT OF STR. (M21) AND (M26) THRU (M28)

FOR DRAINAGE TABLES
REFER TO DWG. W38

MECHANICAL
EQUIPMENT, CO. (MECO)
LEASE SITE

EXIST. SLAB
TO REMAIN

SCALE: 1"=10'

10' 0 10' 20' 30'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: MECOJDM
DRAWN BY: L.P.C.	1"=10'	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

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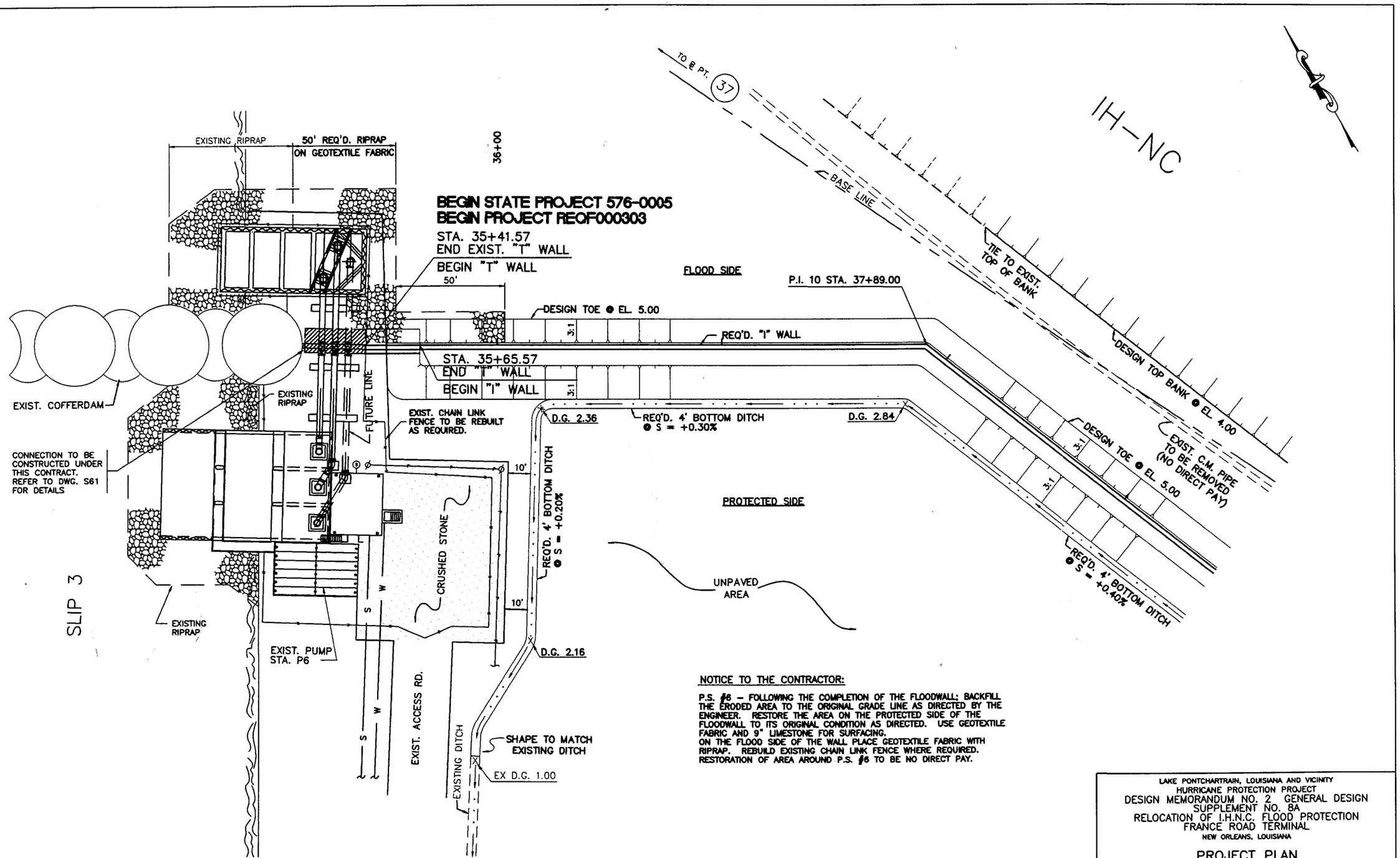
PLATE W22



NOTICE TO THE CONTRACTOR:

P.S. #6 – FOLLOWING THE COMPLETION OF THE FLOODWALL; BACKFILL THE ERODED AREA TO THE ORIGINAL GRADE LINE AS DIRECTED BY THE ENGINEER. RESTORE THE AREA ON THE PROTECTED SIDE OF THE FLOODWALL TO ITS ORIGINAL CONDITION AS DIRECTED. USE GEOTEXTILE FABRIC AND 9" LIMESTONE FOR SURFACING.
ON THE FLOOD SIDE OF THE WALL PLACE GEOTEXTILE FABRIC WITH RIPRAP. REBUILD EXISTING CHAIN LINK FENCE WHERE REQUIRED.
RESTORATION OF AREA AROUND P.S. #6 TO BE NO DIRECT PAY.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
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SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

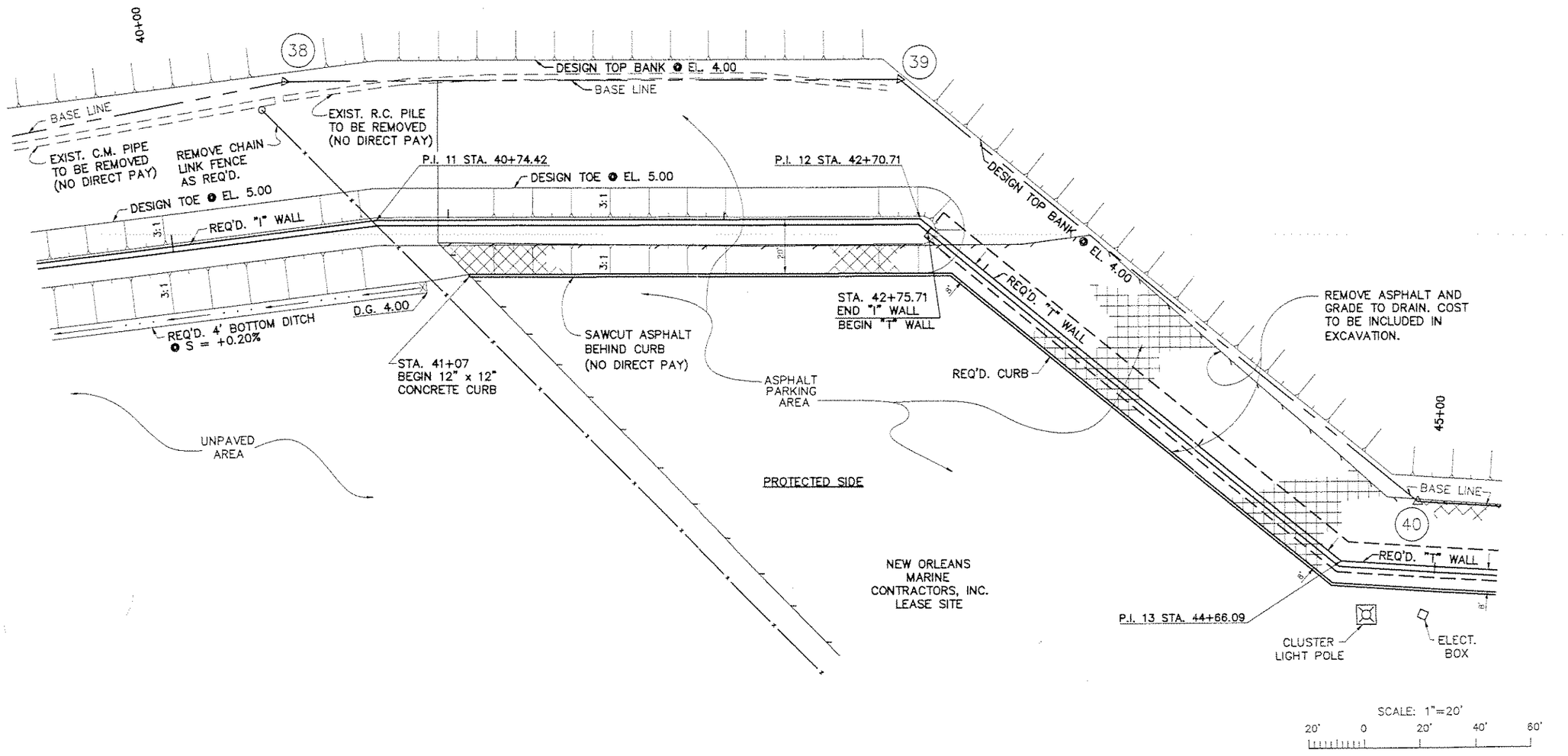
DESIGNED BY: H.C.D.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: P6P4
DRAWN BY: L.P.C.	DATE: 10/97		FILE NO. 504-005
CHECKED BY: H.C.D.			

Jan 17, 1997 - 14:26:30[P&O FILE: G:\CAD\VCAD\504-005\CONSYS95\P6P4] [Login: lonnie chauvin]

PLATE W23

IH-NC

FLOOD SIDE



SCALE: 1"=20'

20' 0 20' 40' 60'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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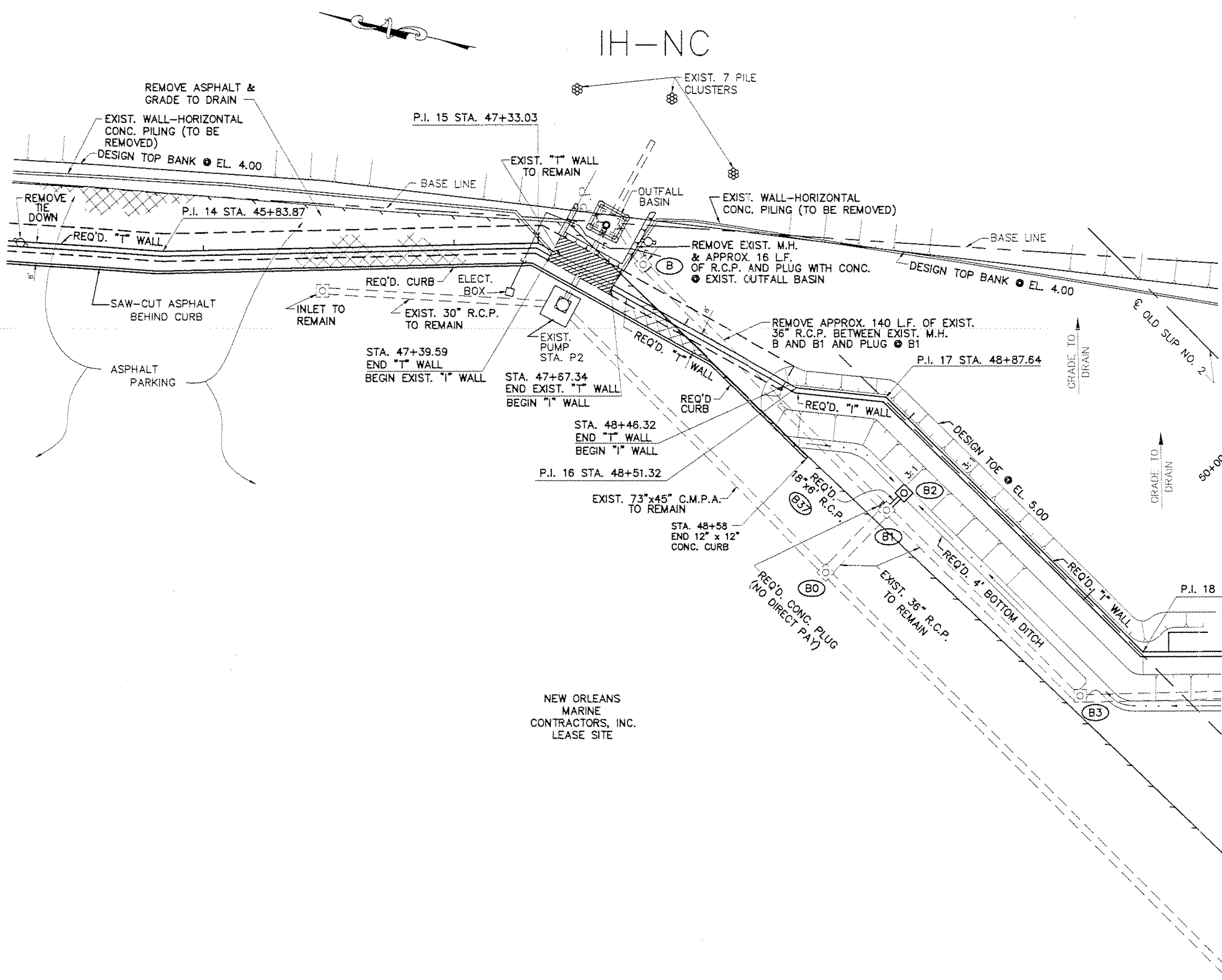
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: P6P4
DRAWN BY: L.P.C.	1"=20'	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

PLATE W24



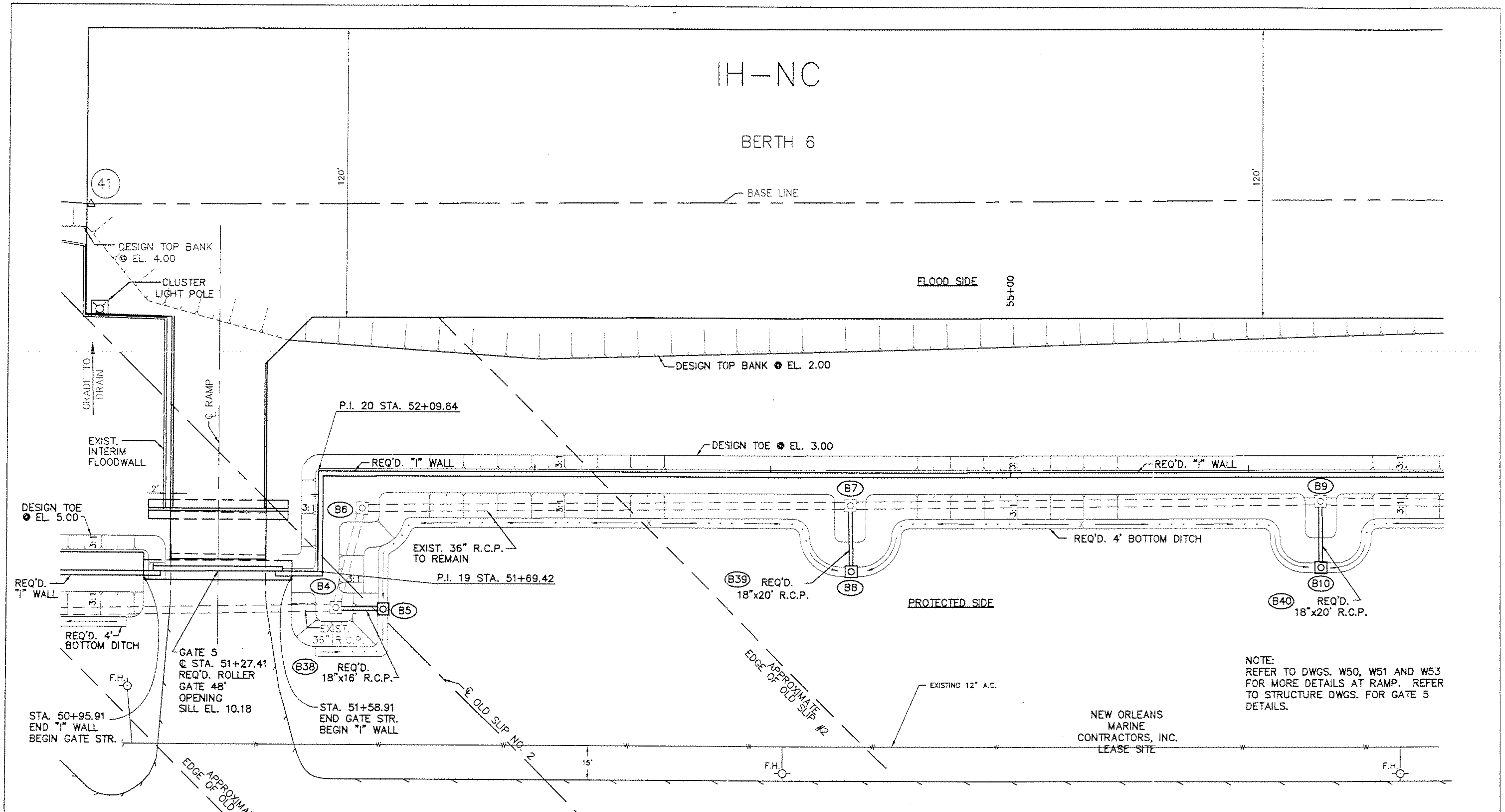
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: P6P4
DRAWN BY: L.P.C.			FILE NO. 504–005
CHECKED BY: H.C.D.	DATE: 10/97		

Oct 17, 1997 - 12:54:22] PSO FILE: G:\CAD\ACAD\504-006\MEMO97\P6P4] [Login: SCB]


IH-NC
BERTH 6
41
120'
120'
BASE LINE
DESIGN TOP BANK @ EL. 4.00
CLUSTER LIGHT POLE
FLOOD SIDE
55+00
GRADE TO DRAIN
℄ RAMP
DESIGN TOP BANK @ EL. 2.00
P.I. 20 STA. 52+09.84
EXIST. INTERIM FLOODWALL
DESIGN TOE @ EL. 3.00
REQ'D. "I" WALL
REQ'D. "I" WALL
2'
B6
B7
B9
DESIGN TOE @ EL. 5.00
3:1
EXIST. 36" R.C.P. TO REMAIN
REQ'D. 4' BOTTOM DITCH
P.I. 19 STA. 51+69.42
REQ'D. "I" WALL
B4
B5
B39
REQ'D. 18"x20' R.C.P.
B8
PROTECTED SIDE
B10
B40
REQ'D. 18"x20' R.C.P.
EXIST. 36" R.C.P.
REQ'D. 4' BOTTOM DITCH
GATE 5
℄ STA. 51+27.41
REQ'D. ROLLER GATE 48' OPENING
SILL EL. 10.18
B38
REQ'D. 18"x16' R.C.P.
APPROXIMATE EDGE OF OLD SLIP #2
NOTE:
REFER TO DWGS. W50, W51 AND W53 FOR MORE DETAILS AT RAMP. REFER TO STRUCTURE DWGS. FOR GATE 5 DETAILS.
F.H.
EXISTING 12" A.C.
STA. 50+95.91
END "I" WALL
BEGIN GATE STR.
STA. 51+58.91
END GATE STR.
BEGIN "I" WALL
℄ OLD SLIP NO. 2
NEW ORLEANS MARINE CONTRACTORS, INC. LEASE SITE
15'
F.H.
F.H.
APPROXIMATE EDGE OF OLD SLIP #2
SERVICE ROAD
ELEC. M.H.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: P6P4
DRAWN BY: L.P.C.	DATE: 10/97		FILE NO. 504-005
CHECKED BY: H.C.D.			

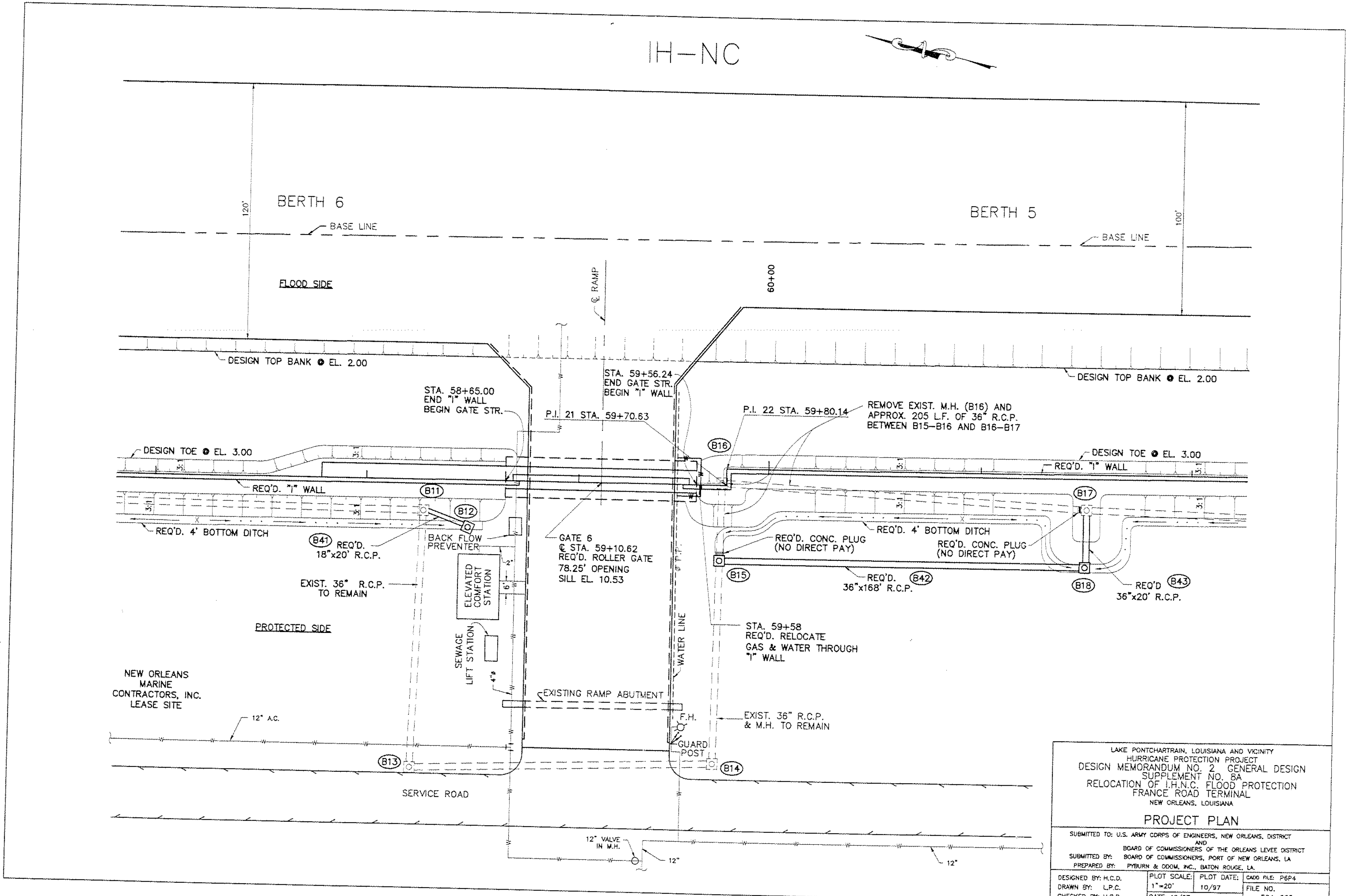
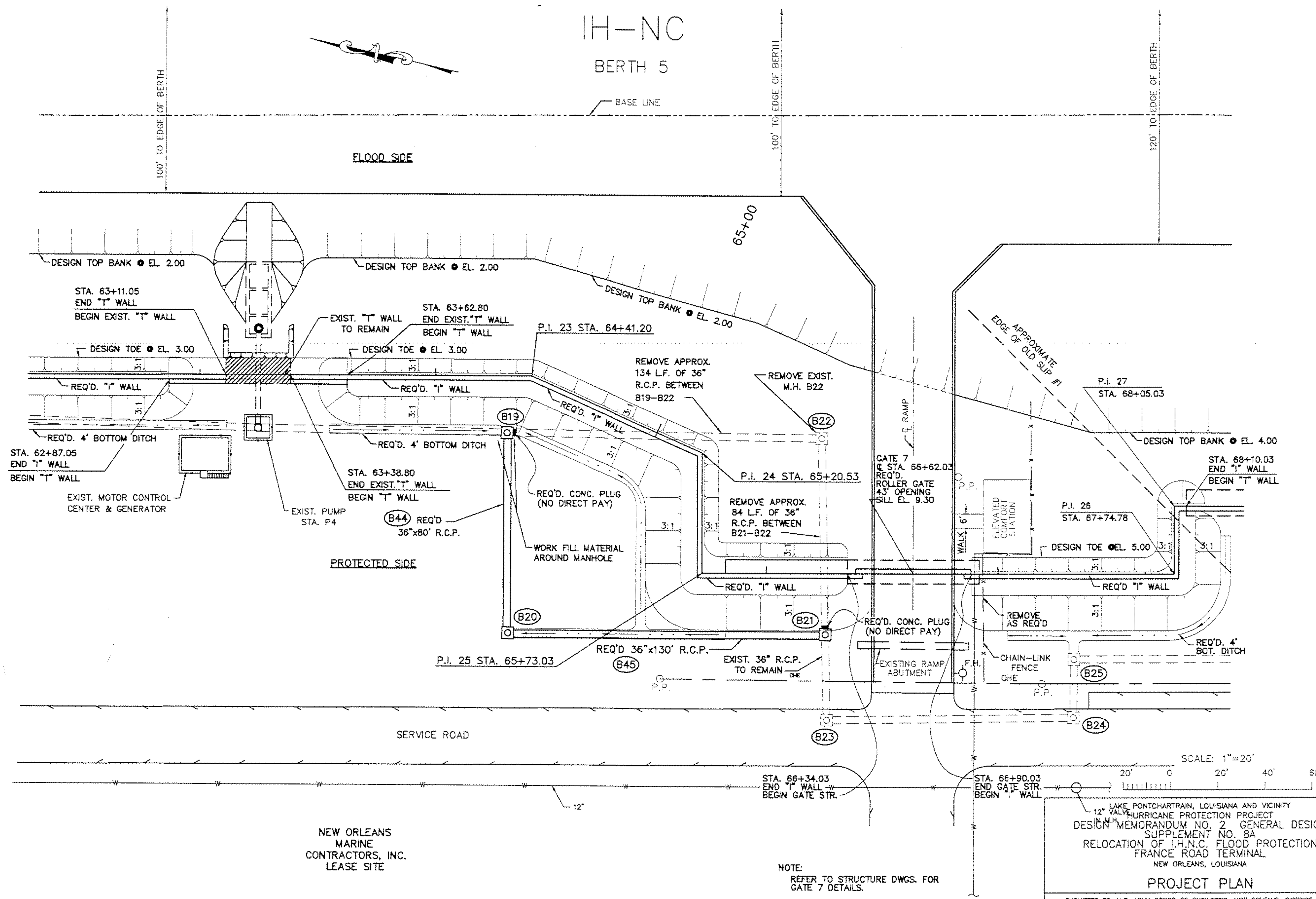

IH-NC
BERTH 6
BERTH 5
120'
100'
BASE LINE
BASE LINE
FLOOD SIDE
℄ RAMP
60+00
DESIGN TOP BANK @ EL. 2.00
DESIGN TOP BANK @ EL. 2.00
STA. 58+65.00
END "I" WALL
BEGIN GATE STR.
STA. 59+56.24
END GATE STR.
BEGIN "I" WALL
P.I. 21 STA. 59+70.63
P.I. 22 STA. 59+80.14
REMOVE EXIST. M.H. (B16) AND
APPROX. 205 L.F. OF 36" R.C.P.
BETWEEN B15–B16 AND B16–B17
DESIGN TOE @ EL. 3.00
DESIGN TOE @ EL. 3.00
REQ'D. "I" WALL
REQ'D. "I" WALL
REQ'D. 4' BOTTOM DITCH
REQ'D. 4' BOTTOM DITCH
B11
B12
B16
B17
B41
REQ'D.
18"x20' R.C.P.
BACK FLOW
PREVENTER
GATE 6
℄ STA. 59+10.62
REQ'D. ROLLER GATE
78.25' OPENING
SILL EL. 10.53
REQ'D. CONC. PLUG
(NO DIRECT PAY)
REQ'D. CONC. PLUG
(NO DIRECT PAY)
B15
REQ'D. B42
36"x168' R.C.P.
B18
REQ'D B43
36"x20' R.C.P.
EXIST. 36" R.C.P.
TO REMAIN
ELEVATED
COMFORT
STATION
PROTECTED SIDE
SEWAGE
LIFT STATION
WATER LINE
STA. 59+58
REQ'D. RELOCATE
GAS & WATER THROUGH
"I" WALL
NEW ORLEANS
MARINE
CONTRACTORS, INC.
LEASE SITE
EXISTING RAMP ABUTMENT
12" A.C.
F.H.
GUARD
POST
EXIST. 36" R.C.P.
& M.H. TO REMAIN
B13
B14
SERVICE ROAD
12" VALVE
IN M.H.
12"
12"
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
PROJECT PLAN
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.
DESIGNED BY: H.C.D.
DRAWN BY: L.P.C.
CHECKED BY: H.C.D.
PLOT SCALE: 1"=20'
PLOT DATE: 10/97
DATE: 10/97
CADD FILE: P6P4
FILE NO. 504-005

PLATE W27



IH-NC
BERTH 5
BASE LINE
100' TO EDGE OF BERTH
100' TO EDGE OF BERTH
120' TO EDGE OF BERTH
FLOOD SIDE
65+00
DESIGN TOP BANK @ EL. 2.00
DESIGN TOP BANK @ EL. 2.00
DESIGN TOP BANK @ EL. 2.00
STA. 63+11.05
END "T" WALL
BEGIN EXIST. "T" WALL
EXIST. "T" WALL TO REMAIN
STA. 63+62.80
END EXIST."T" WALL
BEGIN "T" WALL
P.I. 23 STA. 64+41.20
DESIGN TOE @ EL. 3.00
DESIGN TOE @ EL. 3.00
REQ'D. "I" WALL
REQ'D. "I" WALL
REQ'D. "I" WALL
REQ'D. 4' BOTTOM DITCH
REQ'D. 4' BOTTOM DITCH
REMOVE APPROX. 134 L.F. OF 36" R.C.P. BETWEEN B19-B22
REMOVE EXIST. M.H. B22
EDGE OF APPROXIMATE OLD SLIP #1
P.I. 27
STA. 68+05.03
DESIGN TOP BANK @ EL. 4.00
STA. 62+87.05
END "I" WALL
BEGIN "T" WALL
EXIST. MOTOR CONTROL CENTER & GENERATOR
EXIST. PUMP STA. P4
STA. 63+38.80
END EXIST."T" WALL
BEGIN "T" WALL
B44 REQ'D 36"x80' R.C.P.
B19
REQ'D. CONC. PLUG (NO DIRECT PAY)
WORK FILL MATERIAL AROUND MANHOLE
P.I. 24 STA. 65+20.53
B22
℄ RAMP
GATE 7
℄ STA. 66+62.03
REQ'D. ROLLER GATE
43' OPENING
SILL EL. 9.30
P.P.
ELEVATED COMFORT STATION
STA. 68+10.03
END "I" WALL
BEGIN "T" WALL
P.I. 26
STA. 67+74.78
REMOVE APPROX. 84 L.F. OF 36" R.C.P. BETWEEN B21-B22
6'
WALK
DESIGN TOE @EL. 5.00
PROTECTED SIDE
3:1
REQ'D. "I" WALL
REQ'D "I" WALL
B20
B21
REQ'D. CONC. PLUG (NO DIRECT PAY)
REMOVE AS REQ'D
REQ'D. 4' BOT. DITCH
P.I. 25 STA. 65+73.03
REQ'D 36"x130' R.C.P.
B45
EXIST. 36" R.C.P. TO REMAIN
EXISTING RAMP ABUTMENT
F.H.
CHAIN-LINK FENCE
OHE
P.P.
P.P.
B25
B24
B23
SERVICE ROAD
STA. 66+34.03
END "I" WALL
BEGIN GATE STR.
STA. 66+90.03
END GATE STR.
BEGIN "I" WALL
12"
12" VALVE
SCALE: 1"=20'
20' 0 20' 40' 60'
NEW ORLEANS MARINE CONTRACTORS, INC. LEASE SITE
NOTE:
REFER TO STRUCTURE DWGS. FOR GATE 7 DETAILS.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: P4P3
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

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IH-NC

120' TO EDGE OF BERTH

70+00

BASE LINE

120' TO EDGE OF BERTH

BERTH 4

FLOOD SIDE

℄ OLD SLIP NO. 1

℄ RAMP

DESIGN TOP BANK @ EL. 4.00

STA. 70+35.40
END "I" WALL
BEGIN "I" WALL

P.I. 29 STA. 70+30.40

P.I. 30 STA. 71+60.31

STA. 71+55.31
END "I" WALL
BEGIN "I" WALL

P.I. 31 STA. 72+06.48

EXIST. "I" WALL
TO REMAIN

DESIGN TOE @ EL. 5.00

DESIGN TOP BANK
@ EL. 4.00

STA. 69+46.61
END GATE STR.
BEGIN "I" WALL

REQ'D "I" WALL

REQ'D. "I" WALL

REQ'D. "I" WALL

STA. 68+74.45
END "I" WALL
BEGIN GATE STR.

REQ'D "I" WALL
STA. 69+98.53
END "I" WALL
BEGIN "I" WALL

3:1

REQ'D. 4' BOTTOM DITCH

B30

B47

GRADE TO DRAIN

REQ'D "I" WALL

EXIST. 36" R.C.P.
TO REMAIN

B29

REQ'D.
18"x8' R.C.P.

STA. 70+77.84
END EXIST. "I" WALL
BEGIN "I" WALL

P.I. 28 STA. 70+03.53

EXIST. PUMP
STA. P5

PROTECTED SIDE

APPROXIMATE EDGE OF OLD SLIP #1

GATE 8
℄ STA. 69+10.53
REQ'D. ROLLER
GATE 58'
OPENING
SILL EL 10.44

B27

B46

REQ'D.
18"x26'
R.C.P.

EXIST. 36" R.C.P.

STA. 70+62.76
END "I" WALL
BEGIN EXIST. "I" WALL

B28

B26

F.H.

P.P.

6" W.V.

SCALE: 1"=20'

20' 0 20' 40' 60'

APPROXIMATE EDGE OF OLD SLIP #1

WATER METER

SERVICE ROAD

12"

12"

CERES GULF
LEASE SITE

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: P4P3
DRAWN BY: L.P.C.	1"=20'	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

PLATE W29

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IH-NC

BERTH 4

120' TO EDGE OF BERTH

120' TO EDGE OF BERTH

BASE LINE

75+00

FLOOD SIDE

PROTECTED SIDE

42

℄ RAMP

EXIST. 7 PILE CLUSTERS

BASE LINE

DESIGN TOP BANK ● EL. 4.00

STA. 76+16.60
END "I" WALL
BEGIN GATE STR.

STA. 76+73.60
END GATE STR.
BEGIN "I" WALL

STA. 77+43.16
END "I" WALL
BEGIN "I" WALL

DESIGN TOP BANK ● EL. 4.00

STA. 79+13.59
END "I" WALL
BEGIN EXIST. "I" WALL

DESIGN TOP BANK ● EL. 4.00

STA. 79+41.34
END EXIST. "I" WALL
BEGIN "I" WALL

P.I. 32 STA. 75+39.10

P.I. 35 STA. 77+38.16

P.I. 34 STA. 76+93.61

P.I. 36 STA. 79+79.00

REQ'D. "I" WALL

EXIST. "I" WALL TO REMAIN

DESIGN TOE ● EL. 5.00

3:1

REQ'D. "I" WALL

REQ'D. 4' BOTTOM DITCH

EXIST. 36" R.C.P. TO REMAIN

P.I. 33 STA. 75+62.10

D.G. 5.50

REQ'D. SWALE ● S = +0.10%

D.G. 5.70

EXIST. 36" R.C.P. TO REMAIN

REQ'D. "I" WALL

80+00

B36

WORK FILL MATERIAL AROUND MANHOLE

EXIST. PUMP STA. P3

EXIST. CLUSTER LIGHT POLE

P.I. 37 STA. 80+00.28

ELEVATED COMFORT STATION

ROOF SOFFIT

REQ'D. SWALE ● S = +0.625%

D.G. 5.00

STA. 79+74.00
END "I" WALL
BEGIN "I" WALL

GATE 9
℄ STA. 76+45.10
REQ'D. ROLLER GATE 43' OPENING
SILL EL. 10.56

EXIST. CHAIN LINK FENCE TO REMAIN

F.H.

EXIST. 36" R.C.P.

B31

B32 B33

REQ'D. 18"x20' R.C.P.

B48

B34 B35

REQ'D. 18"x12' R.C.P.

B49

CONCRETE PARKING

SCALE: 1"=20'

20' 0 20' 40' 60'

SERVICE ROAD

12"

SEA LAND SERVICES, INC. LEASE SITE

CERES GULF LEASE SITE

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: P4P3
DRAWN BY: L.P.C.	1"=20'	10/97	FILE NO.
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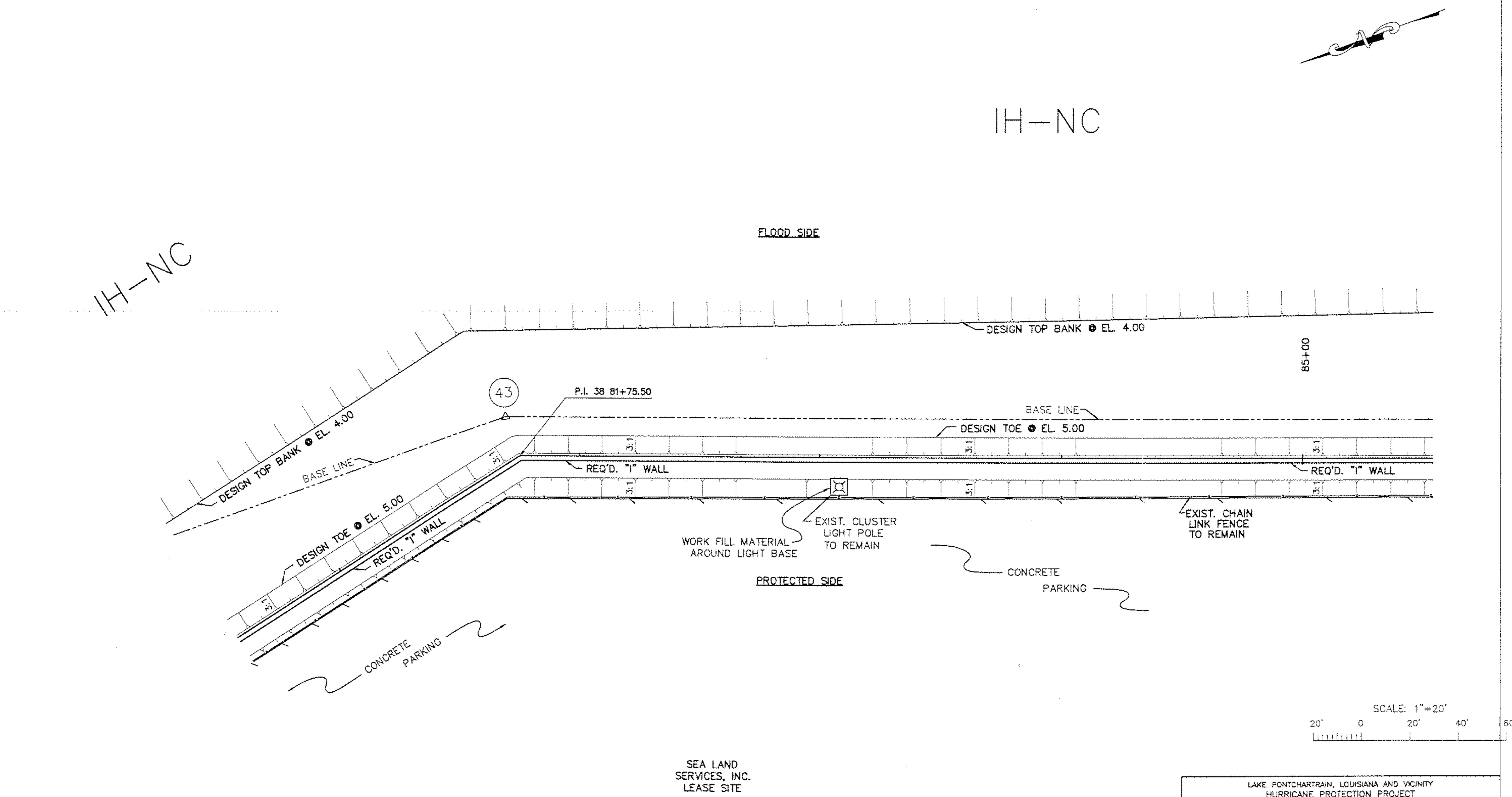

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
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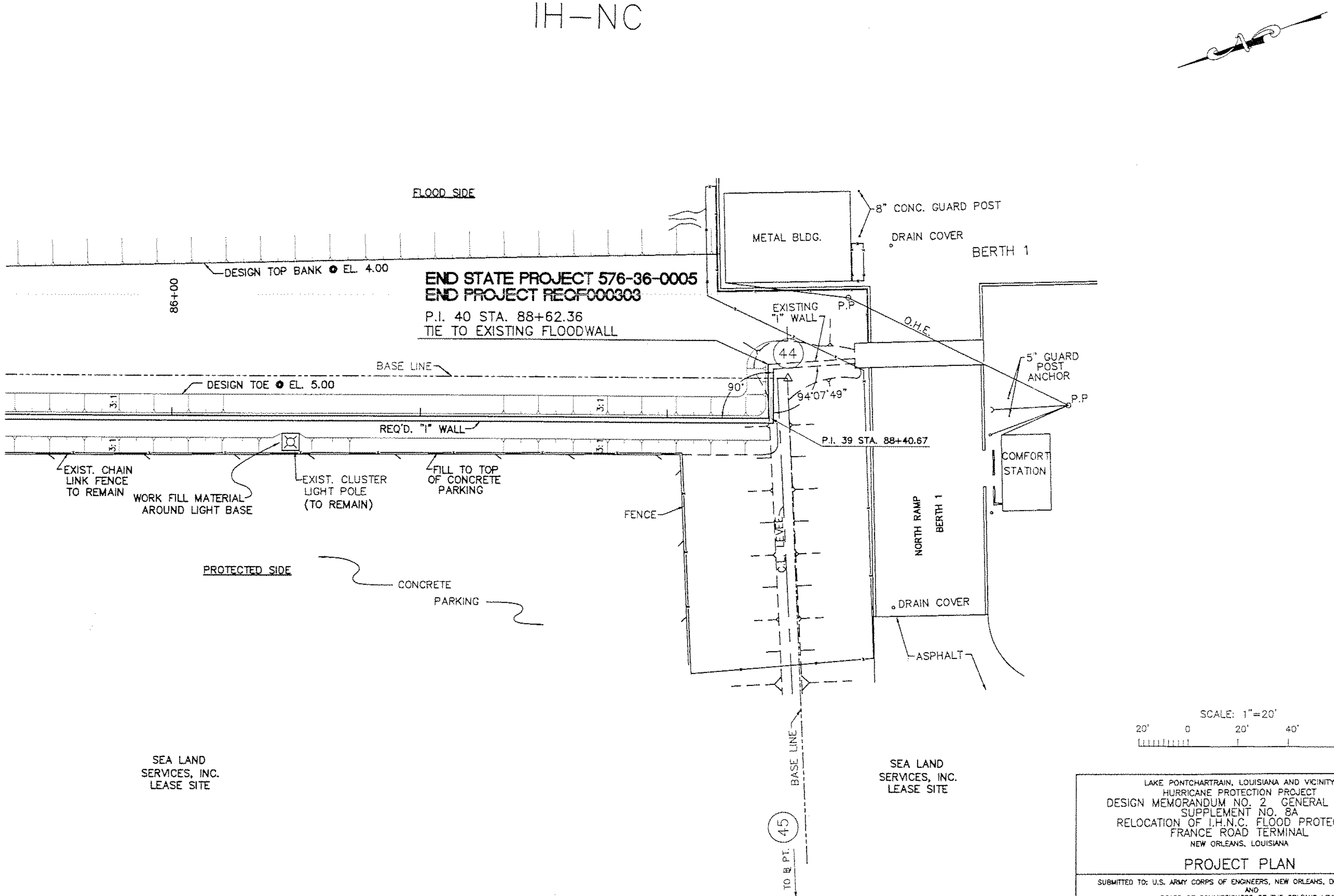
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: H.C.O.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: P38ER1
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.O.	DATE: 10/97		

PLATE W31

IH–NC



LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
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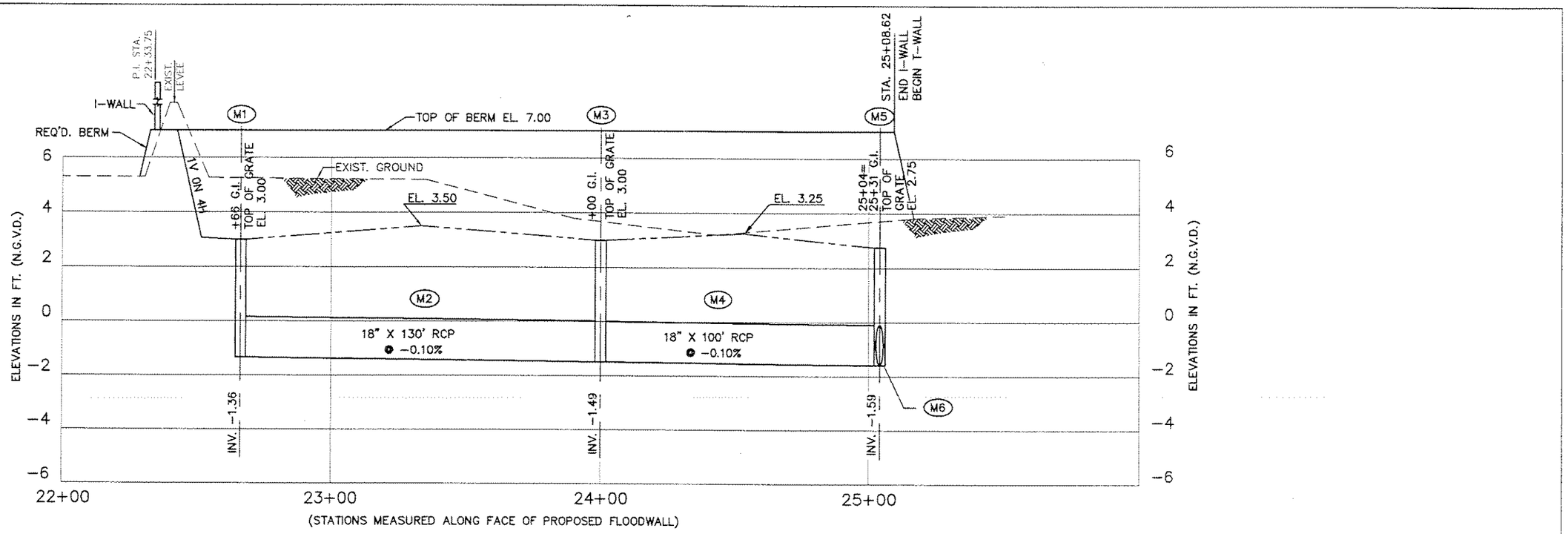
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: H.C.D. DRAWN BY: L.P.C. CHECKED BY: H.C.D.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: P3BER1
	DATE: 10/97		FILE NO. 504-005

PLATE W32



NOTE:
STATIONS SHOWN ARE W/L STATIONS.

DRAINAGE FROM STA. 1+00.00 TO STA. 22+66.00 AND FROM STA. 79+63 TO END OF PROJECT IS SHOWN IN PLAN DWGS. ONLY. DITCH GRADES, PIPE SIZES AND INVERTS ARE SHOWN ON THE PLAN.

(HORZ.) SCALE: 1"=20'
20' 0 20' 40' 60'

(VERT.) SCALE: 1"=2'
2' 0 2' 4' 6'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
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PROJECT PROFILE

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SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: PRMECOD1
DRAWN BY: L.P.C.	DATE: 10/97		FILE NO. 504--005
CHECKED BY: H.C.D.			

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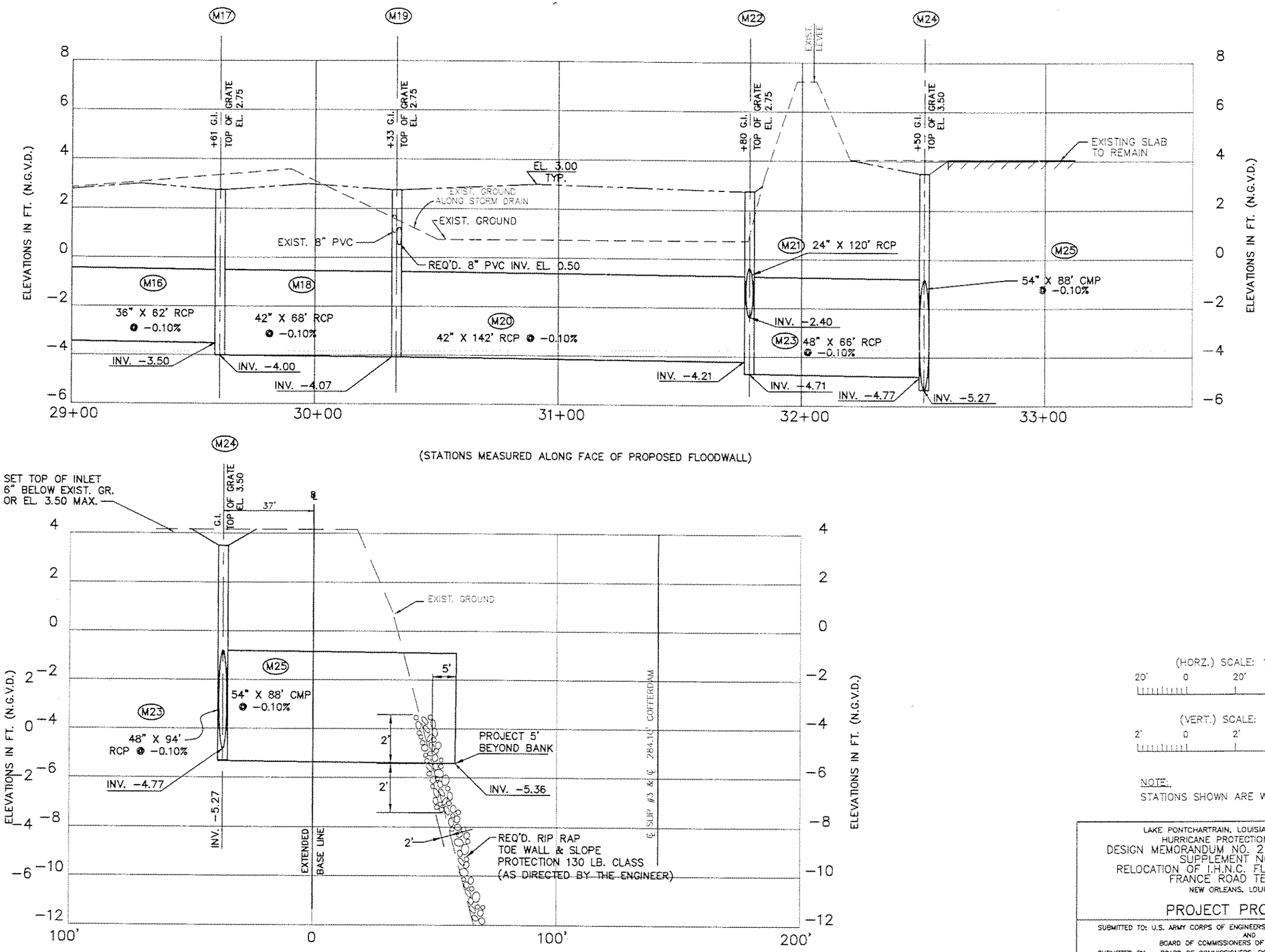

(HORZ.) SCALE: 1"=20'

20' 0 20' 40' 60'

(VERT.) SCALE: 1"=2'

2' 0 2' 4' 6'

NOTE:
STATIONS SHOWN ARE W/L STATIONS.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
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SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: PRMECOD1
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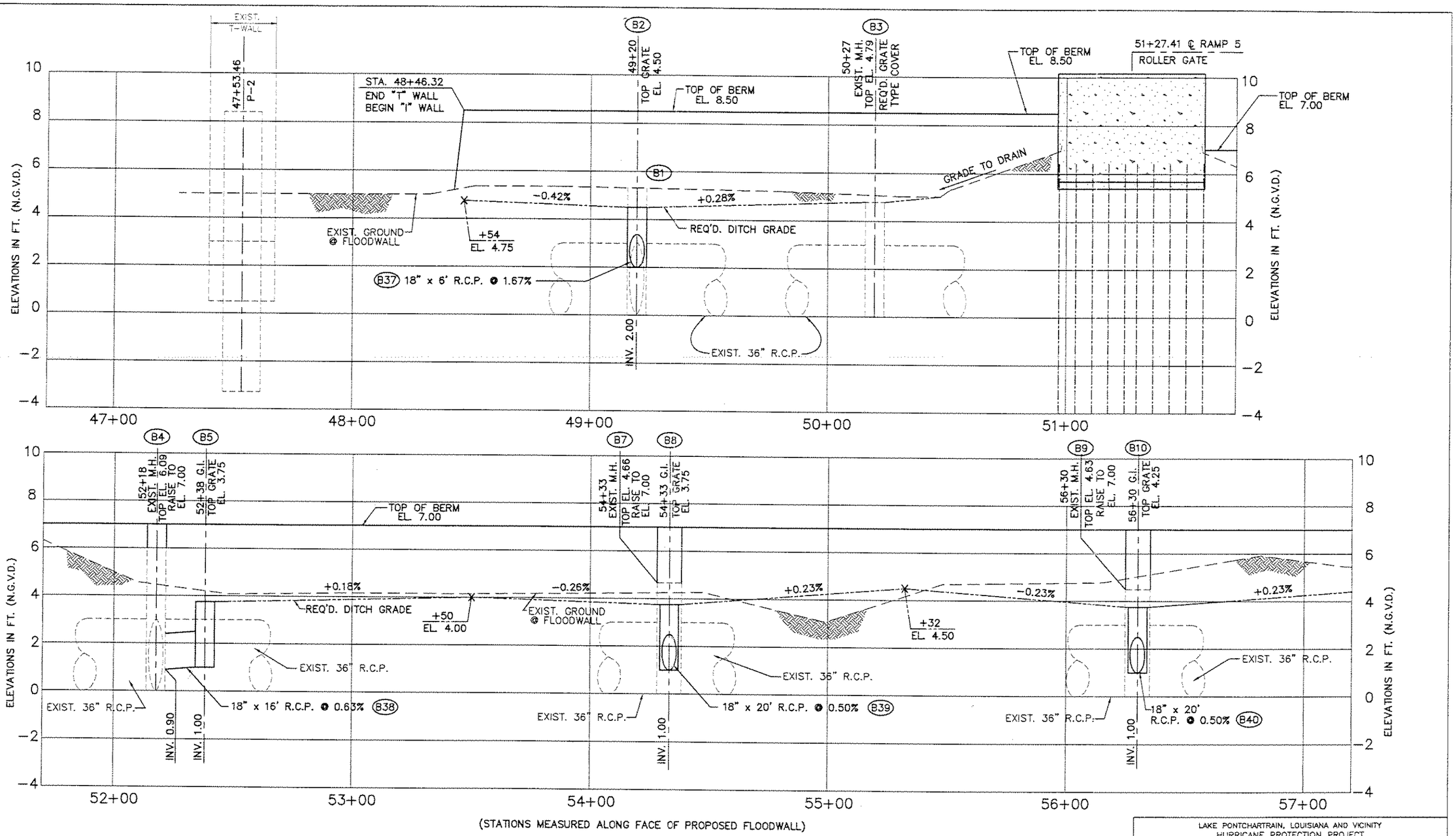


(STATIONS MEASURED ALONG FACE OF PROPOSED FLOODWALL)

(HORZ.) SCALE: 1"=20'

20' 0 20' 40' 60'

(VERT.) SCALE: 1"=2'

2' 0 2' 4' 6'

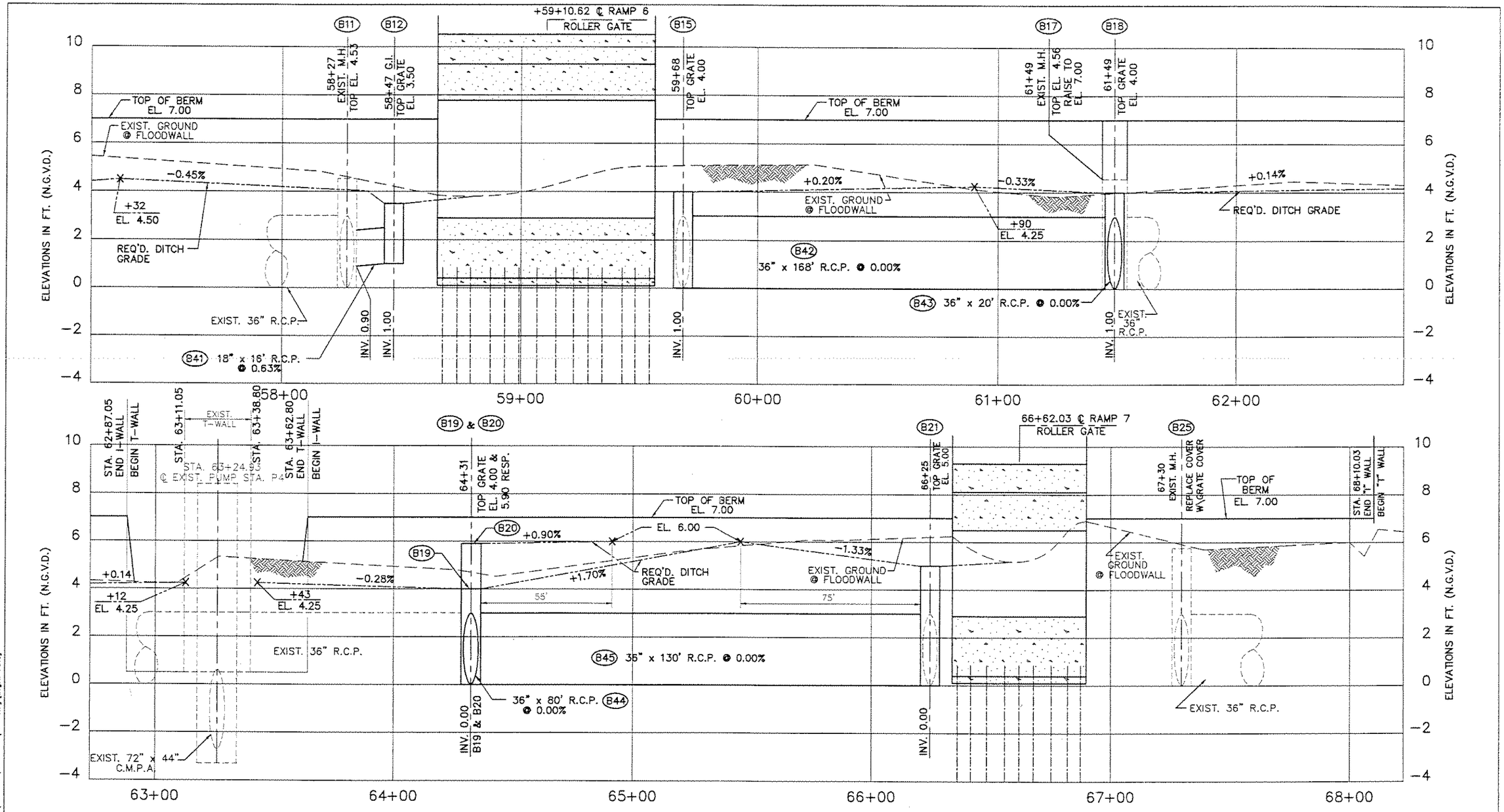
NOTE:
STATIONS SHOWN ARE W/L STATIONS.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PROFILE

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.O.	PLOT SCALE:	PLOT DATE:	CADD FILE: PRBERTH
DRAWN BY: L.P.C.	AS SHOWN	10/97	FILE NO.
CHECKED BY: H.C.O.	DATE: 10/97		504-005



(STATIONS MEASURED ALONG FACE OF PROPOSED FLOODWALL)

NOTE:
STATIONS SHOWN ARE W/L STATIONS.

(HORZ.) SCALE: 1"=20'

20' 0 20' 40' 60'

(VERT.) SCALE: 1"=2'

2' 0 2' 4' 6'

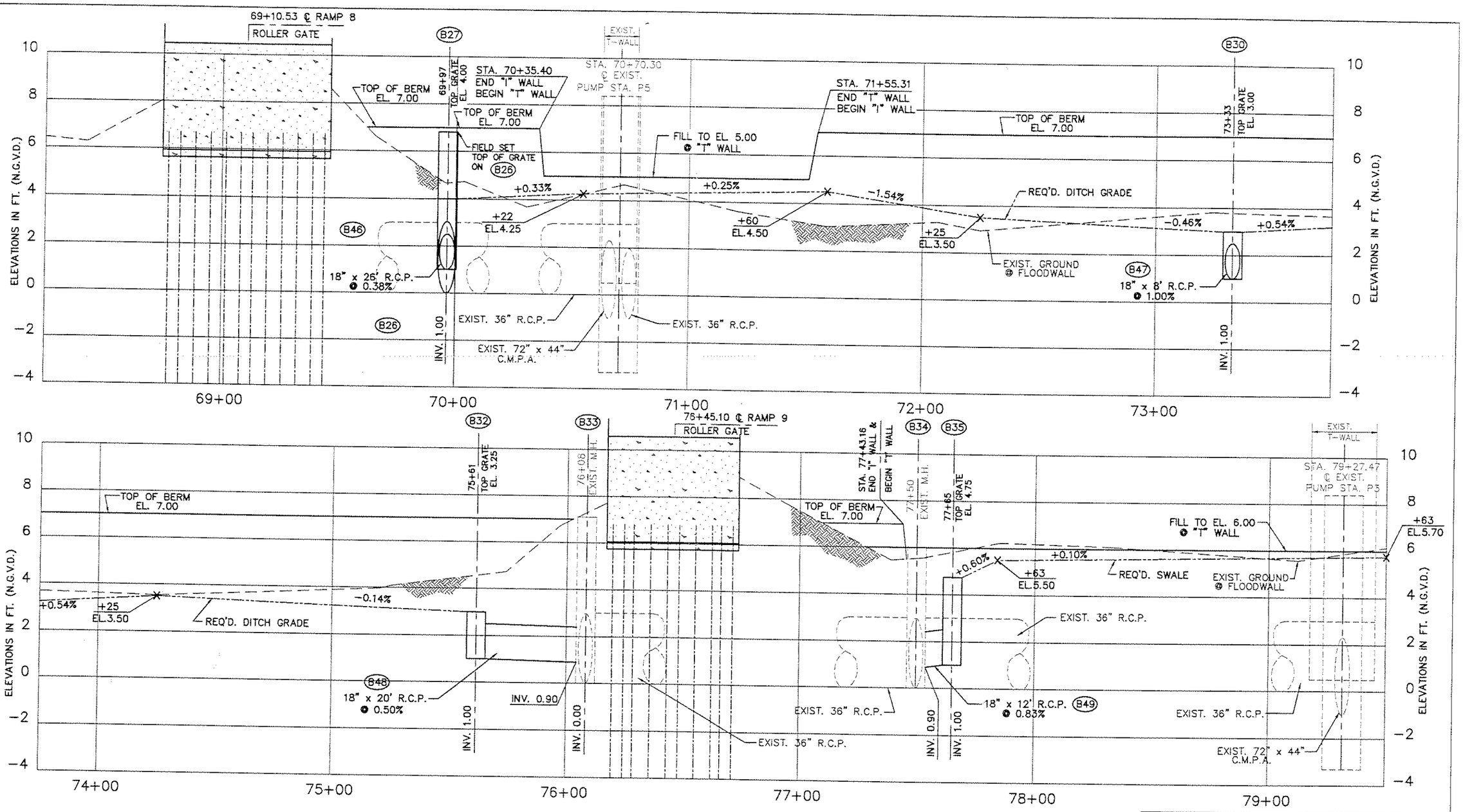
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PROFILE

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: PRBERTH
DRAWN BY: L.P.C.	AS SHOWN	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

PLATE W36



(STATIONS MEASURED ALONG FACE OF PROPOSED FLOODWALL)

NOTE:
STATIONS SHOWN ARE W/L STATIONS.

(HORZ.) SCALE: 1"=20'
20' 0 20' 40' 60'

(VERT.) SCALE: 1"=2'
2' 0 2' 4' 6'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PROFILE

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: PRBERTH
DRAWN BY: L.P.C.	AS SHOWN	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

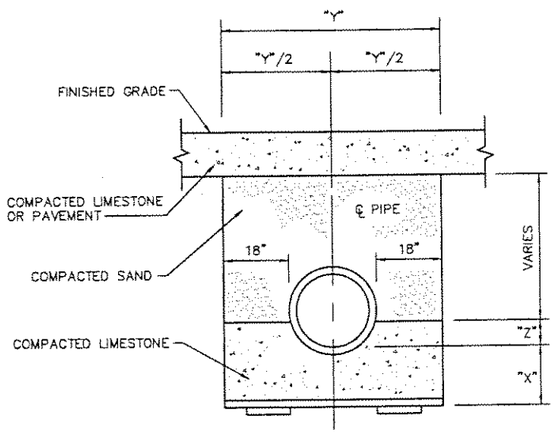
PLATE W37

MECO SUMMARY OF DRAINAGE STRUCTURES

DRAINAGE STRUCTURE	STATION	TYPE	OFFSET	REQ'D T.O.S. ELEVATION	REMARK
M1	22+66	GRATE INLET	32.00'	3.00	OFFSET FROM WALL LINE STATION
M3	24+00	GRATE INLET	32.00'	3.00	OFFSET FROM WALL LINE STATION
M5	25+04	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M7	25+19	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M9	27+03	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M11	27+59	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M13	28+29	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M15	28+92	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M17	29+59	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M19	30+31	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M22	31+50	GRATE INLET	15.00'	2.75	OFFSET FROM WALL LINE STATION
M24	32+50	GRATE INLET	27.00'	3.50	OFFSET FROM EXTENDED WALL LINE STATION
M26	31+80 RT.	GRATE INLET	*139.00'	2.75	ALONG EXIST. PROTECTION LEVEE
M28	31+80 RT.	GRATE INLET	*263.00'	3.50	ALONG EXIST. PROTECTION LEVEE

T.O.S.= TOP OF STRUCTURE
STATIONS SHOWN ARE W/L STATIONS.

*VARIFY IN FIELD



TRENCH DETAIL FOR PIPE

N.T.S.

NOTE:
FOUNDATION LUMBER CONSIST OF
1 TRANSVERSE LAYER OF 2" BOARDS
(MIN. 8" WIDE) ON 2" x 10" SILLS.

TRENCH DATA TABLE

PIPE DIA.	"X" (FT.)	"Y" (FT.)	"Z" (FT.)
15"	0.50	4.5	0.25
18"	0.70	5.00	0.33
24"	0.80	5.50	0.50
30"	0.90	6.00	0.67
36"	1.00	6.50	0.83
42"	1.20	7.75	0.89
48"	1.30	8.00	0.98
54"	1.40	8.50	1.10

NOTE:
BEDDING AND LUMBER SHALL BE INCLUDED IN COST OF PIPE.

MECO DRAIN PIPE DATA

PIPE NO.	DROP INLET NO.	PIPE SIZE	APPROX. LENGTH	END	INVERT ELEVATION
M2	M1 TO M3	18"	130'	M1	-1.36
				M3	-1.49
M4	M3 TO M5	18"	100'	M3	-1.49
				M5	-1.59
M6	M5 TO M7	18"	78'	M5	-1.59
				M7	-1.67
M8	M7 TO M9	24"	80'	M7	-2.17
				M9	-2.25
M10	M9 TO M11	30"	54'	M9	-2.75
				M11	-2.83
M12	M11 TO M13	30"	66'	M11	-2.83
				M13	-2.88
M14	M13 TO M15	36"	60'	M13	-3.38
				M15	-3.44
M16	M15 TO M17	36"	62'	M15	-3.44
				M17	-3.50
M18	M17 TO M19	42"	68'	M17	-4.00
				M19	-4.07
M20	M19 TO M22	42"	114'	M19	-4.07
				M26	-2.20
M21	M22 TO M26	24"	120'	M22	-2.40
				M26	-2.20
M23	M22 TO M24	48"	56'	M22	-4.71
				M24	-4.77
M25	M24 TO OUTFALL	54"	88'	M24	-5.27
				OUTFALL	-5.36
M27	M26 TO M28	18"	120'	M26	-1.70
				M28	-1.50

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

DRAINAGE TABLES

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: MECOSTA8
DRAWN BY: L.P.C.	NO SCALE	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

SUMMARY OF DRAINAGE STRUCTURES

DRAINAGE STRUCTURE	STATION	TYPE	OFFSET	REQ'D T.O.S. ELEVATION	EXIST. T.O.S. ELEVATION	REMARK
B0	49+20	GRATE INLET	32.00' RT.			EXIST. STRUCTURE TO REMAIN.
* B1	49+20	MANHOLE	32.00' RT.			TIE PIPE TO EXIST. M.H./INLET.
B2	49+20	GRATE INLET	32.00' RT.	4.50	———	REQ'D. NEW GRATE INLET.
B3	50+27	MANHOLE	30.00' RT.	———	4.79	REPLACE M.H. COVER WITH GRATE.
B4	52+18	MANHOLE	57.26' RT.	7.00	6.09	RAISE STRUCTURE TO NEW HEIGHT / TIE PIPE.
B5	52+38	GRATE INLET	57.26' RT.	3.75	———	REQ'D. NEW GRATE INLET.
B6	52+29	MANHOLE	15.52' RT.	7.00	5.06	RAISE STRUCTURE TO NEW HEIGHT.
B7	54+33	MANHOLE	13.80' RT.	7.00	7.66	RAISE STRUCTURE TO NEW HEIGHT / TIE PIPE.
B8	54+33	GRATE INLET	37.80' RT.	3.75	———	REQ'D. NEW GRATE INLET.
B9	56+30	MANHOLE	12.15' RT.	7.00	4.63	RAISE STRUCTURE TO NEW HEIGHT / TIE PIPE.
B10	56+30	GRATE INLET	36.20' RT.	4.25	———	REQ'D. NEW GRATE INLET.
B11	58+27	MANHOLE	14.72' RT.		4.53	TIE PIPE TO EXIST. M.H./INLET.
B12	58+47	GRATE INLET	22.00' RT.	3.50	———	REQ'D. NEW GRATE INLET.
B13	58+25	MANHOLE	131.23' RT.	6.23	6.23	EXIST. STRUCTURE TO REMAIN.
B14	59+66	MANHOLE	131.23' RT.	5.49	5.49	EXIST. STRUCTURE TO REMAIN.
* B15	59+68	GRATE INLET	34.20' RT.	4.00	———	REQ'D. NEW GRATE INLET.
B16	59+69	MANHOLE	1.06' LT.	———	———	REMOVE EXIST. M.H.
* B17	61+49	MANHOLE	16.60' RT.	7.00	4.56	RAISE STRUCTURE TO NEW HEIGHT / TIE PIPE.
B18	61+49	GRATE INLET	40.60' RT.	4.00	———	REQ'D. NEW GRATE INLET.

* REQ'D. CONCRETE PLUG AT NO DIRECT PAY. SEE PLANS FOR LOCATION.
T.O.S.= TOP OF STRUCTURE

SUMMARY OF DRAINAGE STRUCTURES

DRAINAGE STRUCTURE	STATION	TYPE	OFFSET	REQ'D T.O.S. ELEVATION	EXIST. T.O.S. ELEVATION	REMARK
* B19	64+31	GRATE INLET	23.92' RT.	4.00	———	REQ'D. NEW GRATE INLET.
B20	64+31	GRATE INLET	107.92' RT.	6.00	———	REQ'D. NEW GRATE INLET.
* B21	66+25	GRATE INLET	25.00' RT.	5.00	———	REQ'D. NEW GRATE INLET.
B22	66+23	MANHOLE	57.23' LT.	———	———	REMOVE EXIST. M.H.
B23	66+23	MANHOLE	62.00' RT.		6.82	EXIST. STRUCTURE TO REMAIN.
B24	67+30	MANHOLE	51.00' RT.			EXIST. STRUCTURE TO REMAIN.
B25	67+30	MANHOLE	36.06' RT.			REPLACE M.H. COVER WITH GRATE.
B26	69+97	GRATE INLET	64.33' RT.	6.40	———	REQ'D. NEW GRATE INLET.
B27	69+97	GRATE INLET	34.33' RT.	4.00	———	REQ'D. NEW GRATE INLET.
B28	70+66	MANHOLE	91.11' RT.		6.42	EXIST. STRUCTURE TO REMAIN.
B29	73+33	MANHOLE	35.32' RT.		5.35	REPLACE M.H. COVER WITH GRATE.
B30	73+33	GRATE INLET	23.32' RT.	3.00	———	REQ'D. NEW GRATE INLET.
B31	76+07	MANHOLE	12.08' RT.	7.00		RAISE STRUCTURE TO NEW HEIGHT.
B32	75+61	GRATE INLET	87.00' RT.	3.25	———	REQ'D. NEW GRATE INLET.
B33	76+08	MANHOLE	64.14' RT.			TIE PIPE TO EXIST. M.H./INLET.
B34	77+47	MANHOLE	109.32' RT.	7.13	7.13	TIE PIPE TO EXIST. M.H./INLET.
B35	77+50	GRATE INLET	109.30' RT.	4.75	———	REQ'D. NEW GRATE INLET.
B36	77+65	MANHOLE	23.86' RT.		5.93	EXIST. STRUCTURE TO REMAIN

DRAIN PIPE DATA

PIPE NO.	DROP INLET NO.	PIPE SIZE	APPROX. LENGTH	END	INVERT ELEVATION
B37	B1 TO B2	18"	6'	B1	1.90
				B2	2.00
B38	B34 TO B35	18"	16'	B34	0.90
				B35	1.00
B39	B7 TO B8	18"	20'	B7	0.90
				B8	1.00
B40	B9 TO B10	18"	20'	B9	0.90
				B10	1.00
B41	B11 TO B12	18"	20'	B11	0.90
				B12	1.00
B42	B15 TO B18	36"	168'	B15	0.00
				B16	0.00
B43	B17 TO B18	36"	20'	B17	0.00
				B18	0.00
B44	B19 TO B20	36"	80'	B19	0.00
				B20	0.00
B45	B20 TO B21	36"	130'	B20	0.00
				B21	0.00
B46	B26 TO B27	18"	26'	B26	0.90
				B27	1.00
B47	B29 TO B30	18"	8'	B29	0.90
				B30	1.00
B48	B32 TO B33	18"	20'	B32	1.00
				B33	0.90
B49	B34 TO B35	18"	12'	B34	0.90
				B35	1.00

NOTE: 1. STATIONING SHOWN ARE W/L STATIONS.

LEGEND

- EXIST. "T" WALL
- REQ'D. "T" WALL
- REQ'D. "I" WALL
- REQ'D. DRAIN PIPE W/INLET OR M.H.
- EXIST. DRAIN PIPE W/INLET OR M.H.
- CLUSTER LIGHT POLE
- ELECTRICAL BOX
- TIE DOWN
- FIRE HYDRANT
- P.P. POWER POLE
- (B4) DRAINAGE STRUCTURE NO.
- (43) SURVEY BASELINE POINT NO.

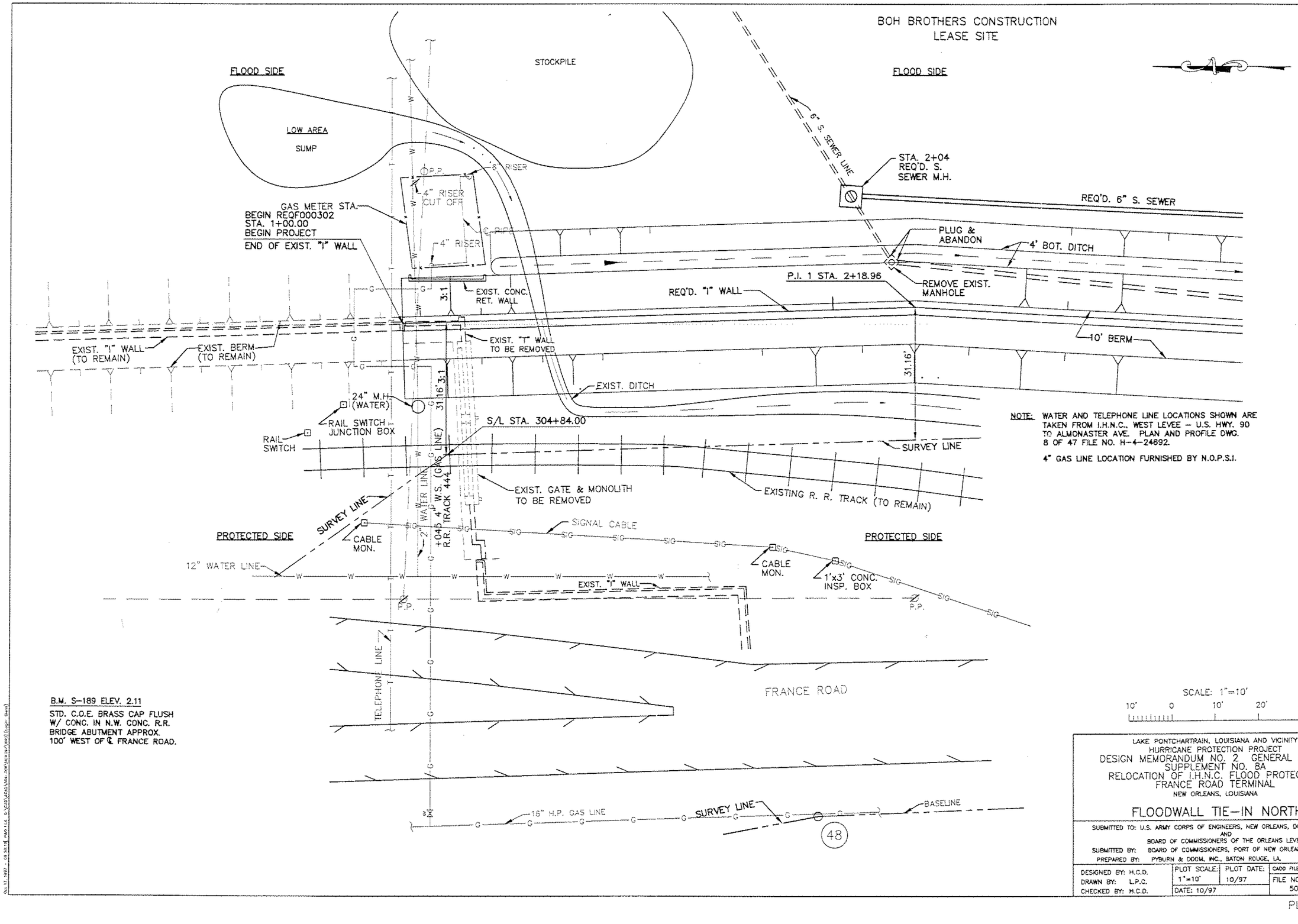
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

DRAINAGE TABLES

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: MECDSTAB
DRAWN BY: L.P.C.	NO SCALE	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

BOH BROTHERS CONSTRUCTION
LEASE SITE



NOTE: WATER AND TELEPHONE LINE LOCATIONS SHOWN ARE TAKEN FROM I.H.N.C., WEST LEVEE – U.S. HWY. 90 TO ALMONASTER AVE. PLAN AND PROFILE DWG. 8 OF 47 FILE NO. H-4-24692.

4" GAS LINE LOCATION FURNISHED BY N.O.P.S.I.

B.M. S-189 ELEV. 2.11

STD. C.O.E. BRASS CAP FLUSH W/ CONC. IN N.W. CONC. R.R. BRIDGE ABUTMENT APPROX. 100' WEST OF ℄ FRANCE ROAD.

SCALE: 1"=10'

10' 0 10' 20' 30'

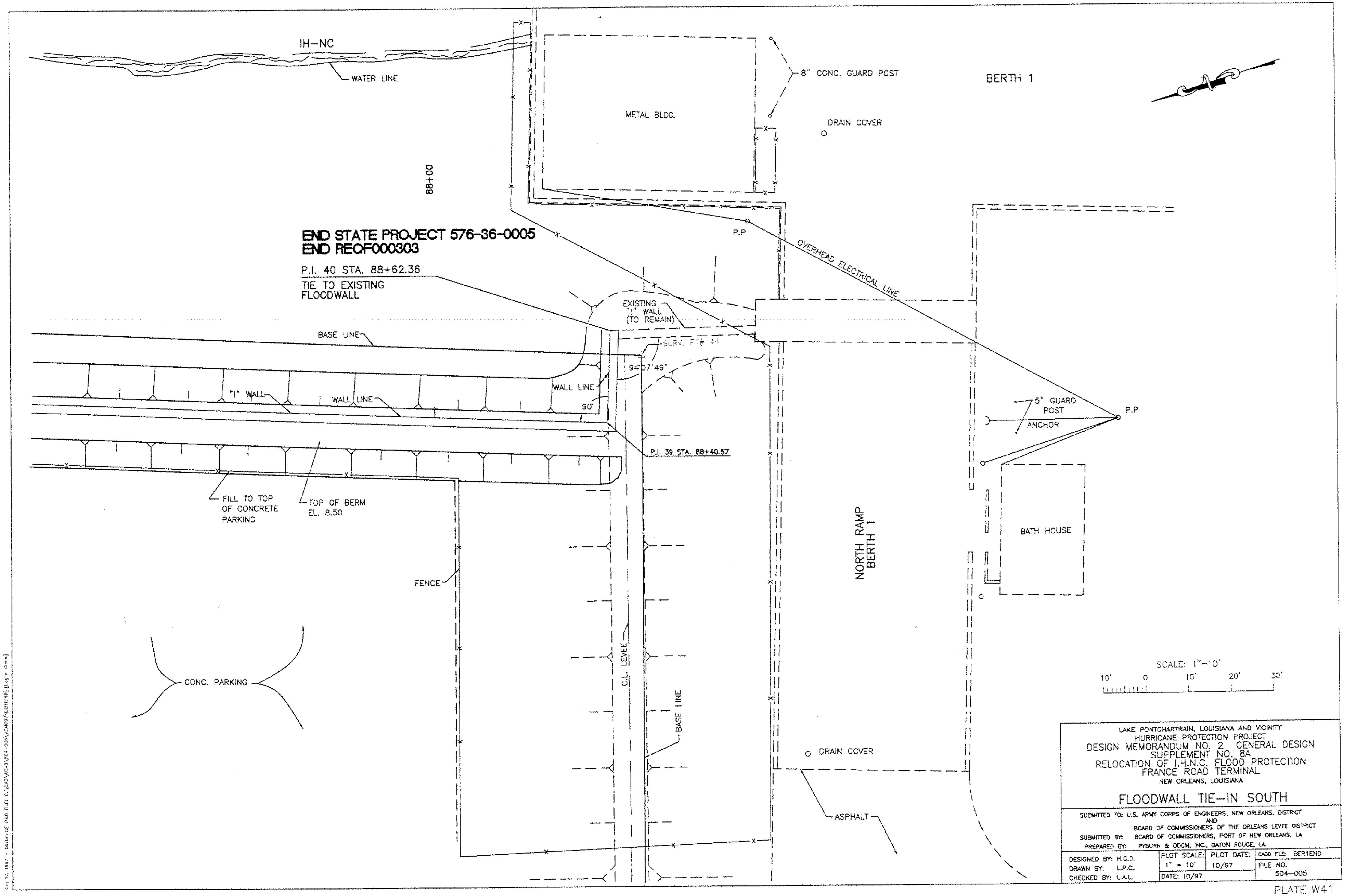
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODWALL TIE-IN NORTH

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: W40
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W40



IH-NC
WATER LINE
METAL BLDG.
8" CONC. GUARD POST
BERTH 1
DRAIN COVER
88+00
END STATE PROJECT 576-36-0005
END REQF000303
P.I. 40 STA. 88+62.36
TIE TO EXISTING FLOODWALL
P.P
OVERHEAD ELECTRICAL LINE
EXISTING "I" WALL (TO REMAIN)
BASE LINE
SURV. PT# 44
94°07'49"
WALL LINE
"I" WALL
WALL LINE
90°
P.I. 39 STA. 88+40.67
5" GUARD POST
ANCHOR
P.P
FILL TO TOP OF CONCRETE PARKING
TOP OF BERM EL. 8.50
NORTH RAMP BERTH 1
BATH HOUSE
FENCE
C.L. LEVEE
BASE LINE
CONC. PARKING
SCALE: 1"=10'
10' 0 10' 20' 30'
DRAIN COVER
ASPHALT
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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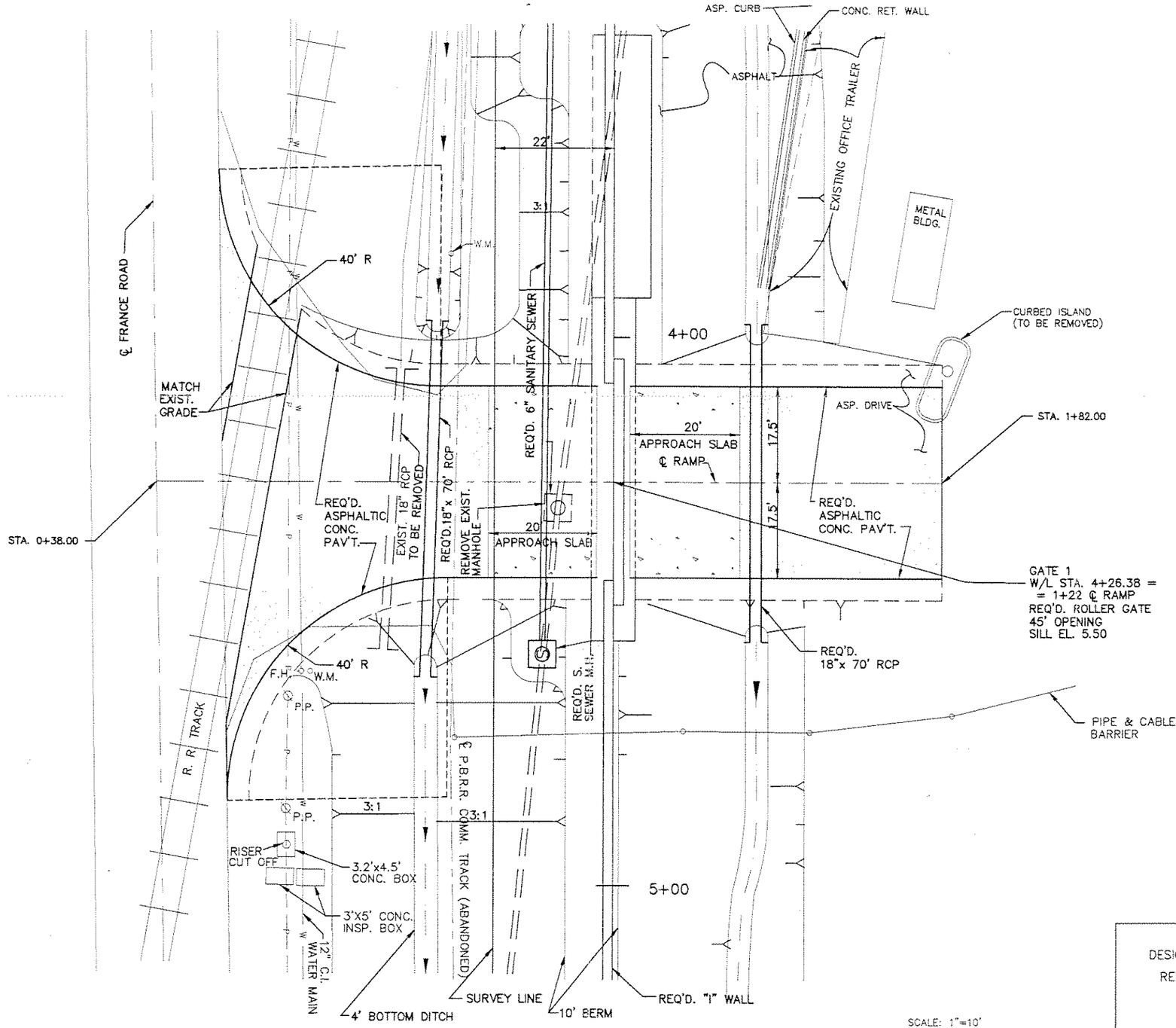
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
FLOODWALL TIE-IN SOUTH
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA
DESIGNED BY: H.C.D.
DRAWN BY: L.P.C.
CHECKED BY: L.A.L.
PLOT SCALE: 1" = 10'
PLOT DATE: 10/97
DATE: 10/97
CADD FILE: BER1END
FILE NO. 504-005

PLATE W41



LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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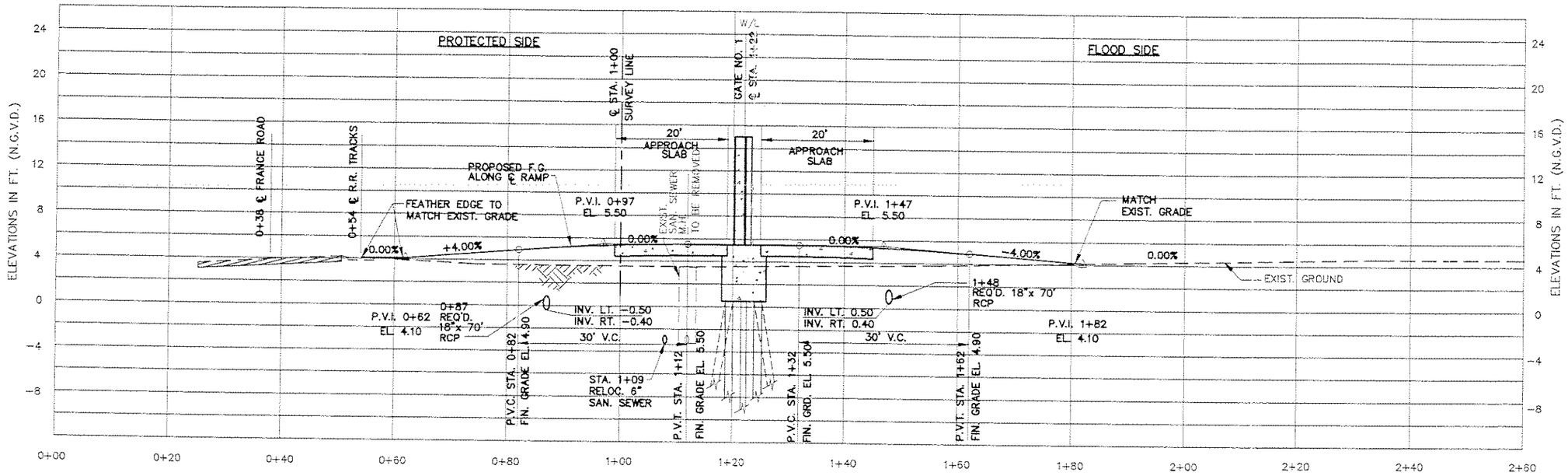
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PLAN – GATE 1 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: G1PLANEW
DRAWN BY: E.B.K.			FILE NO. 504-005
CHECKED BY: N.J.S.	DATE: 10/97		

PLATE W42



PROFILE – GATE NO. 1 RAMP

(HORZ.) SCALE: 1"= 10'
(VERT.) SCALE: 1"= 5'

(HORZ.) SCALE: 1"=10'

10' 0 10' 20' 30'

(VERT.) SCALE: 1"=5'

5' 0 5' 10' 15'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
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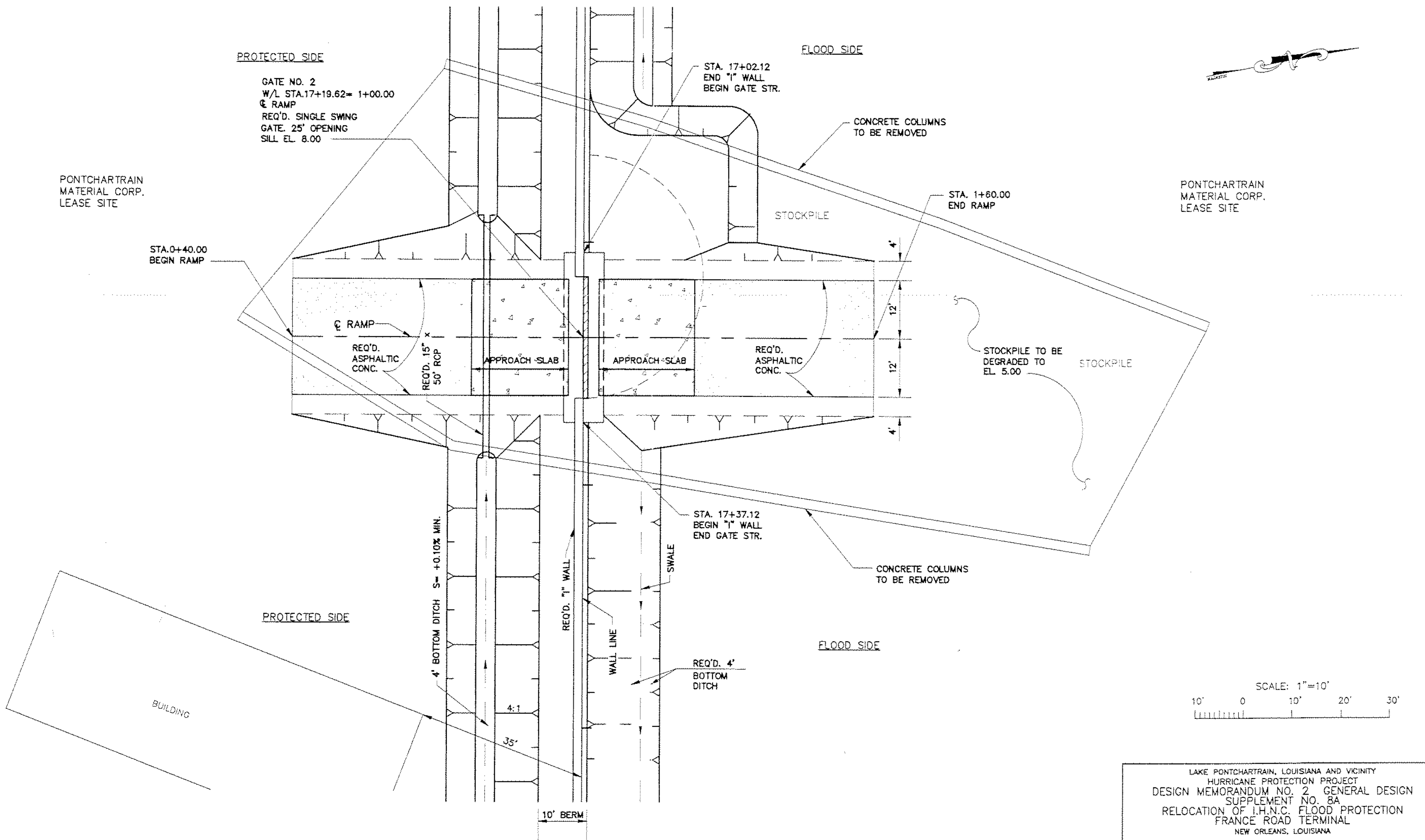
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROFILE – GATE 1 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.N.S.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: G1PROF1
DRAWN BY: E.B.K.			FILE NO. 504-005
CHECKED BY: J.N.S.	DATE: 10/97		



LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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RELOCATION OF I.H.N.C. FLOOD PROTECTION
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PLAN – GATE NO. 2 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
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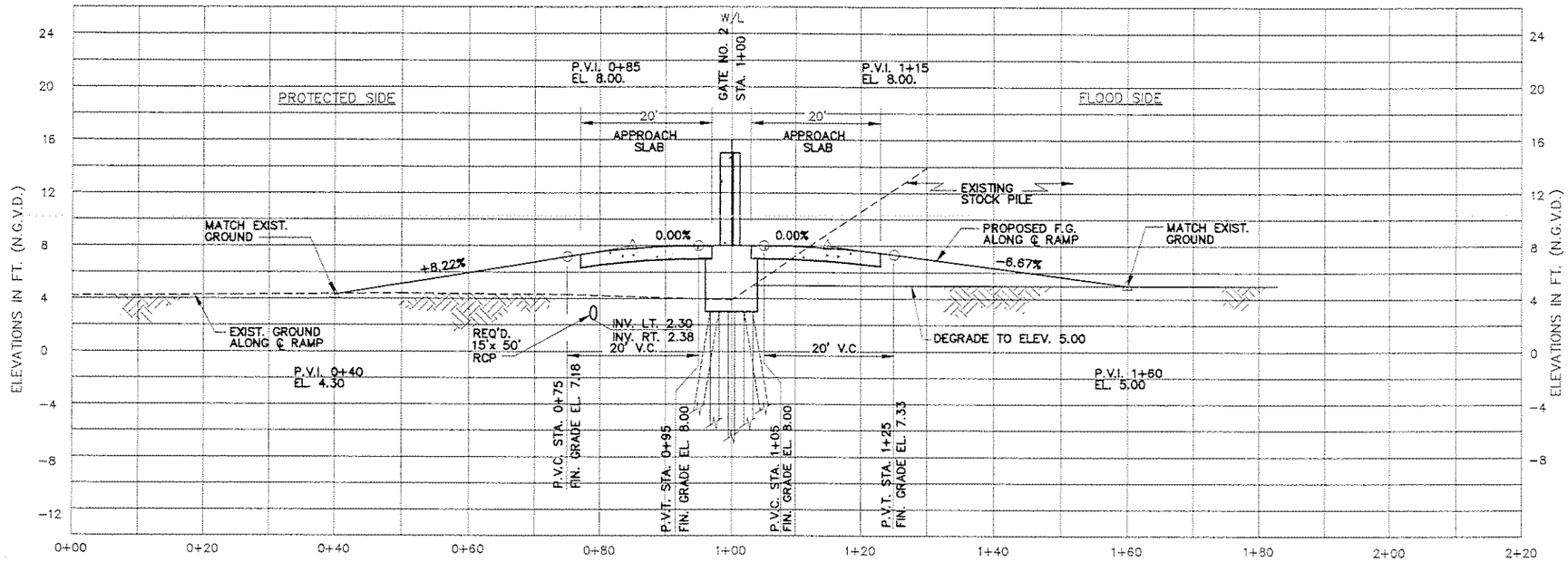
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.N.S.	PLOT SCALE:	PLOT DATE:	CADD FILE: G2PLAN	
DRAWN BY: E.B.K.	1"=10'	10/97	FILE NO.	
CHECKED BY: J.N.S.	DATE: 10/97		504-005	

PLATE W44



PROFILE — GATE NO. 2 RAMP

(HORZ.) SCALE: 1"= 10'
(VERT.) SCALE: 1"= 5'

(HORZ.) SCALE: 1"=10'

10' 0 10' 20' 30'

(VERT.) SCALE: 1"=5'

5' 0 5' 10' 15'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

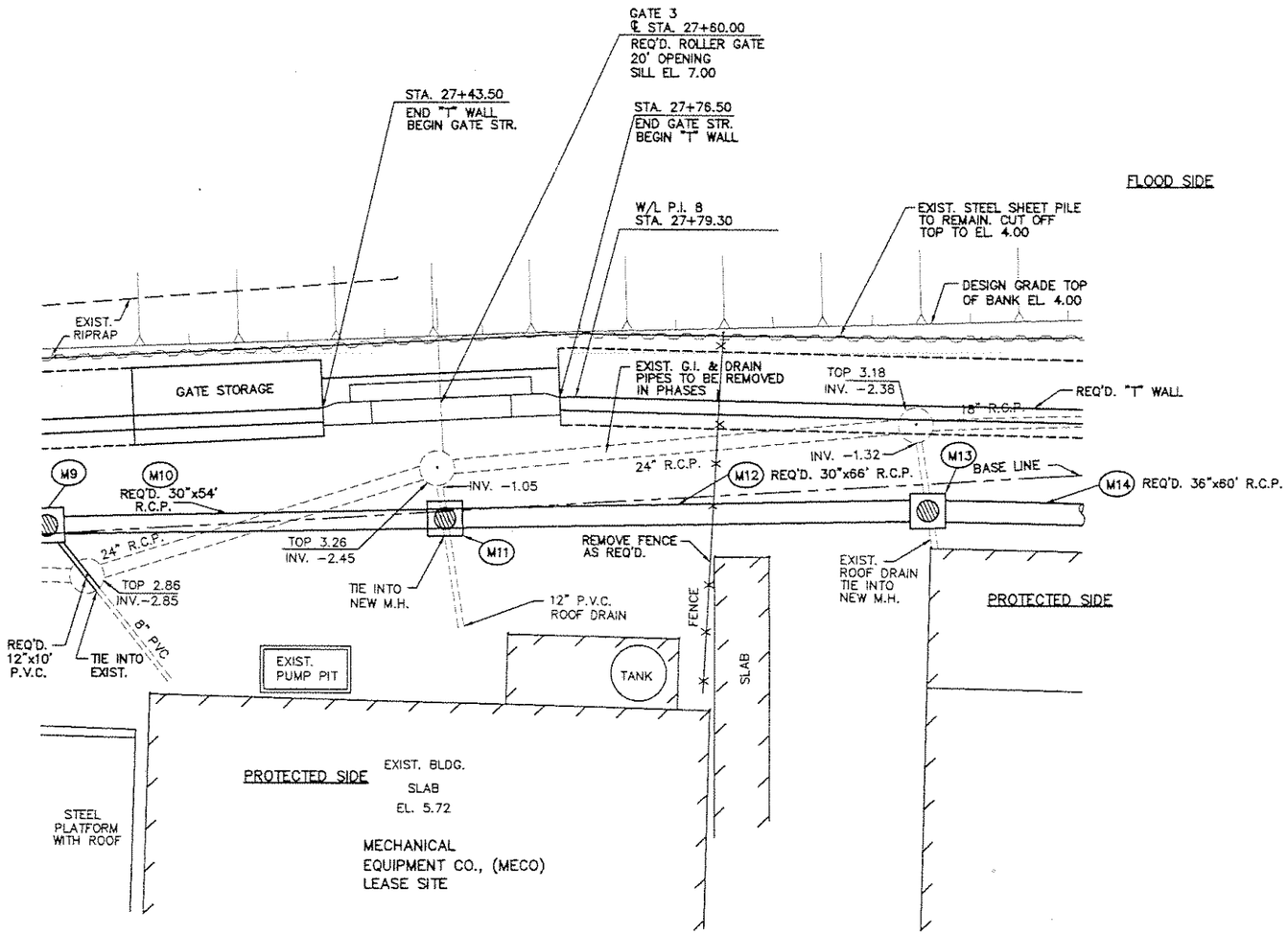
PROFILE — GATE 2 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.N.S.	PLOT SCALE: 1"=20'	PLOT DATE: 10/97	CADD FILE: G1PROF2
DRAWN BY: E.B.K.			FILE NO. 504-005
CHECKED BY: J.N.S.	DATE: 10/97		

PLATE W45

SLIP NO. 3



SCALE: 1"=10'

10' 0 10' 20' 30'

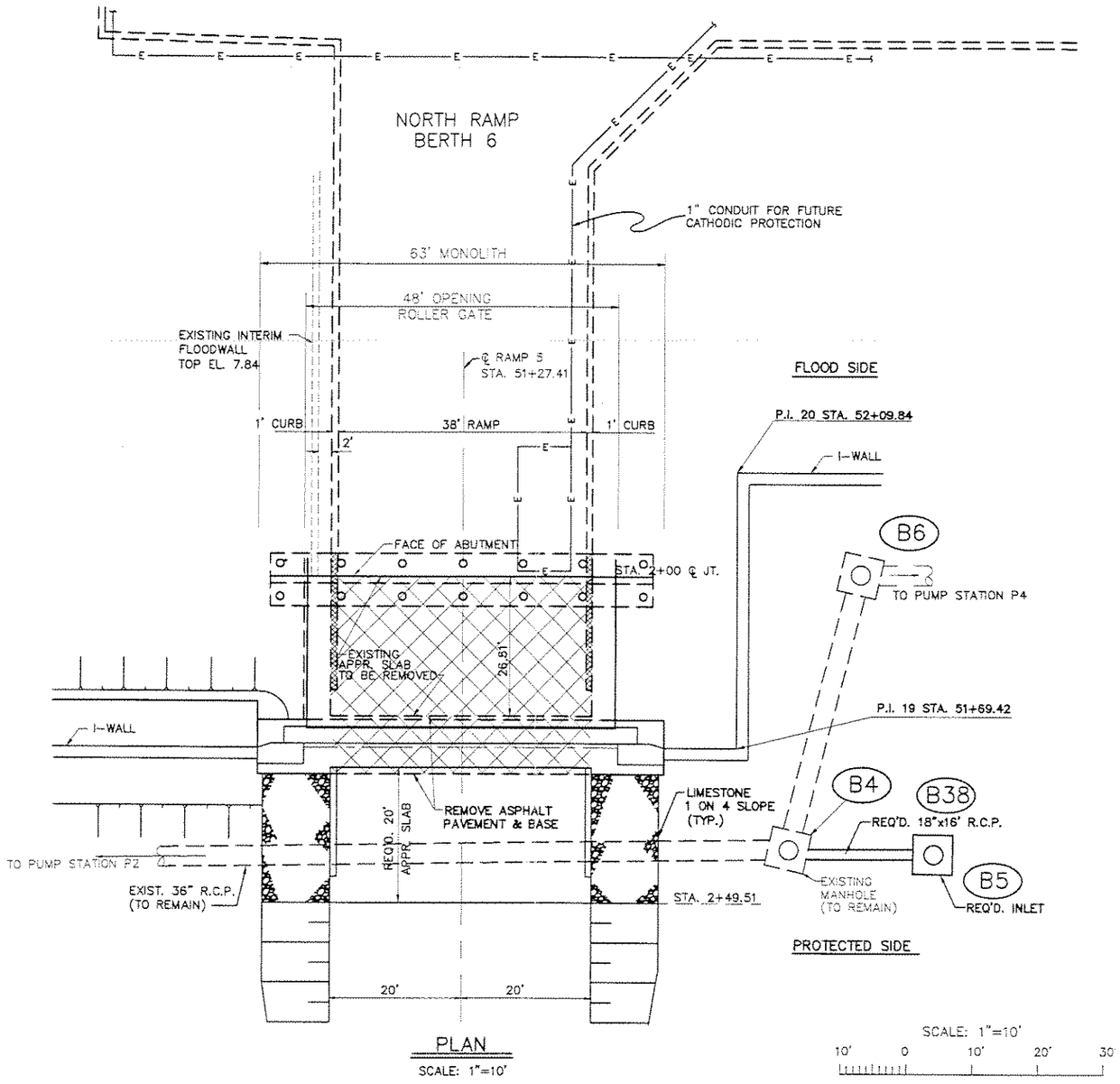
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROJECT PLAN

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & DOOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: W49A
DRAWN BY: L.P.C.	1"=10'	10/97	FILE NO.
CHECKED BY: H.C.D.	DATE: 10/97		504-005

PLATE W45A



PLAN
SCALE: 1"=10'

SCALE: 1"=10'
10' 0 10' 20' 30'

UTILITY REFERENCE

ELECTRIC: M11F-5793-W-E2
WATER: M11F-5793-W-M1

NOTE: LOCATION OF UTILITIES AND RELATIVE DISTANCES AND ELEVATIONS SHOWN FROM REFERENCE DRAWINGS FOR INFORMATION ONLY.

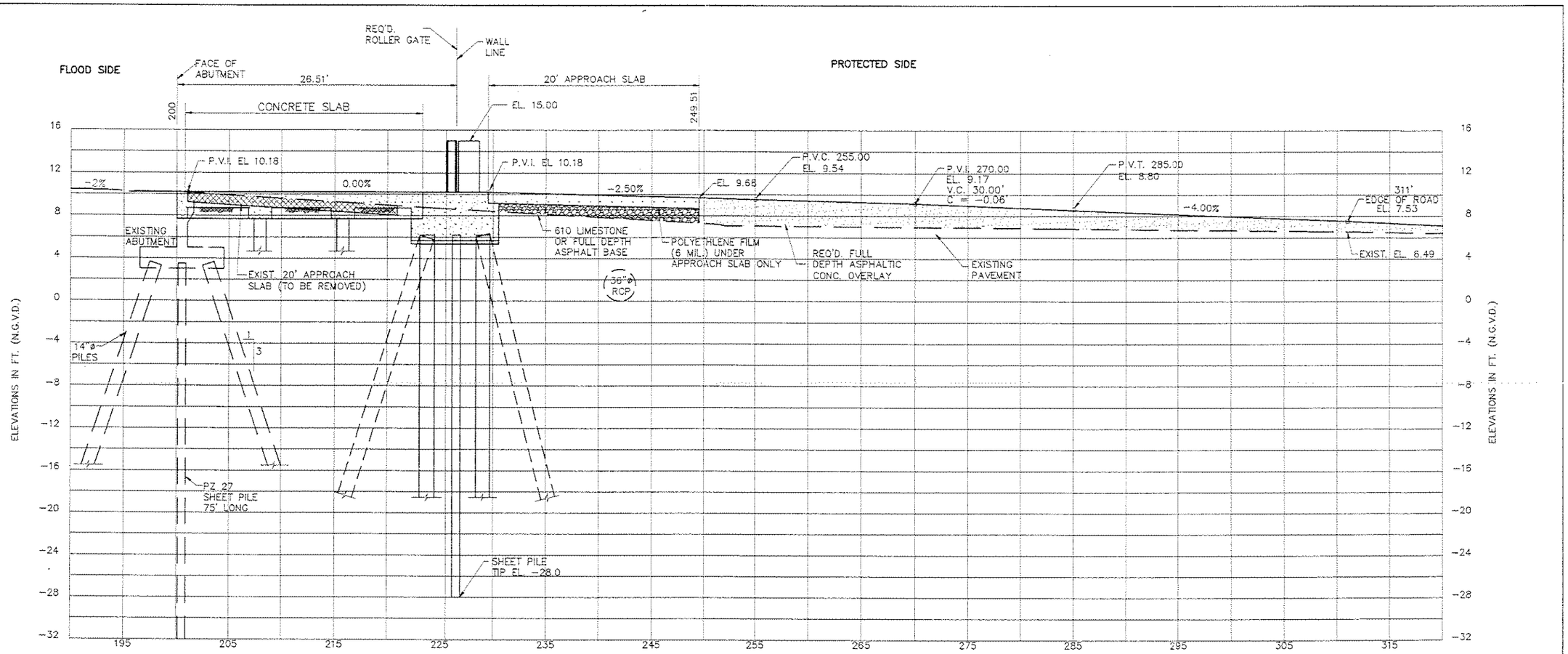
THIS FLOOD GATE IS LOCATED IN OLD SLIP NO. 2.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

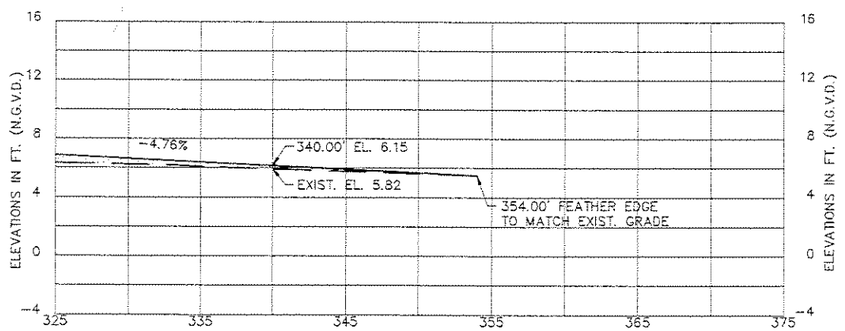
PLAN – GATE 5 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.N.S.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: RAMP5	
DRAWN BY: E.B.K.			FILE NO. 504-005	
CHECKED BY: J.N.S.	DATE: 10/97			



(DISTANCES MEASURED FROM EAST SIDE OF BERTH)



PROFILE NORTH RAMP — BERTH 6

(HORZ.) SCALE: 1"= 5'
(VERT.) SCALE: 1"= 5'

(HORZ.) SCALE: 1"=5'
(VERT.) SCALE: 1"=5'

5' 0 5' 10' 15'

NOTE:
THIS FLOODGATE IS LOCATED IN OLD SLIP NO. 2.

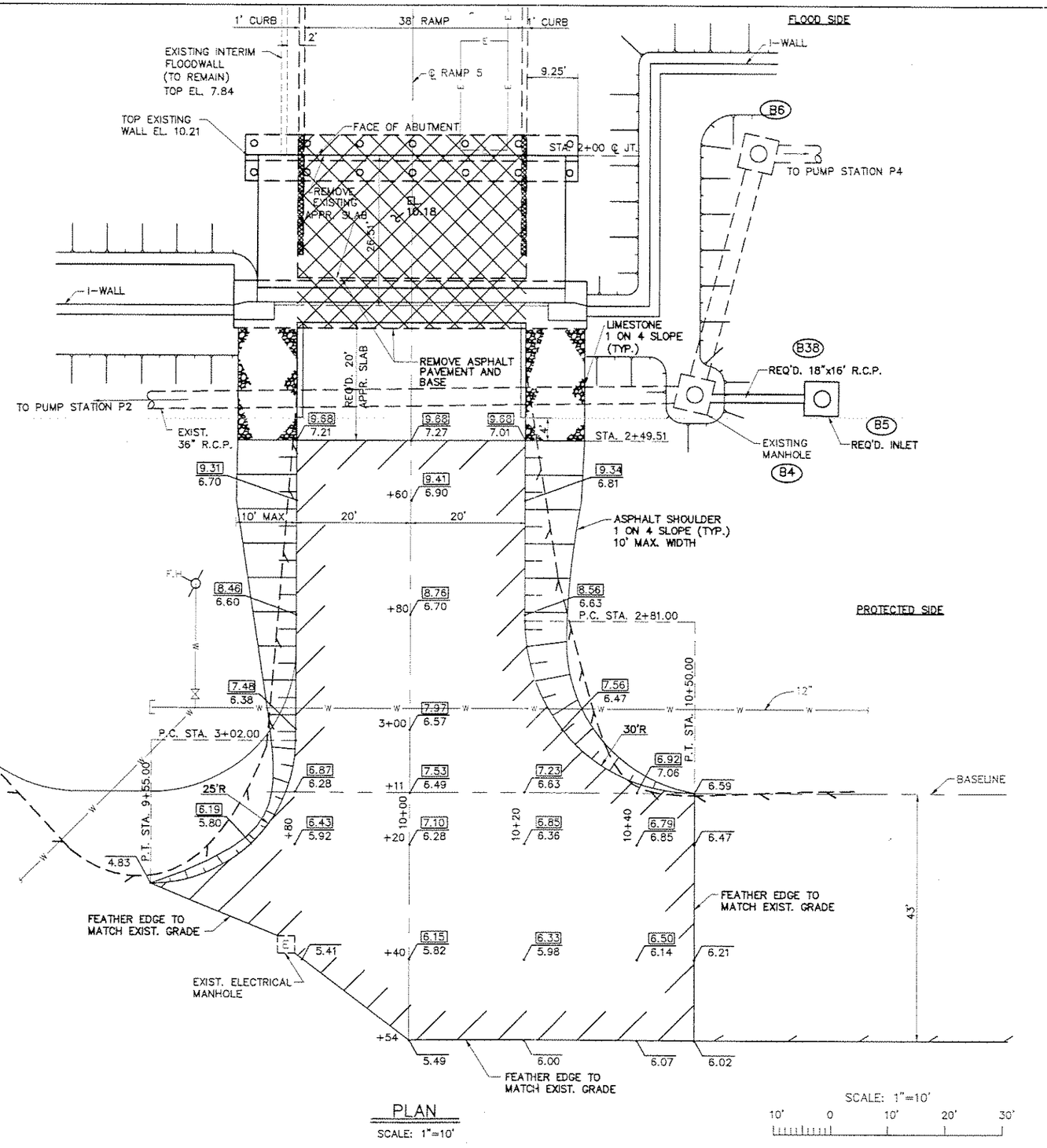
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROFILE — GATE 5 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1" = 5'	PLOT DATE: 10/97	CADD FILE: RAMP5PRO
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: L.A.L.	DATE: 10/97		

PLATE W47



UTILITY REFERENCE

ELECTRIC: M11F-5793-W-E2
WATER: M11F-5793-W-M1

NOTE: LOCATION OF UTILITIES AND RELATIVE DISTANCES AND ELEVATIONS SHOWN FROM REFERENCE DRAWINGS FOR INFORMATION ONLY.

LEGEND:

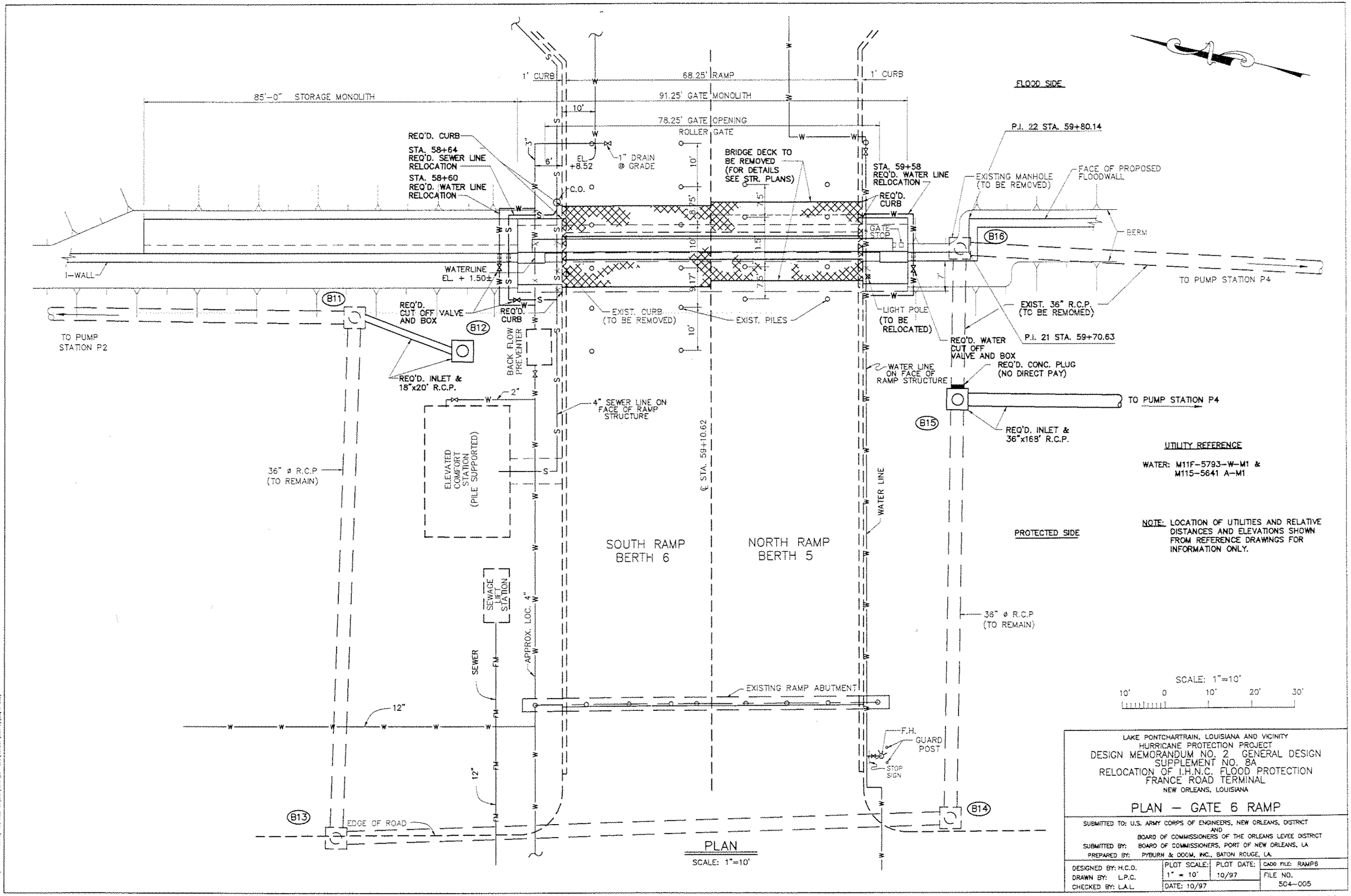
- REQUIRED ASPHALT OVERLAY
- 6.50 / 6.14 NEW ELEVATION / EXISTING ELEVATION
- —W— EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING ELECTRICAL MANHOLE
- EXISTING FIRE HYDRANT

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

TURNOUT DETAIL – GATE 5 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: RSTURN
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

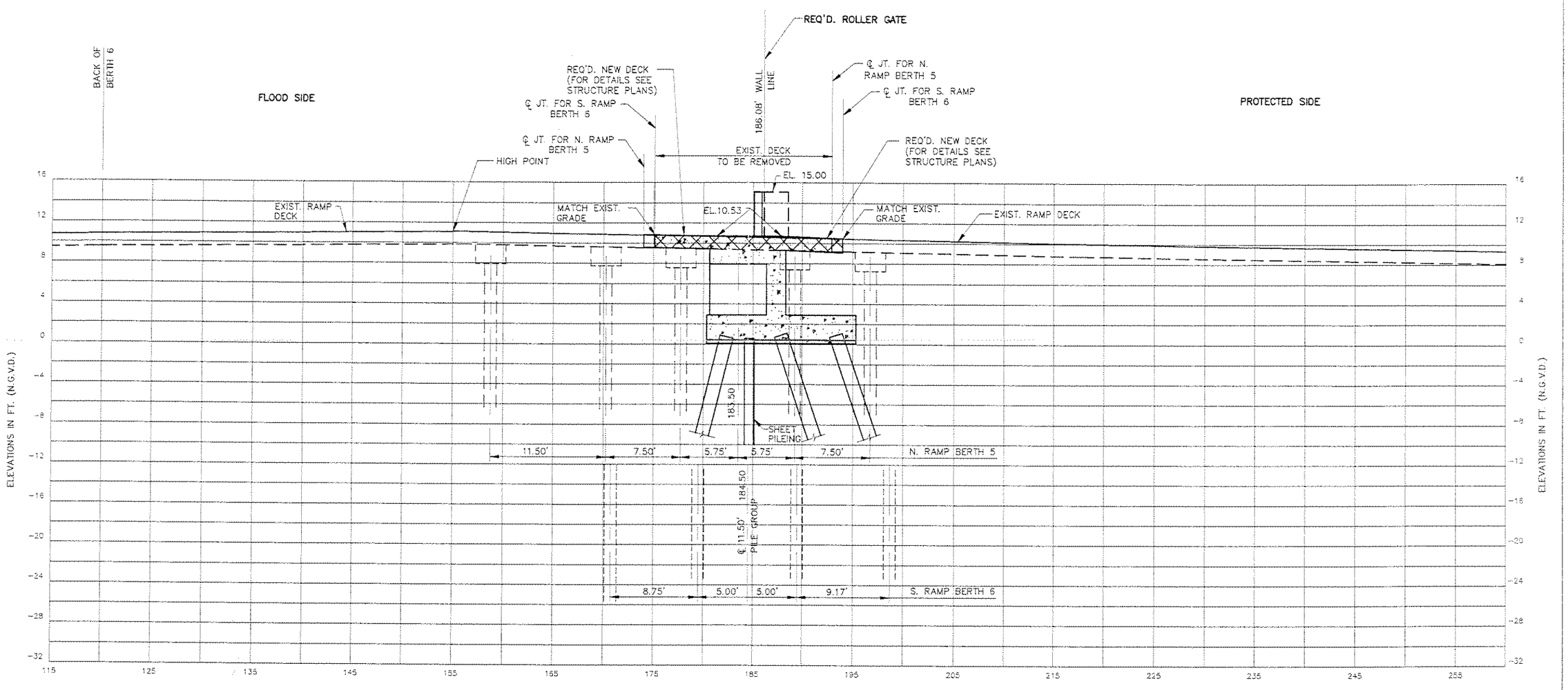


LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PLAN – GATE 6 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.O.	PLOT SCALE: 1" = 10'	PLOT DATE: 10/97	CADD FILE: RAMP6
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: L.A.L.	DATE: 10/97		



(DISTANCES MEASURED FROM EAST SIDE OF BERTH)

PROFILE SOUTH RAMP – BERTH 6 & NORTH RAMP – BERTH 5

(HORZ.) SCALE: 1"= 5'
(VERT.) SCALE: 1"= 5'

(HORZ.) SCALE: 1"=5'
(VERT.) SCALE: 1"=5'

5' 0 5' 10' 15'

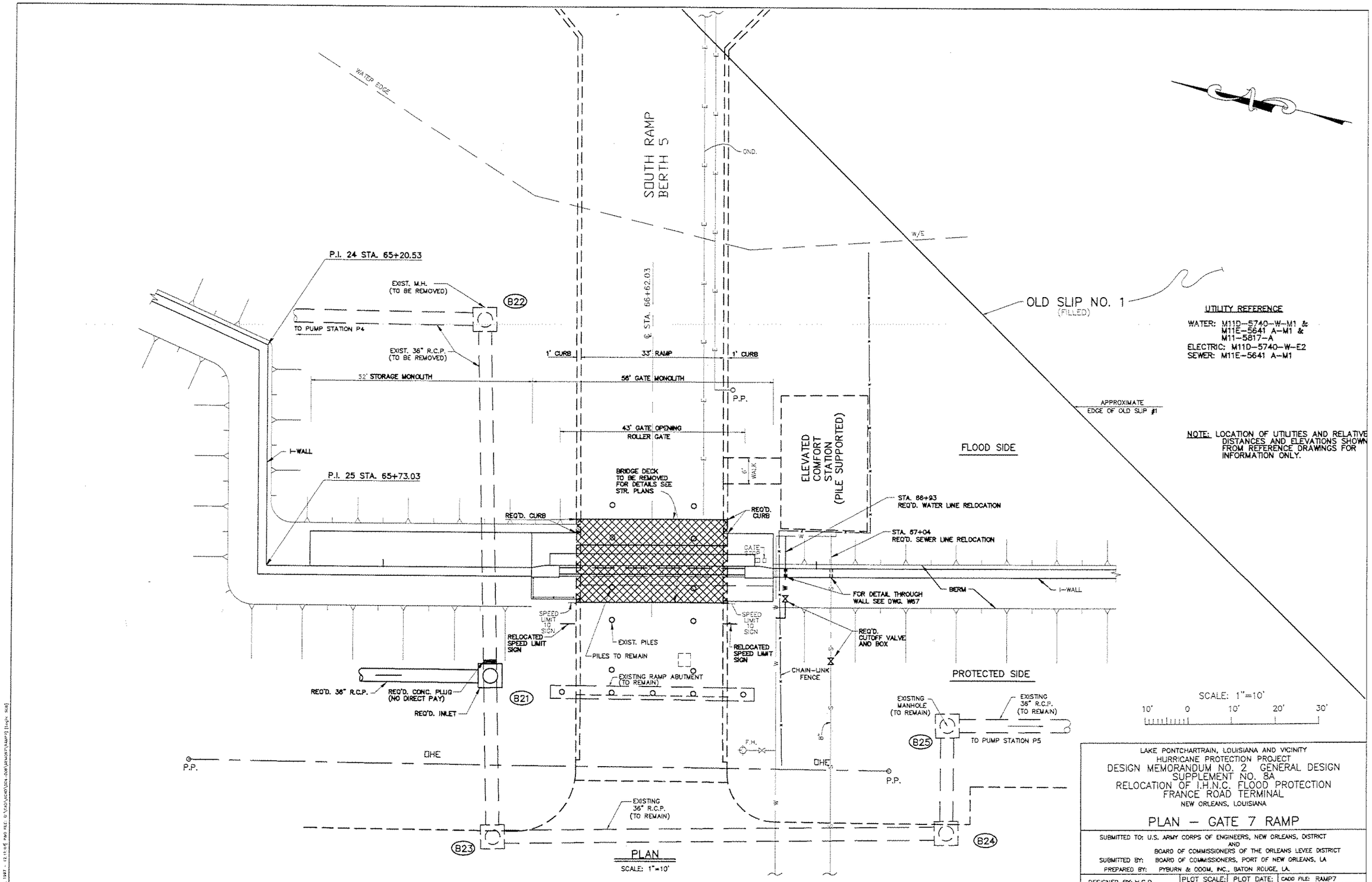
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROFILE – GATE 6 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.O.	PLOT SCALE:	PLOT DATE:	CADD FILE: RAMP6PRO
DRAWN BY: L.P.C.	1" = 5'	10/97	FILE NO.
CHECKED BY: L.A.L.	DATE: 10/97		504-005

PLATE W50



UTILITY REFERENCE

WATER: M11D-5740-W-M1 & M11E-5641 A-M1 & M11-5817-A
ELECTRIC: M11D-5740-W-E2
SEWER: M11E-5641 A-M1

NOTE: LOCATION OF UTILITIES AND RELATIVE DISTANCES AND ELEVATIONS SHOWN FROM REFERENCE DRAWINGS FOR INFORMATION ONLY.

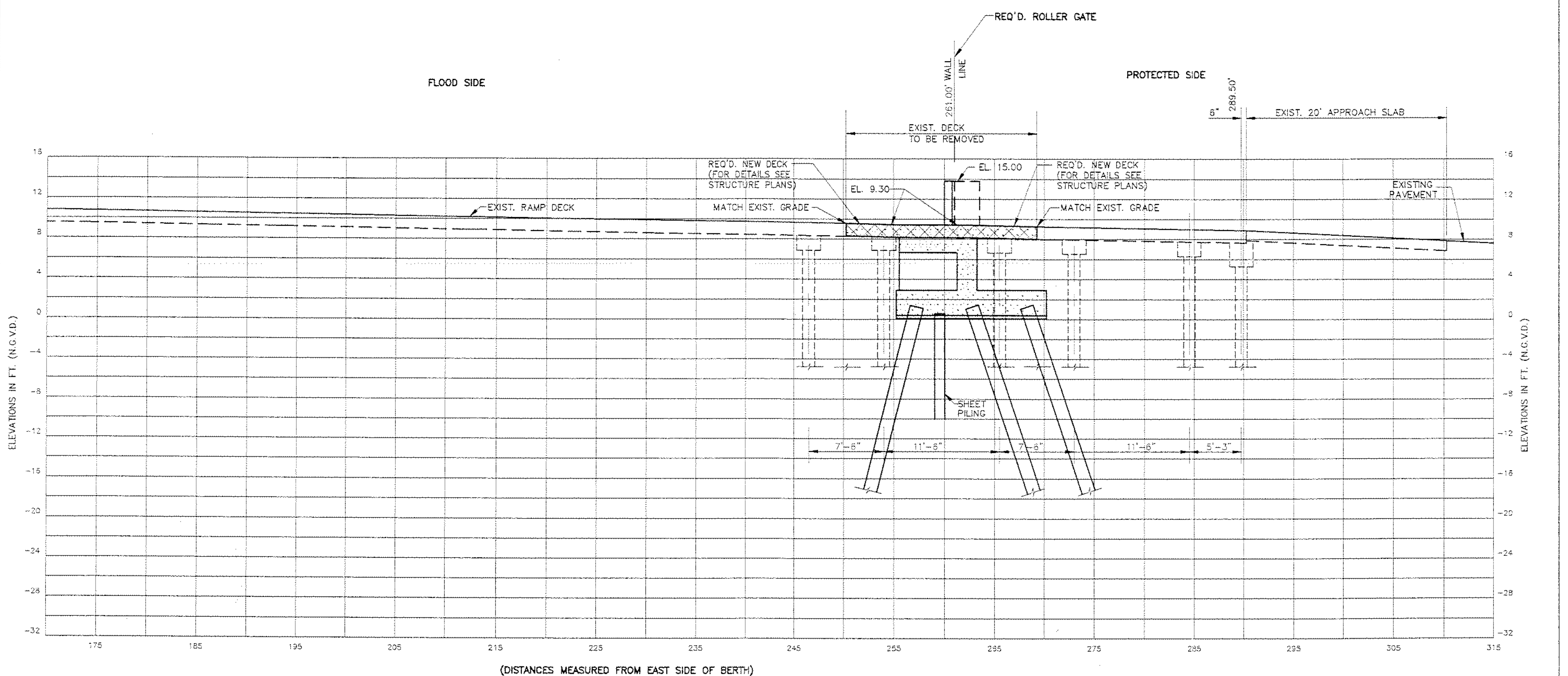
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PLAN – GATE 7 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.O.	PLOT SCALE:	PLOT DATE:	CADD FILE: RAMP7
DRAWN BY: L.P.C.	1" = 10'	10/97	FILE NO.
CHECKED BY: L.A.L.	DATE: 10/97		504--005

PLATE W51



PROFILE SOUTH RAMP–BERTH 5

(HORZ.) SCALE: 1"=5'
(VERT.) SCALE: 1"=5'

(HORZ.) SCALE: 1"=5'
(VERT.) SCALE: 1"=5'
5' 0 5' 10' 15'

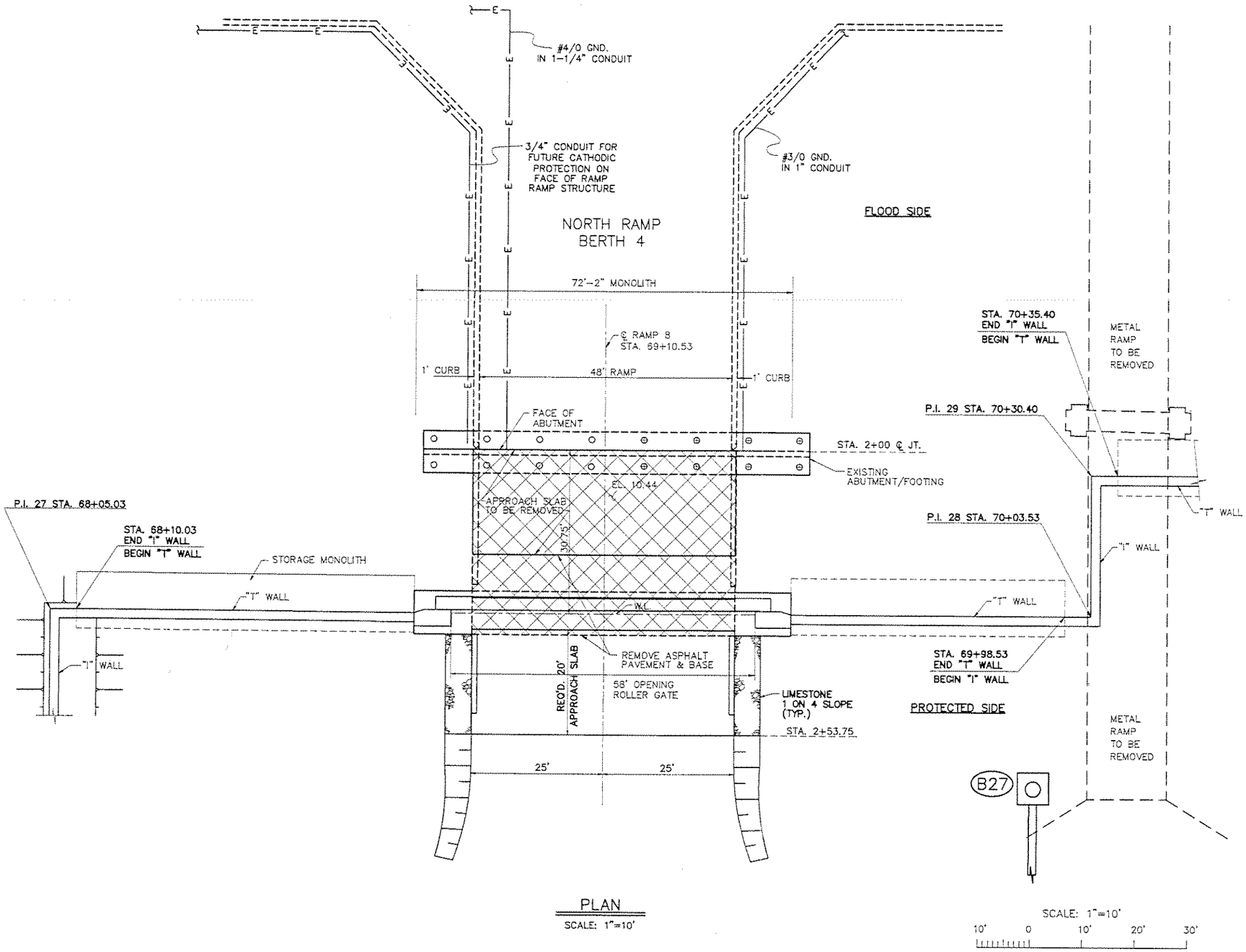
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROFILE – GATE 7 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1" = 5'	PLOT DATE: 10/97	CADD FILE: RAMP7PRO
DRAWN BY: L.P.C.			FILE NO. 504–005
CHECKED BY: L.A.L.	DATE: 10/97		

PLATE W52



UTILITY REFERENCE

ELECTRIC: M11D-5740-W-E1 & E2

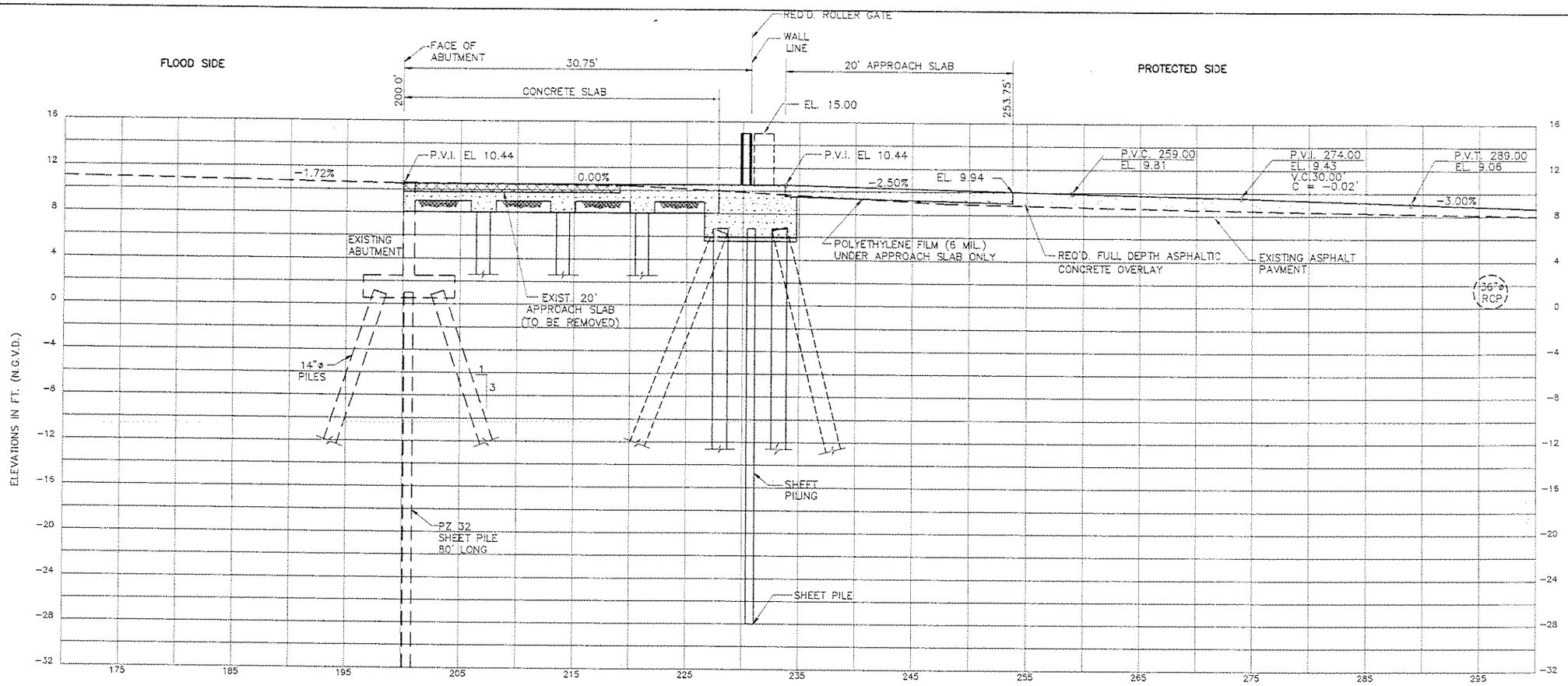
NOTE: LOCATION OF UTILITIES AND RELATIVE DISTANCES AND ELEVATIONS SHOWN FROM REFERENCE DRAWINGS FOR INFORMATION ONLY.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

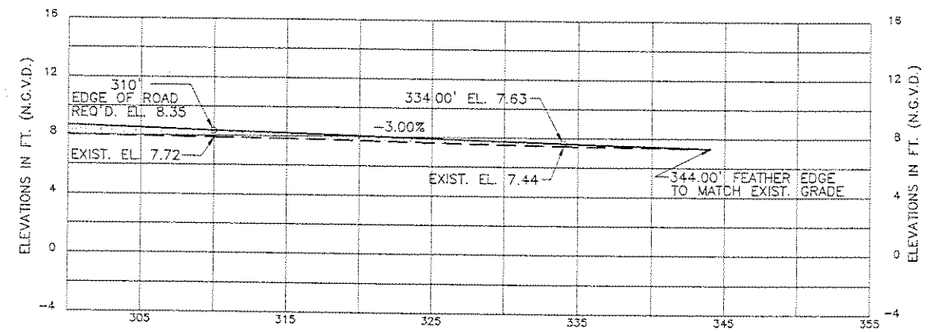
PLAN-GATE NO. 8 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.N.S.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: RAMP8
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: J.N.S.	DATE: 10/97		



(DISTANCES MEASURED FROM EAST SIDE OF BERTH)



NOTE:
THIS FLOODGATE IS LOCATED IN OLD SLIP NO. 1.

(HORZ.) SCALE: 1"=5'
(VERT.) SCALE: 1"=5'

5' 0 5' 10' 15'

PROFILE NORTH RAMP – BERTH 4

(HORZ.) SCALE: 1"= 5'
(VERT.) SCALE: 1"= 5'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROFILE – GATE 8 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1" = 5'	PLOT DATE: 10/97	CADD FILE: RAMP8PRO
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: L.A.L.	DATE: 10/97		

PLATE W54

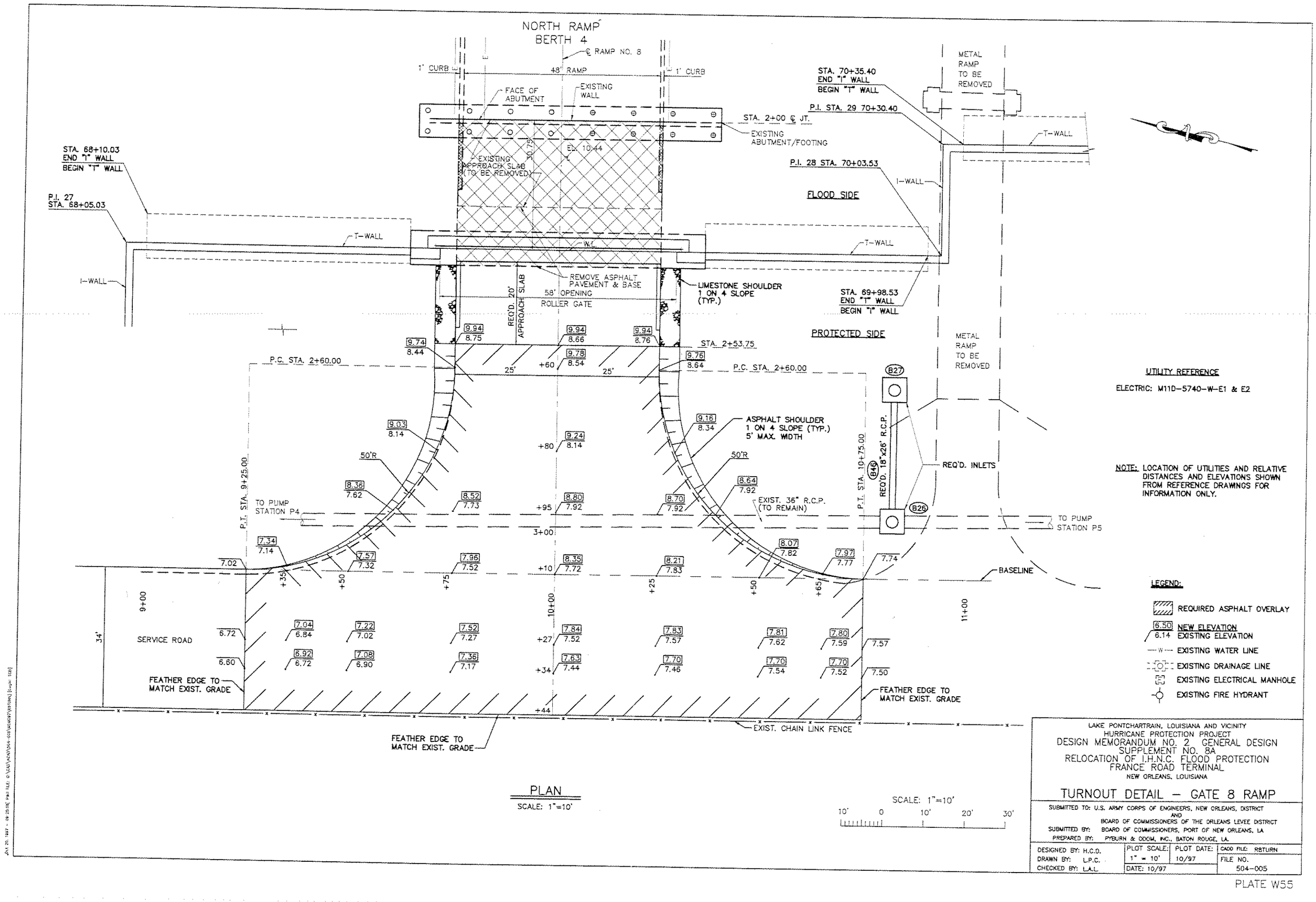

NORTH RAMP
BERTH 4
℄ RAMP NO. 8
1' CURB
48" RAMP
1' CURB
FACE OF ABUTMENT
EXISTING WALL
STA. 2+00 ℄ JT.
EXISTING ABUTMENT/FOOTING
EXISTING APPROACH SLAB (TO BE REMOVED)
EL. 10.44
30.75'
STA. 68+10.03
END "I" WALL
BEGIN "T" WALL
P.I. 27
STA. 68+05.03
T-WALL
I-WALL
W.F.
REMOVE ASPHALT PAVEMENT & BASE
58' OPENING
ROLLER GATE
REQ'D. 20' APPROACH SLAB
LIMESTONE SHOULDER 1 ON 4 SLOPE (TYP.)
STA. 70+35.40
END "I" WALL
BEGIN "T" WALL
P.I. STA. 29 70+30.40
METAL RAMP TO BE REMOVED
T-WALL
P.I. 28 STA. 70+03.53
I-WALL
FLOOD SIDE
T-WALL
STA. 69+98.53
END "T" WALL
BEGIN "I" WALL
PROTECTED SIDE
METAL RAMP TO BE REMOVED
STA. 2+53.75
P.C. STA. 2+60.00
P.C. STA. 2+60.00
25'
+60
25'
9.74 8.44
9.94 8.75
9.94 8.66
9.78 8.54
9.94 8.76
9.76 8.64
9.16 8.34
ASPHALT SHOULDER 1 ON 4 SLOPE (TYP.) 5' MAX. WIDTH
50'R
50'R
9.03 8.14
+80
9.24 8.14
8.36 7.62
8.52 7.73
+95
8.80 7.92
8.70 7.92
8.64 7.92
EXIST. 36" R.C.P. (TO REMAIN)
P.I. STA. 9+25.00
TO PUMP STATION P4
3+00
P.I. STA. 10+75.00
B27
B46
REQ'D. 18'x26' R.C.P.
REQ'D. INLETS
B26
TO PUMP STATION P5
7.34 7.14
7.57 7.32
7.96 7.52
+10
8.35 7.72
8.21 7.83
8.07 7.82
7.97 7.77
7.74
7.02
+35
+50
+75
+25
+50
+65
BASELINE
9+00
10+00
11+00
34'
SERVICE ROAD
6.72
6.60
7.04 6.84
7.22 7.02
7.52 7.27
+27
7.84 7.52
7.83 7.57
7.81 7.62
7.80 7.59
7.57
6.92 6.72
7.08 6.90
7.36 7.17
+34
7.63 7.44
7.70 7.46
7.70 7.54
7.70 7.52
7.50
FEATHER EDGE TO MATCH EXIST. GRADE
FEATHER EDGE TO MATCH EXIST. GRADE
+44
EXIST. CHAIN LINK FENCE
FEATHER EDGE TO MATCH EXIST. GRADE
PLAN
SCALE: 1"=10'
SCALE: 1"=10'
10' 0 10' 20' 30'
UTILITY REFERENCE
ELECTRIC: M11D-5740-W-E1 & E2
NOTE: LOCATION OF UTILITIES AND RELATIVE DISTANCES AND ELEVATIONS SHOWN FROM REFERENCE DRAWINGS FOR INFORMATION ONLY.
LEGEND:
REQUIRED ASPHALT OVERLAY
6.50 NEW ELEVATION
6.14 EXISTING ELEVATION
EXISTING WATER LINE
EXISTING DRAINAGE LINE
EXISTING ELECTRICAL MANHOLE
EXISTING FIRE HYDRANT
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
TURNOUT DETAIL – GATE 8 RAMP
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.
DESIGNED BY: H.C.D.
DRAWN BY: L.P.C.
CHECKED BY: L.A.L.
PLOT SCALE: 1" = 10'
PLOT DATE: 10/97
DATE: 10/97
CADD FILE: RBTURN
FILE NO. 504-005

PLATE W55

2 #4 IN 1-1/4"C.

SOUTH RAMP BERTH 4

℄ RAMP 9
STA. 76+45.10

57' MONOLITH

43' OPENING
DBL. SWING GATE

1' CURB

33' RAMP

1' CURB

P.I. 32 STA. 75+39.10

P.I. 33 STA. 75+62.10

I-WALL

LIMESTONE 1 ON 4 SLOPE (TYP.)

TO PUMP STATION P5

B31

FACE OF ABUTMENT

EL. 10.56

REQ'D. 20' APPR. SLAB

EXIST. 20' APPROACH SLAB (TO BE REMOVED)

4'

17.50'

17.50'

W.V.

4"

APPROX. LOC.

8"

F.H.

B33

B32

REQ'D. 18"x20' R.C.P.

EXIST. 36" R.C.P. (TO REMAIN)

FLOOD SIDE

P.I. 35 STA. 77+38.16

STA. 77+43.16
END "I" WALL
BEGIN "T" WALL

T-WALL

I-WALL

B36

TO PUMP STATION P3

WATERLINE EL.+7.75

STA. 2+00 ℄ JT.

P.I. 34 STA. 76+93.61

STA. 76+78
REQ'D. WATERLINE RELOCATION

EXIST. 3" GATE VALVE & BACKFLOW PREVENTER

WATERLINE EL. +5.63

ROOF SOFFIT

REQ'D. 3" GATE VALVE & BACKFLOW PREVENTER

STA. 2+34.18

ELEVATED COMFORT STATION (PILE SUPPORTED)

PROTECTED SIDE

B49

REQ'D. 18"x16' R.C.P.

B35

B34

REQ'D. INLET

PLAN
SCALE: 1"=10'

SCALE: 1"=10'
10' 0 10' 20' 30'

UTILITY REFERENCE

WATER: M11D-5740-W-M1
ELECTRIC: M11D-5740-W-E2

NOTE: LOCATION OF UTILITIES AND RELATIVE ELEVATIONS AND DISTANCES SHOWN FROM REFERENCE DRAWINGS FOR INFORMATION ONLY.

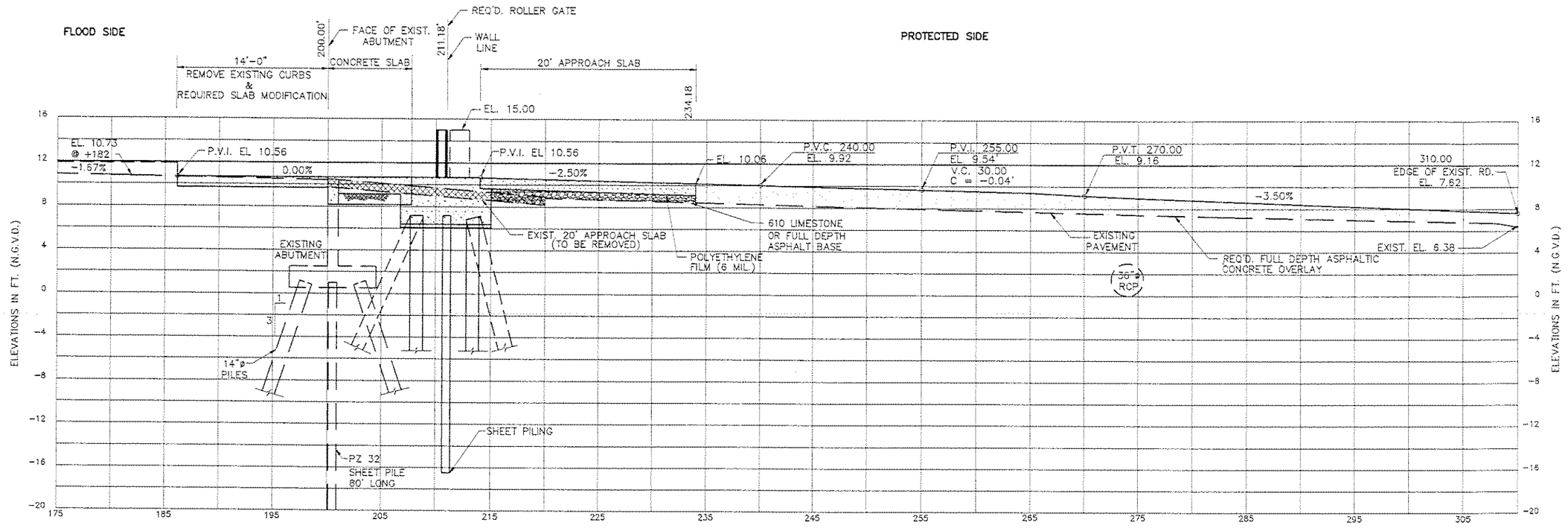
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

RAMP 9 PLAN

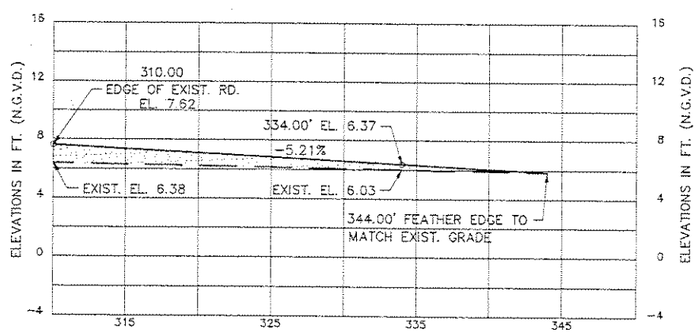
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: RAMP9
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W56



(DISTANCES MEASURED FROM EAST SIDE OF BERTH)



PROFILE SOUTH RAMP – BERTH 4

(HORZ.) SCALE: 1"= 5'
(VERT.) SCALE: 1"= 5'

(HORZ.) SCALE: 1"=5'
(VERT.) SCALE: 1"=5'

5' 0 5' 10' 15'

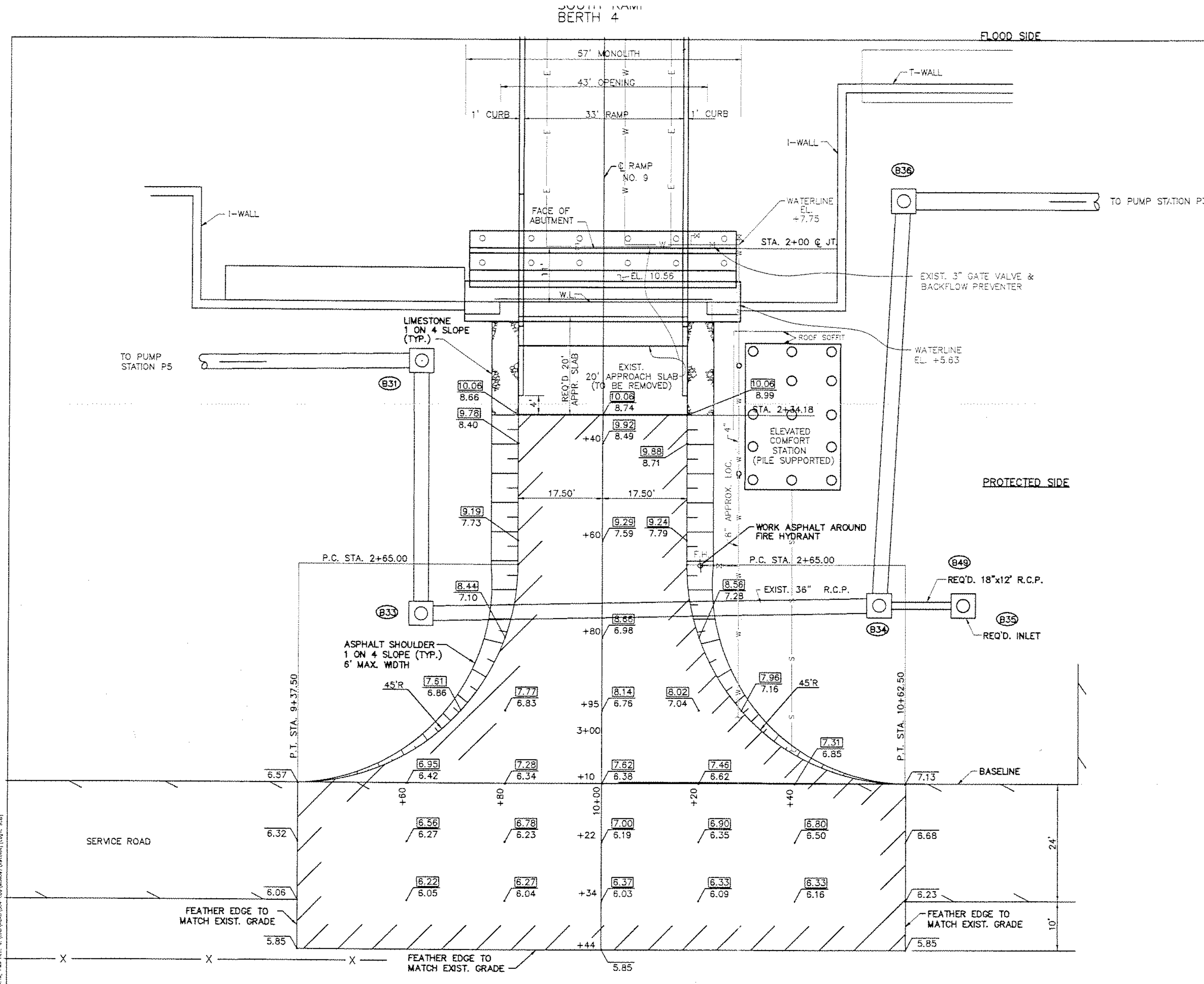
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

PROFILE – GATE 9 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE:	PLOT DATE:	CADD FILE: RAMP9PRO
DRAWN BY: L.P.C.	1" = 5'	10/97	FILE NO.
CHECKED BY: L.A.L.	DATE: 10/97		504--005

PLATE W57



PLAN

SCALE: 1"=10'

UTILITY REFERENCE

WATER: M11D-5740-W-M1
ELECTRIC: M11D-5740-W-E2

NOTE: LOCATION OF UTILITIES AND RELATIVE ELEVATIONS AND DISTANCES SHOWN FROM REFERENCE DRAWINGS FOR INFORMATION ONLY.

LEGEND:

- REQUIRED ASPHALT OVERLAY
- 6.50 NEW ELEVATION / 6.14 EXISTING ELEVATION
- EXISTING WATER LINE
- EXISTING DRAINAGE LINE
- EXISTING ELECTRICAL MANHOLE
- EXISTING FIRE HYDRANT

SCALE: 1"=10'

10' 0 10' 20' 30'

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

TURNOUT DETAIL – GATE 9 RAMP

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: H.C.D.	PLOT SCALE: 1"=10'	PLOT DATE: 10/97	CADD FILE: R9TURN
DRAWN BY: L.P.C.			FILE NO. 504-005
CHECKED BY: H.C.D.	DATE: 10/97		

PLATE W58

LOADING:

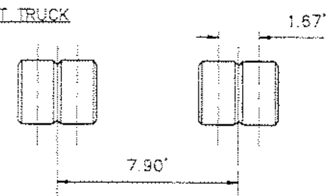
1. LIVE LOAD

1. BASIC UNIFORM LIVE LOAD = 850#/SQUARE FOOT

2. TRUCK LOADING - HS20-16 LATEST AASHTO SPECIFICATIONS

3. FORK LIFT TRUCK

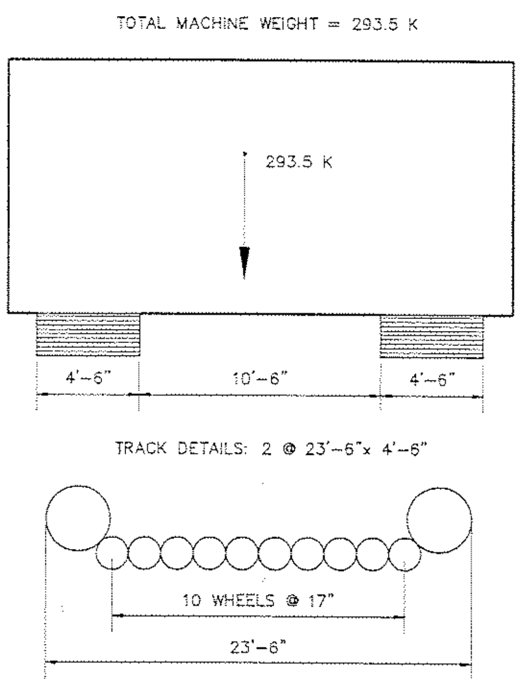
(a)



FRONT AXLE LOAD FOR HYSTER CHALLENGER 620
= 143 KIPS + 25% IMPACT

(b) DESIGN AXLE LOAD FOR KALMAN LMV FORK LIFT = 190 KIPS + 25% IMPACT. SINCE IT IS AN OCCASIONAL LOAD, ONLY 75% OF THIS LOAD SHALL BE CONSIDERED.

4. BUCYRES 888 CRANELOAD



WHEEL DETAIL
SCALE: N.T.S.

5. WIND LOADS - 50 psf

STRUCTURAL NOTES:

1. STRUCTURAL CONCRETE IN FLOODWALLS SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI. STRUCTURAL CONCRETE IN GATE MONOLITHS & RAMPS SHALL HAVE A 28-DAY MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.

2. CONSTRUCTION JOINTS SHALL BE PROVIDED WHERE SHOWN. WHERE NOT SHOWN, CONSTRUCTION JOINTS SHALL BE PLACED AT LOCATIONS LEAST LIKELY TO IMPAIR THE INTEGRITY OF THE CONCRETE STRUCTURE. CONSTRUCTION JOINT LOCATIONS SHALL BE APPROVED BY THE ENGINEER.

3. UNLESS OTHERWISE NOTED, PROVIDE 3/4"-45° CHAMFER AT ALL EXPOSED JOINTS, EDGES, EXTERNAL CORNERS, AND VERTICAL EXPANSION JOINTS.

4. STRUCTURAL BACKFILL SHALL NOT BE PLACED AROUND A STRUCTURE UNTIL THE EMBEDDED PORTION OF THE STRUCTURE HAS DEVELOPED FULL STRENGTH IN COMPRESSION.

5. STABILIZATION SLAB CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 3000 PSI AT 28 DAYS, 90 DAYS IF POZZOLAN IS USED.

6. ALL REINFORCING STEEL SHALL BE GRADE 60 BILLET STEEL WITH fy=60,000 PSI. ALL REINFORCEMENT SPACING SHALL BE CENTER-TO-CENTER OF BARS UNLESS NOTED OTHERWISE. SPLICING OF REINFORCEMENT SHALL BE GOVERNED BY ACI-318-95.

7. REINFORCING BAR DESIGNATION NUMBERS CONFORM TO THE NUMBERING SYSTEM OF THE CONCRETE REINFORCING STEEL INSTITUTE.

8. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE: I-WALL-3", T-WALL - 3"; GATE MONOLITH-3"; BEAMS-2"; RAMP SLAB - 2" (TOP) & 1" (BOTTOM); BASE SLAB - 4" (TOP) AND 2" (BOTTOM); SHEET PILE CAPS & STRUTS - 2".

9. THE EMBEDMENT AND SPLICE TABLE SHALL BE USED IN DETERMINING LAP SPLICES AND EMBEDMENT LENGTHS WHERE LENGTHS ARE NOT OTHERWISE INDICATED. SPLICE LENGTHS SHALL BE BASED ON THE SMALLER BAR BEING LAPPED. THE CONTRACTOR WILL BE ALLOWED TO MAKE SPLICES IN ADDITION TO THOSE INDICATED IN THE DRAWINGS, WHERE ESSENTIAL TO CONSTRUCTIBILITY, SUBJECT TO APPROVAL BY THE CONTRACTING OFFICER. SPLICES OTHER THAN THOSE SHOWN ON THE DRAWINGS AND OTHER THAN ANY ADDITIONAL SPLICES REQUIRED BY THE CONTRACTING OFFICER WILL BE AT THE CONTRACTOR'S EXPENSE.

10. REINFORCING BARS SHALL BE CONTINUOUS AT ALL CORNERS UNLESS OTHERWISE NOTED.

11. ALL BENDS OF REINFORCEMENT AND ALL BAR SPACERS AND SUPPORTS SHALL BE IN ACCORDANCE WITH SP-66, AMERICAN CONCRETE INSTITUTE DETAILING MANUAL - 1994.

12. REINFORCING BARS SHALL BE SPACED TO CLEAR RECESSES FOR GATE LATCHES AND HINGES.

13. REINFORCEMENT, WHERE NECESSARY TO AVOID OPENINGS, PIPES, EMBEDDED ITEMS AND OTHER OBSTRUCTIONS, SHALL BE BENT OR SHIFTED AS DIRECTED BY THE ENGINEER.

14. PILES: ALL CONCRETE PILES SHALL BE 14" SQ. PRECAST, PRESTRESSED CONCRETE PILES.

15. ALL SHEET PILES SHALL BE AS GIVEN IN THE SPECIFICATIONS. HANDLING HOLES IN SHEETPILES SHALL HAVE A DIAMETER NO GREATER THAN 2" AND SHALL NOT BE PLACED MORE THAN 4" BELOW TOP OF SHEET PILE. CONCRETE PILES SHALL BE DRIVEN BEFORE STEEL SHEETPILES ARE DRIVEN.

16. ALL STRUCTURAL STEEL SHALL BE ASTM A36, UNLESS OTHERWISE NOTED.

17. ALL WELDS SHALL BE E-70XX GRADE WELDS UNLESS NOTED OTHERWISE. ALL WELDING SHALL BE ELECTRIC WELDING. WORKMANSHIP AND TECHNIQUE SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE.

18. WELDING SYMBOLS SHOWN ARE THOSE ADOPTED BY THE AMERICAN WELDING SOCIETY AND INDICATE ONLY SIZE AND TYPE OF WELDS REQUIRED. DETAILED INFORMATION SHALL BE SHOWN ON THE SHOP DRAWINGS AND SUBMITTED BY THE CONTRACTOR FOR APPROVAL.

19. DIMENSIONS SHOWN OR CALLED FOR ARE THE FINAL DIMENSIONS; ALLOWANCES MUST BE MADE FOR MACHINING.

20. TO PREVENT CORROSION BY MOISTURE BETWEEN STEEL SURFACES IN CONTACT, ALL SUCH CONTACTS SHALL BE SEALED WATERTIGHT BY RUNNING A CONTINUOUS 1/8" FILLET WELD ALONG ALL EDGES OF CONTACT, UNLESS OTHERWISE NOTED.

21. ALL BOLTS SHALL BE GALVANIZED ASTM A325 GRADE STEEL BOLTS UNLESS NOTED OTHERWISE. ALL ANCHOR BOLTS SHALL BE ASTM A307 GRADE GALVANIZED STEEL BOLTS UNLESS NOTED OTHERWISE. ALL BOLT SPACINGS SHALL BE CENTER-TO-CENTER OF BOLTS.

22. ITEMS MARKED C.R.S. SHALL BE CORROSION RESISTANT STEEL (STAINLESS STEEL). SEE SPECIFICATIONS.

GENERAL NOTES:

1. THE LOCATION OF ALL PIPES, DUCTS OR UNDERGROUND STRUCTURES IS NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND PIPES, DUCTS OR STRUCTURES ARE SHOWN. THE CONTRACTOR IS ADVISED THAT EXISTING OVERHEAD AND UNDERGROUND UTILITIES SUCH AS (BUT NOT LIMITED TO) ELECTRICAL LINES AND POLES, TELEPHONE CABLES, GAS LINES, WATER LINES AND SANITARY SEWERS EXIST IN THE RIGHT-OF-WAY WHERE THE PROPOSED IMPROVEMENTS ARE TO BE INSTALLED. CONTRACTOR SHALL CONTACT LA. ONE CALL OR THE APPROPRIATE UTILITY COMPANY FOR LOCATION OF THEIR UNDERGROUND SERVICE A MINIMUM OF 48 HOURS PRIOR TO BEGINNING CONSTRUCTION IN EACH AREA. LA. ONE CALL NUMBER IS 1-800-272-3020. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO LOCATE AND PROTECT THESE EXISTING UTILITIES DURING THE CONSTRUCTION OF THE WORK TO BE INSTALLED UNDER THIS CONTRACT.

2. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THE EXECUTION OF THE WORK UNDER THIS CONTRACT SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

3. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, A CONSTRUCTION SCHEDULE FOR THE PROPOSED WORK AS WELL AS PROVISIONS FOR SITE DRAINAGE UNTIL THE WORK IS SUBSTANTIALLY COMPLETE AND READY TO BE PLACED IN SERVICE.

4. ELEVATIONS ARE IN FEET AND REFER TO NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.).

5. DIMENSIONS AND/OR ELEVATIONS MARKED THUS: (±), ARE APPROXIMATE. CONTRACTOR SHALL VERIFY ACTUAL DIMENSIONS IN THE FIELD.

6. DIMENSIONS AND/OR ELEVATIONS MARKED THUS: (N.T.S.), ARE NOT SHOWN TO SCALE.

7. DRAWINGS ARE GENERALLY TO SCALE, BUT SHOULD NOT BE SCALED. N.T.S. IS SHOWN ONLY WHERE THE DRAWING IS OBVIOUSLY OUT OF SCALE.

8. BENCH MARKS AND BASE LINES HAVE BEEN ESTABLISHED AT THE SITE.

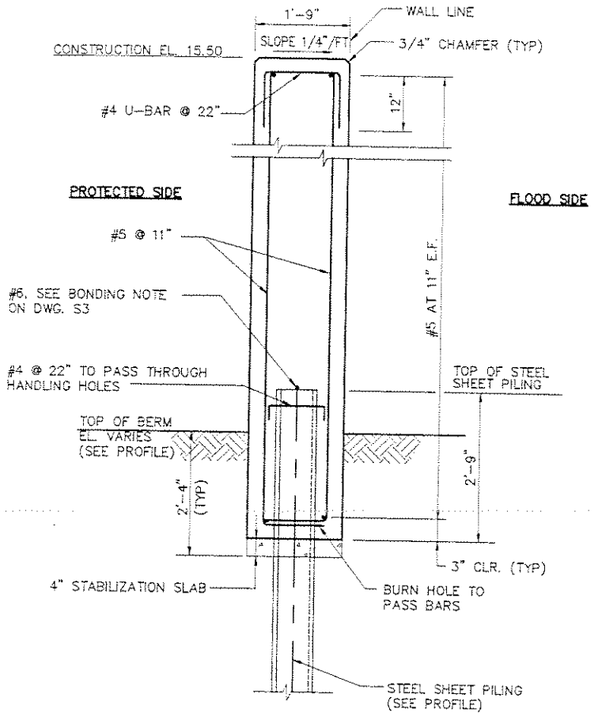
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

DESIGN LOADS & GENERAL NOTES

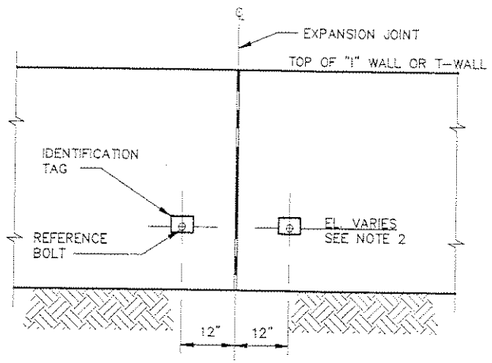
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=48	PLOT DATE: 10/96	CADD FILE: GEN-NOTE
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/96		

PLATE S1



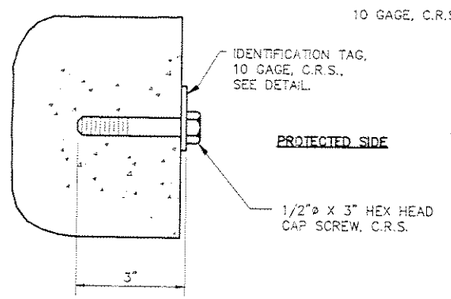
TYPICAL I-WALL REINFORCEMENT
SCALE: 3/4"=1'-0"



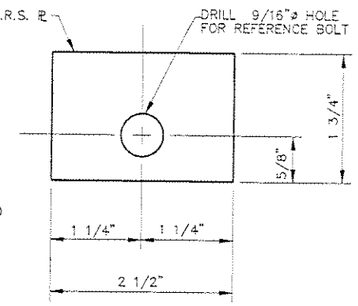
TYPICAL ELEVATION OF SETTLEMENT REFERENCE MARKER (S.R.M.)
SCALE: 3/4"=1'-0"

NOTES:

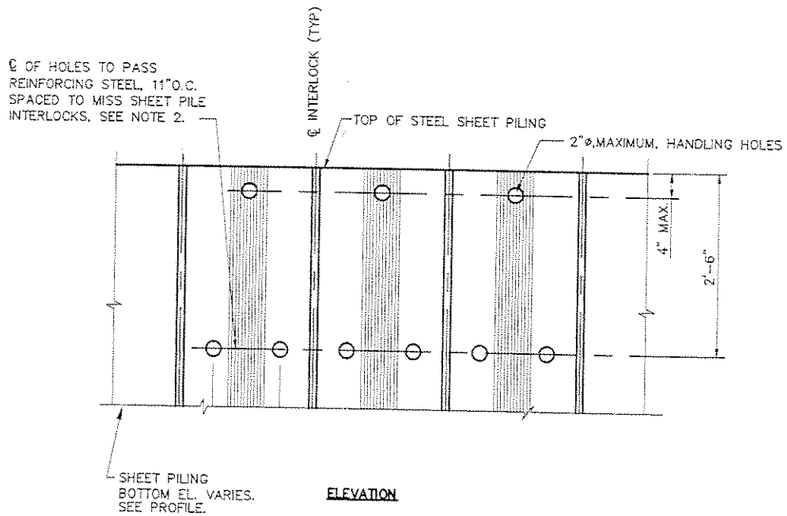
1. SETTLEMENT REFERENCE MARKERS SHALL BE INSTALLED AS SHOWN AT THE ENDS OF EACH I-WALL SEGMENT.
2. THE CONTRACTOR SHALL TAKE FINAL ELEVATIONS OF ALL S.R.M.'S AND SHALL SUBMIT THIS DATA TO THE OWNER'S REPRESENTATIVE.
3. EACH S.R.M. TAG PLATE SHALL BE STAMPED WITH A REFERENCE IDENTIFICATION NUMBER. (FR-1, FR-2, FR-3, ...)



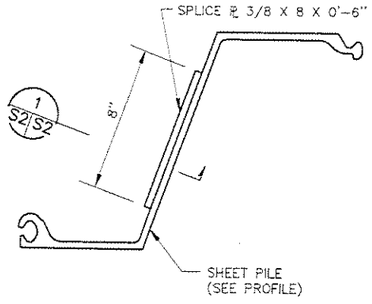
REFERENCE BOLT
SCALE: 6"=1'-0"



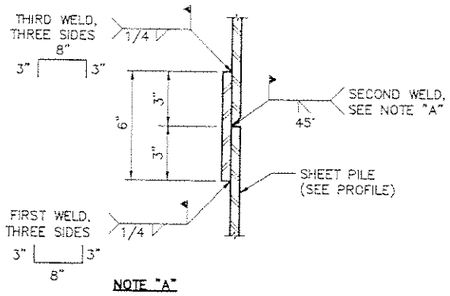
IDENTIFICATION TAG
SCALE: 2"=1'-0"



DETAIL OF HOLES IN SHEET PILES
SCALE: 1"=1'-0"



SHEET PILE SPLICE DETAILS
SCALE: 3"=1'-0"



NOTE "A"

GROOVE WELD SHALL EXTEND THE FULL LENGTH OF THE SHEET PILE WEB AND FLANGES EXCLUDING THE INTERLOCKS.

SECTION 1 S2 S2
SCALE: 3"=1'-0"

NOTES:

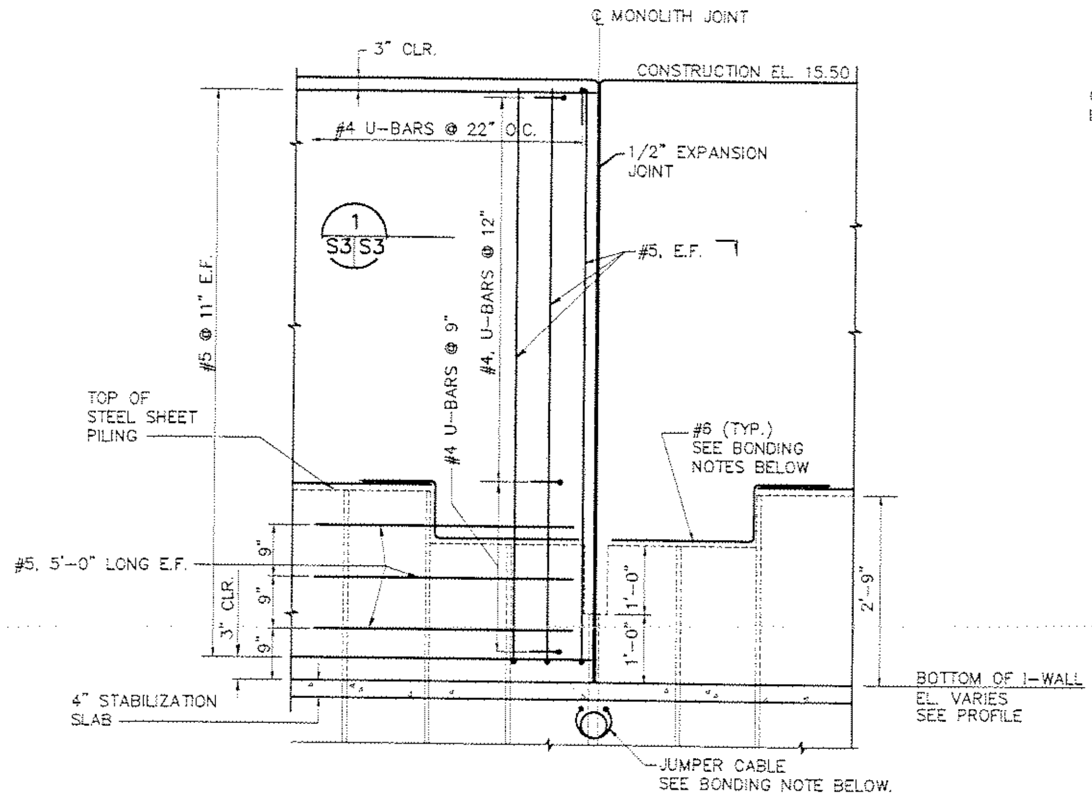
1. A MINIMUM OF 4 INCHES CONCRETE COVER SHALL BE PROVIDED OVER SHEET PILING AT ALL POINTS.
2. HOLES CUT IN STEEL SHEET PILING FOR PASSING REINFORCING BARS SHALL NOT EXCEED 2"ø. WHERE HOLES FALL WITHIN THE WEB OF THE STEEL SHEET PILE, THE HOLE SHALL BE SLOTTED 4" HORIZONTALLY TO ACCOMMODATE PASSING THE REINFORCING BARS.
3. STEEL SHEET PILE SURFACE PREPARATION AND PAINTING SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

TYPICAL I-WALL DETAILS

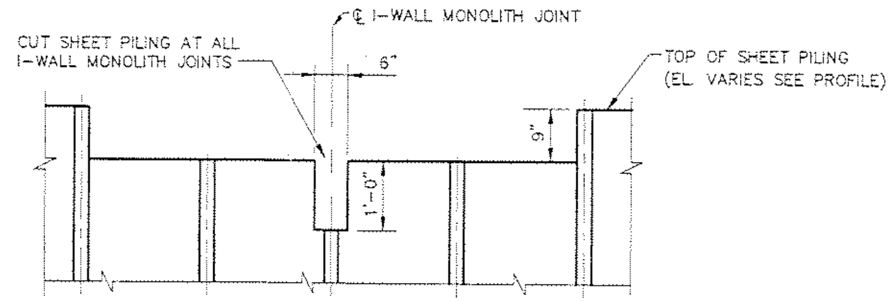
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: DET-IWL2
DRAWN BY: J.M.R.	1=4	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



TYPICAL REINFORCEMENT DETAILS AT I-WALL/I-WALL JOINT

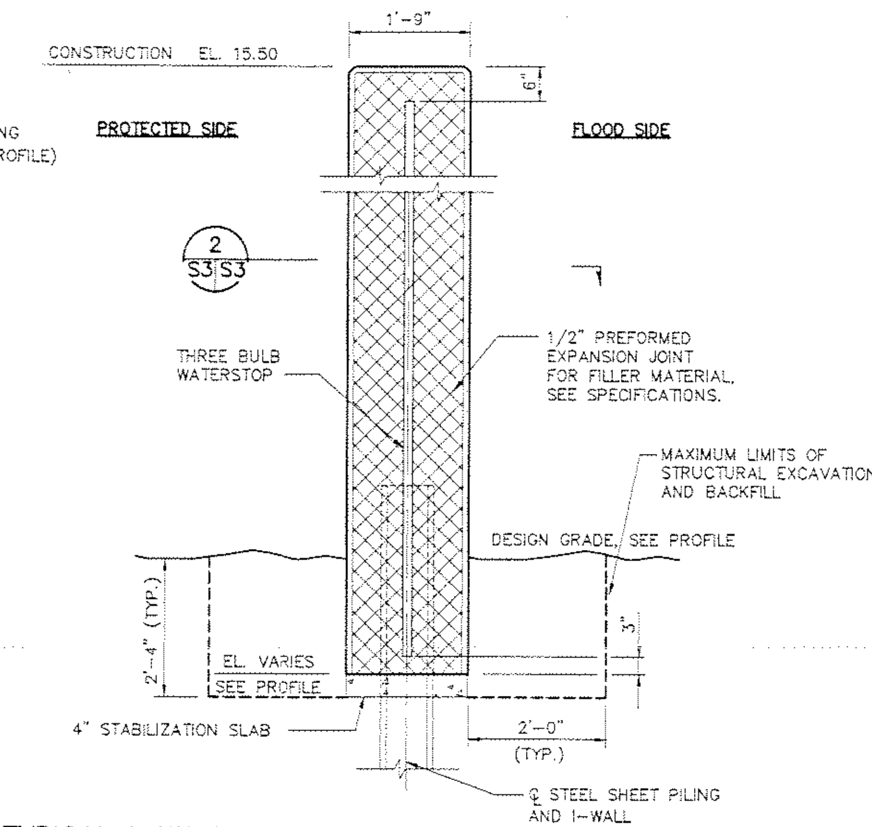
SCALE: 3/4"=1'-0"



SHEET PILING DETAILS

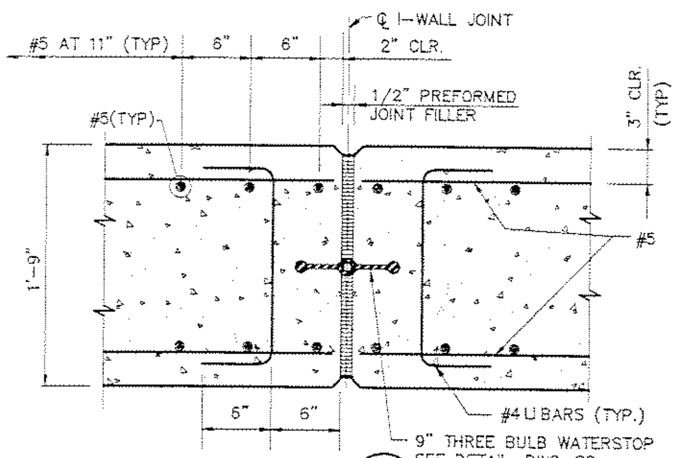
I-WALL MONOLITH JOINTS

N.T.S.

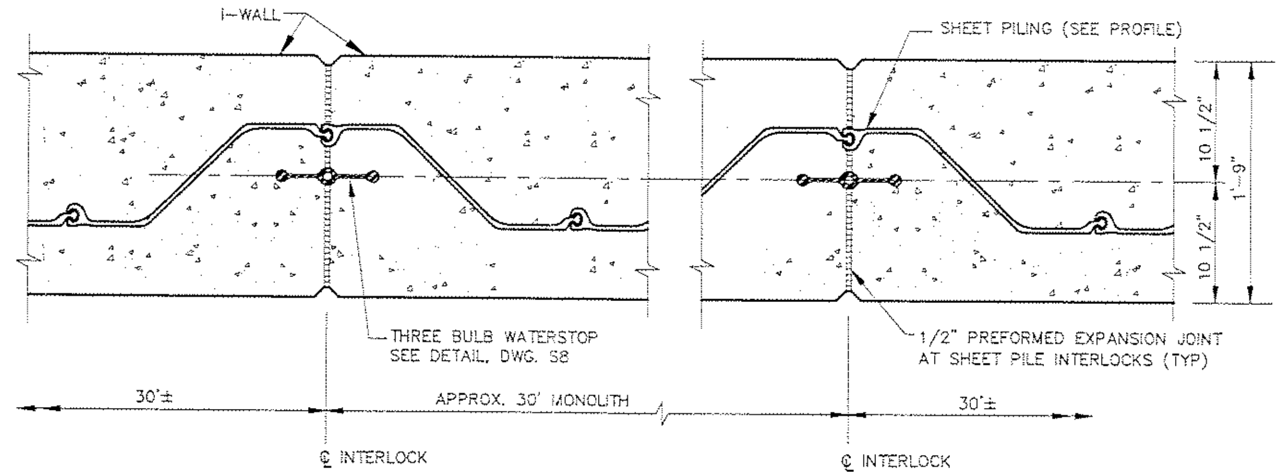


TYPICAL I-WALL MONOLITH SECTION AT EXPANSION JOINT

SCALE 3/4"=1'-0"

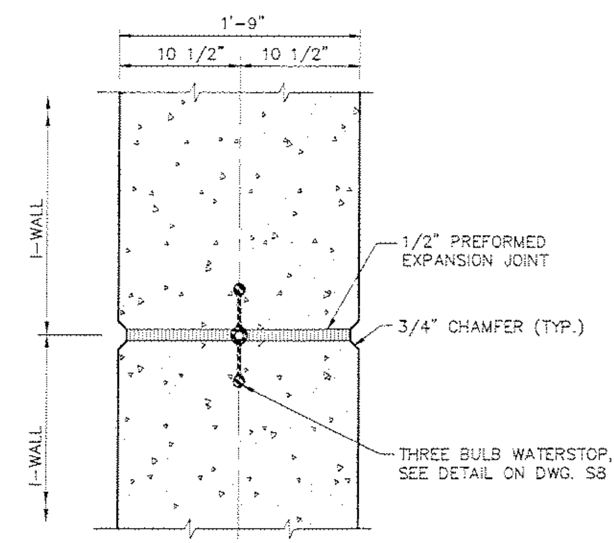


SECTION 1/S3
SCALE: 1 1/2"=1'-0"



TYPICAL I-WALL MONOLITH AT SHEET PILE INTERLOCKS

1 1/2"=1'-0"



SECTION 2/S3
SCALE: 1-1/2"=1'-0"

BONDING NOTE:

1. #6 REINFORCING BAR SHALL BE WELDED AT THE TOP OF EACH SHEET PILE. #6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE MONOLITH JOINT.
2. INSTALL FLEXIBLE JUMPERS AT ALL MONOLITH JOINTS. JUMPERS SHALL BE INSULATED No.1/0 AWG COPPER, TYPE USE, INSULATED WITH A MINIMUM OF 95 MILS OF CROSS LINKED POLYETHYLENE IN A 8" DIAMETER LOOP. JUMPERS SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL SHEET PILES 7" BELOW THE BOTTOM OF THE CONCRETE CAP. WELDED CONNECTIONS SHALL BE COATED WITH SPLICING EPOXY TO OBTAIN A MOISTURE PROOF JOINT. SPLICING OF #6 BAR WILL NOT BE ALLOWED.

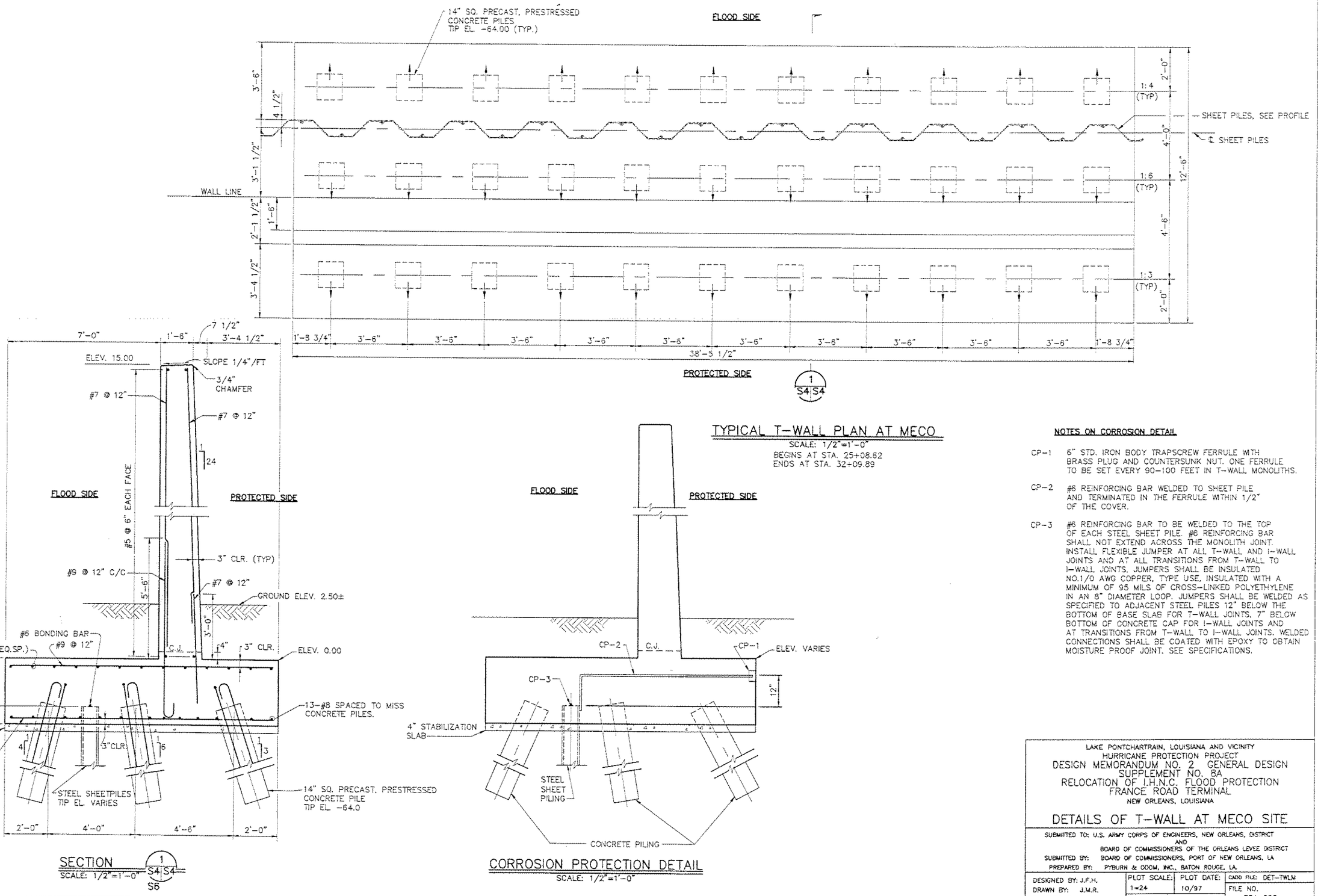
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

I-WALL/I-WALL JOINT DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=16	PLOT DATE: 10/97	CADD FILE: DET-IWL1
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		

PLATE S3



NOTES ON CORROSION DETAIL

CP-1 6" STD. IRON BODY TRAPSCREW FERRULE WITH BRASS PLUG AND COUNTERSUNK NUT. ONE FERRULE TO BE SET EVERY 90-100 FEET IN T-WALL MONOLITHS.

CP-2 #6 REINFORCING BAR WELDED TO SHEET PILE AND TERMINATED IN THE FERRULE WITHIN 1/2" OF THE COVER.

CP-3 #6 REINFORCING BAR TO BE WELDED TO THE TOP OF EACH STEEL SHEET PILE. #6 REINFORCING BAR SHALL NOT EXTEND ACROSS THE MONOLITH JOINT. INSTALL FLEXIBLE JUMPER AT ALL T-WALL AND I-WALL JOINTS AND AT ALL TRANSITIONS FROM T-WALL TO I-WALL JOINTS. JUMPERS SHALL BE INSULATED NO.1/0 AWG COPPER, TYPE USE, INSULATED WITH A MINIMUM OF 95 MILS OF CROSS-LINKED POLYETHYLENE IN AN 8" DIAMETER LOOP. JUMPERS SHALL BE WELDED AS SPECIFIED TO ADJACENT STEEL PILES 12" BELOW THE BOTTOM OF BASE SLAB FOR T-WALL JOINTS, 7" BELOW BOTTOM OF CONCRETE CAP FOR I-WALL JOINTS AND AT TRANSITIONS FROM T-WALL TO I-WALL JOINTS. WELDED CONNECTIONS SHALL BE COATED WITH EPOXY TO OBTAIN MOISTURE PROOF JOINT. SEE SPECIFICATIONS.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
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RELOCATION OF I.H.N.C. FLOOD PROTECTION
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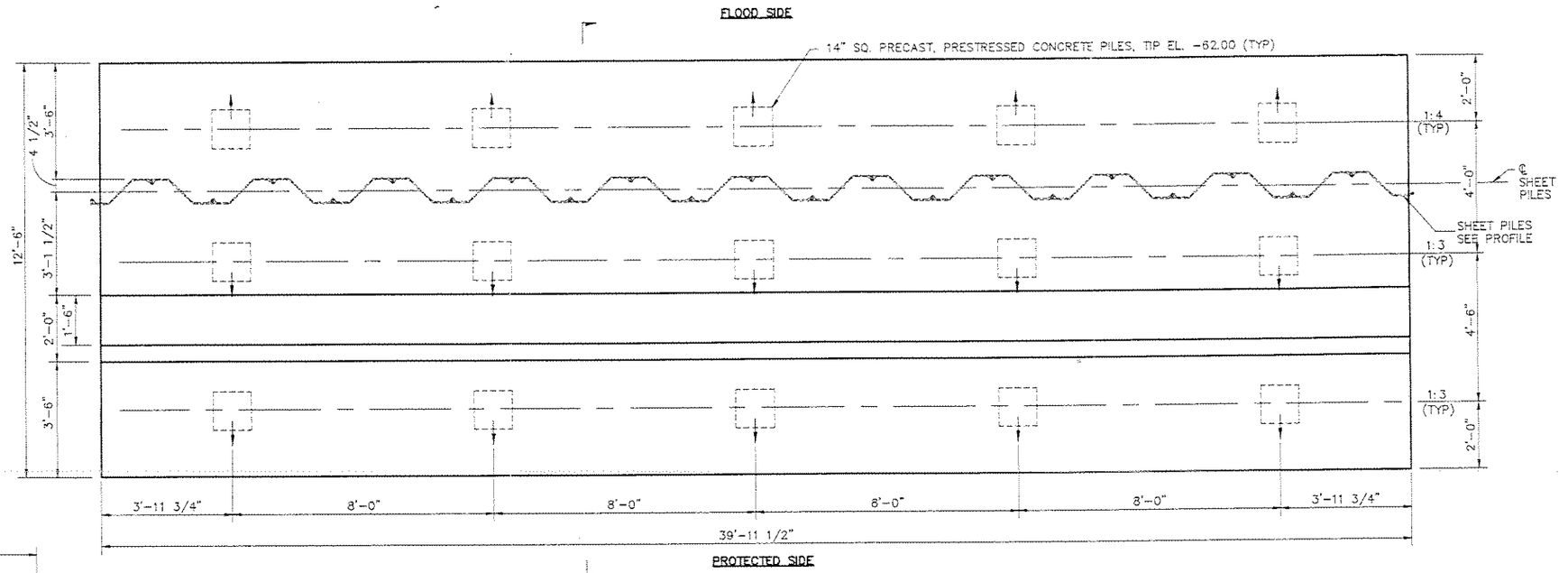
NEW ORLEANS, LOUISIANA

DETAILS OF T-WALL AT MECO SITE

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

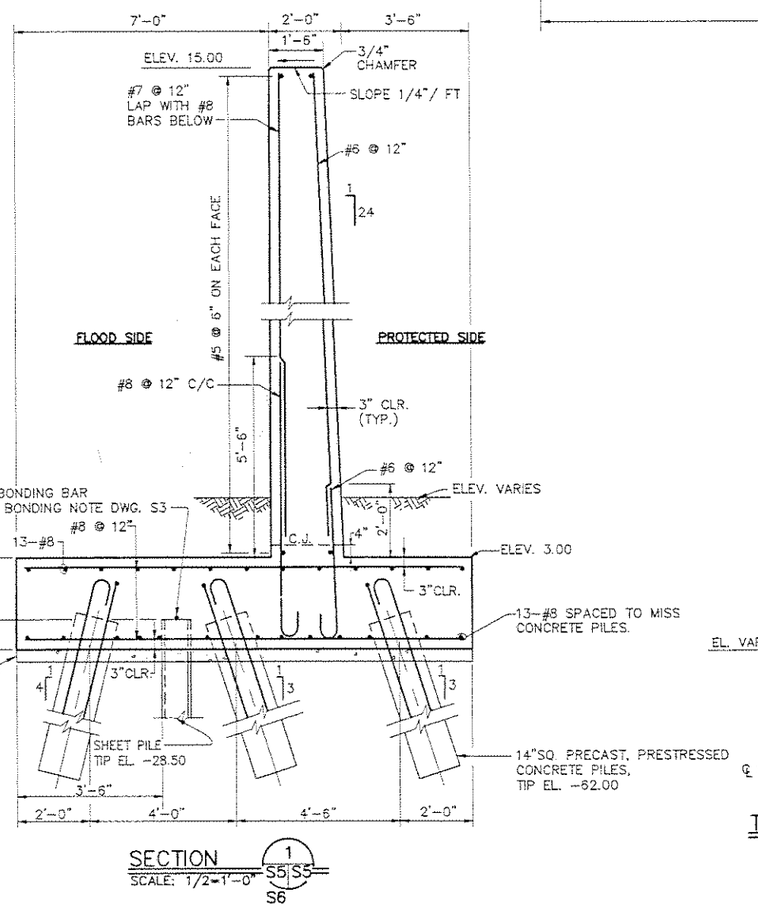
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: DET-TWLM
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



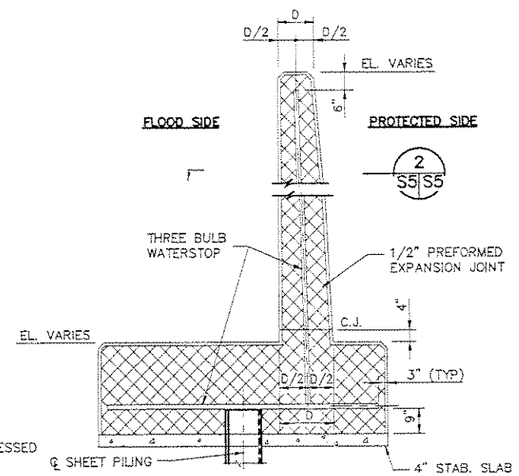
1
S5|S5

T-WALL PLAN BEHIND BERTHS

SCALE: 1/2"=1'-0"
FIRST SEGMENT BEGINS AT STA. 42+75.71
LAST SEGMENT ENDS AT STA. 79+74.00

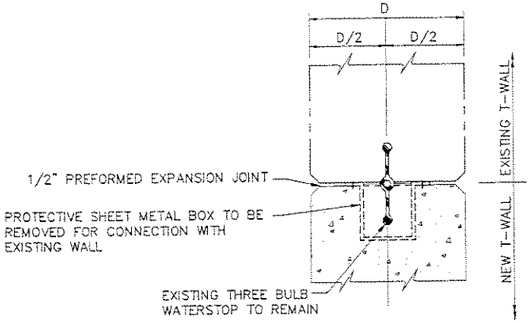


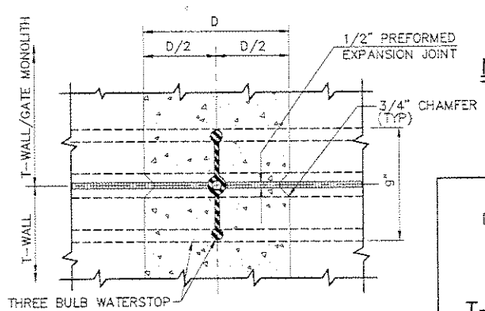
SECTION 1 S5|S5 S6
SCALE: 1/2"=1'-0"



TYPICAL T-WALL MONOLITH SECTION AT EXPANSION JOINT

SCALE: 3/4"=1'-0"





TYPICAL JOINT DETAIL BETWEEN T-WALL MONOLITHS

SECTION 2 S5|S5
SCALE: 3"=1'-0"

TYPICAL JOINT DETAIL BETWEEN NEW & EXISTING T-WALL MONOLITHS

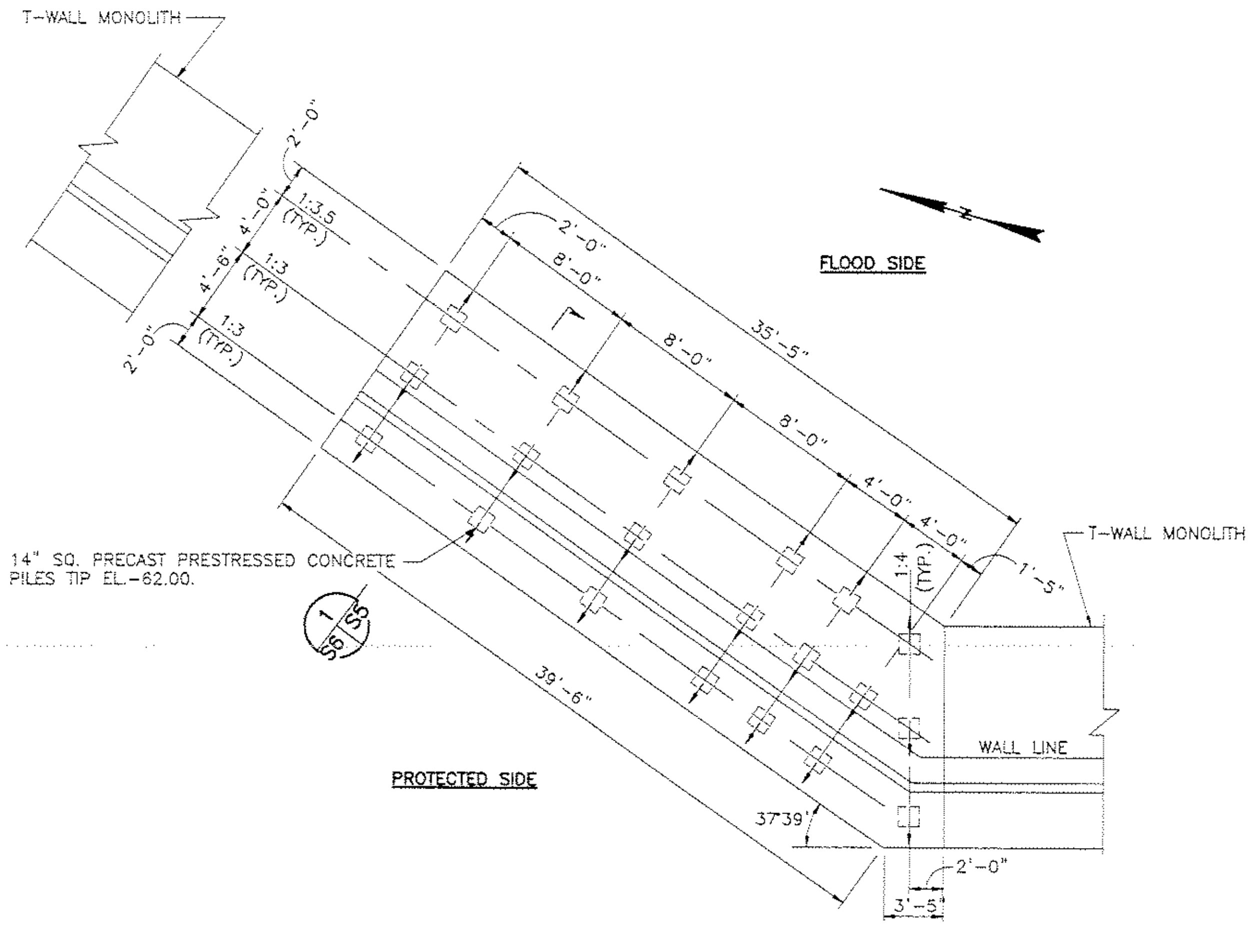
SCALE: 1/2"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

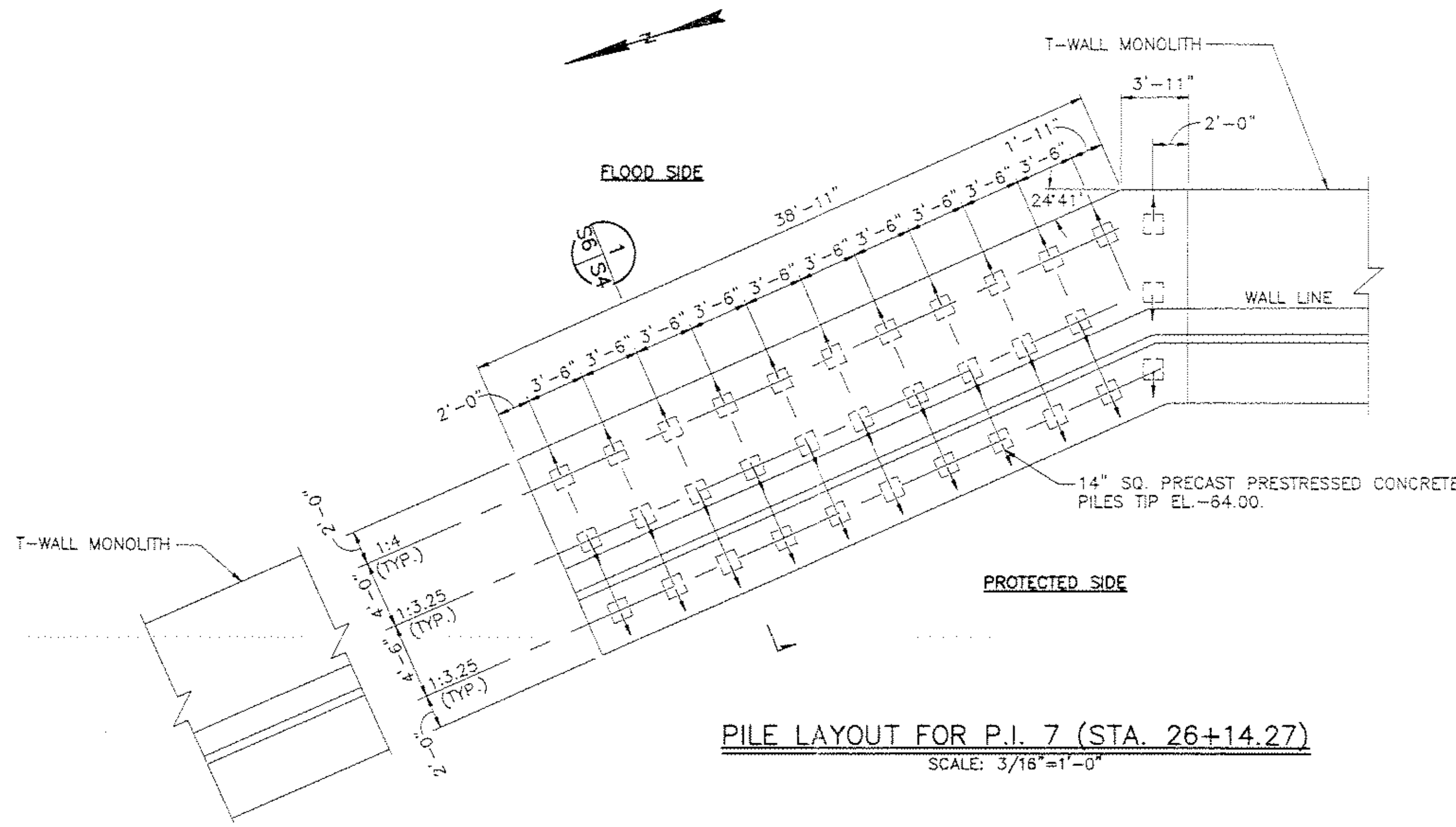
T-WALL BEHIND BERTHS AND DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

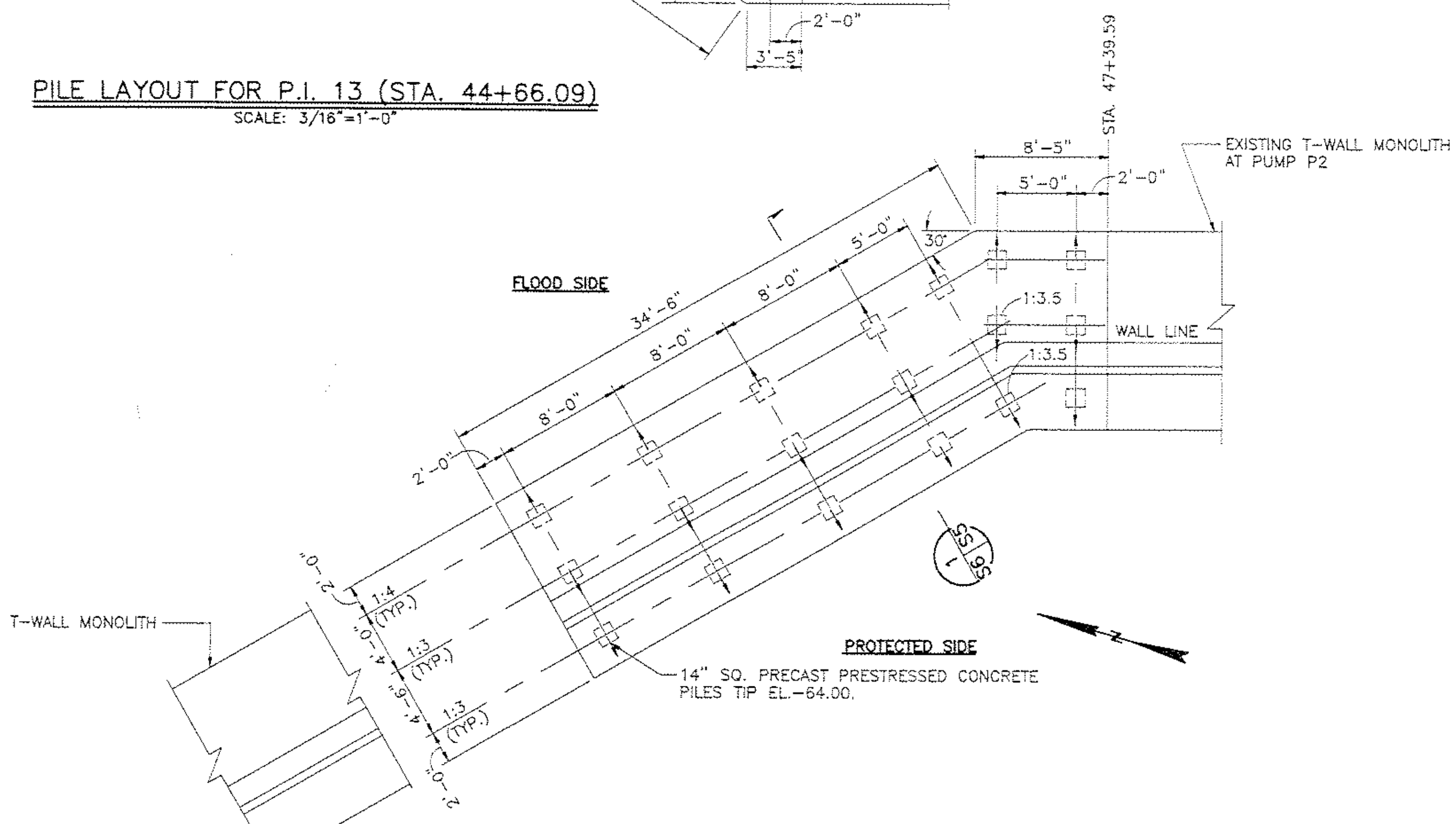
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: DET-TWLB
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



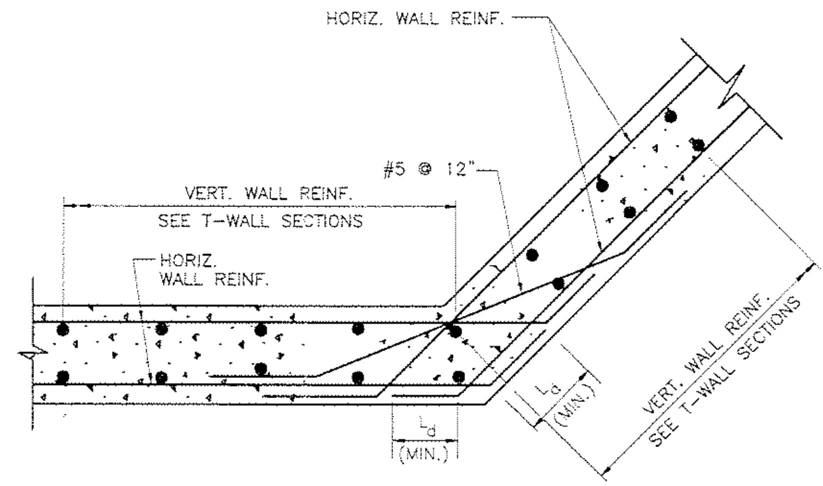
PILE LAYOUT FOR P.I. 13 (STA. 44+66.09)
SCALE: 3/16"=1'-0"



PILE LAYOUT FOR P.I. 7 (STA. 26+14.27)
SCALE: 3/16"=1'-0"



PILE LAYOUT FOR P.I. 15 (STA. 47+33.03)
SCALE: 3/16"=1'-0"



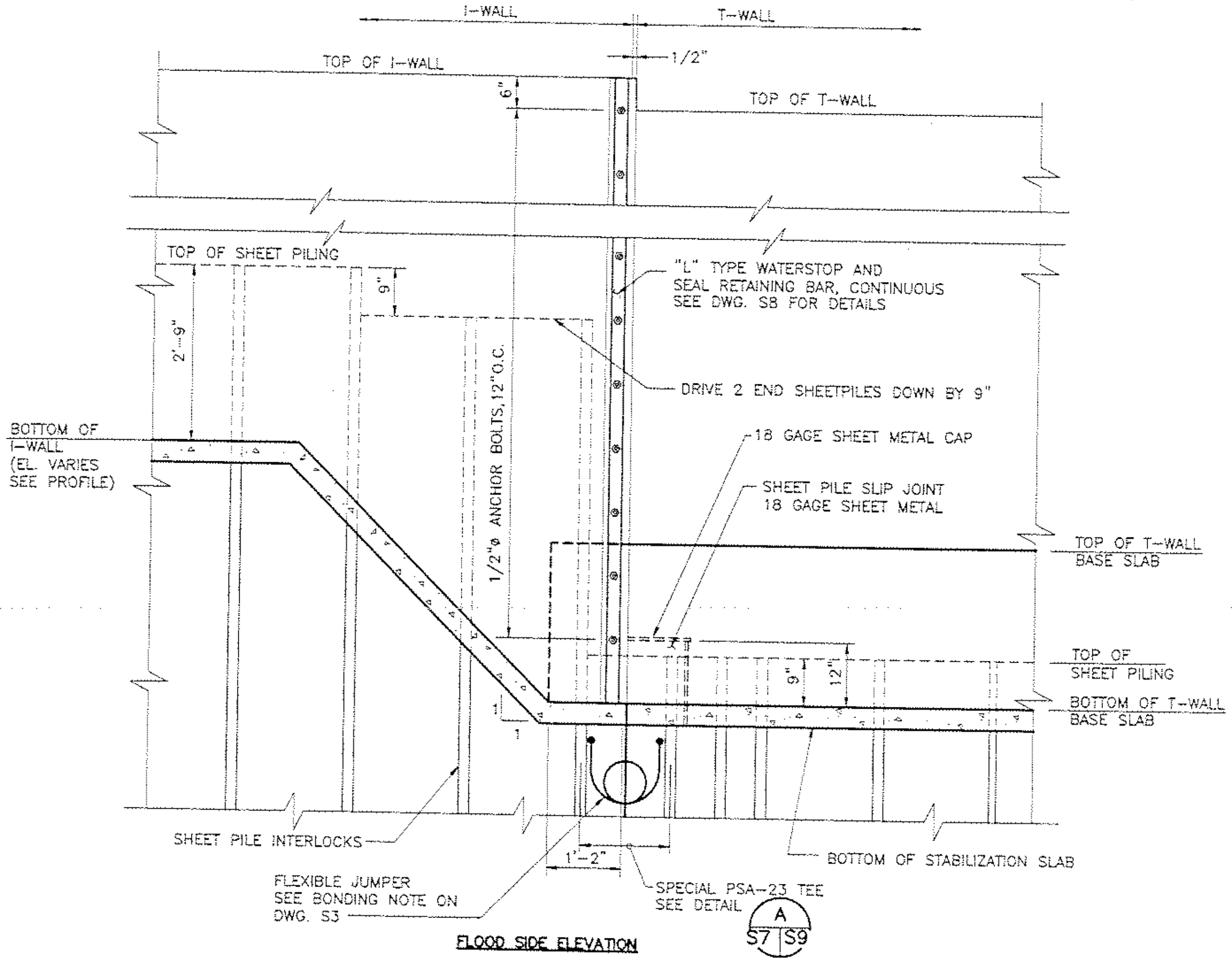
T-WALL REINFORCEMENT DETAIL AT P.I.
SCALE: N.T.S.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

T-WALL BEND DETAILS

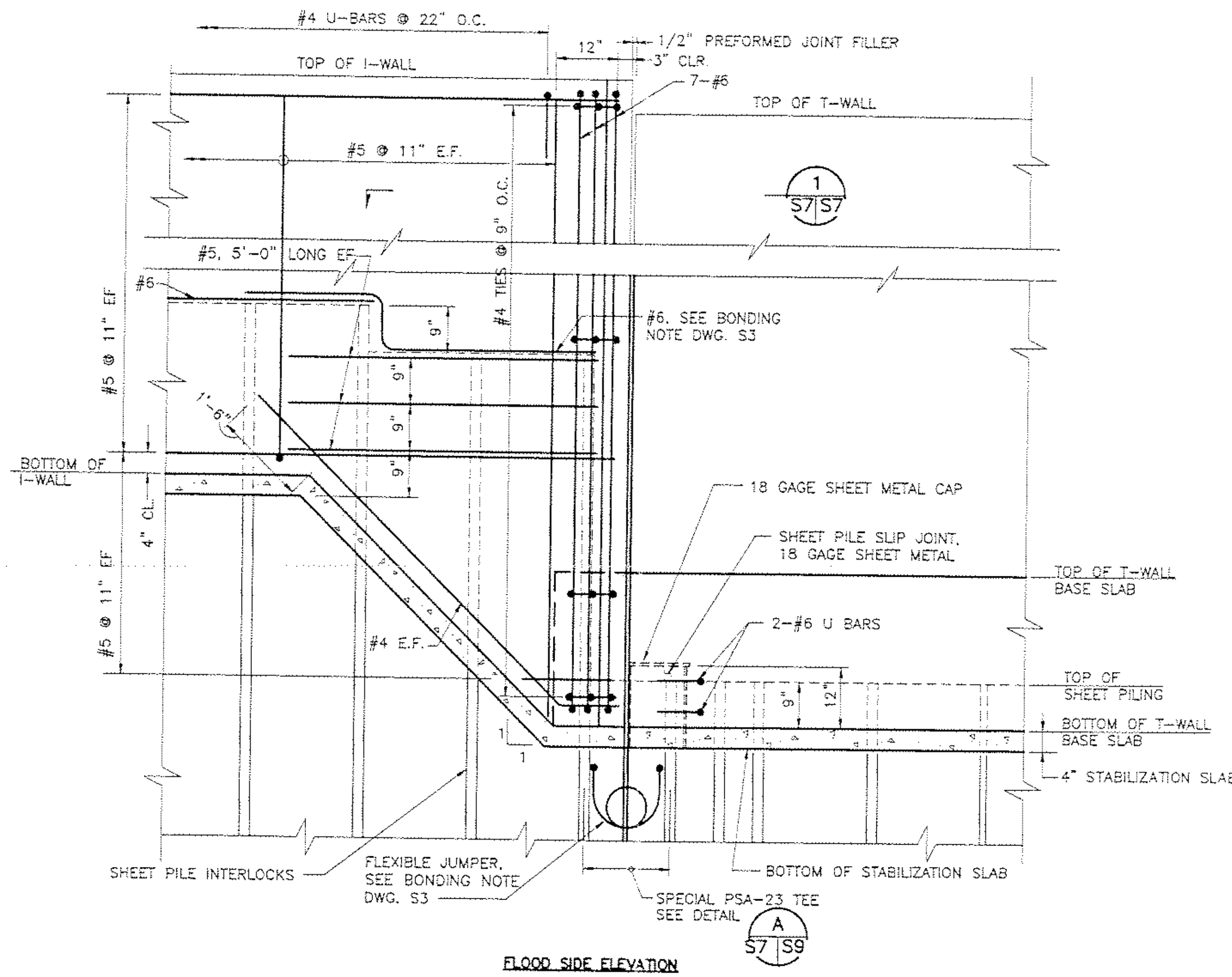
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=64	PLOT DATE: 10/97	CADD FILE: BEND
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		



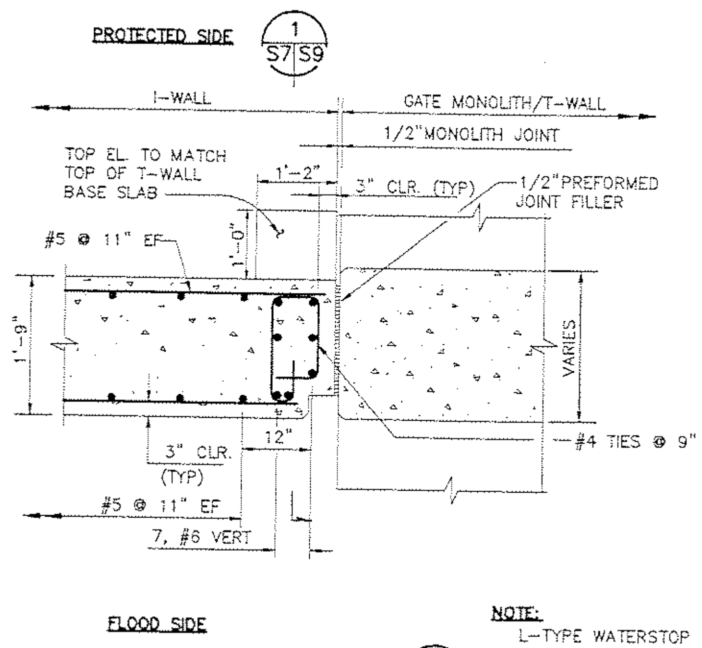
I-WALL TO GATE MONOLITH/T-WALL CONNECTION

SCALE: 3/4"=1'-0"



I-WALL TO GATE MONOLITH/T-WALL CONNECTION (REINFORCEMENT DETAILS)

SCALE: 3/4"=1'-0"



SECTION 1 S7 S7

SCALE: 3/4"=1'-0"

NOTE:
L-TYPE WATERSTOP NOT SHOWN FOR CLARITY.

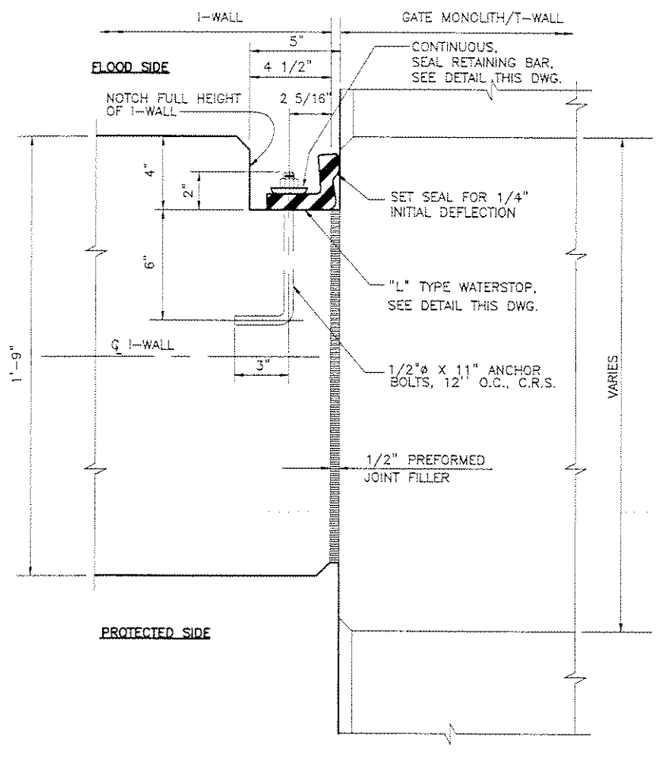
NOTE:
SEE DWG. S9 FOR SHEETPILE CONNECTION DETAILS.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

I-WALL/T-WALL/JOINT DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=16	PLOT DATE: 10/97	CADD FILE: DET-ISL3
DRAWN BY: J.M.R			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		



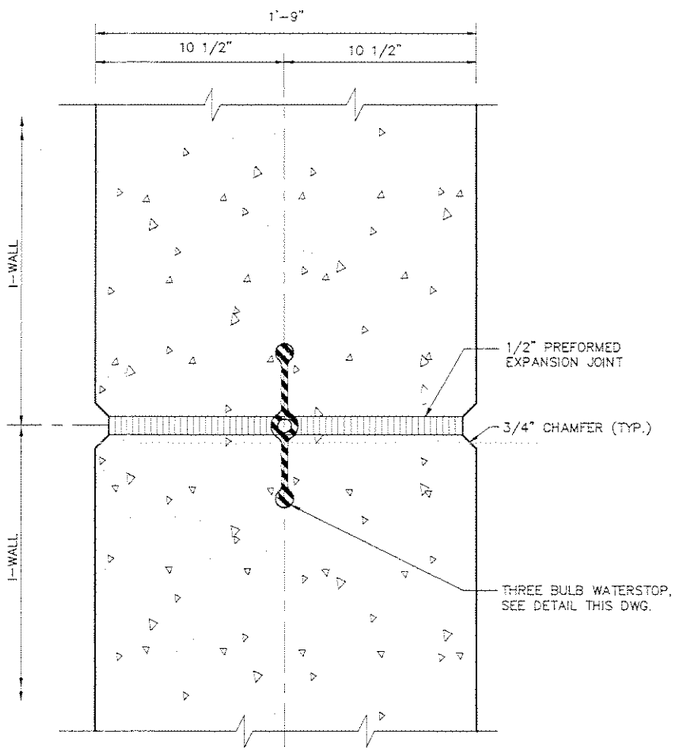
PLAN

I-WALL TO GATE MONOLITH/T-WALL JOINT

SCALE: 3"=1'-0"

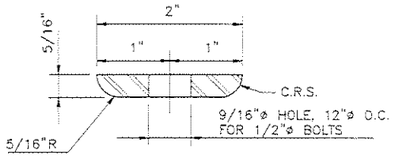
"L" TYPE WATERSTOP

SCALE: 1"=1"



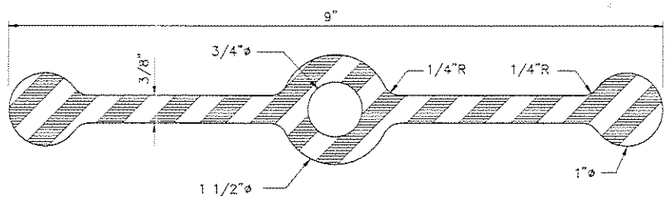
I-WALL TO I-WALL JOINT

SCALE: 3"=1'-0"



SEAL RETAINING BAR

SCALE: 1"=1"



THREE BULB WATERSTOP

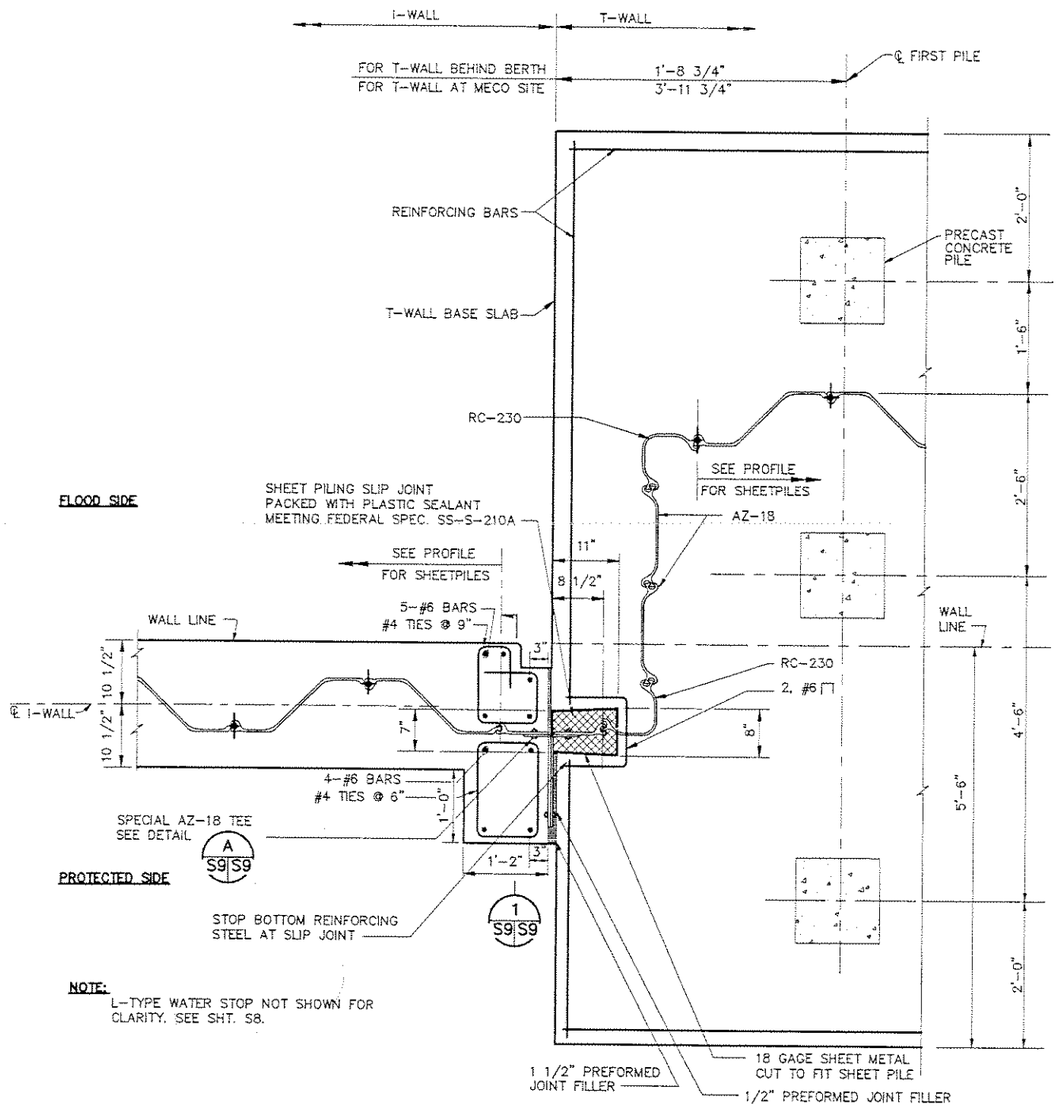
SCALE: 1"=1"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

WATER STOP DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & DOOM, INC., BATON ROUGE, LA.

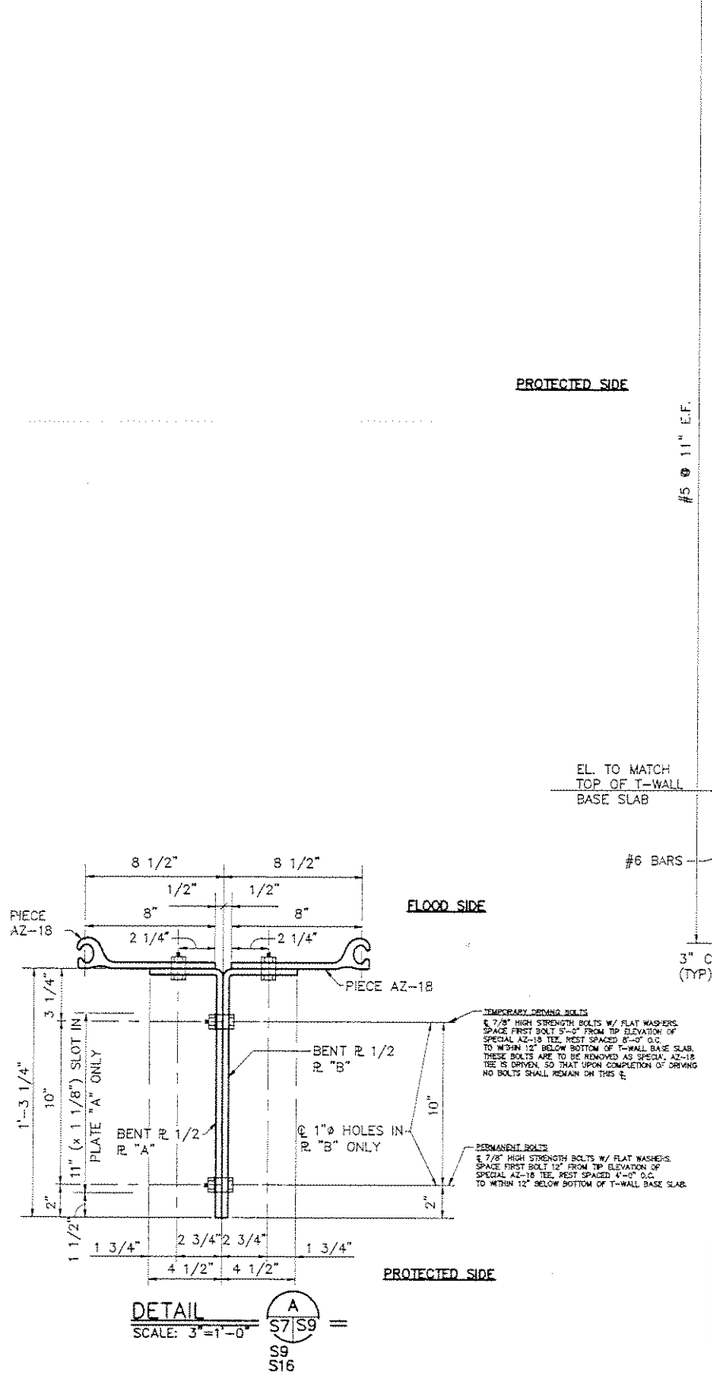
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: DET-WSTP
DRAWN BY: J.M.R.	1=16	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-005



NOTE:
L-TYPE WATER STOP NOT SHOWN FOR CLARITY. SEE SHT. S8.

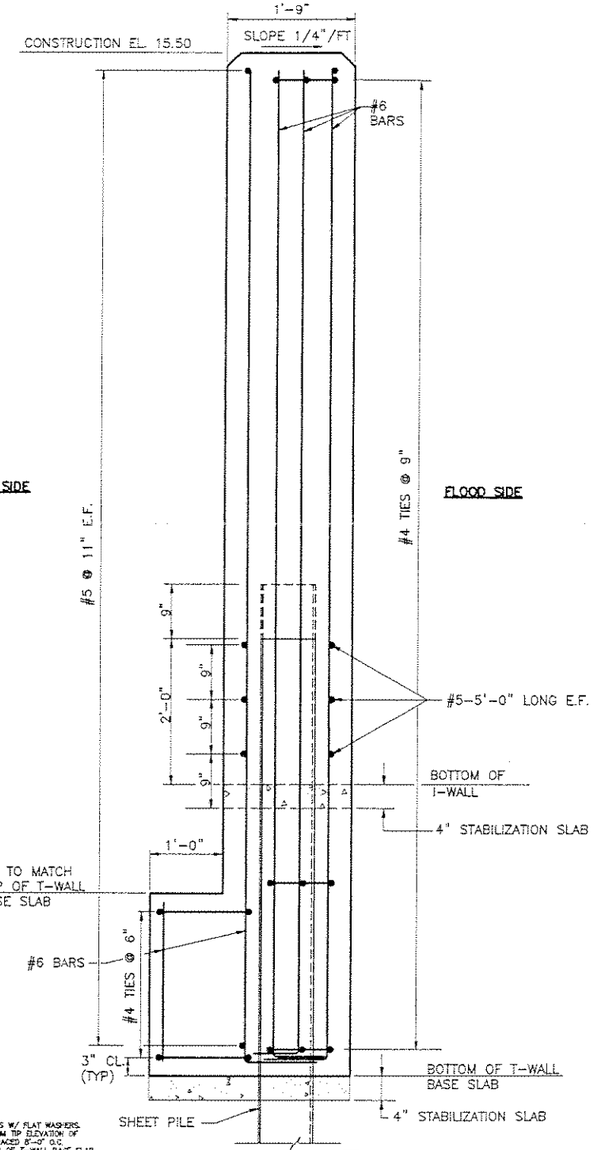
TYPICAL SHEETPILE CONNECTION BETWEEN I-WALL & T-WALL

SCALE: 1"=1'-0"



DETAIL
SCALE: 3"=1'-0"
A S7 S9 = S9 S16

PROTECTED SIDE



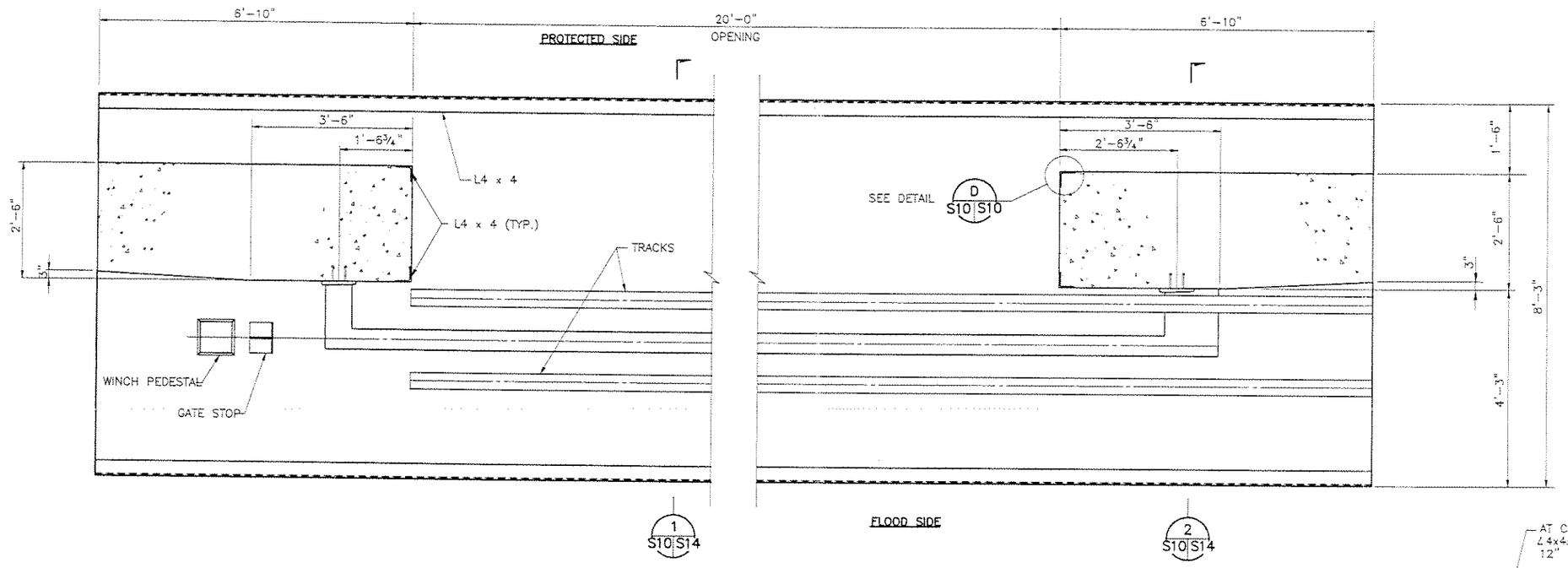
SECTION
SCALE: 1"=1'-0"
1 S7 S9 = S9

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODWALL CONNECTION DETAILS

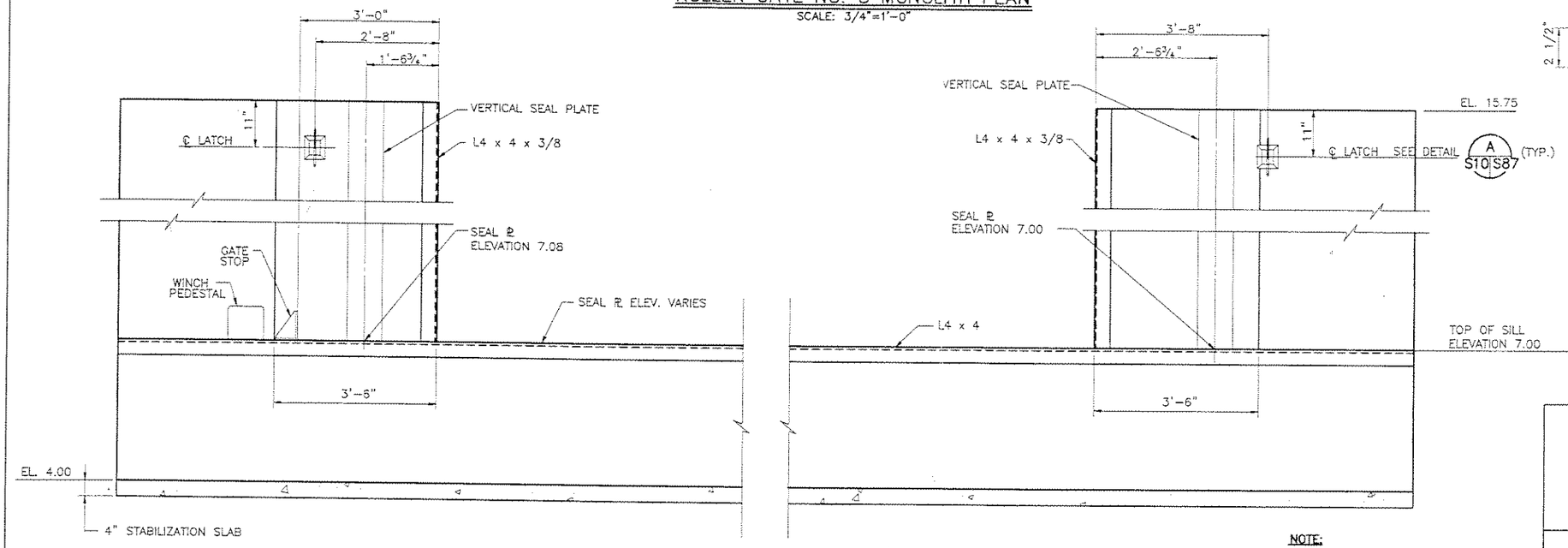
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=12	PLOT DATE: 10/97	CADD FILE: DET-SHCN
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		



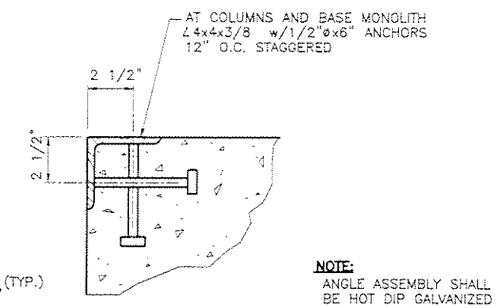
ROLLER GATE NO. 3 MONOLITH PLAN

SCALE: 3/4"=1'-0"



FLOOD SIDE ELEVATION

SCALE: 3/4"=1'-0"



NOTE:
ANGLE ASSEMBLY SHALL BE HOT DIP GALVANIZED AFTER FABRICATION.

DETAIL

SCALE: 1"=1'-0"

D S10|S10 = S11

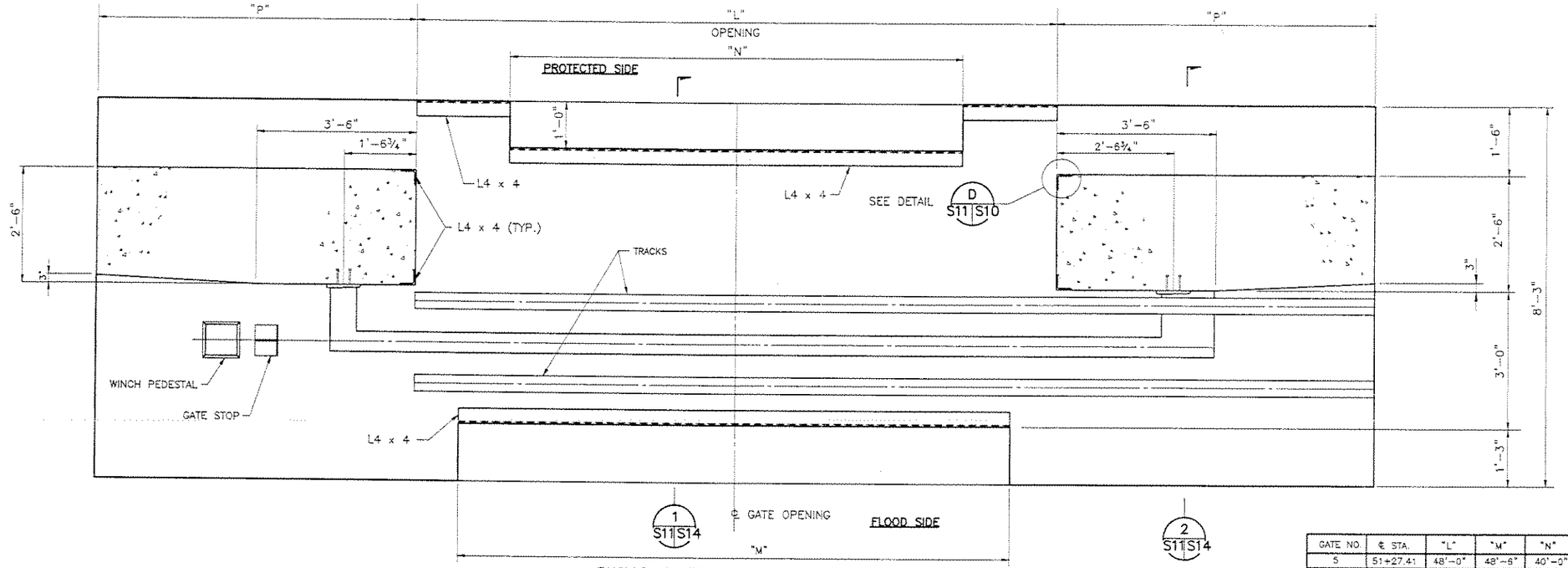
NOTE:
CONCRETE PILES & SHEETPILES NOT SHOWN FOR CLARITY.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NO. 3 MONOLITH

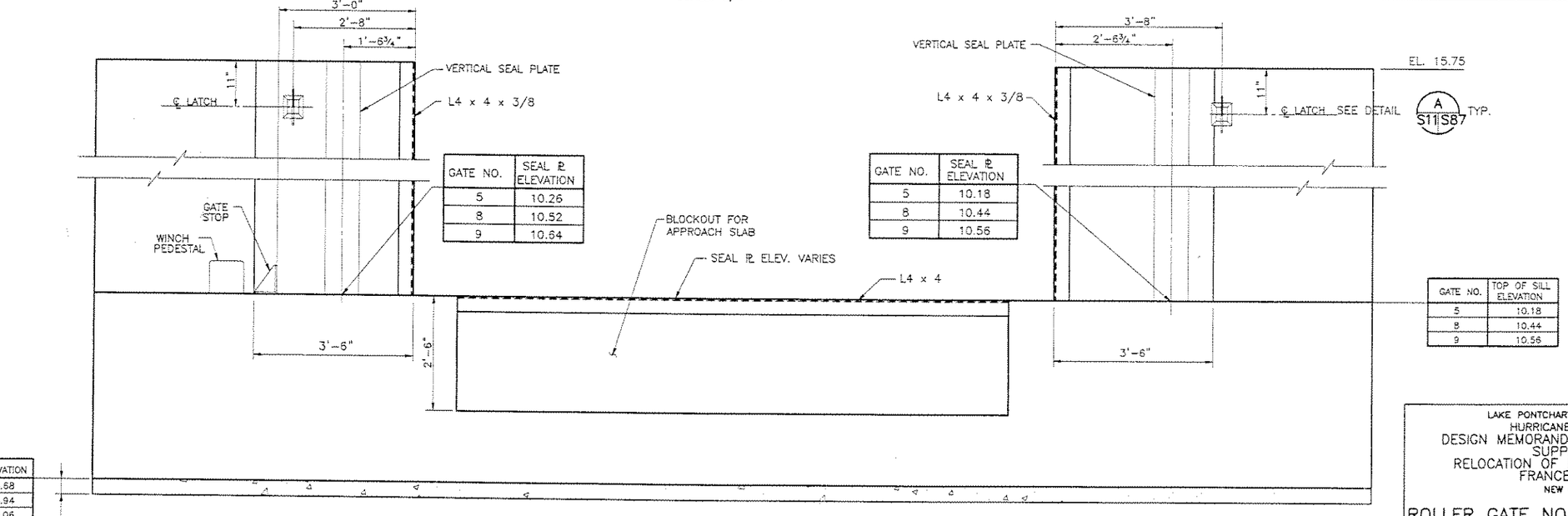
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & DOOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=16	PLOT DATE: 10/97	CADD FILE: PAE-3
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		



SWING GATE MONOLITH PLAN
SCALE: 3/4"=1'-0"

GATE NO.	℄ STA.	"L"	"M"	"N"	"P"
5	51+27.41	48'-0"	48'-6"	40'-0"	7'-6"
8	69+10.53	58'-0"	52'-2"	50'-0"	7'-1"
9	76+45.10	43'-0"	35'-0"	35'-0"	7'-0"



GATE NO.	SEAL ℞ ELEVATION
5	10.26
8	10.52
9	10.64

GATE NO.	SEAL ℞ ELEVATION
5	10.18
8	10.44
9	10.56

GATE NO.	TOP OF SILL ELEVATION
5	10.18
8	10.44
9	10.56

GATE NO.	ELEVATION
5	5.68
8	5.94
9	6.06

FLOOD SIDE ELEVATION
SCALE: 3/4"=1'-0"

NOTE:
CONCRETE PILES & SHEETPILES NOT SHOWN FOR CLARITY.

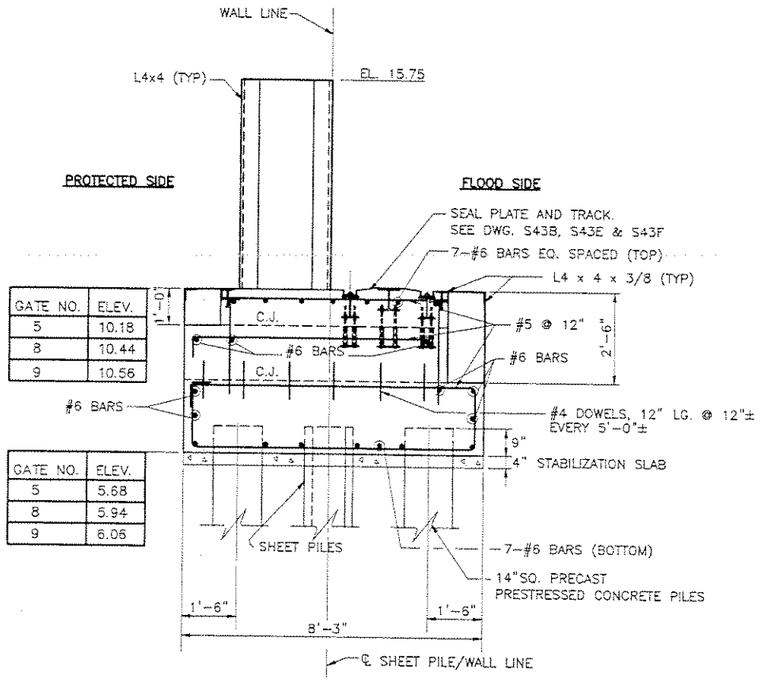
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NOS. 5, 8 & 9 MONOLITHS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: PAE-589
DRAWN BY: J.M.R.	1=16	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006

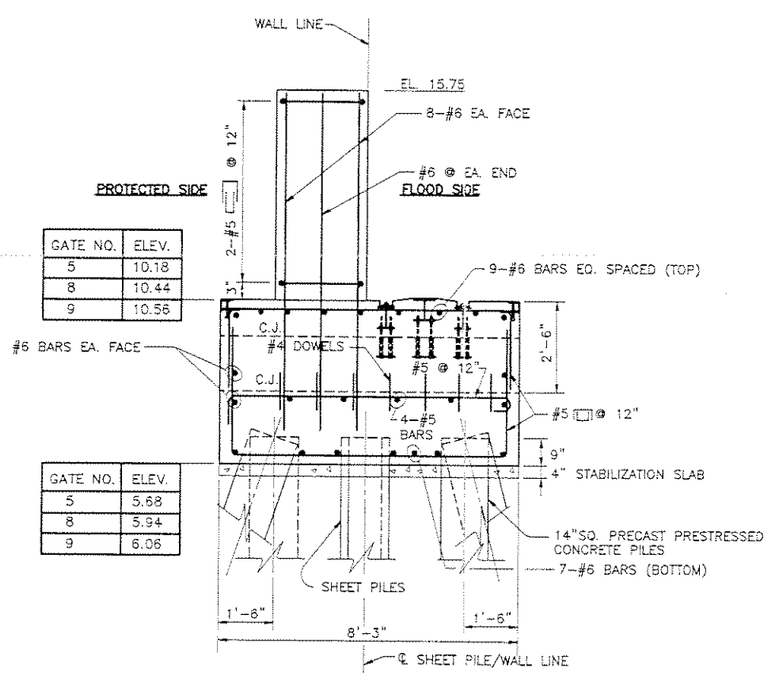
PLATE S11



GATE NO.	ELEV.
5	10.18
8	10.44
9	10.56

GATE NO.	ELEV.
5	5.68
8	5.94
9	6.06

SECTION
SCALE: 1/2"=1'-0"
1 S10 S14 S11



GATE NO.	ELEV.
5	10.18
8	10.44
9	10.56

GATE NO.	ELEV.
5	5.68
8	5.94
9	6.06

SECTION
SCALE: 1/2"=1'-0"
2 S10 S14 S11

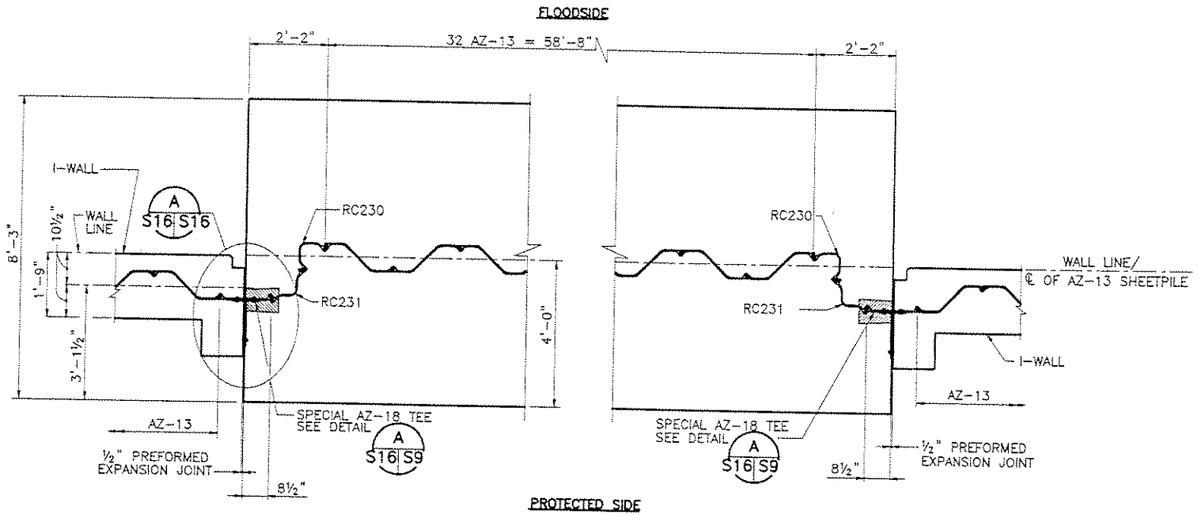
SHEETPILE NOTES:

TIP EL. -28.0 FOR GATE 5
TIP EL. -16.5 FOR GATE 8
TIP EL. -16.5 FOR GATE 9

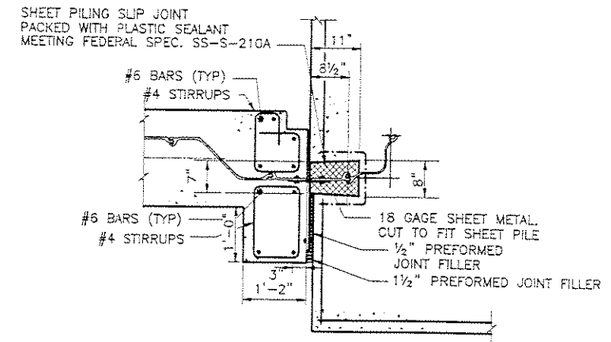
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
ROLLER GATE NOS. 5, 8 & 9
MONOLITH SECTIONS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

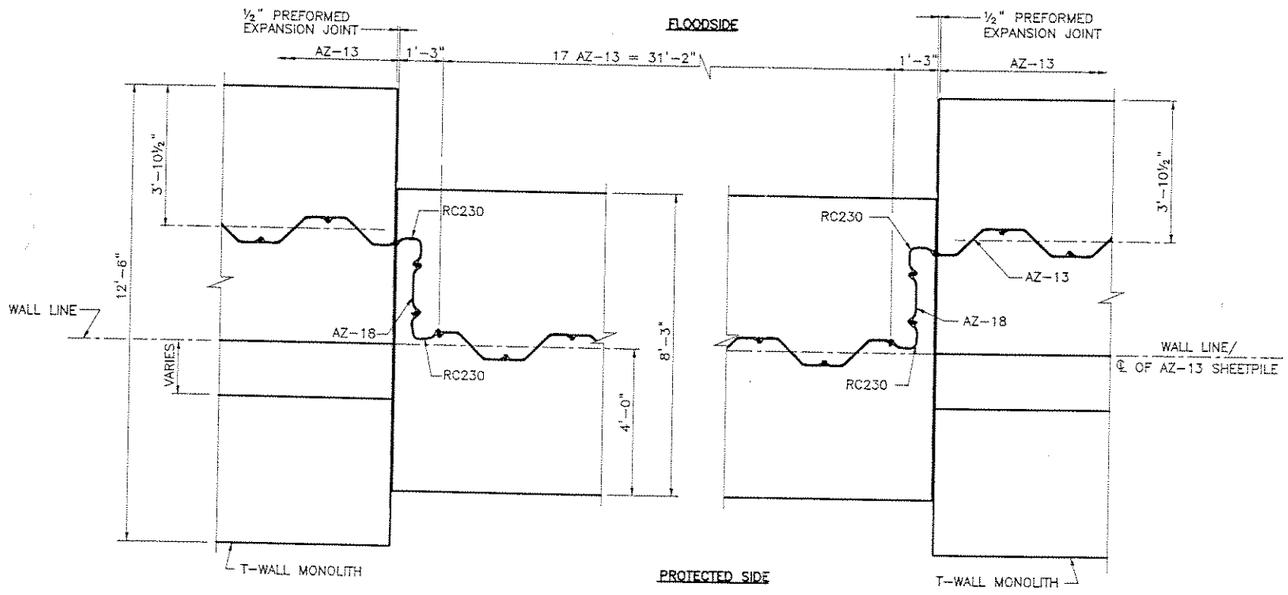
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SEC-589
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



SHEET PILE LAYOUT FOR GATE NO. 5
SCALE: 1/2"=1'-0"



DETAIL A S16 S16
N.T.S.
S16A



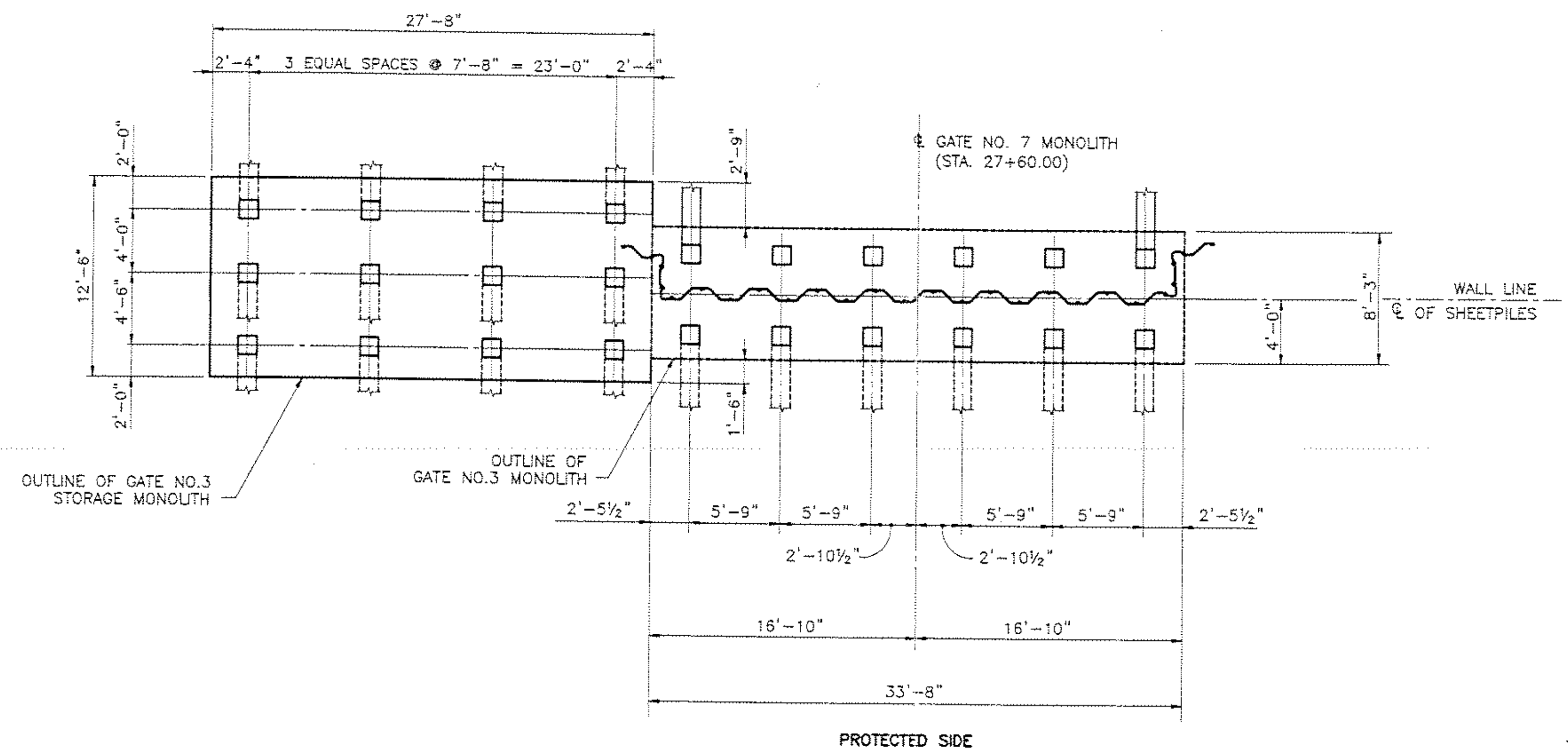
SHEET PILE LAYOUT FOR GATE NO. 3
SCALE: 1/2"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

GATE NOS. 3 & 5 SHEET PILE LAYOUT

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SH35DET
DRAWN BY: J.M.R.	1"=24'	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



PILING PLAN AT GATE NO. 3

SCALE: 3/16"=1'-0"

LEGEND

- 14" SQ. PRECAST PRESTRESSED CONCRETE VERTICAL PILE
- 14" SQ. PRECAST PRESTRESSED CONCRETE BATTER PILE @ 3V:1H, UNLESS NOTED OTHERWISE
- EXISTING PIPE PILE

NOTES:

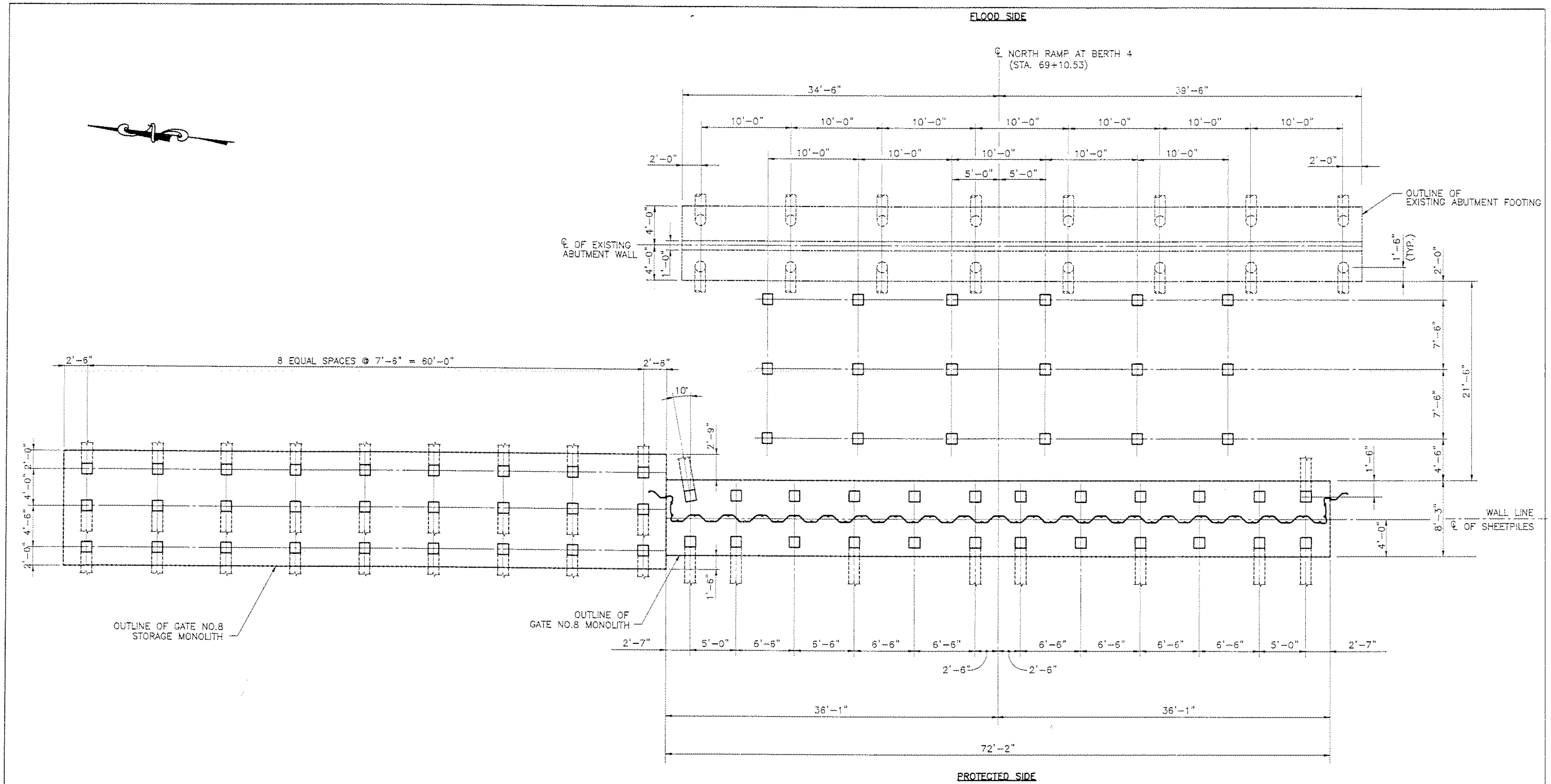
1. 14" SQ. PRECAST PRESTRESSED CONCRETE PILES: TIP EL. -64.00
2. PILOT HOLES FOR THE 14" PRECAST PRESTRESSED CONCRETE PILES SHALL BE PREPUNCHED WITH A STEEL MANDREL NO GREATER THAN 11" IN DIAMETER AND TO A MAXIMUM DEPTH OF 20 FEET.
3. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND EXISTING PILE SIZES.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODGATE PILE PLAN AT GATE NO. 3

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=64	PLOT DATE: 10/97	CADD FILE: GATE 3
DRAWN BY: J.M.R.			FILE NO. 504-005
CHECKED BY: G.P.F.	DATE: 10/97		



PILING PLAN AT GATE NO.8

SCALE: 3/16"=1'-0"

LEGEND

- □ 14" SQ. PRECAST PRESTRESSED CONCRETE VERTICAL PILE
- 14" SQ. PRECAST PRESTRESSED CONCRETE BATTER PILE @ 3V:1H, UNLESS NOTED
- EXISTING PIPE PILES

NOTES:

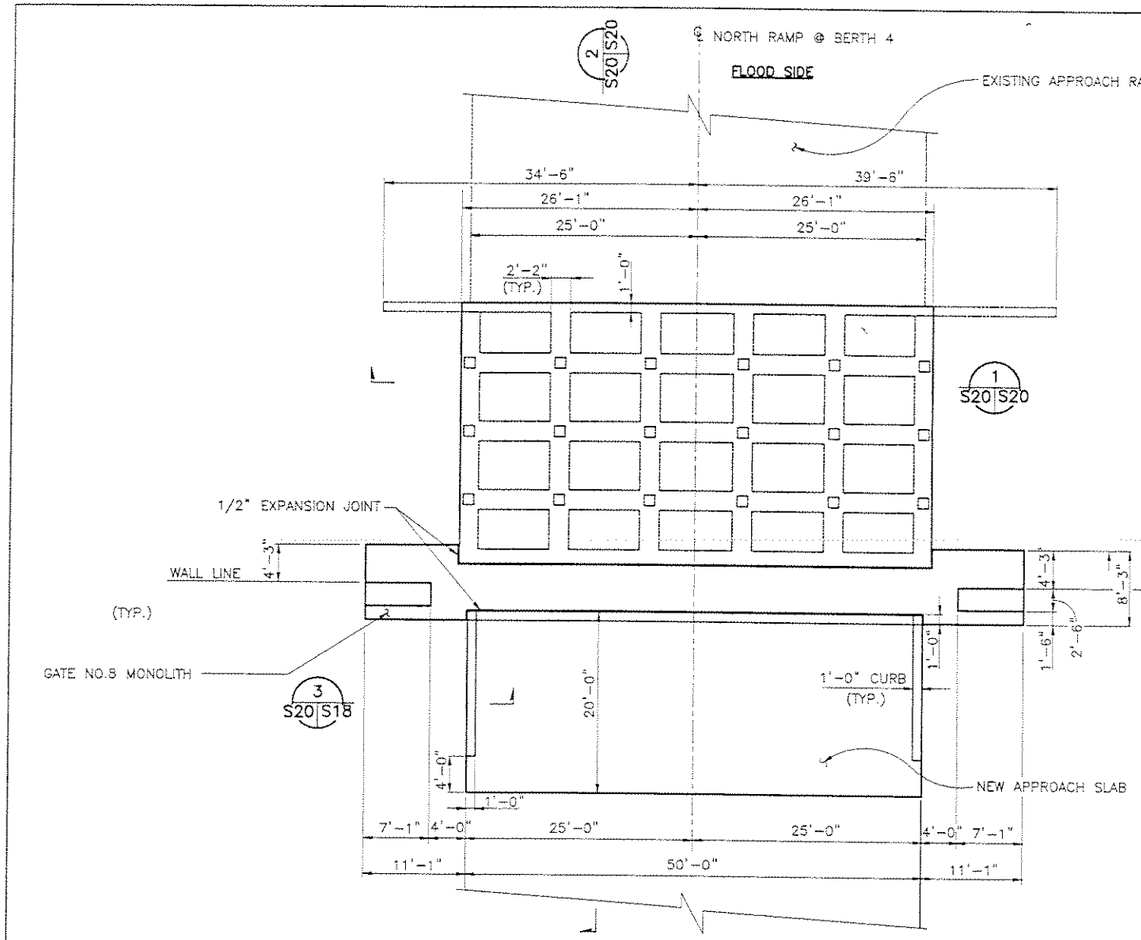
1. 14" SQ. PRECAST PRESTRESSED CONCRETE PILES: TIP EL. -82.00
2. PILOT HOLES FOR THE 14" SQ. PRECAST PRESTRESSED CONCRETE PILES SHALL BE PREPUNCHED WITH A STEEL MANDREL NO GREATER THAN 11" IN DIAMETER AND TO A MAXIMUM DEPTH OF 24 FEET.
3. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND EXISTING PILE SIZES.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

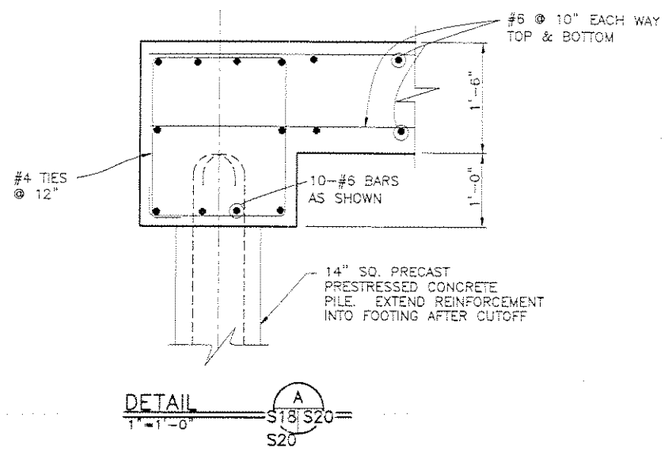
FLOODGATE PILE PLAN AT GATE NO. 8

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

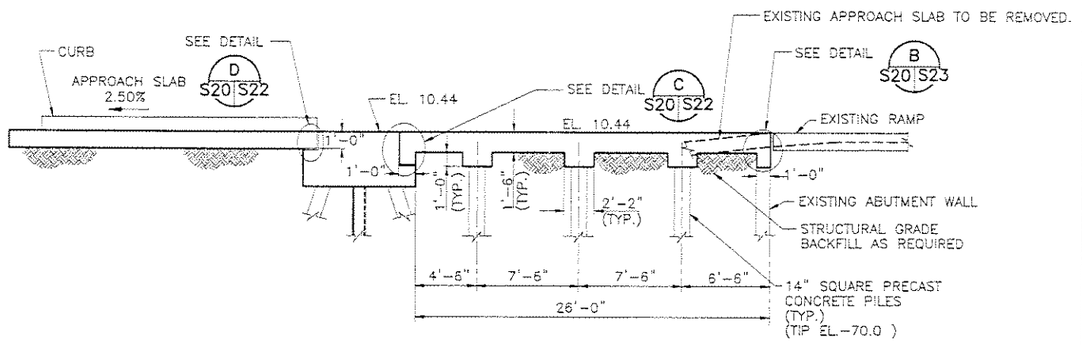
DESIGNED BY: J.F.H.	PLOT SCALE: 1=64	PLOT DATE: 9/1/96	CADD FILE: GATE8A
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 9/1/96		



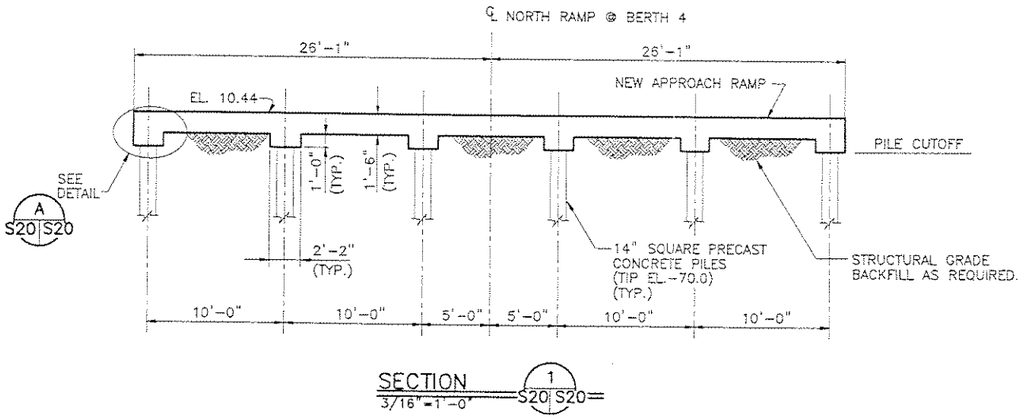
GATE NO. 8 GENERAL ARRANGEMENT
SCALE: 1/8"=1'-0"



DETAIL A — 1"=1'-0" — S18 S20 / S20



SECTION 2 / S20 S20 — 3/16"=1'-0"



SECTION 1 / S20 S20 — 3/16"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

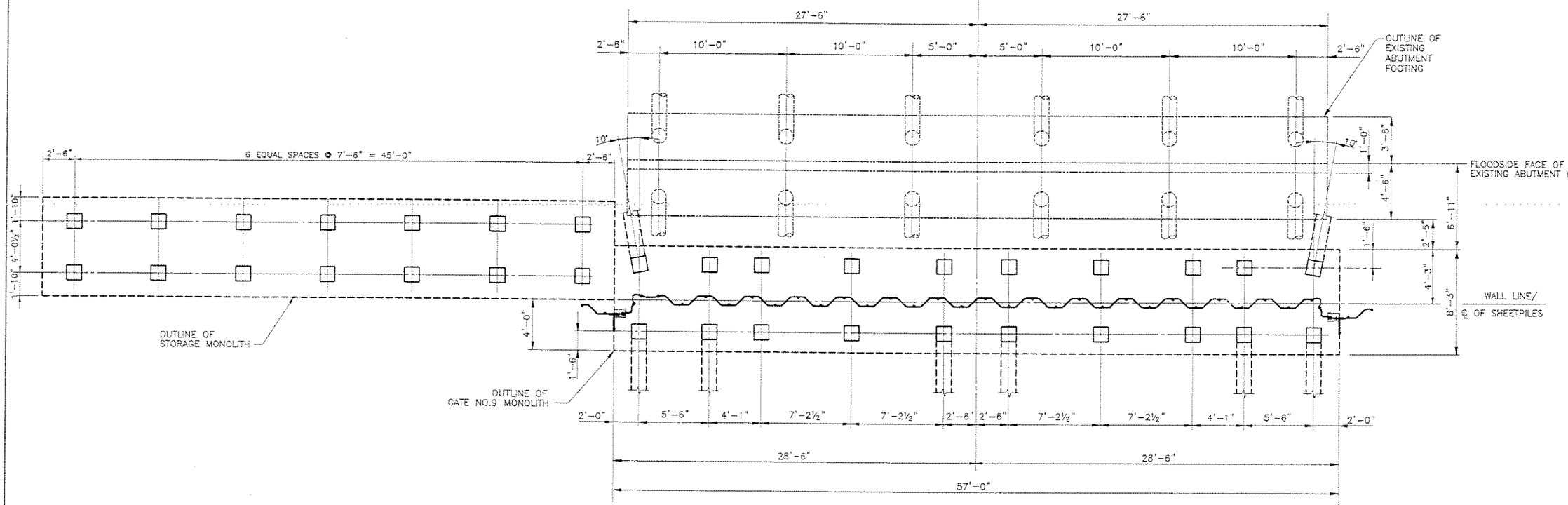
GATE NO. 8 STRUCTURAL ARRANGEMENT

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=54	PLOT DATE: 10/96	CADD FILE: PLANS
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/98		

FLOOD SIDE

℄ SOUTH RAMP @ BERTH 4
STATION 76+45.10 @ WALL LINE



PROTECTED SIDE

PILING PLAN AT GATE NO.9

SCALE: 1/4"=1'-0"

LEGEND

- 14" SQ. PRECAST PRESTRESSED CONCRETE VERTICAL PILE.
- 14" SQ. PRECAST PRESTRESSED CONCRETE BATTER PILE @ 3V:1H, UNLESS NOTED OTHERWISE.
- EXISTING PIPE PILES

NOTE:

1. 14" SQ. PRECAST PRESTRESSED CONCRETE PILES: TIP EL. -83.00
2. PILOT HOLES FOR THE 14" PRECAST PRESTRESSED CONCRETE PILES SHALL BE NO GREATER THAN 11" IN DIAMETER AND DRILLED OR PUNCHED TO A MAXIMUM DEPTH OF 11 FEET.
3. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND EXISTING PILE SIZES.

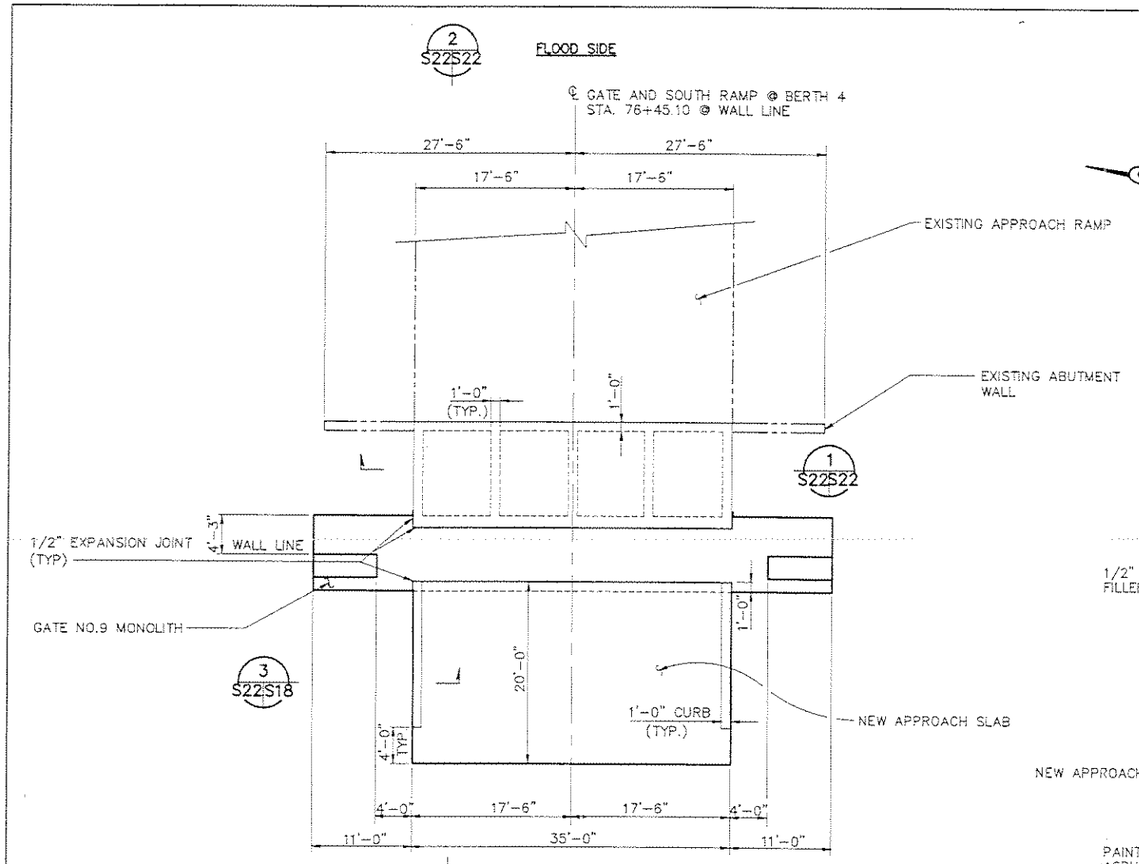
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

FLOODGATE PILE PLAN AT GATE NO. 9

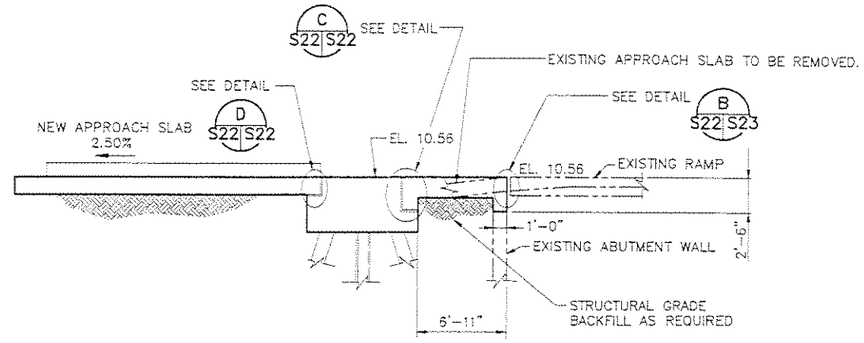
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: GATE9
DRAWN BY: J.M.R.	1=48	10/95	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/96		504-006

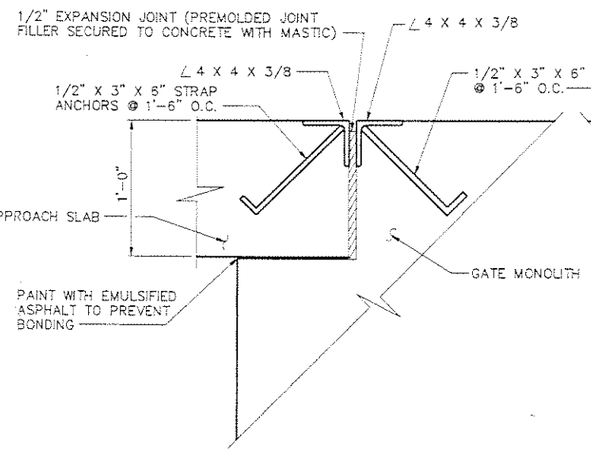
PLATE S21



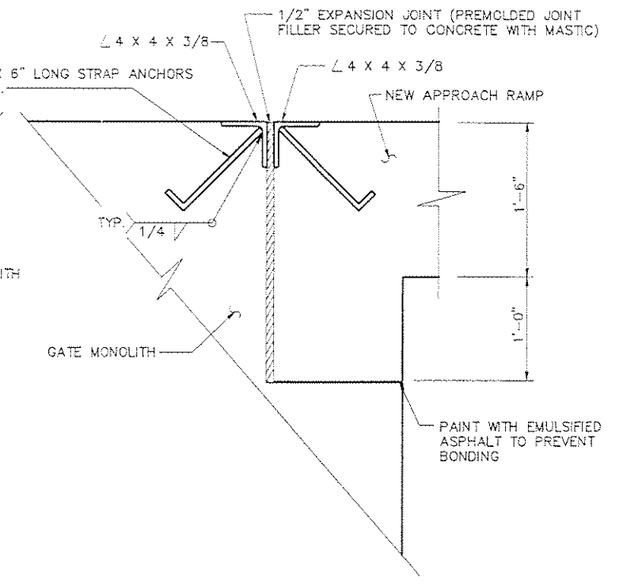
GATE 9 GENERAL ARRANGEMENT
1/8"=1'-0"



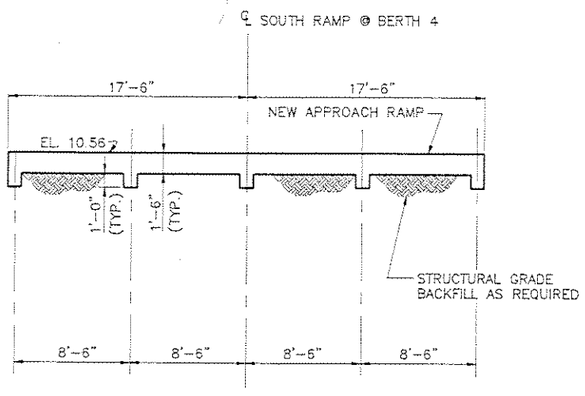
SECTION 2 S22 S22
3/16"=1'-0"



DETAIL D S18 S22
N.T.S.
S20
S22



DETAIL C S18 S22
N.T.S.
S20
S22



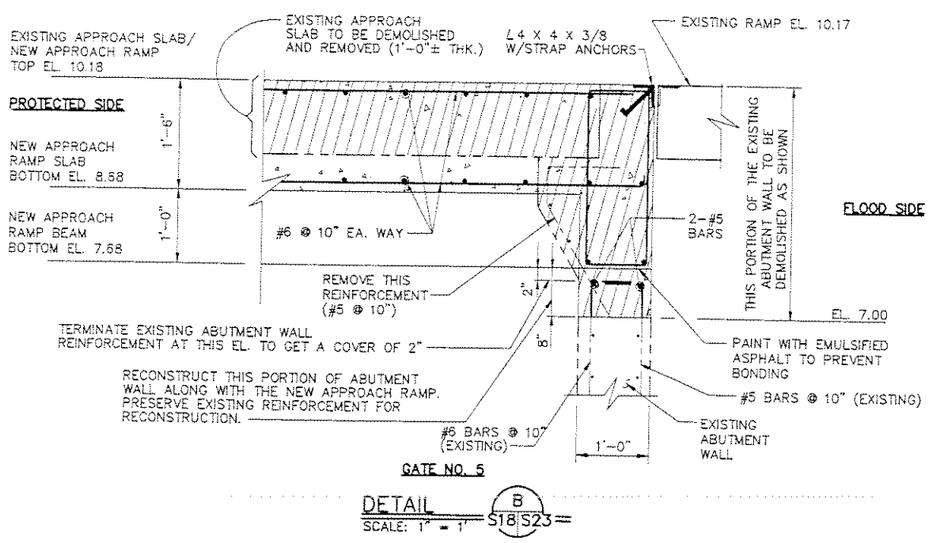
SECTION 1 S22 S22
3/16"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

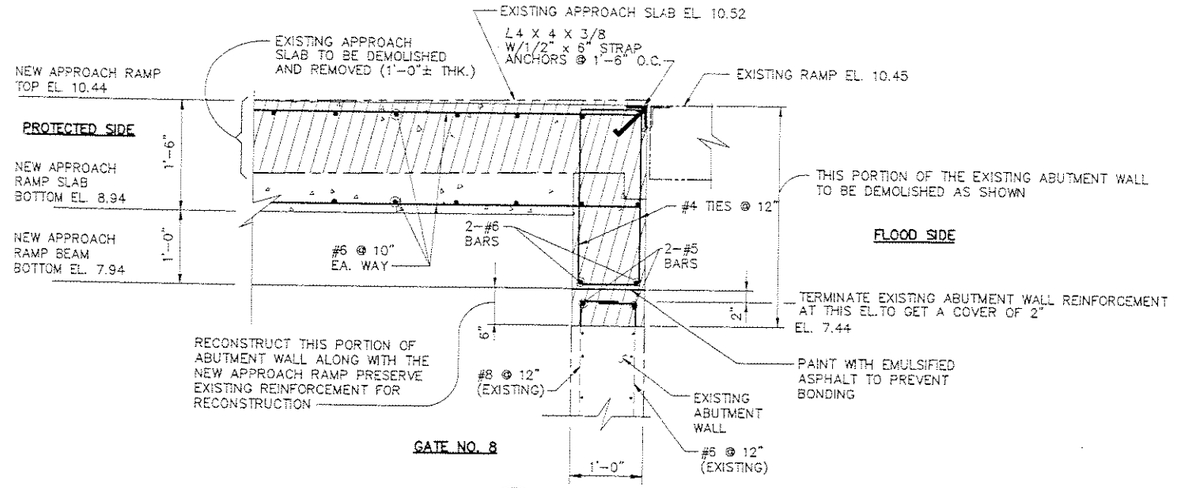
GATE NO. 9 STRUCTURAL ARRANGEMENT

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

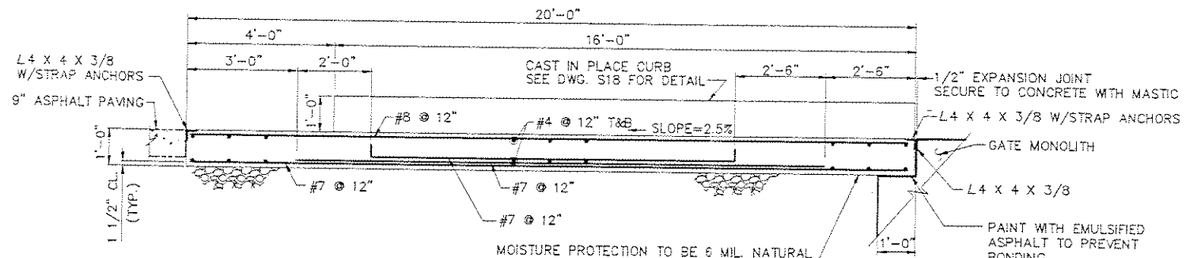
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: PLANS
DRAWN BY: J.M.R.	1=64	10/96	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/96		504-005



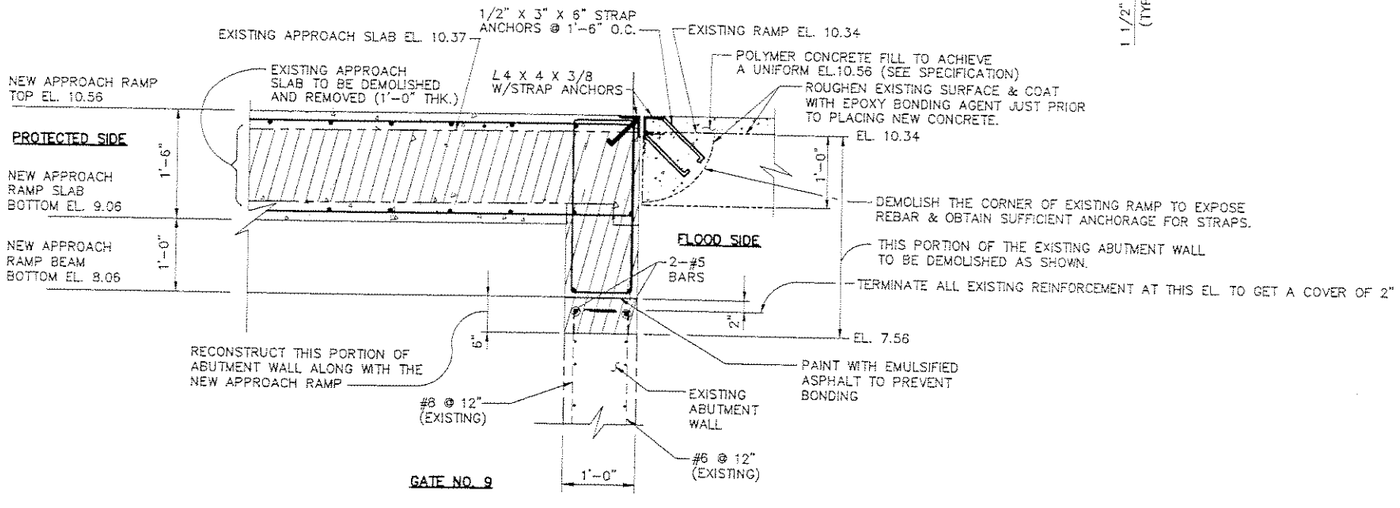
DETAIL B S18 S23
SCALE: 1" = 1'



DETAIL B S20 S23
SCALE: 1" = 1'



APPROACH SLAB DETAIL
SCALE: 1/2"=1'-0"



DETAIL B S22 S23
SCALE: 1" = 1'

EXISTING STRUCTURE TO BE DEMOLISHED.

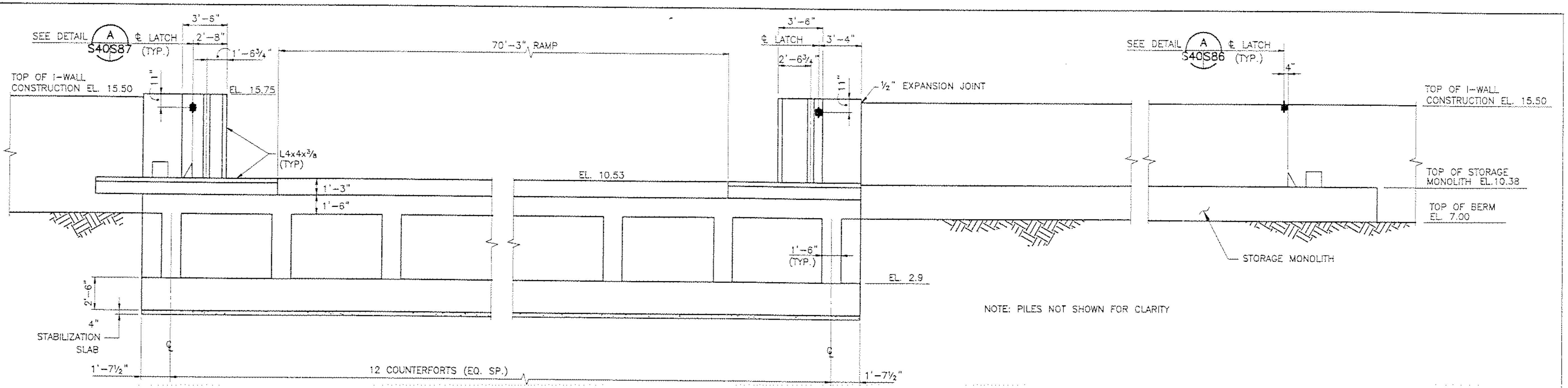
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

APPROACH RAMP/SLAB DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SLABDET
DRAWN BY: J.M.R.	1=12	10/96	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/96		504-006

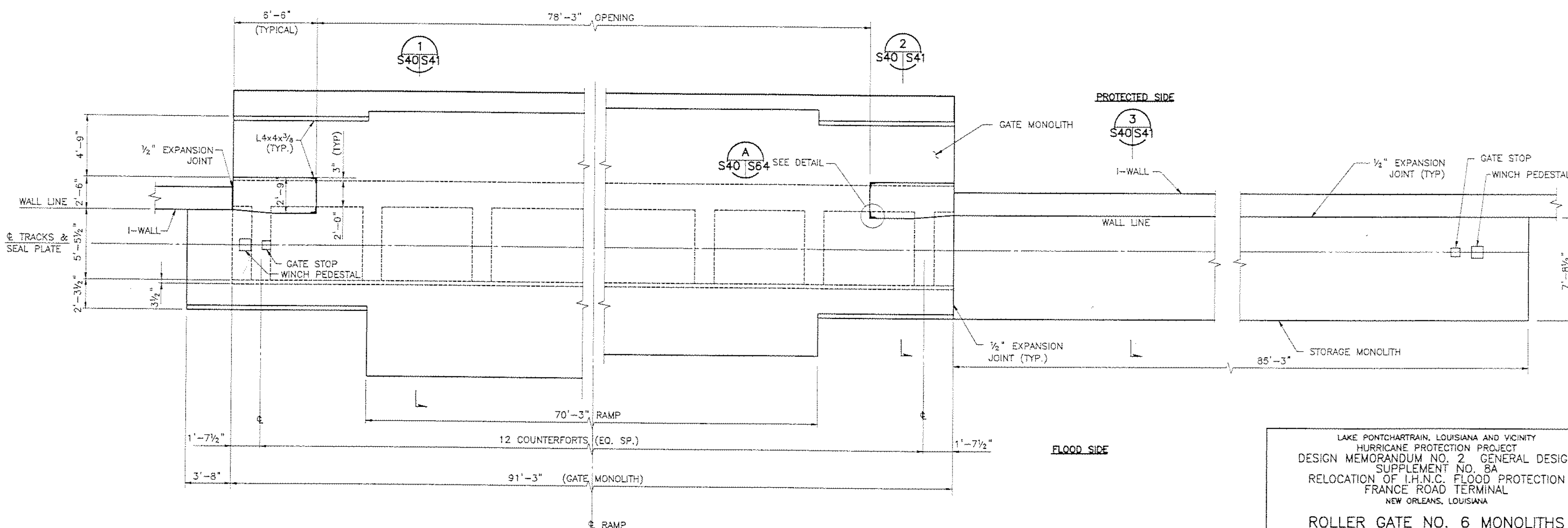
PLATE S23



MONOLITH FLOODSIDE ELEVATION

GATE NO.6

SCALE 1/4" = 1'-0"



MONOLITH PLAN FOR GATE NO.6

SCALE 1/4" = 1'-0"

NOTE:

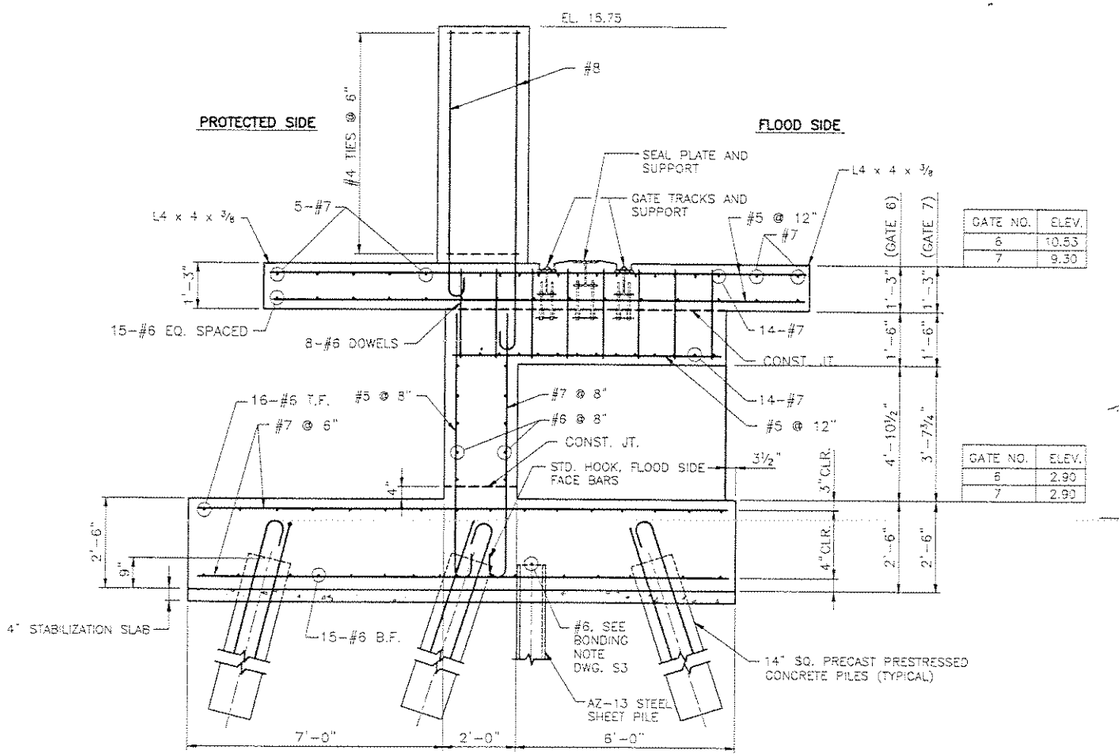
1. FOR LATCH DETAILS SEE DWG. S86 & DWG. S87
2. FOR WINCH PEDESTAL AND GATE STOP DETAIL SEE DWG. S58

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NO. 6 MONOLITHS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

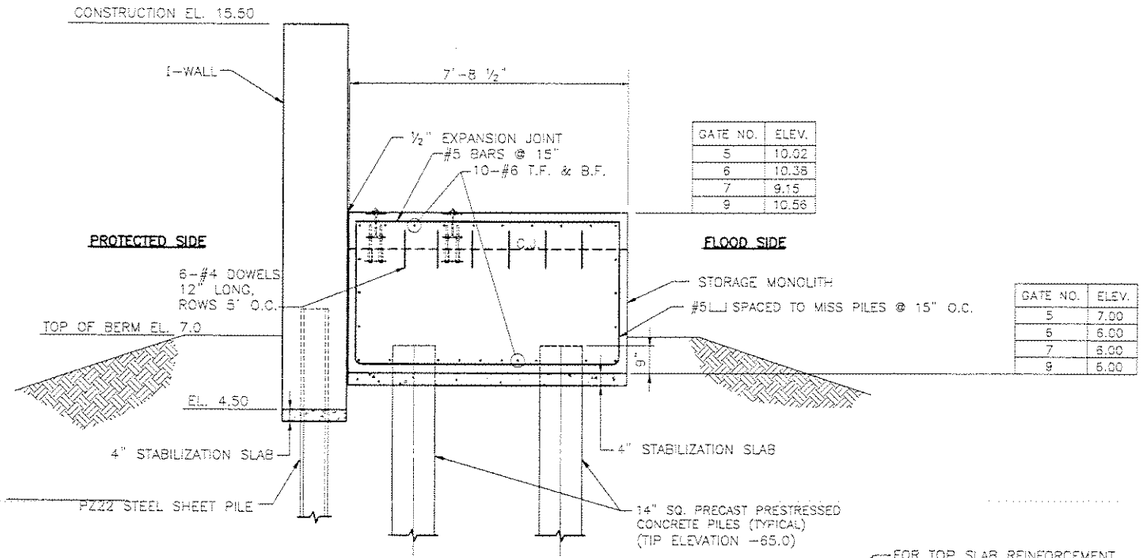
DESIGNED BY: J.F.H.	PLOT SCALE: 1=48	PLOT DATE: 10/96	CADD FILE: 005-S000
DRAWN BY: J.M.R.			FILE NO. 504-005
CHECKED BY: G.P.F.	DATE: 10/96		



GATE NO.	ELEV.
6	10.53
7	9.30

GATE NO.	ELEV.
6	2.90
7	2.90

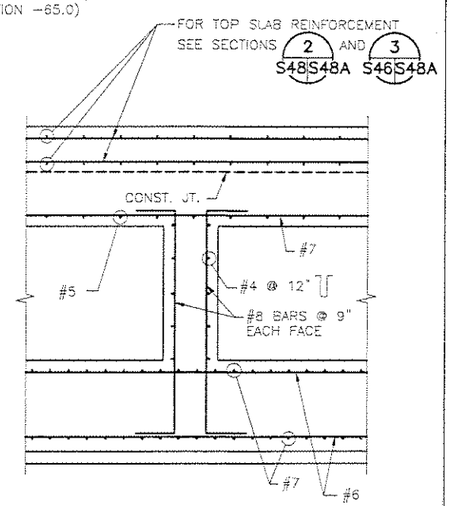
SECTION
SCALE: 1/2"=1'-0"
2 S40|S41 S40A



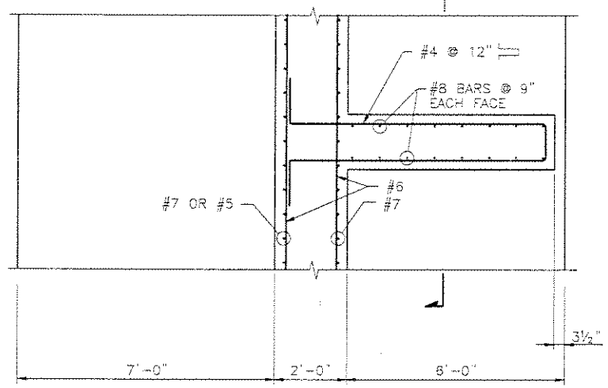
GATE NO.	ELEV.
5	10.02
6	10.38
7	9.15
9	10.56

GATE NO.	ELEV.
5	7.00
6	6.00
7	6.00
9	6.00

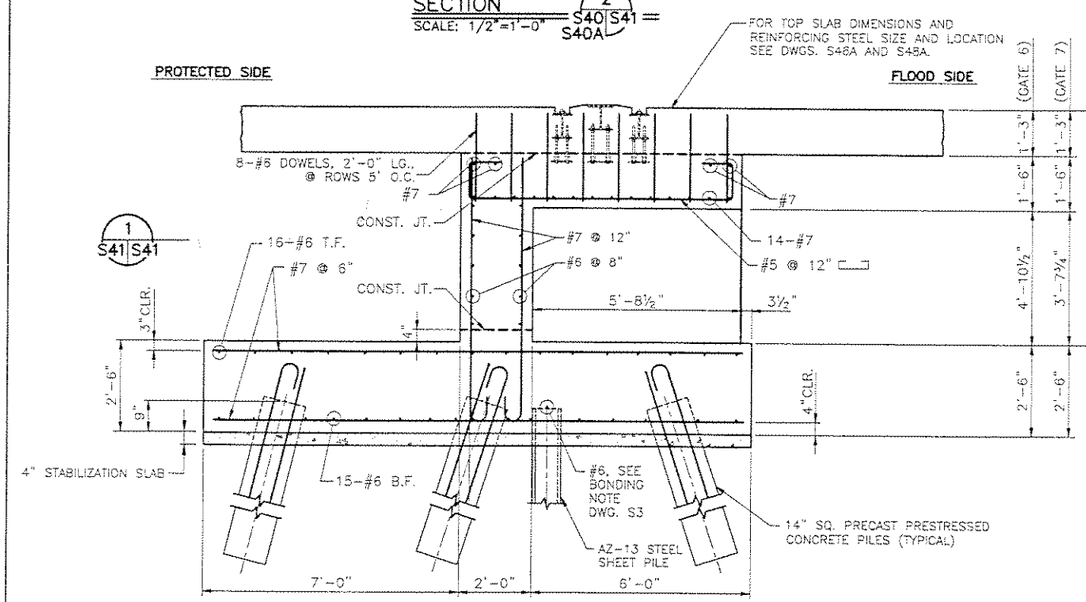
SECTION
SCALE: 1/2"=1'-0"
3 S58B|S58E S58C



SECTION
SCALE: 1/2"=1'-0"
2 S41|S41



SECTION
SCALE: 1/2"=1'-0"
1 S41|S41



GATE NO.	ELEV.
6	10.53
7	9.30

GATE NO.	ELEV.
6	2.90
7	2.90

SECTION
SCALE: 1/2"=1'-0"
1 S40|S41 S40A

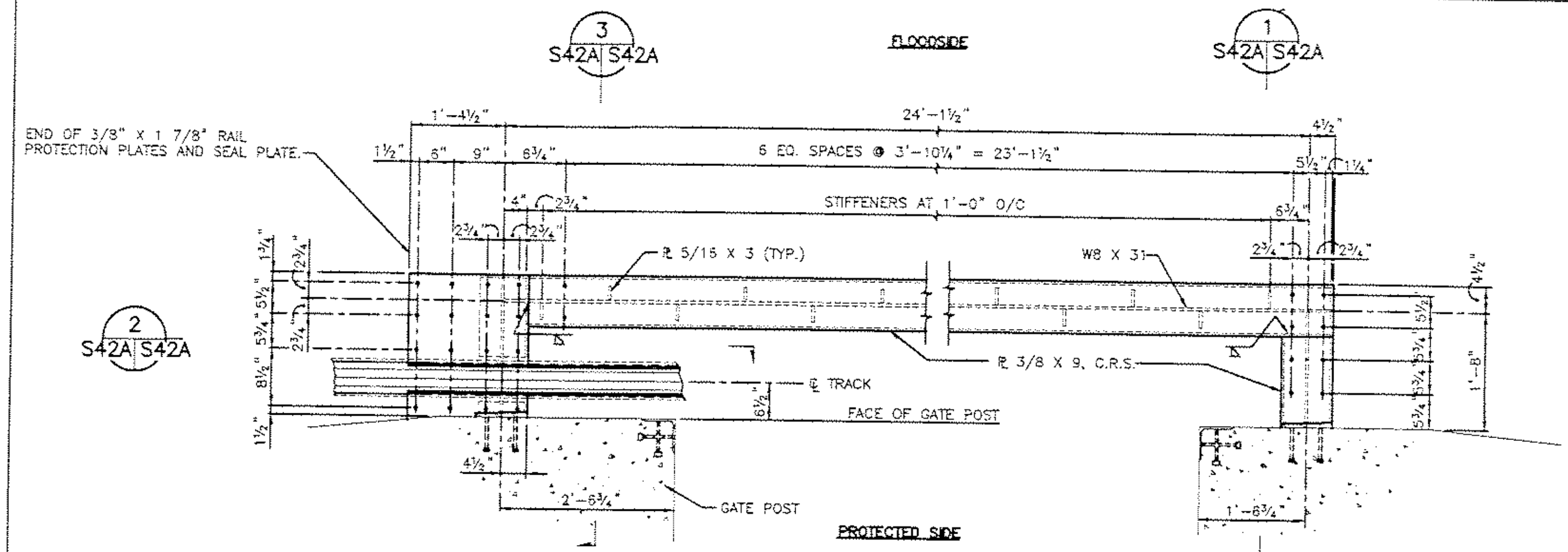
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATES 6&7 MONOLITH SECTIONS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=24	PLOT DATE: 10/97	CADD FILE: RGTDET1
DRAWN BY: J.M.R.			FILE NO. 504-005
CHECKED BY: G.P.F.	DATE: 10/97		

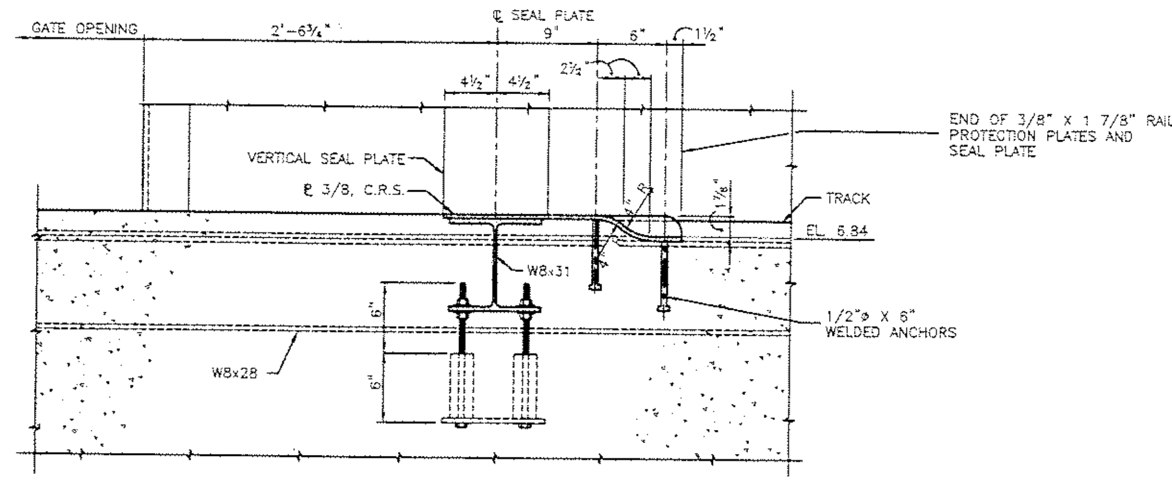
PLATE S41



PLAN OF SEAL PLATE SUPPORT BEAM WITH ANCHOR BOLTS

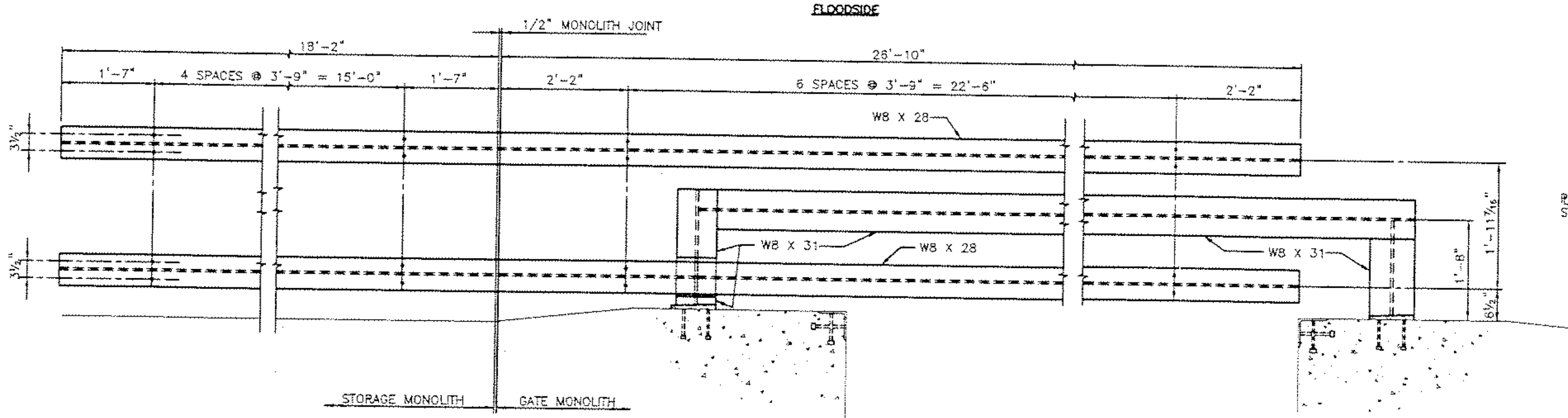
SCALE: 3/4"=1'-0"

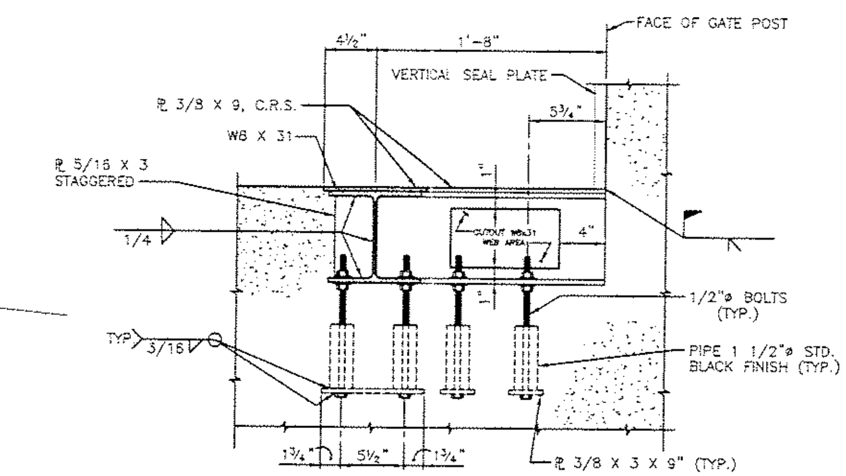
NOTE:
IF BOLT HOLES FALL WITHIN 1" OF ℄ OF 5/16" X 3" PLATE, INCREASE OR DECREASE BOLT HOLE SPACING BY 2" TO CLEAR 5/16" PLATE.



SECTION 2 S42A S42A

SCALE: 1 1/2"=1'-0"



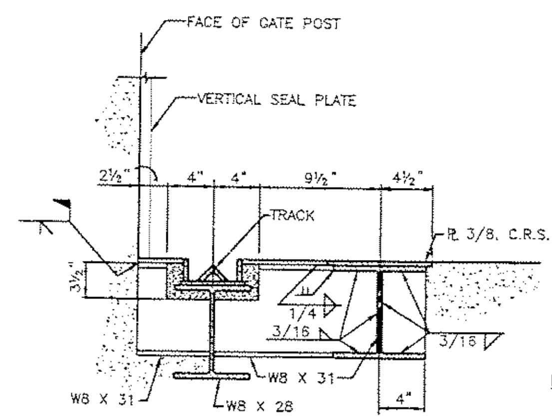


SECTION 1 S42A S42A

SCALE: 1 1/2"=1'-0"

PLAN OF TRACK SUPPORT BEAMS WITH ANCHOR BOLTS

SCALE: 3/4"=1'-0"



SECTION 3 S42A S42A

SCALE: 1 1/2"=1'-0"

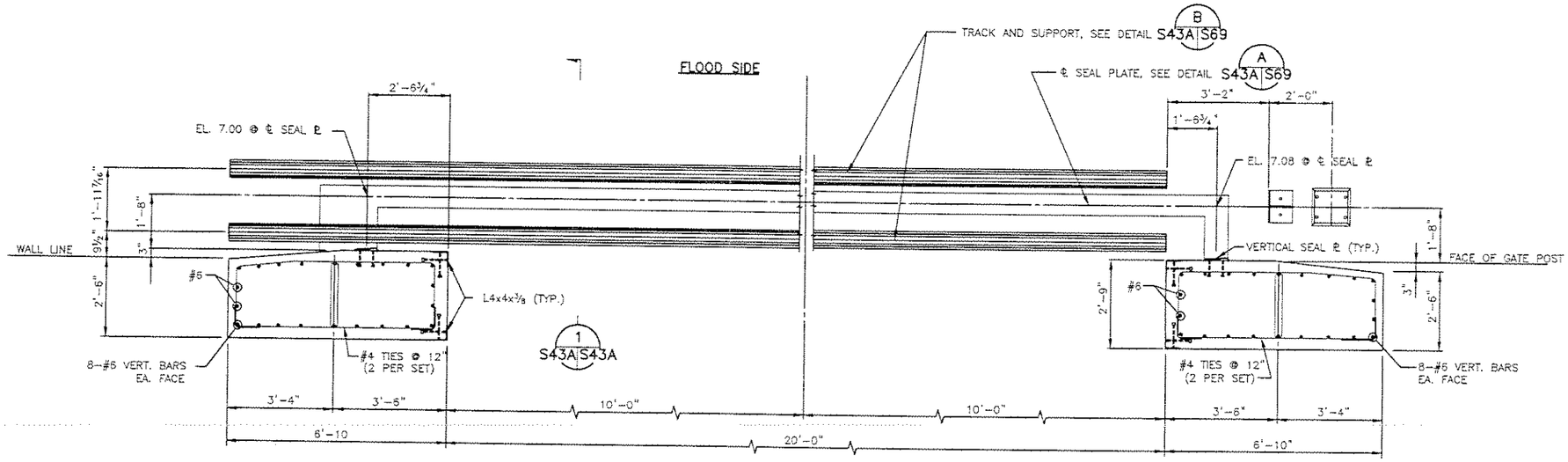
NOTE:
ANCHOR BOLTS NOT SHOWN FOR CLARITY.

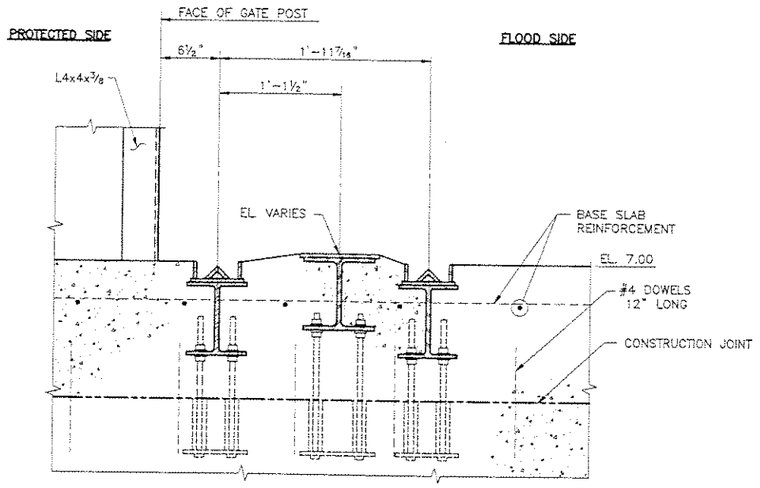
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
ROLLER GATE NO. 3
PLATE\SUPPORT BEAM DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=16	PLOT DATE: 10/96	CADD FILE: RG3TDET
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/96		

PLATE S42A



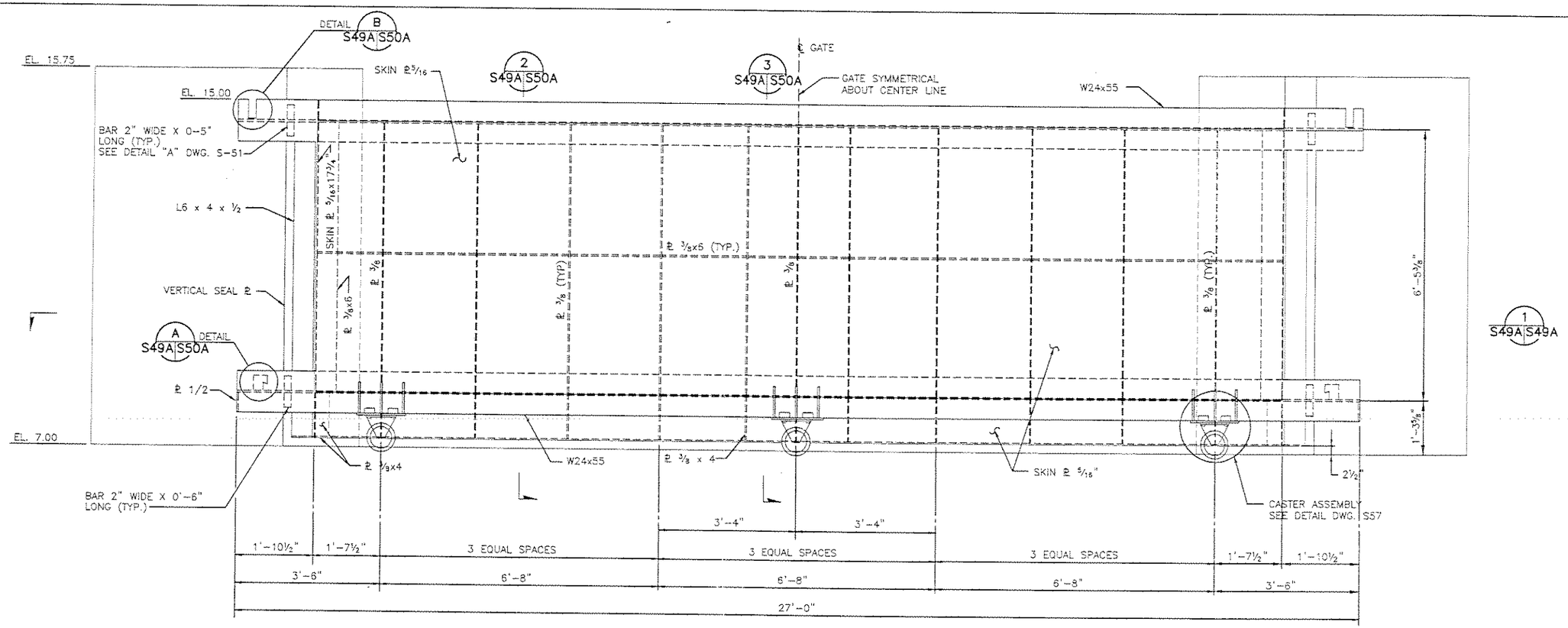


LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NO.3 PART PLAN & SEC.

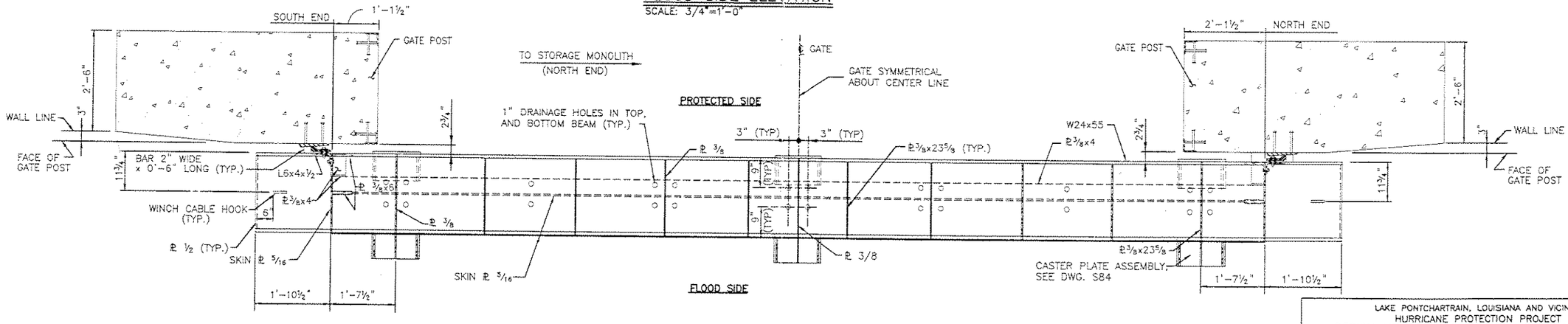
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: RG3TDET2
DRAWN BY: J.M.R.	1=24	10/96	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/96		504-006



FLOOD SIDE ELEVATION

SCALE: 3/4"=1'-0"



SECTION

SCALE: 3/4"=1'-0"

1 S49A S49A

NOTES:

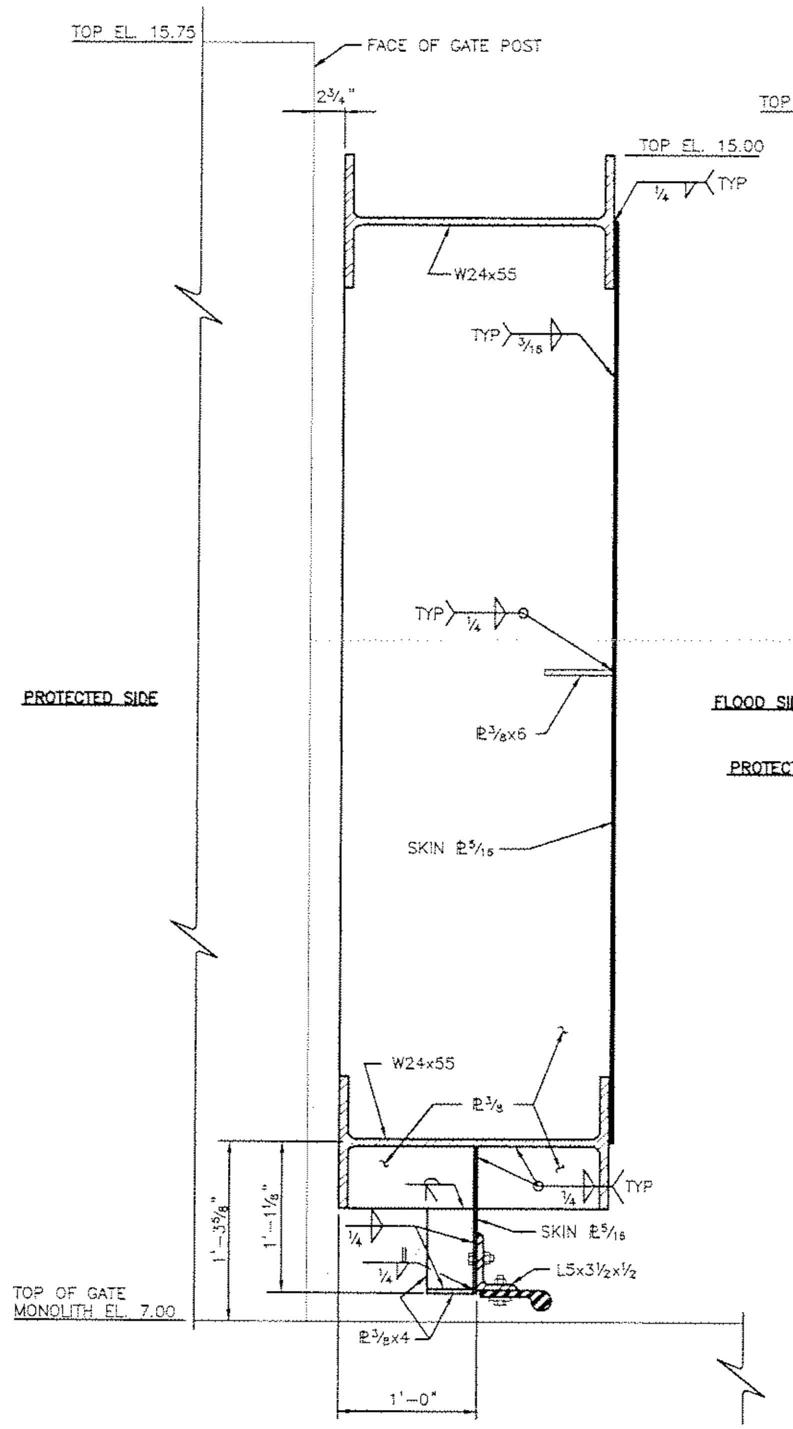
1. SPLICES IN WIDE FLANGE MEMBERS SHALL UTILIZE FULL PENETRATION WELDS AND SHALL DEVELOP THE FULL STRENGTH OF THE MEMBER. WELDS SHALL BE 100% X-RAYED AND INSPECTED PER AWS D1.1, LATEST REVISION.
2. ROLLER GATE MUST BE LATCHED WHEN IN THE CLOSED POSITION.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

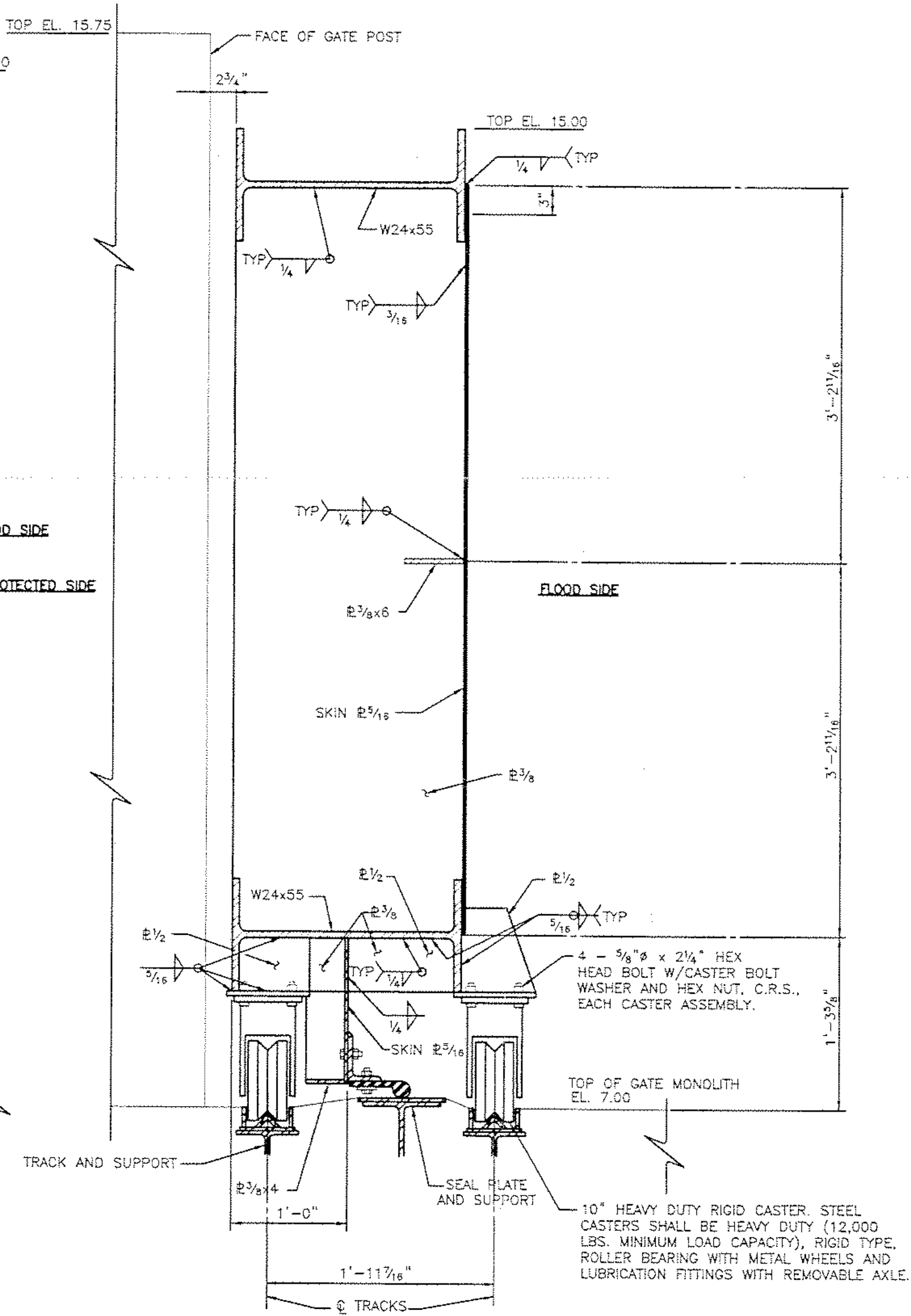
ROLLER GATER NO.3 ELEVATION & SEC.

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

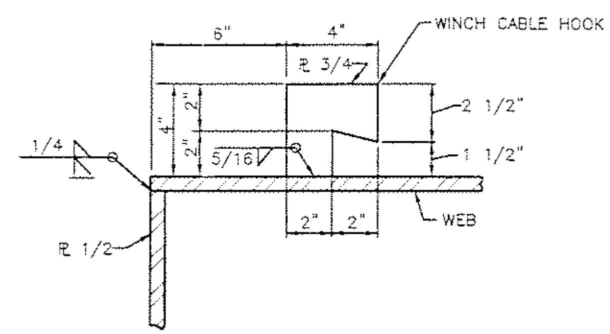
DESIGNED BY: J.F.H.	PLOT SCALE: 1=16	PLOT DATE: 10/96	CADD FILE: PAE-RLG3
DRAWN BY: J.M.R.			FILE NO. 504-005
CHECKED BY: G.P.F.	DATE: 10/96		



SECTION 2 S49A|S50A
SCALE: 1 1/2"=1'-0"

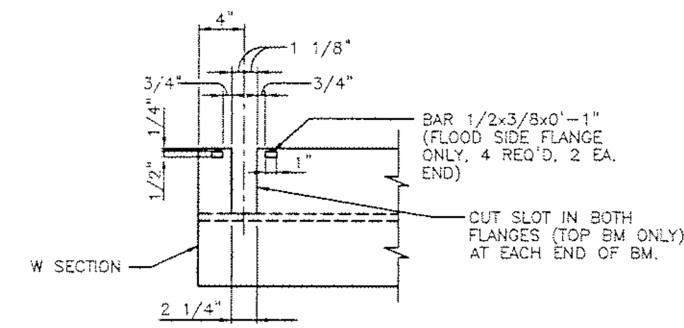


SECTION 3 S49A|S50A
SCALE: 1 1/2"=1'-0"



WINCH CABLE HOOK

DETAIL A S49A|S50A S49B S49C S49D S49E
SCALE: 3"=1'-0"



FLOOD SIDE ELEVATION

LOCKING DEVICE NOTCHES IN W SECTION

DETAIL B S49A|S50A S49B S49C S49D S49E
SCALE: 1 1/2"=1'-0"

NOTE:
PARTICULAR ATTENTION SHALL BE GIVEN TO FIELD ADJUSTMENT OF BOTTOM SEAL IN ORDER TO OBTAIN PROPER SEAL WITH SEAL PLATE.

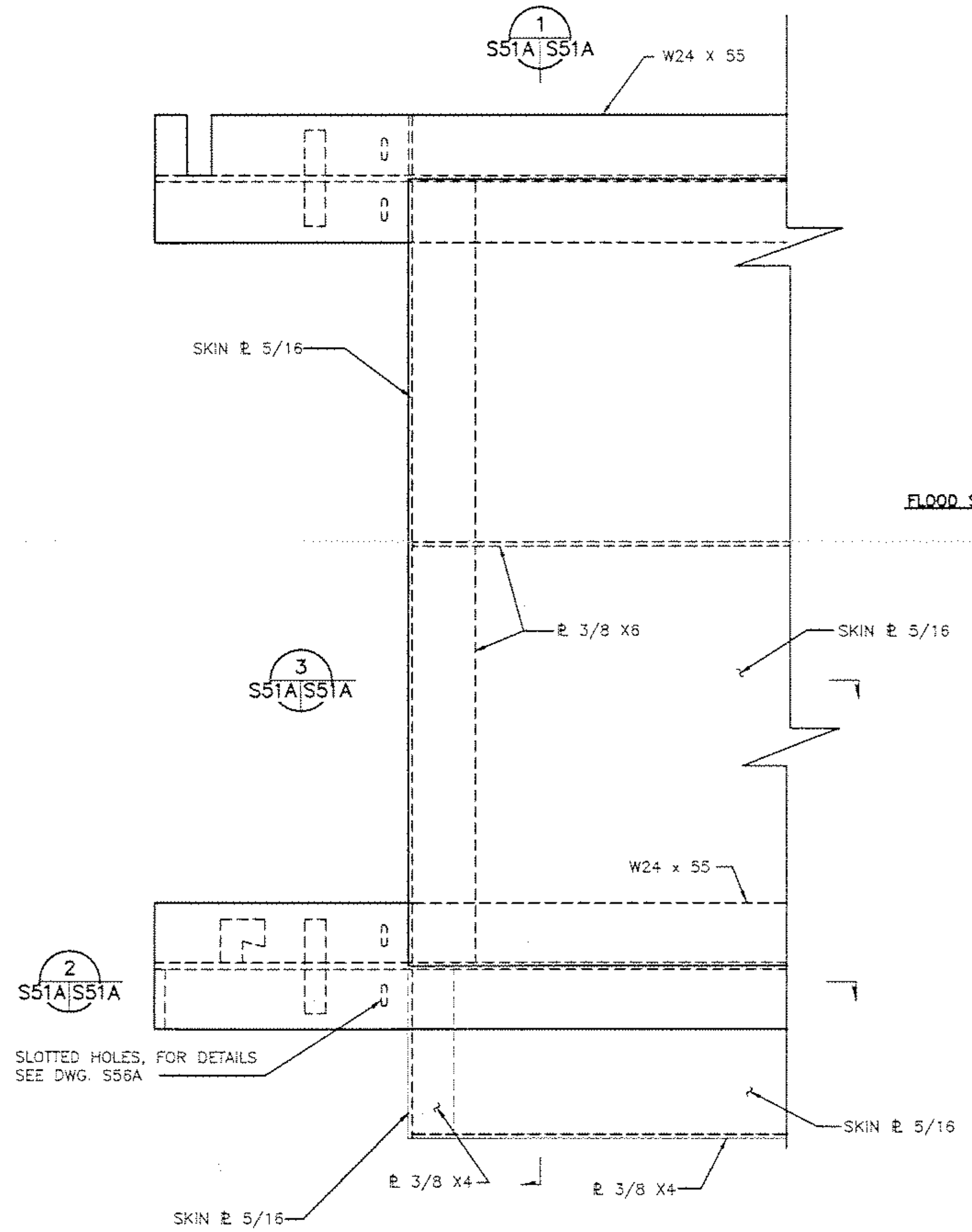
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NO.3 SECTIONS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=8	PLOT DATE: 10/96	CADD FILE: RLG3-SEC
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/96		

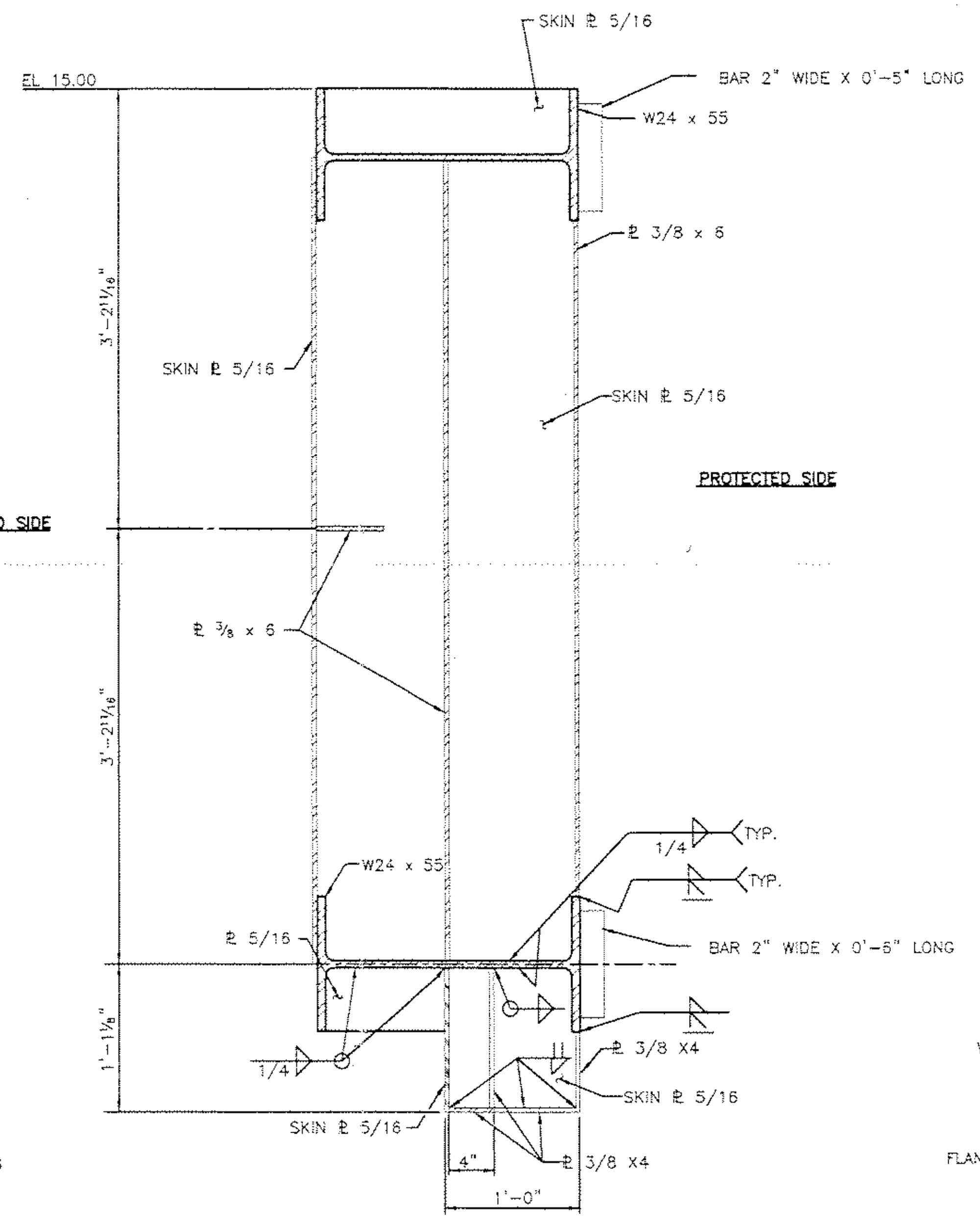
PLATE S50A



SOUTH END–SHOWN
NORTH END–OPPOSITE HAND

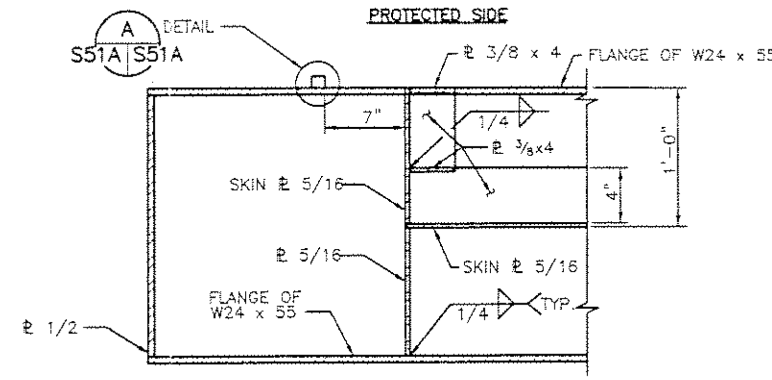
FLOOD SIDE ELEVATION AT END OF GATE

SCALE: 1 1/2"=1'-0"



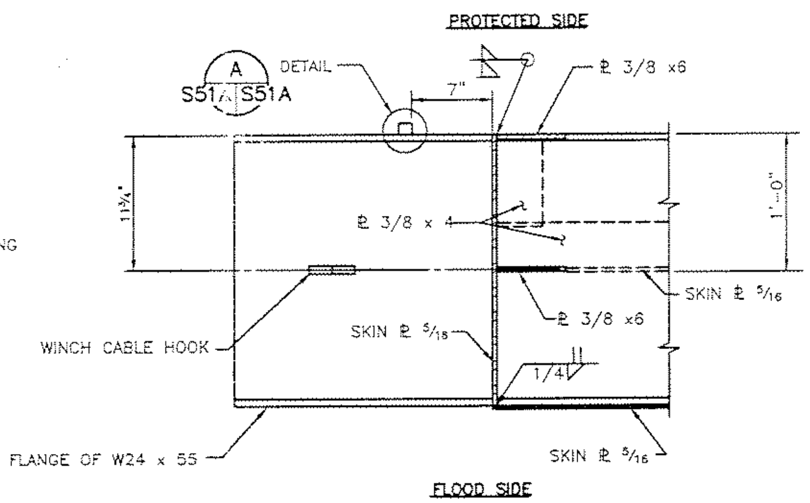
SECTION 1 S51A | S51A

SCALE: 1 1/2"=1'-0"



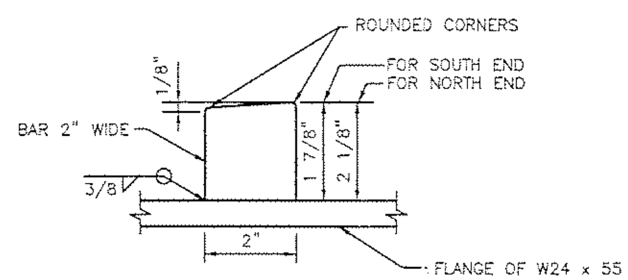
SECTION 2 S51A | S51A

SCALE: 1 1/2"=1'-0"



SECTION 3 S51A | S51A

SCALE: 1 1/2"=1'-0"



DETAIL A S51A | S51A

SCALE: 1 1/2"=1'-0"

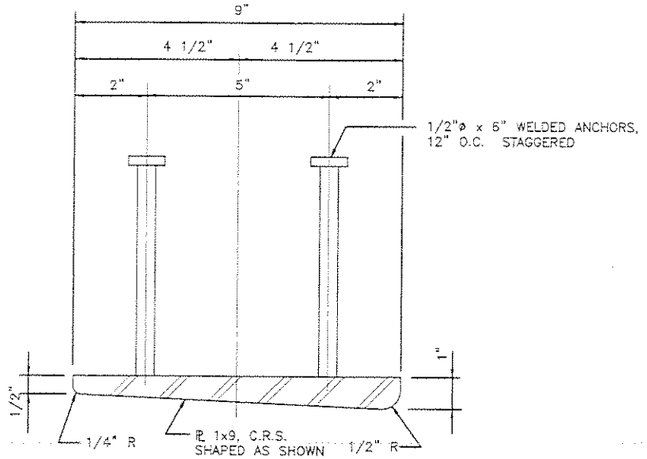
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NO. 3 END SECTIONS

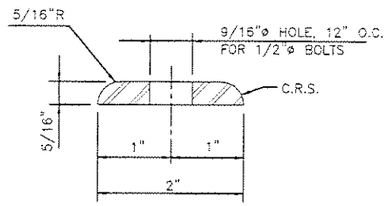
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=8	PLOT DATE: 10/96	CADD FILE: RLGE-DET
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/96		

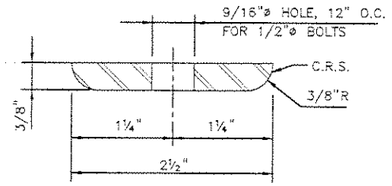
PLATE S51A



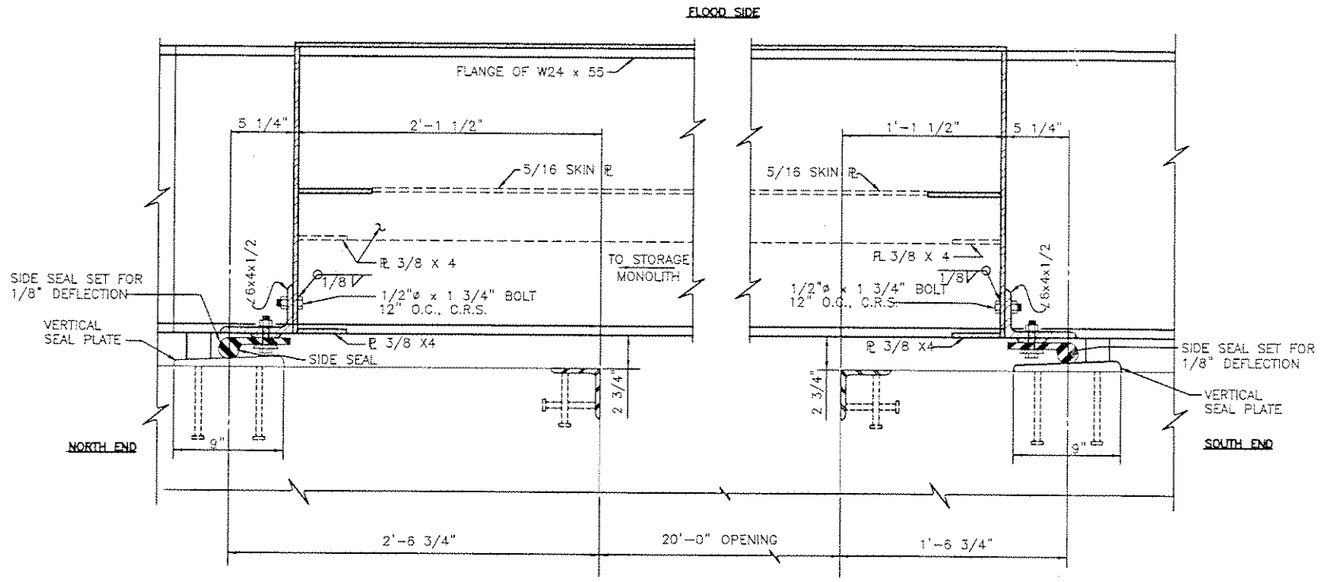
VERTICAL SEAL PLATE DETAIL
SCALE: 6"=1'-0"



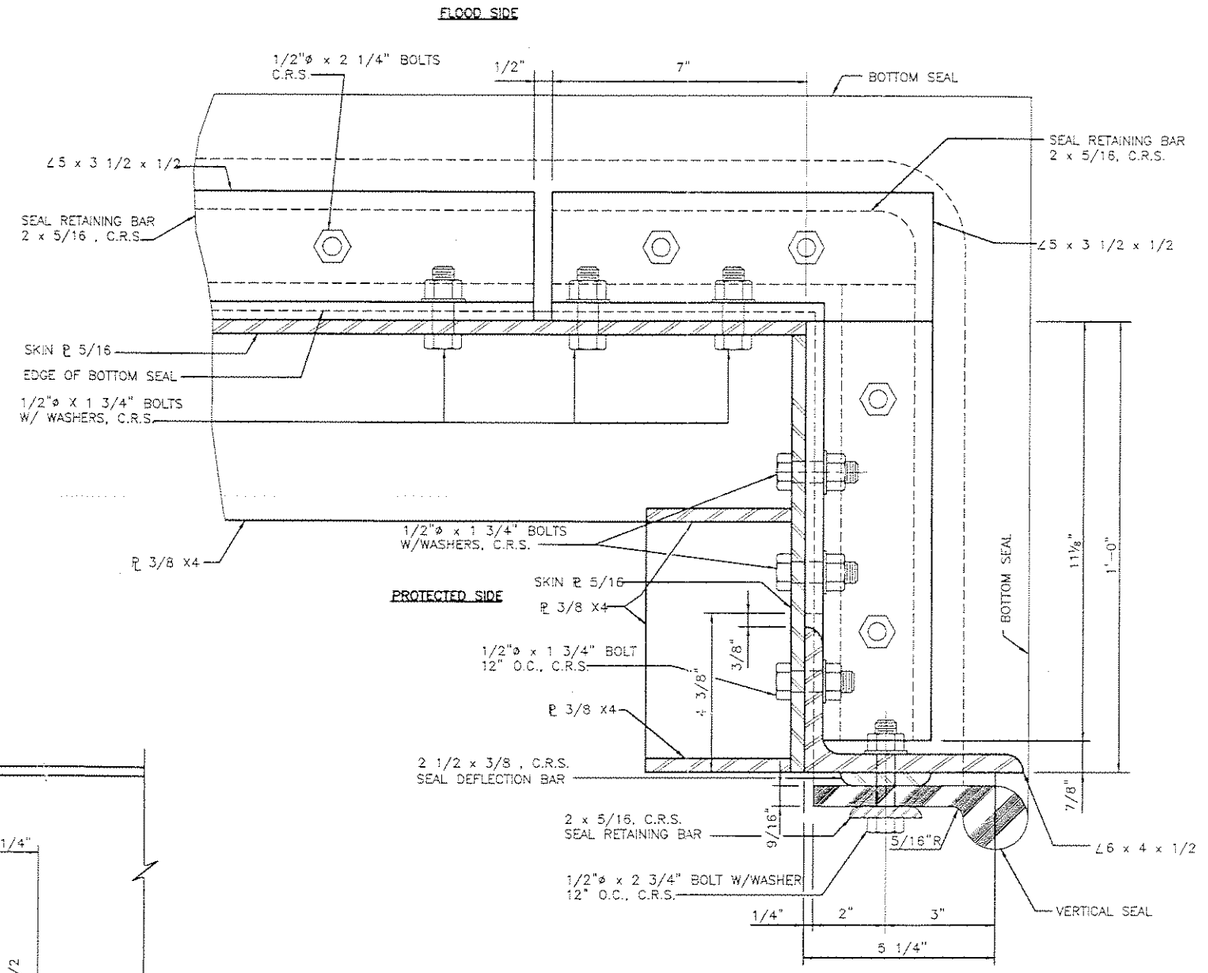
SEAL RETAINING BAR
SCALE: 12"=1'-0"



SEAL DEFLECTION BAR
SCALE: 12"=1'-0"



END SECTION THRU ROLLERGATE
SCALE: 2"=1'-0"



VERTICAL SEAL
PLAN AT END OF GATE BELOW W24x55
SCALE: 6"=1'-0"

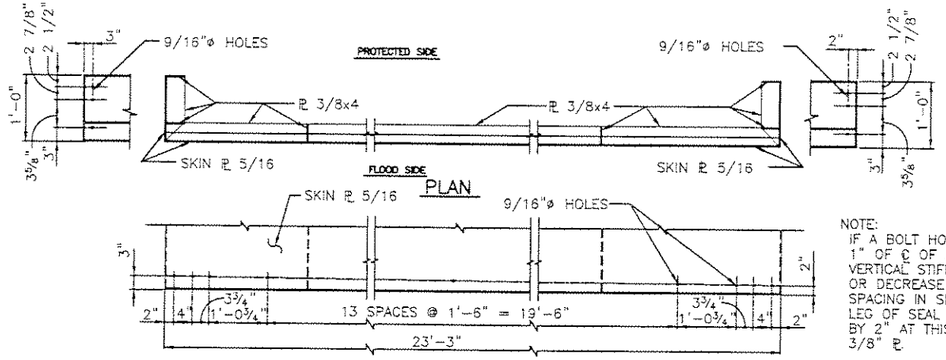
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NO. 3 SIDE SEAL DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

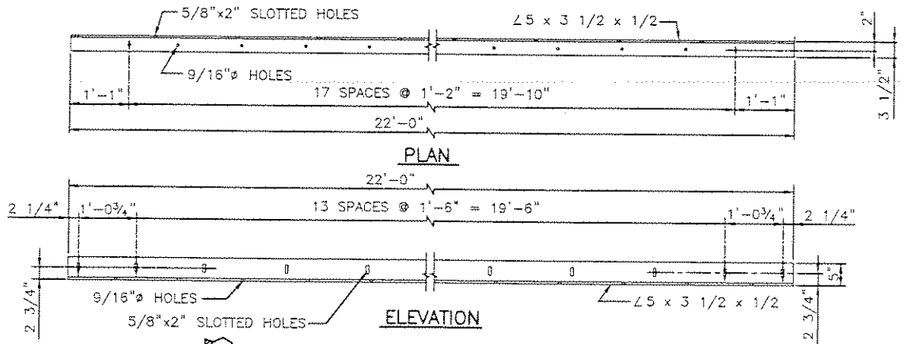
DESIGNED BY: J.F.H.	PLOT SCALE: 1=4	PLOT DATE: 10/96	CADD FILE: DET-RLG3
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/98		

PLATE S55A

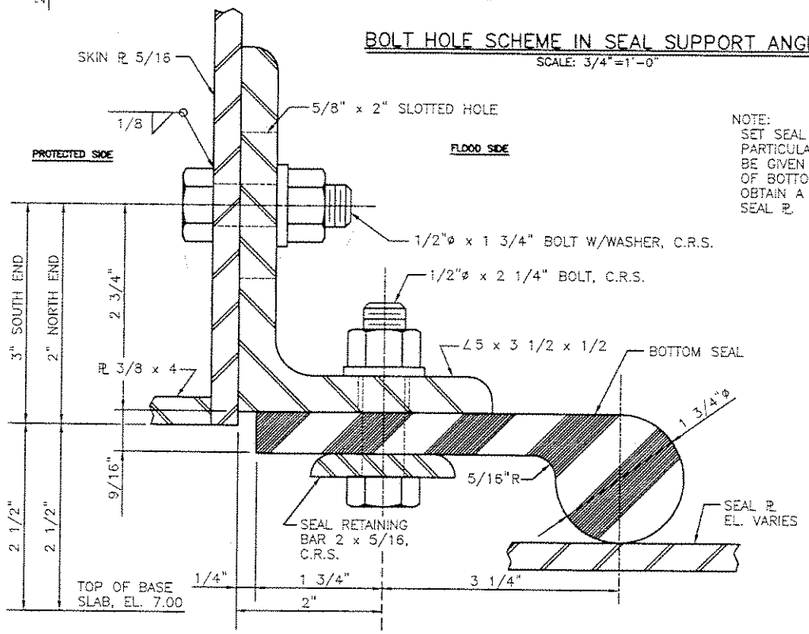


NOTE:
IF A BOLT HOLE FALLS WITHIN 1" OF ℄ OF 3/8" x 4" VERTICAL STIFFENER PL INCREASE OR DECREASE BOLT HOLE SPACING IN SKIN PL AND VERTICAL LEG OF SEAL SUPPORT ANGLE BY 2" AT THIS SPOT TO CLEAR 3/8" PL

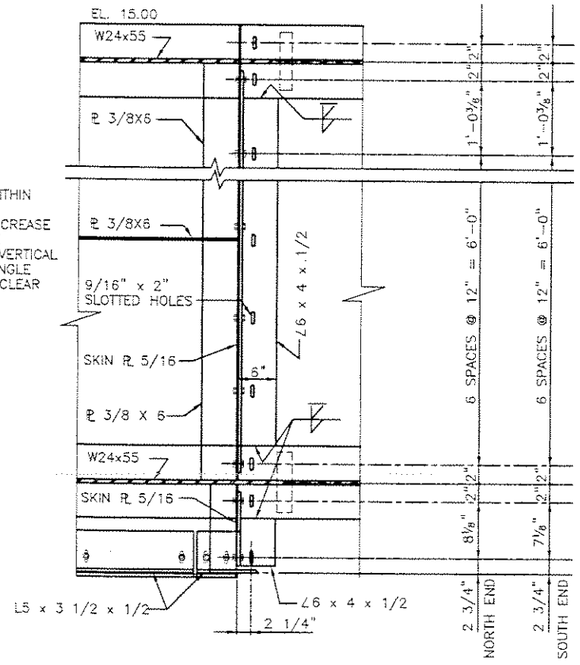
BOLT HOLE SCHEME FOR SEAL SUPPORT ANGLE
SCALE: 3/4"=1'-0"



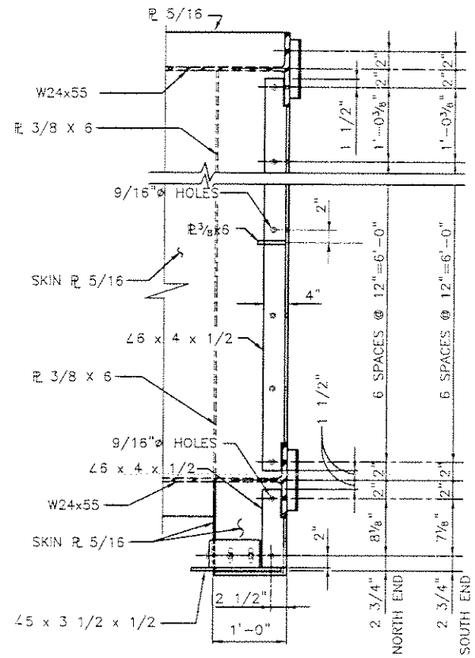
BOLT HOLE SCHEME IN SEAL SUPPORT ANGLE
SCALE: 3/4"=1'-0"



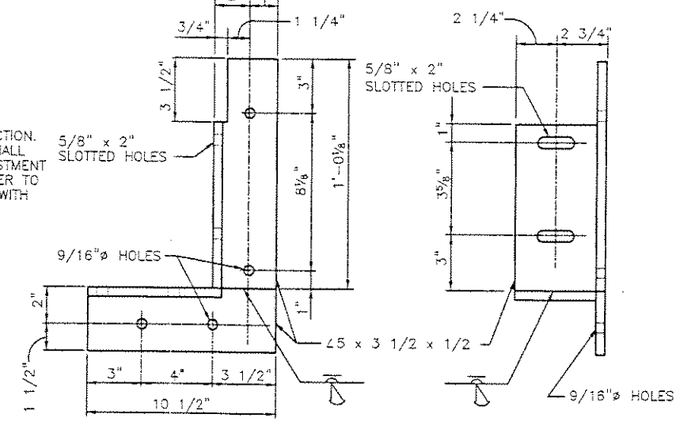
TYPICAL SECTION THRU BOTTOM SEAL
SCALE: 1"=1"



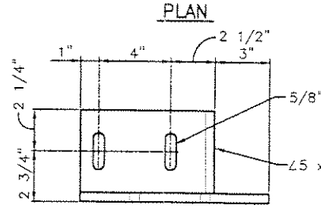
FLOOD SIDE ELEVATION OF VERTICAL SEAL SUPPORT ANGLE
SCALE: 1"=1'-0"



NORTH END SHOWN
SOUTH END OPP. HAND

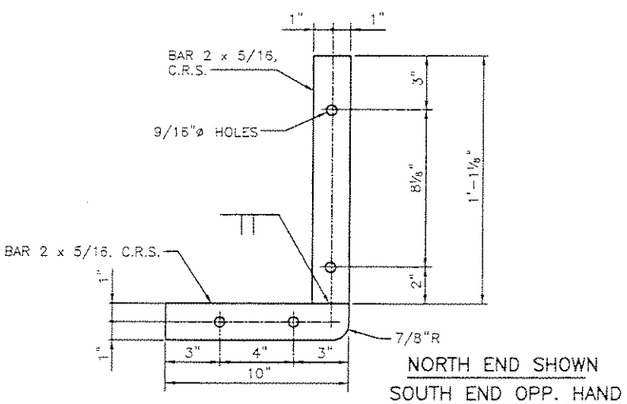


NOTE:
SET SEAL FOR 0" DEFLECTION. PARTICULAR ATTENTION SHALL BE GIVEN TO FIELD ADJUSTMENT OF BOTTOM SEAL IN ORDER TO OBTAIN A PERFECT SEAL WITH SEAL PL



NORTH END SHOWN
SOUTH END OPP. HAND

SEAL SUPPORT ANGLE AT END OF GATE
SCALE: 3"=1'-0"



NORTH END SHOWN
SOUTH END OPP. HAND

SEAL RETAINING BAR AT END OF GATE
SCALE: 3"=1'-0"

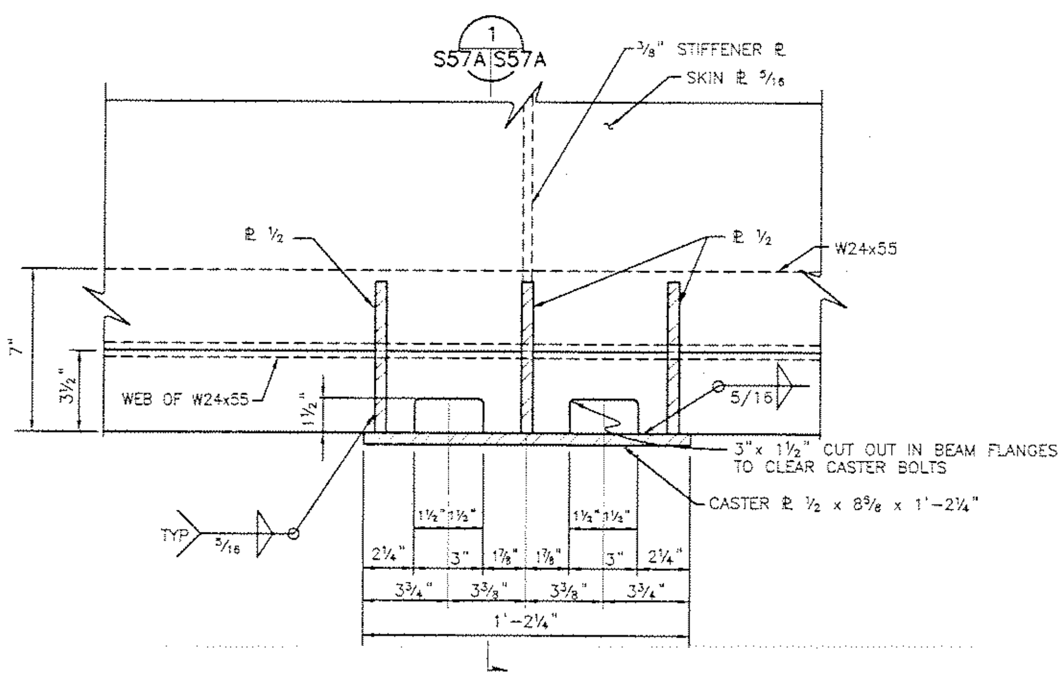
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

ROLLER GATE NO.3 SEAL SUPPORT DET.

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

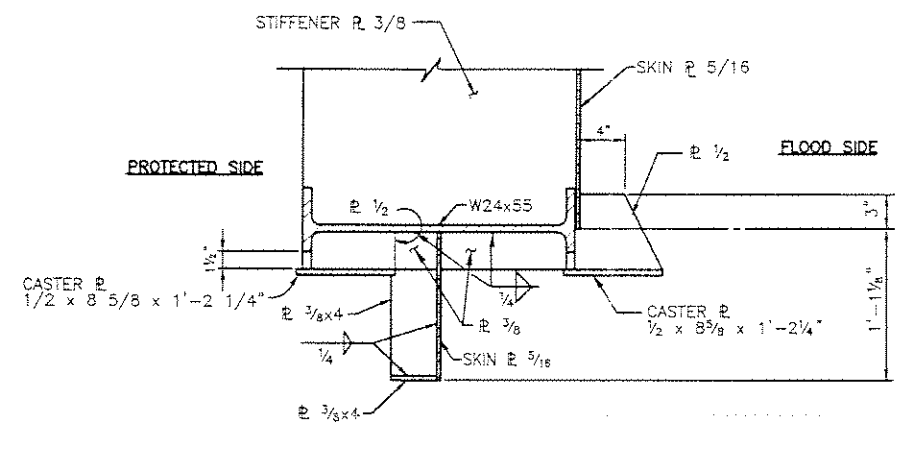
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: RG3SSDET
DRAWN BY: J.M.R.	1=16	10/96	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/96		504-006

PLATE S56A



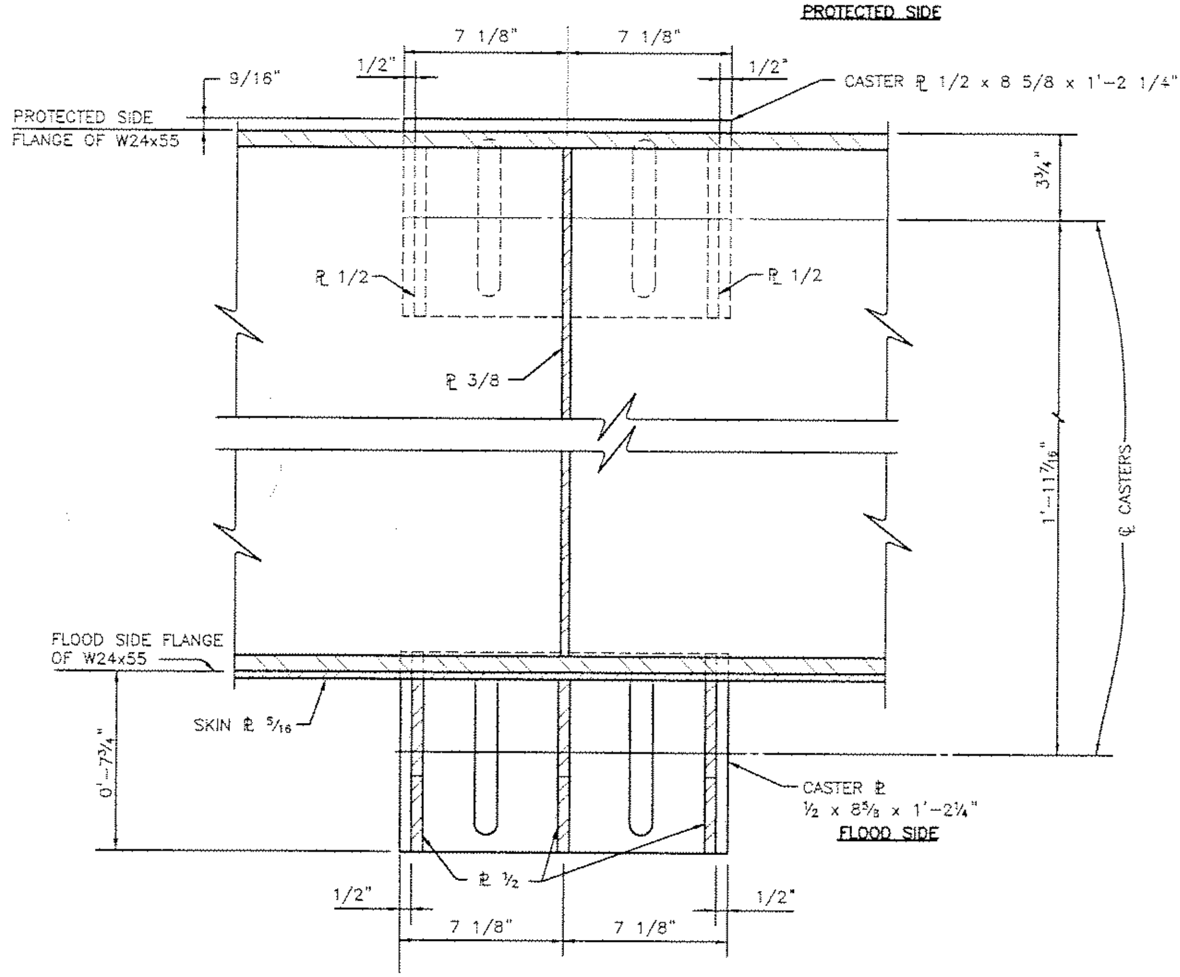
CASTER PLATE ASSEMBLY ELEVATION

SCALE: 3"=1'-0"



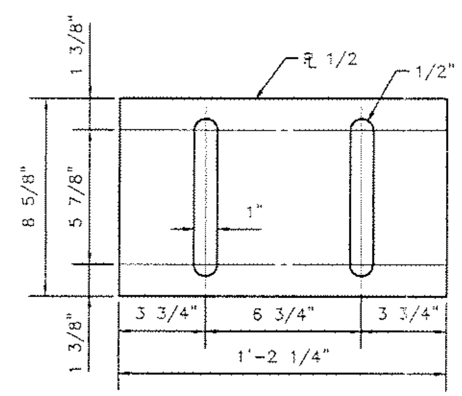
SECTION 1 S57A S57A

SCALE: 1 1/2"=1'-0"



PLAN

SCALE: 3"=1'-0"



CASTER PLATE DETAIL

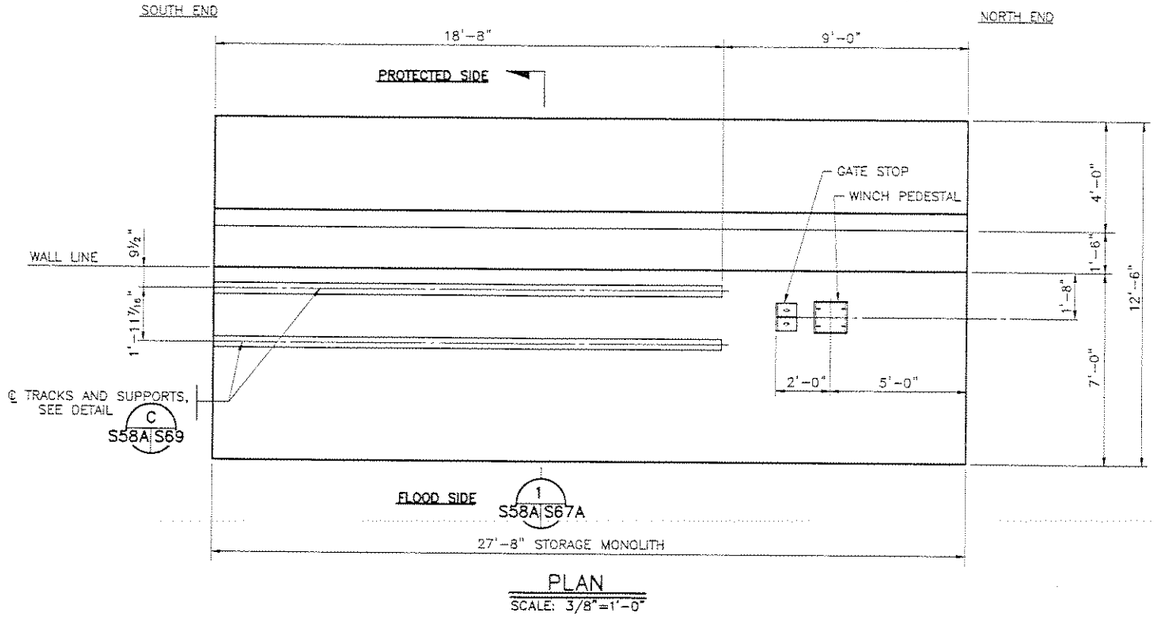
SCALE: 3"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
ROLLER GATE NO. 3
CASTER ASSEMBLY DETAILS

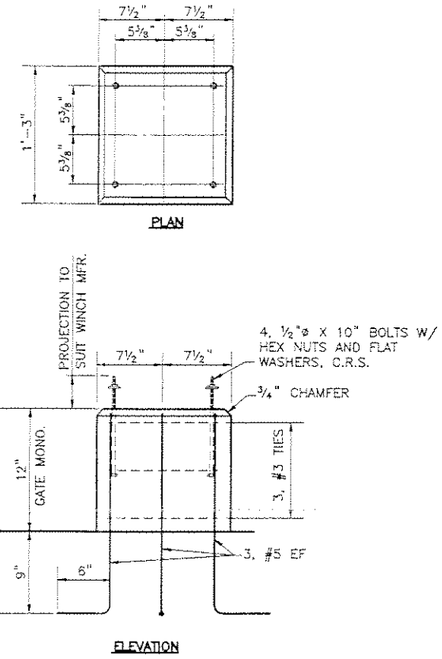
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

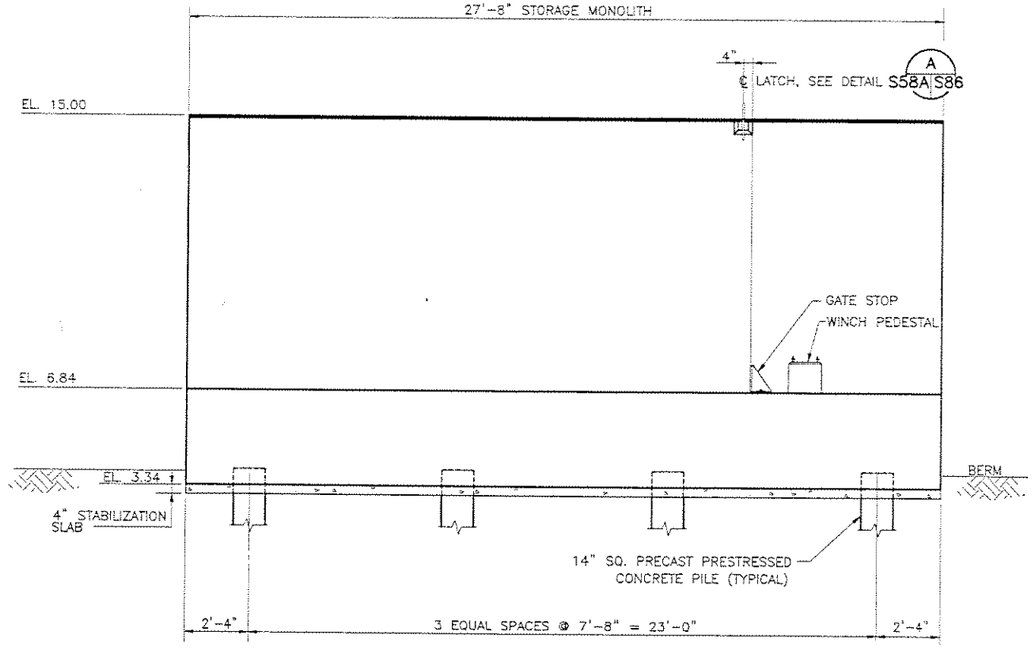
DESIGNED BY: J.F.H.	PLOT SCALE: 1=4	PLOT DATE: 10/96	CADD FILE: CAST-G3	
DRAWN BY: J.M.R.			FILE NO. 504-006	
CHECKED BY: G.P.F.	DATE: 10/96			

PLATE S57A



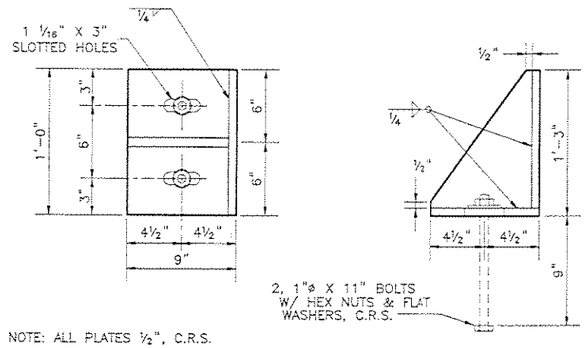
PLAN
SCALE: 3/8"=1'-0"





FLOOD SIDE ELEVATION
SCALE: 3/8"=1'-0"

WINCH PEDESTAL DETAIL
SCALE: 1 1/2"=1'-0"



NOTE: ALL PLATES ½", C.R.S.

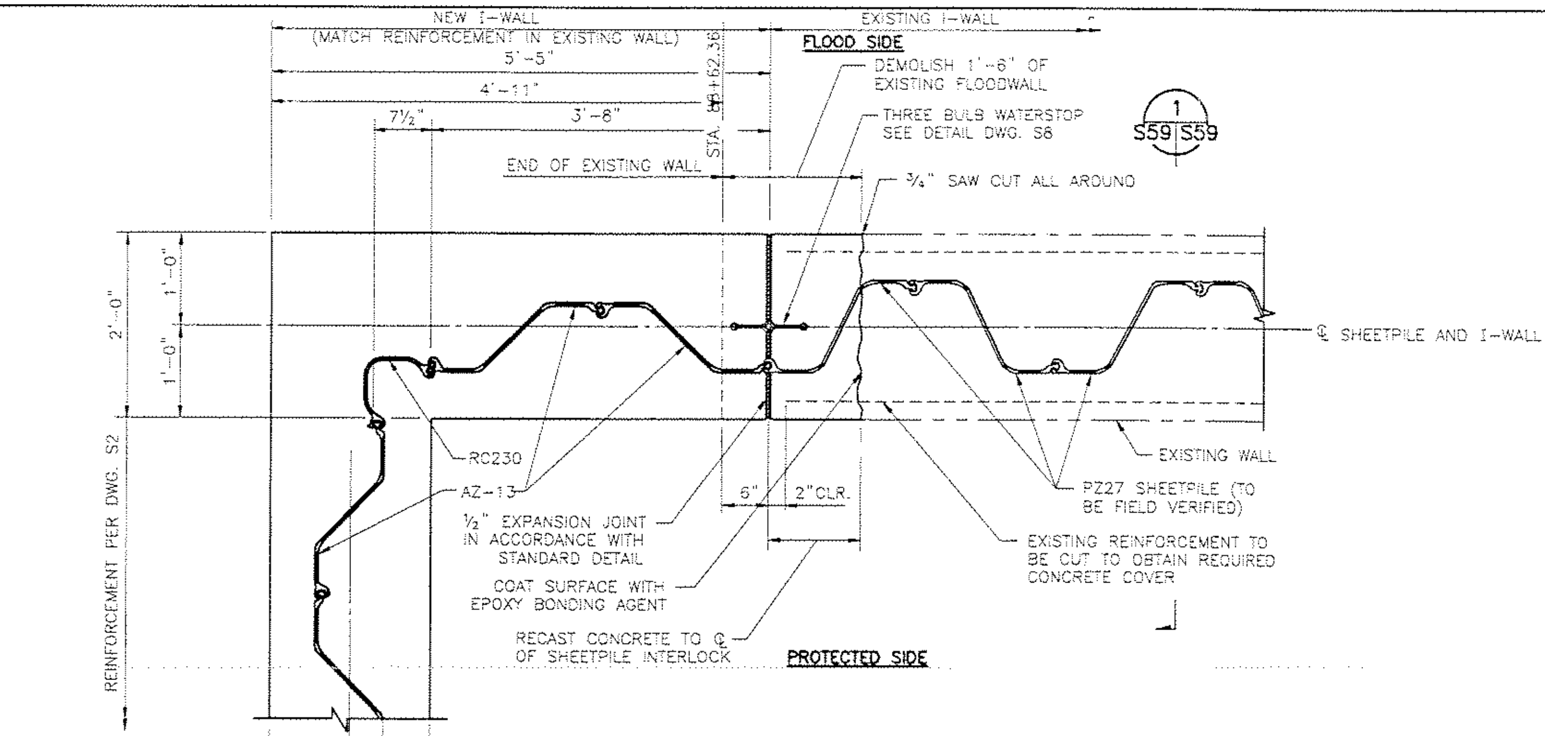
GATE STOP DETAIL
SCALE: 2"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

GATE NO.3 STORAGE MONOLITH DETAILS

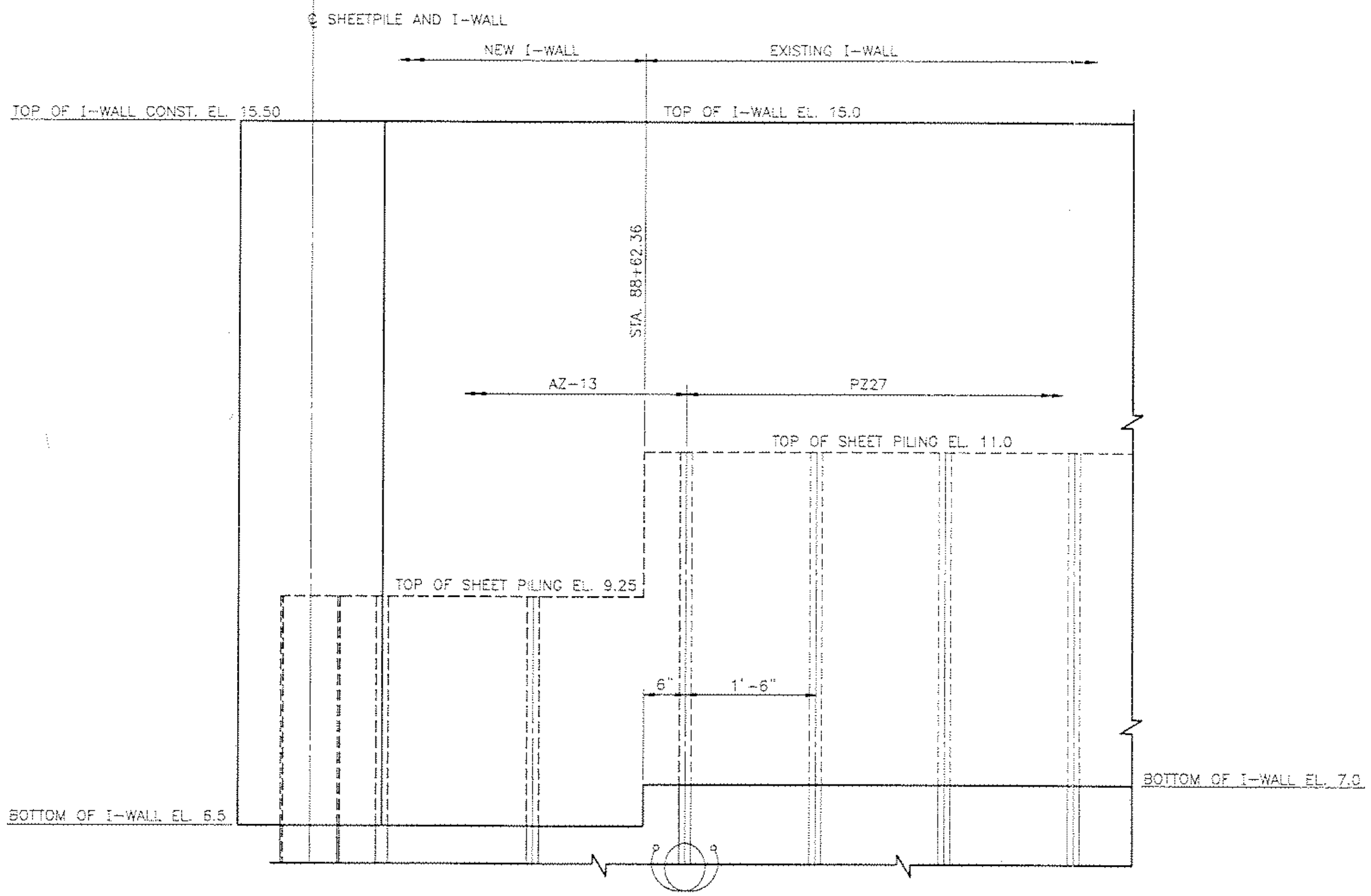
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: G3SMDET
DRAWN BY: J.M.R.	1=32	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



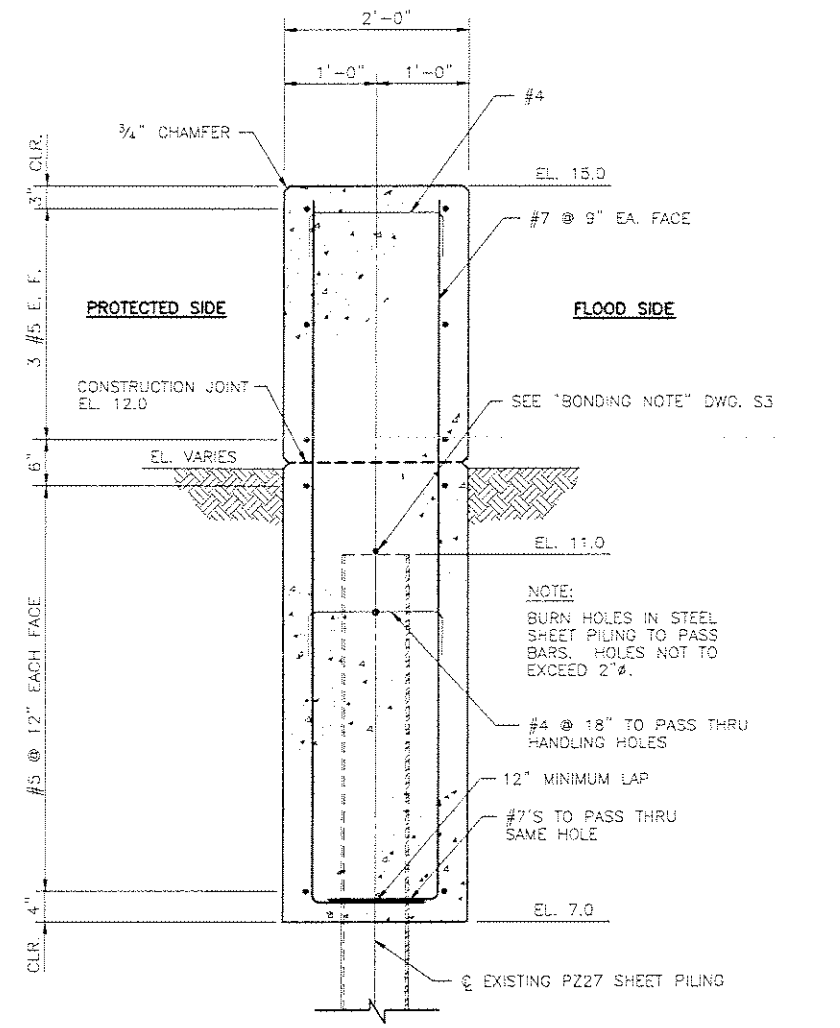
RECONSTRUCTION DETAIL @ SOUTHERN TERMINUS

SCALE: 1"=1'-0"



ELEVATION @ SOUTHERN TERMINUS

SCALE: 1"=1'-0"



EXISTING I-WALL SECTION @ SOUTHERN TERMINUS (1 / S59 S59)

SCALE: 1"=1'-0"

NOTE:

1. CONTRACTOR TO PROVIDE MEANS FOR FLOOD PROTECTION DURING CONSTRUCTION OF WALL TIE-INS.
2. FOR TYPICAL I-WALL SECTION SEE DWG. S2

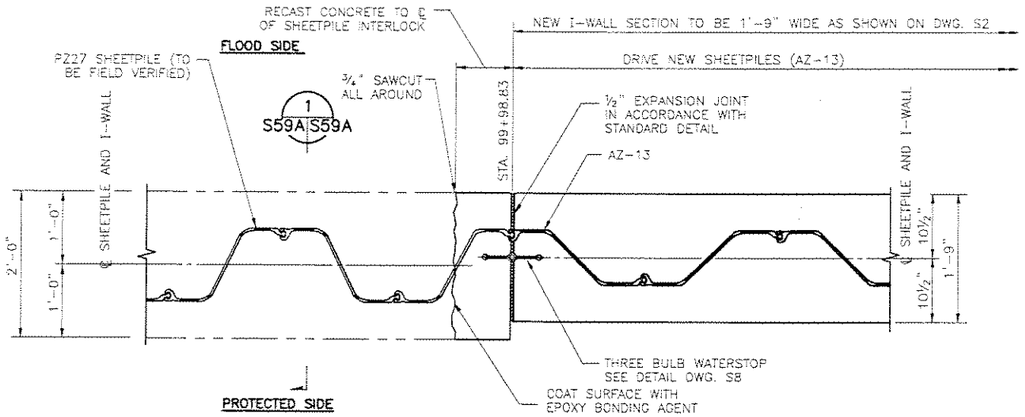
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SOUTHERN TERMINUS FLOODWALL TIE-IN DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

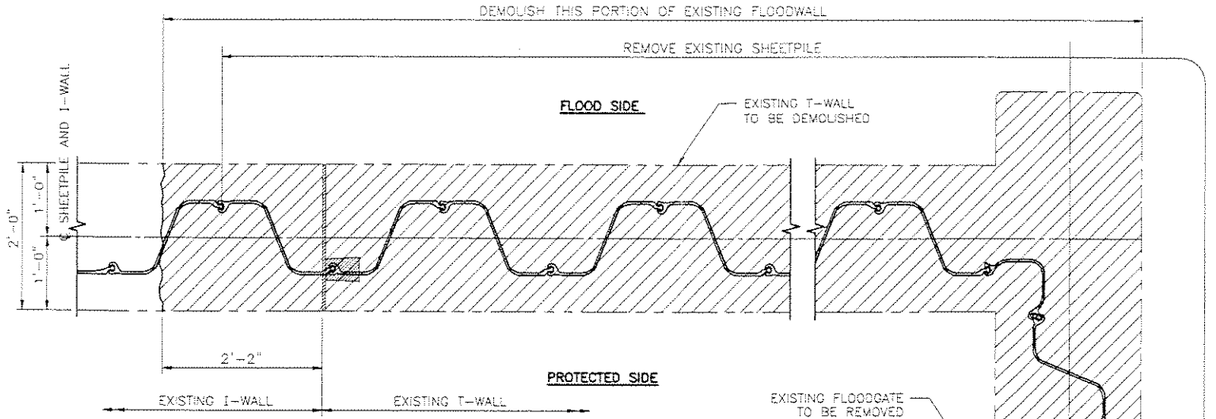
DESIGNED BY: J.F.H.	PLOT SCALE: 1=12	PLOT DATE: 10/97	CADD FILE: TIEIN
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		

PLATE S59



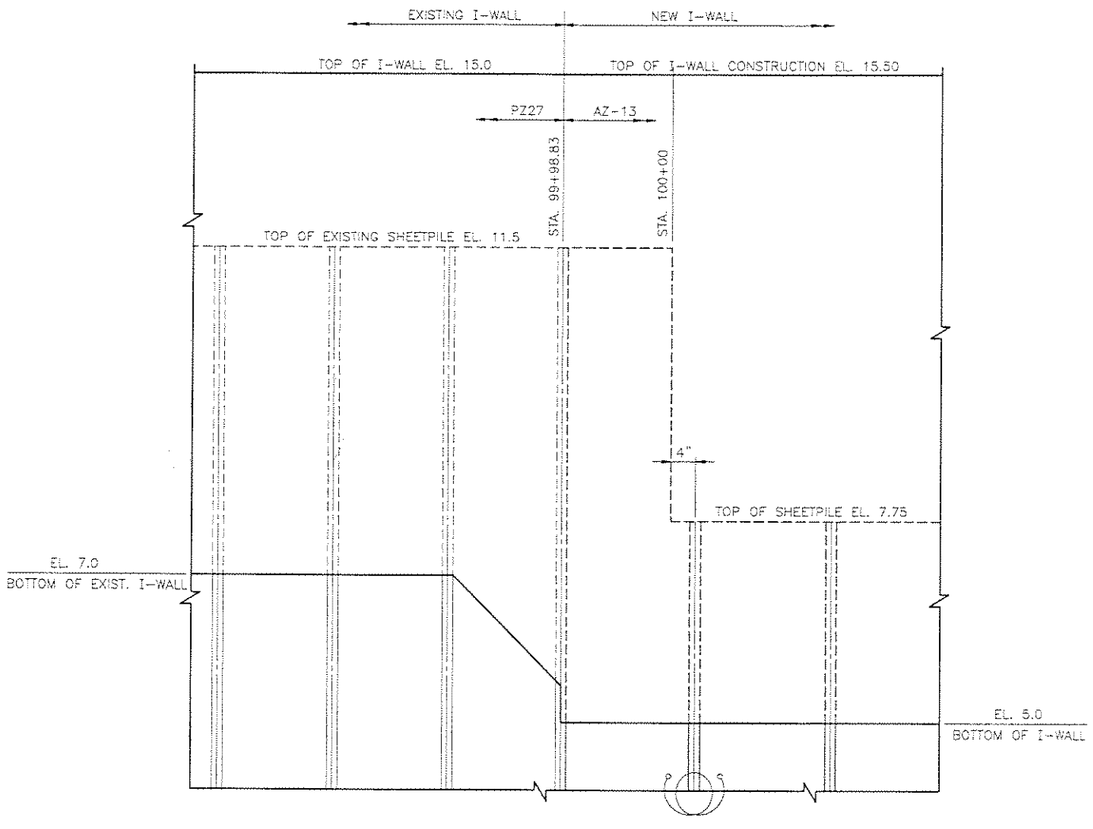
RECONSTRUCTION DETAIL @ NORTHERN TERMINUS

SCALE: 1"=1'-0"



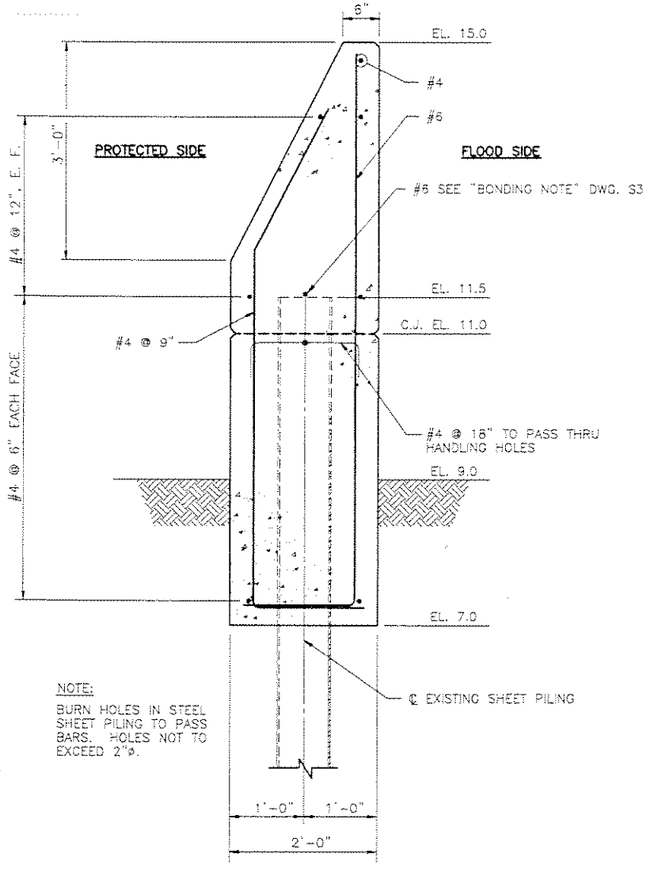
DEMOLITION PLAN @ NORTHERN TERMINUS

SCALE: 1"=1'-0"



ELEVATION @ NORTHERN TERMINUS

SCALE: 1"=1'-0"



NOTE:
BURN HOLES IN STEEL SHEET PILING TO PASS BARS. HOLES NOT TO EXCEED 2"ø.

EXISTING I-WALL SECTION @ NORTHERN TERMINUS

1 S59A S59A

SCALE: 1"=1'-0"

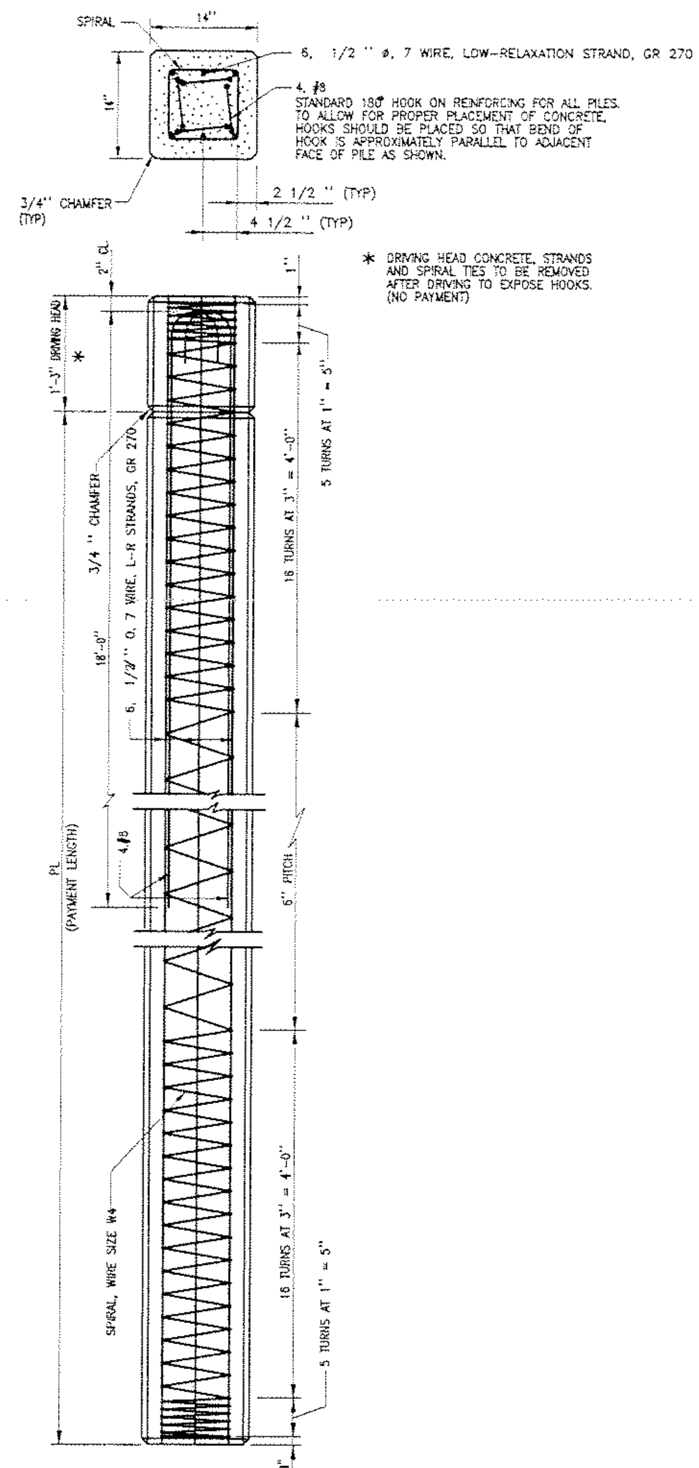
NOTE:

1. CARE SHOULD BE TAKEN WHILE REMOVING & DRIVING THE SHEETPILES TO SECURE THE EXISTING 4"ø GAS LINE & 2"ø WATER LINE.
2. CONTRACTOR TO PROVIDE MEANS FOR FLOOD PROTECTION DURING CONSTRUCTION OF WALL TIE-INS.
3. FOR TYPICAL I-WALL SECTION SEE DWG. S2

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
NORTHERN TERMINUS FLOODWALL TIE-IN DETAILS

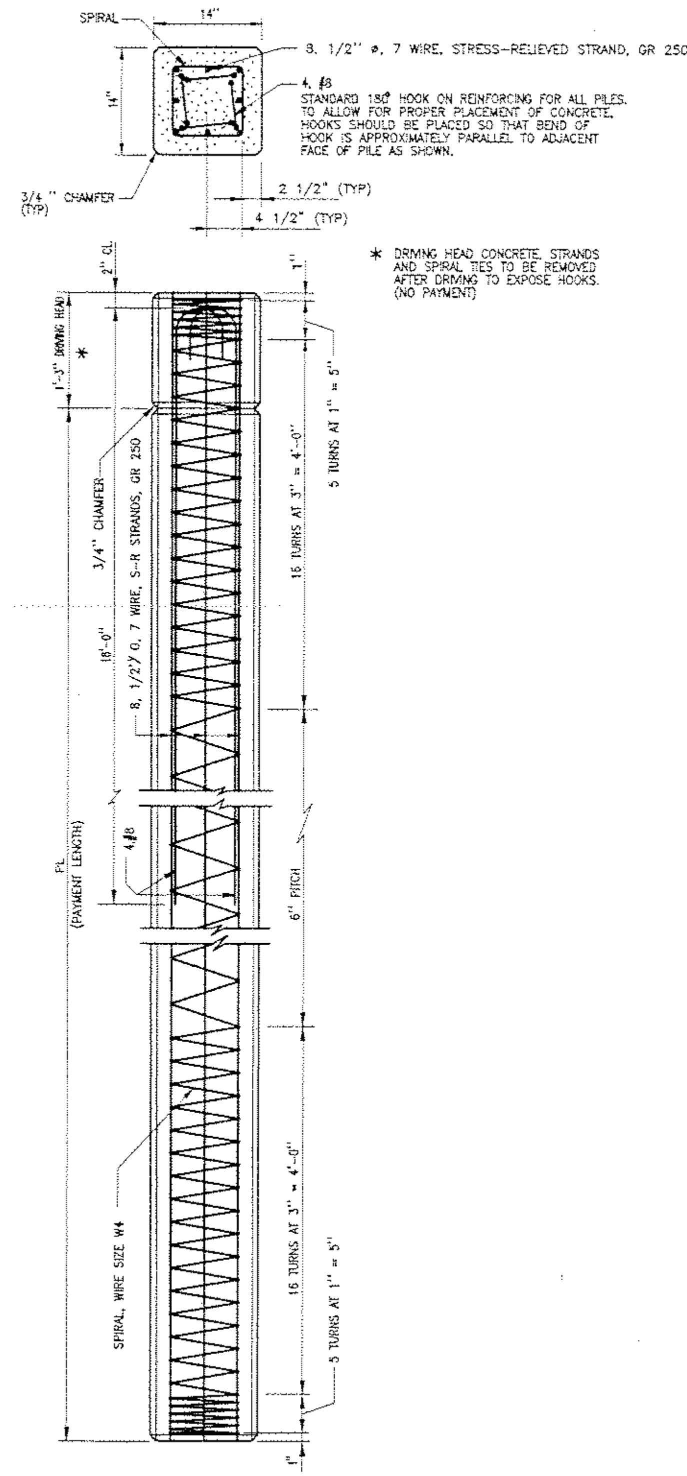
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: TIEIN-2
DRAWN BY: J.M.R.	1=12	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



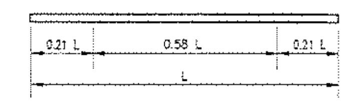
NOTE:
GRIND PRESTRESSED STRANDS FLUSH WITH PILE HEAD AND PILE TIP.

14" X 14"
PRESTRESSED PRECAST
CONCRETE PILE



NOTE:
GRIND PRESTRESSED STRANDS FLUSH WITH PILE HEAD AND PILE TIP.

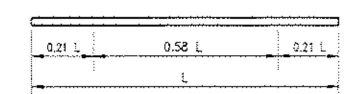
14" X 14"
PRESTRESSED PRECAST
CONCRETE PILE



2 POINT PICKUP (L ≤ 83') 14" X 14" PILE

NOTE: PICKUP POINTS TO BE PLAINLY MARKED ON PILES

STRESS RELIEVED STRAND PILES



2 POINT PICKUP (L ≤ 84') 14" X 14" PILE

NOTE: PICKUP POINTS TO BE PLAINLY MARKED ON PILES

LOW-RELAXATION STRAND PILES

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

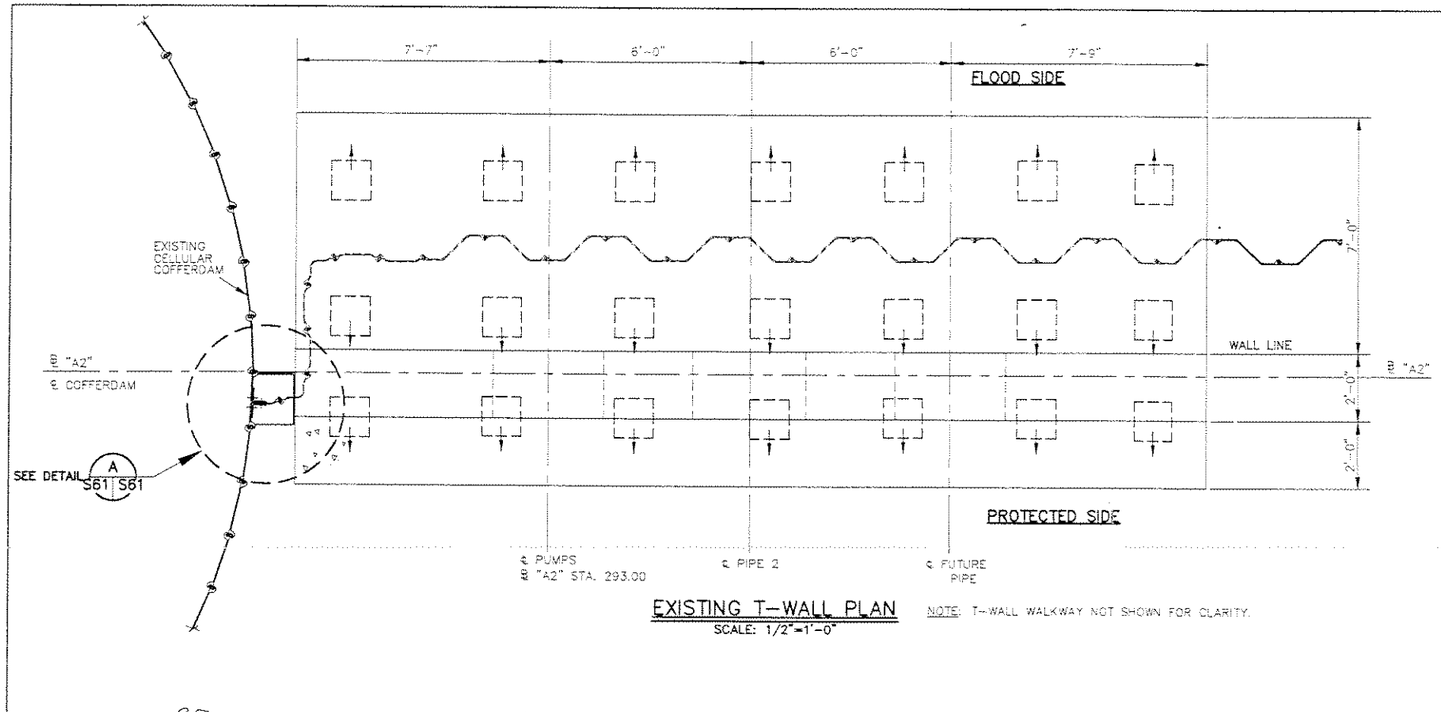
PRECAST PILE DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=12	PLOT DATE: 10/97	CADD FILE: 005-S068
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		

PLATE S60

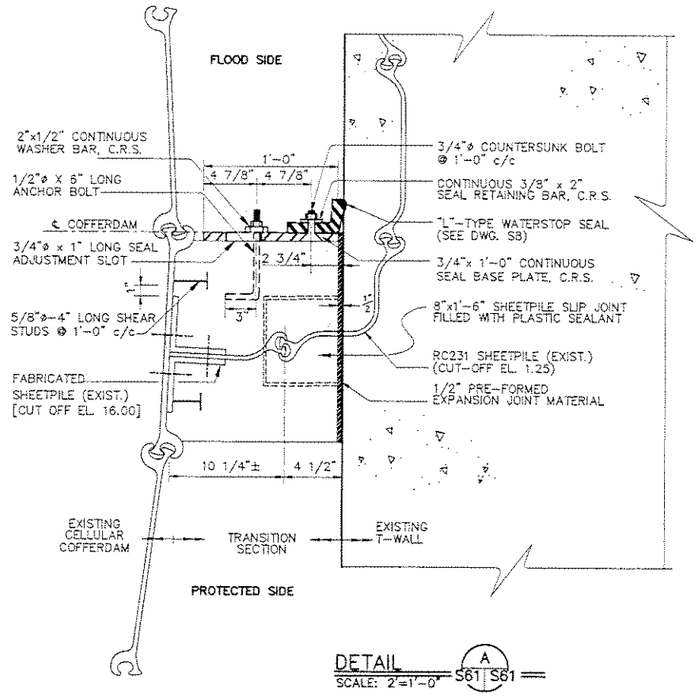
Oct 16, 1997 - 10:52:18 | PLOT FILE: G:\CAD\ACAD\504-006\MEM09\005-S068 | [Login: Roy Keel]



EXISTING T-WALL PLAN

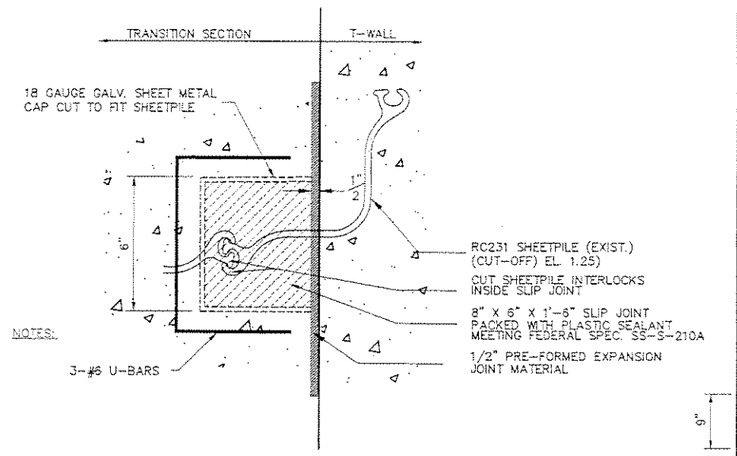
SCALE: 1/2"=1'-0"

NOTE: T-WALL WALKWAY NOT SHOWN FOR CLARITY.



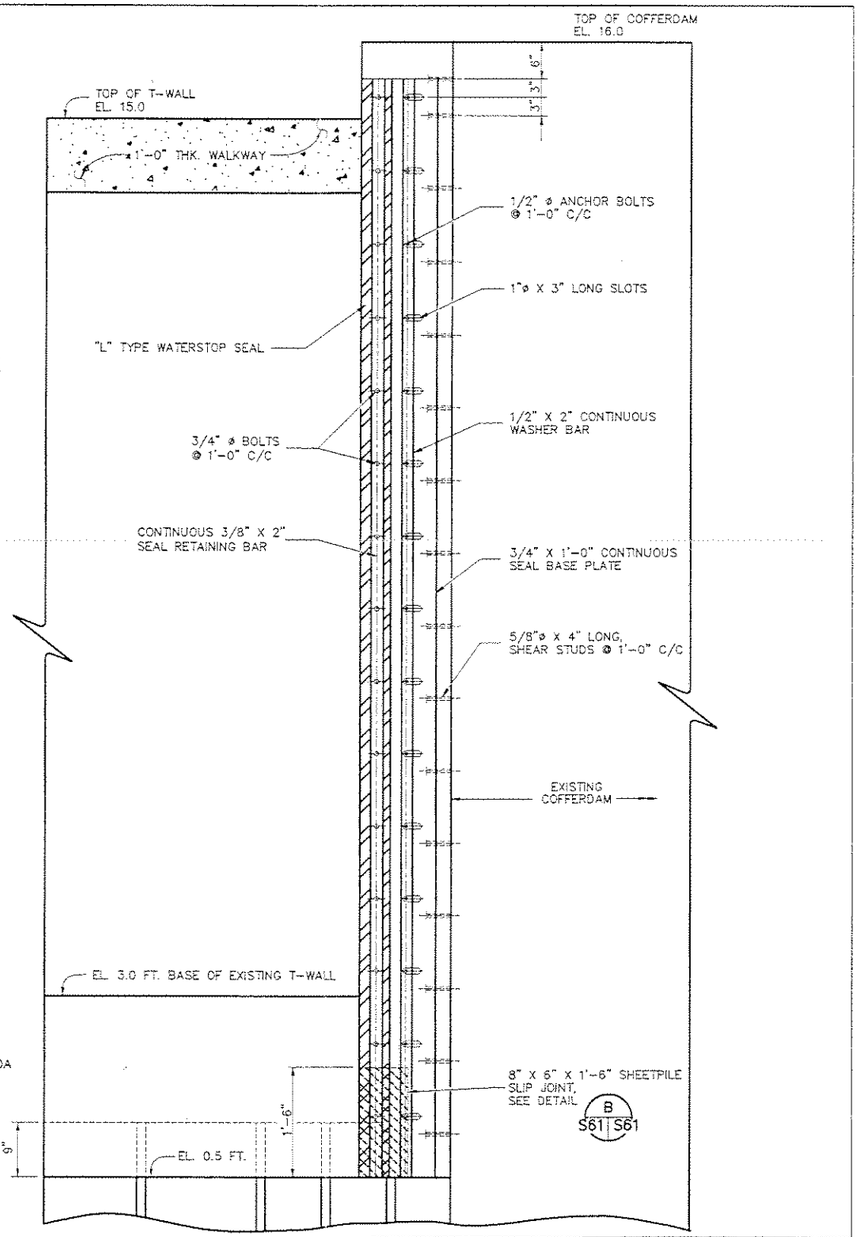
DETAIL A

SCALE: 2"=1'-0" S61 | S61



DETAIL B

SCALE: 3"=1'-0" S61 | S61



FLOODSIDE ELEVATION

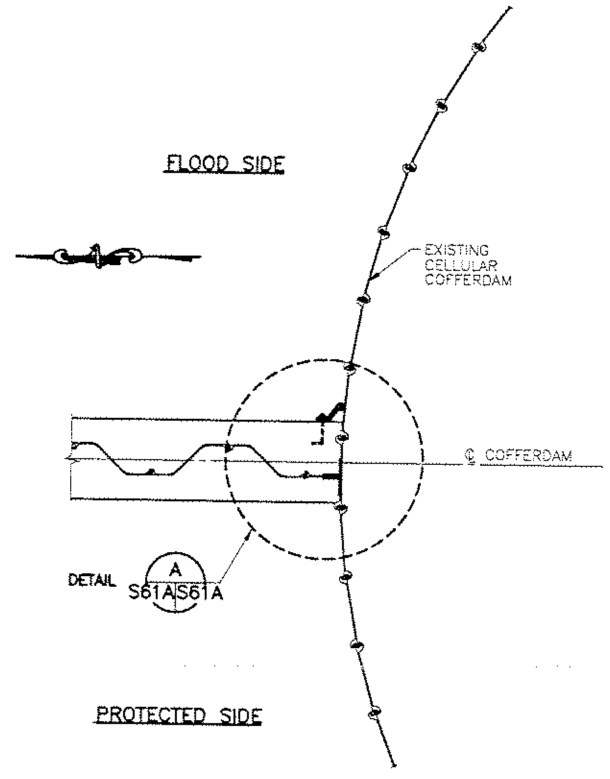
SCALE: 1"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

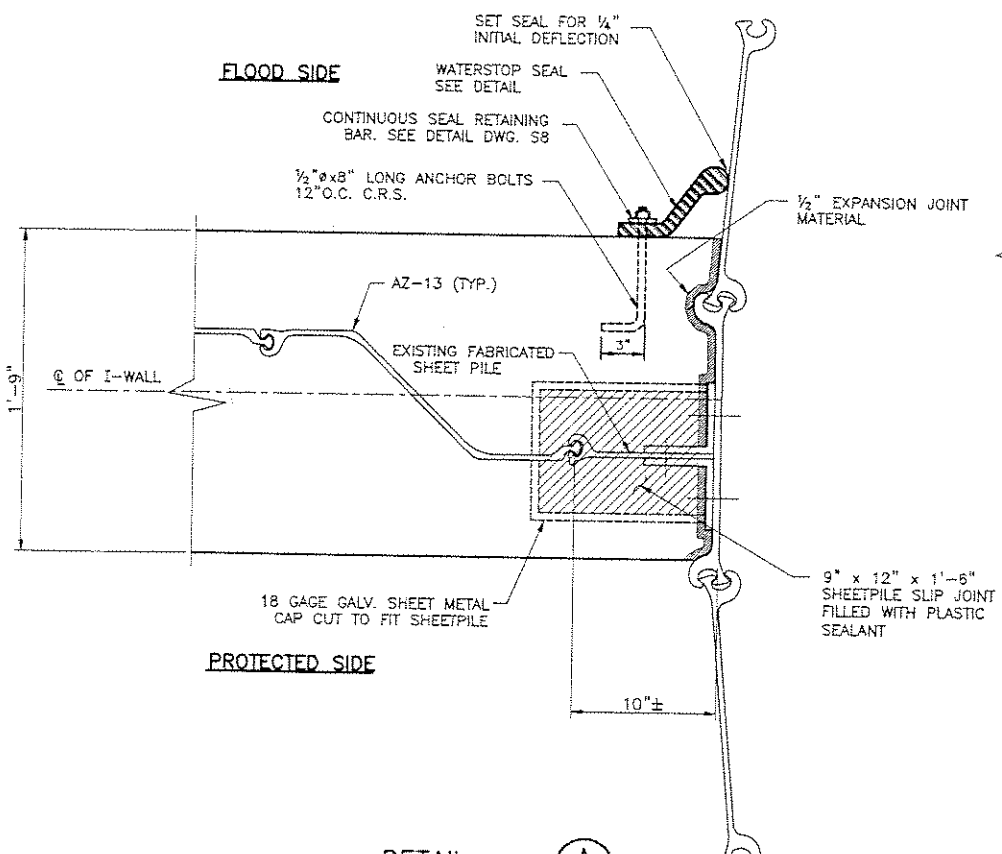
T-WALL TO COFFERDAM CONNECTION @P6

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

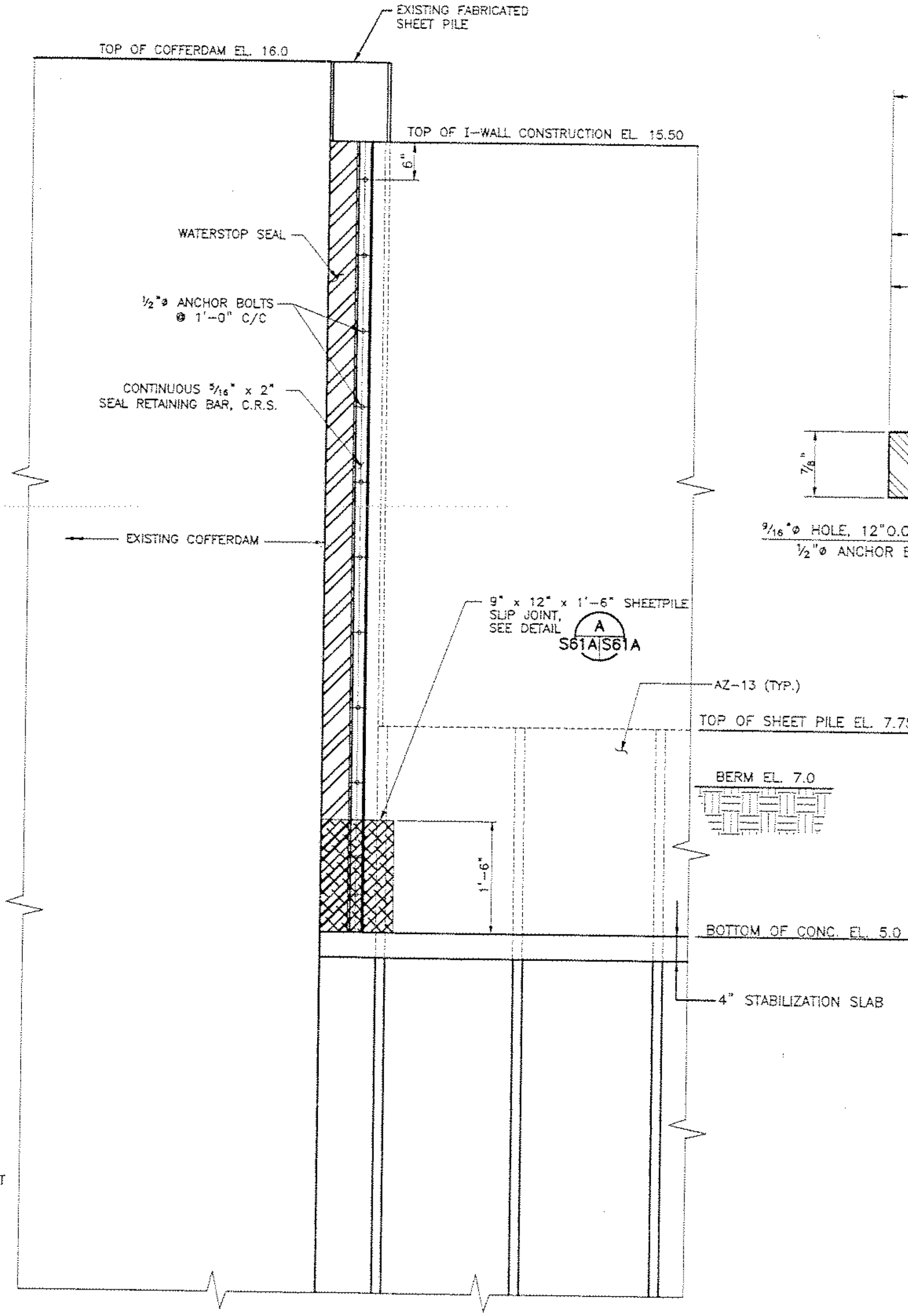
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: 005-S028
DRAWN BY: J.M.R.	1=12	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-005



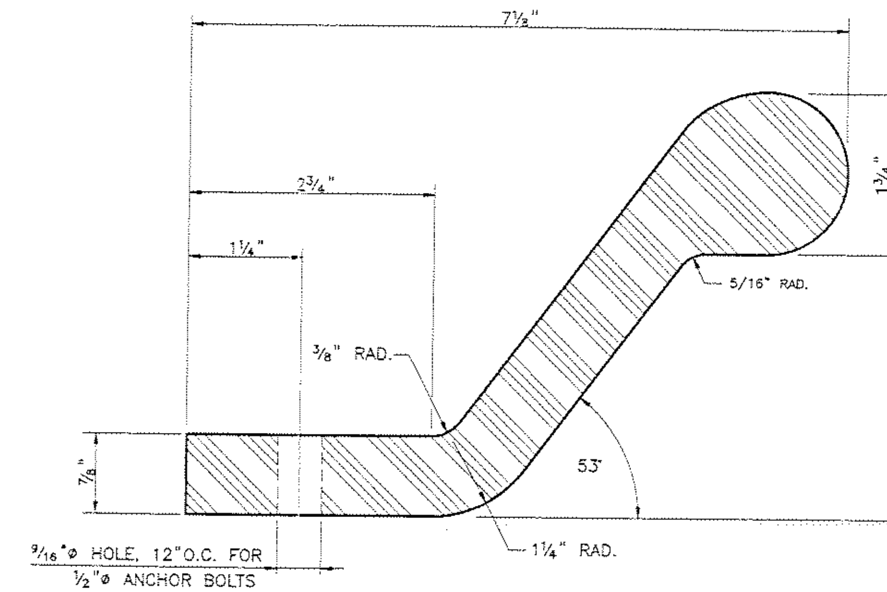
I-WALL & COFFERDAM CONNECTION PLAN
SCALE: 1/2"=1'-0"



DETAIL A S61A|S61A
SCALE: 2"=1'-0"



FLOODSIDE ELEVATION
SCALE: 1"=1'-0"



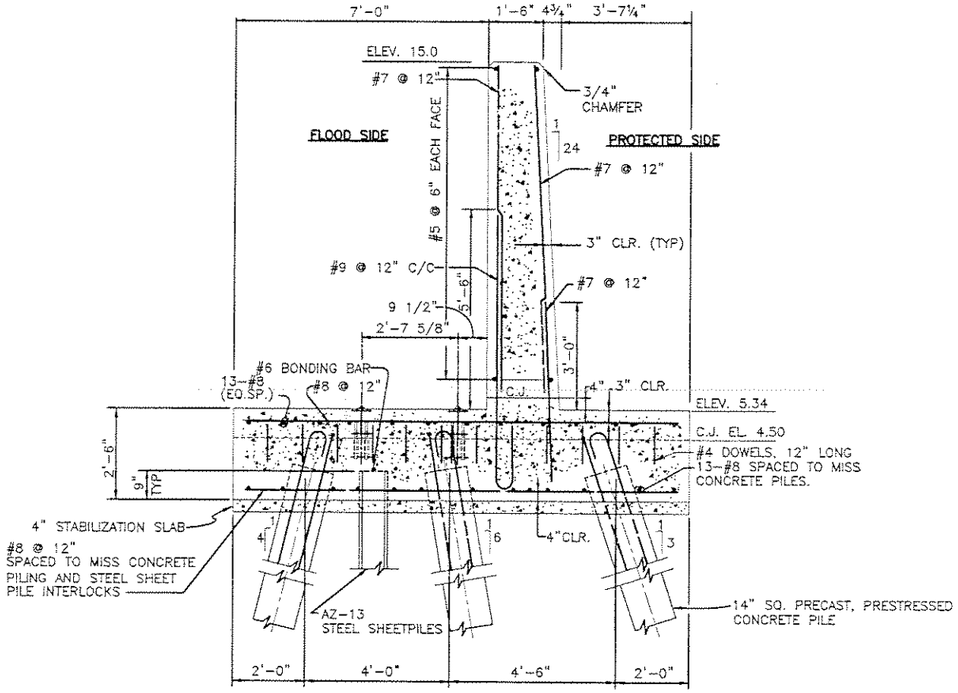
WATERSTOP SEAL
FULL SCALE

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
I-WALL TO COFFERDAM
CONNECTION @ NORTH END

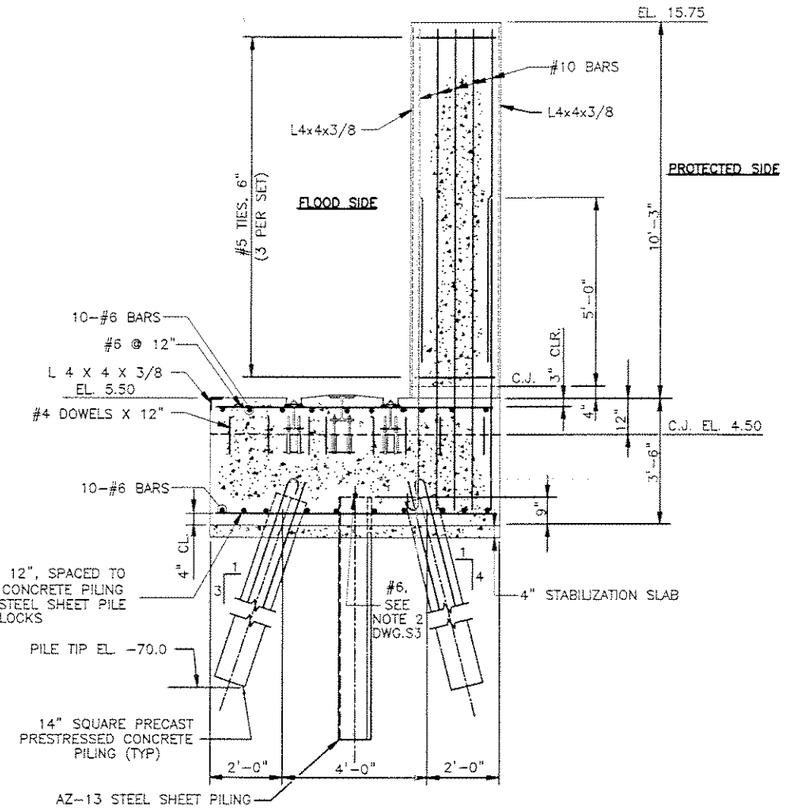
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=12	PLOT DATE: 10/97	CADD FILE: 005-S02C
DRAWN BY: H.L.K.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		

PLATE S61A



SECTION 1 S66 S67
SCALE: 1/2"=1'-0"



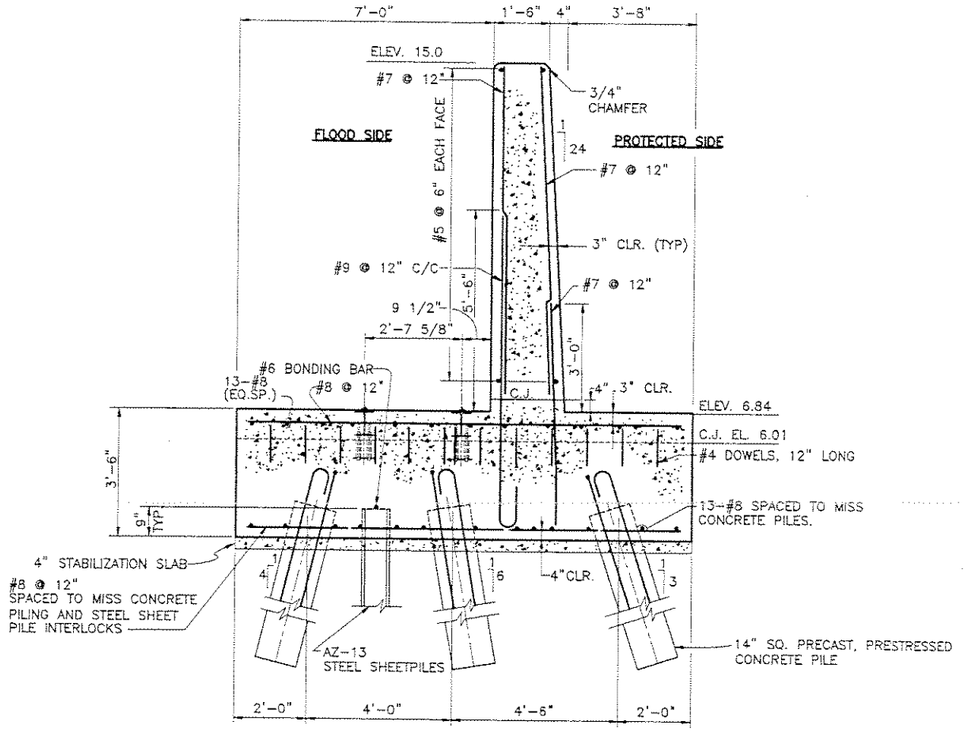
SECTION 1 S64 S67
SCALE: 1/2"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
ROLLER GATE NO. 1 MONOLITH
SECTIONS AND DETAILS

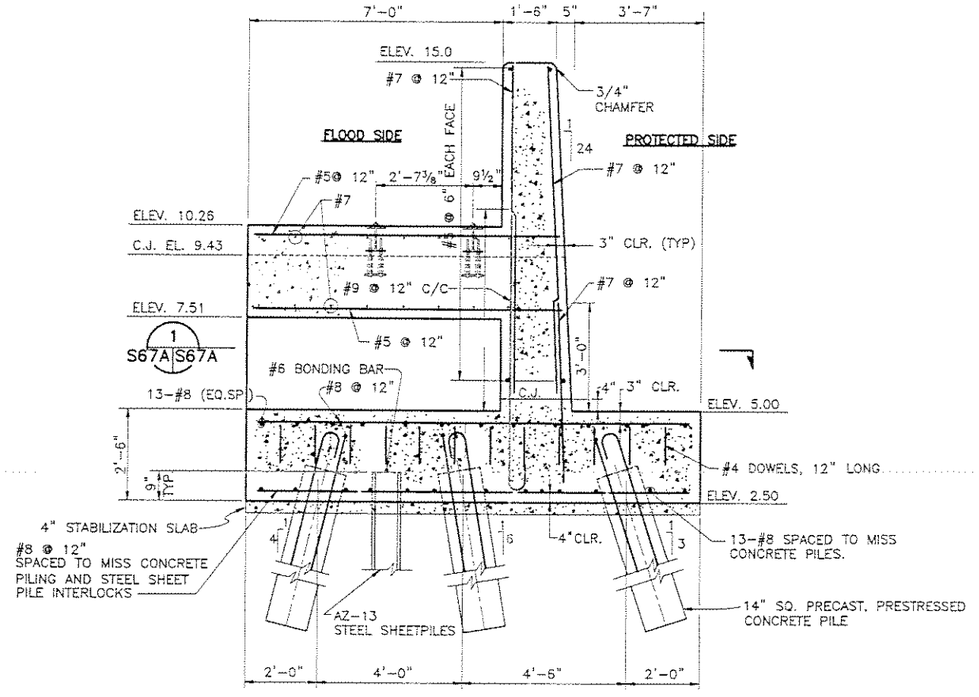
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: FYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: MONOSEC
DRAWN BY: H.L.K.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006

PLATE S67

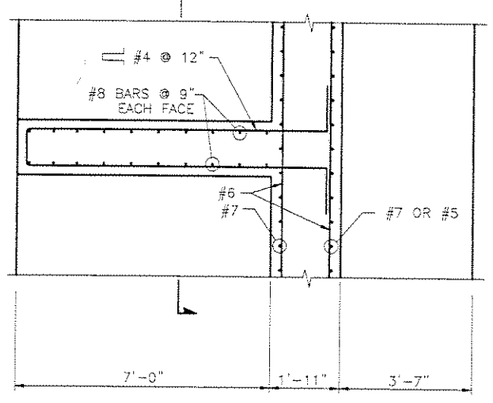


SECTION
SCALE: 1/2"=1'-0"
1 S58A S67A

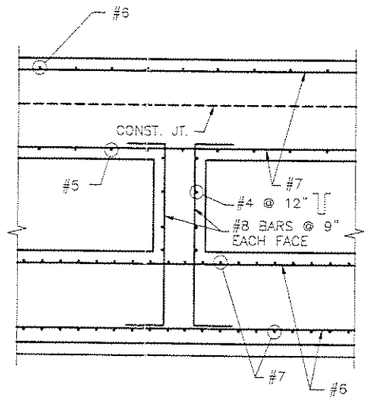


SECTION
SCALE: 1/2"=1'-0"
1 S58D S67A

2 S67A S67A



SECTION
SCALE: 1/2"=1'-0"
1 S67A S67A

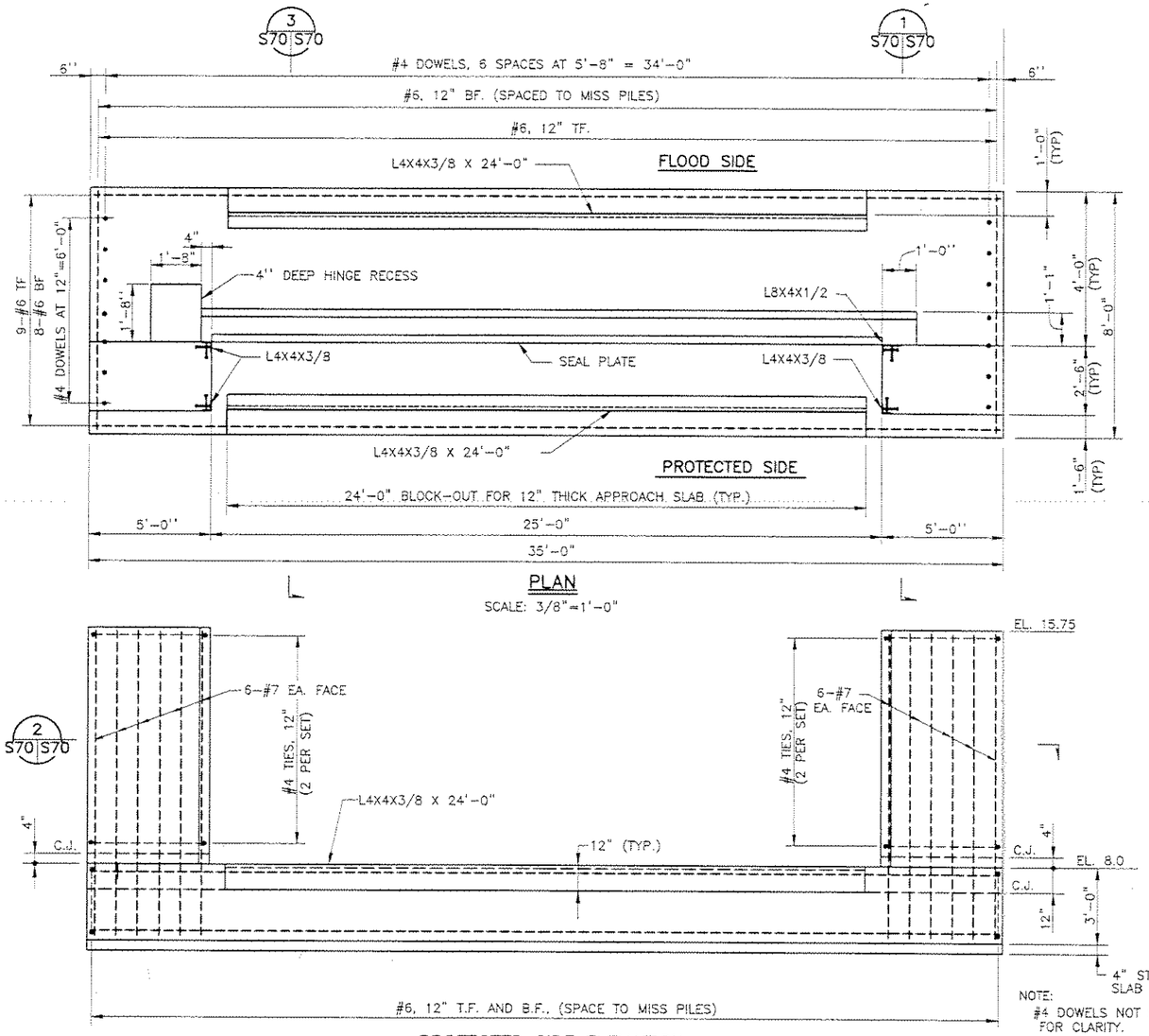


SECTION
SCALE: 1/2"=1'-0"
2 S67A S67A

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA
ROLLER GATE NOS. 3 & 8
MONOLITH SECTIONS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: MONO38
DRAWN BY: H.L.K.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



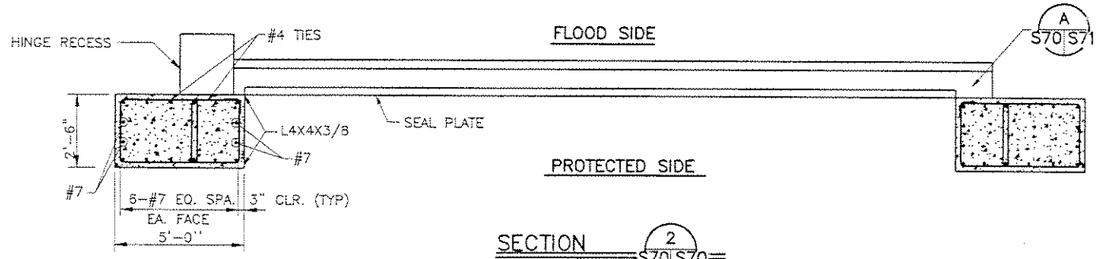
PLAN

SCALE: 3/8"=1'-0"

NOTE:
#4 DOWELS NOT SHOWN FOR CLARITY.

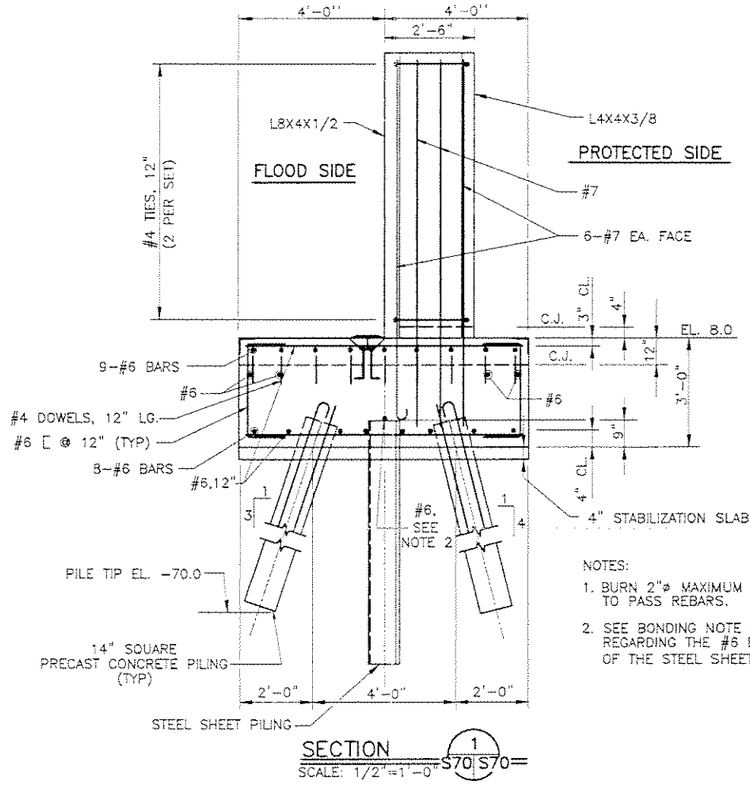
PROTECTED SIDE ELEVATION

SCALE: 3/8"=1'-0"



SECTION 2 S70 S70

SCALE: 3/8"=1'-0"

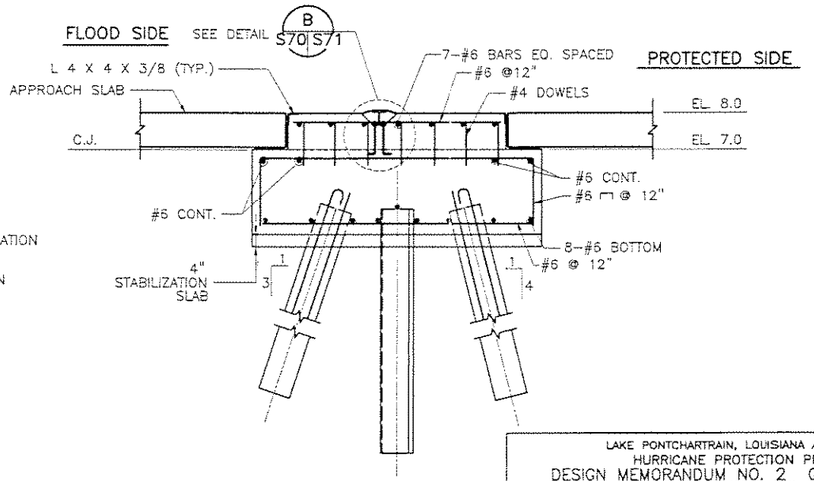


NOTES:

1. BURN 2"ø MAXIMUM HOLE IN SHEET PILING TO PASS REBARS.
2. SEE BONDING NOTE ON DWG. S3 REGARDING THE #6 BAR ON TOP OF THE STEEL SHEET PILING.

SECTION 1 S70 S70

SCALE: 1/2"=1'-0"



SECTION 3 S70 S70

SCALE: 1/2"=1'-0"

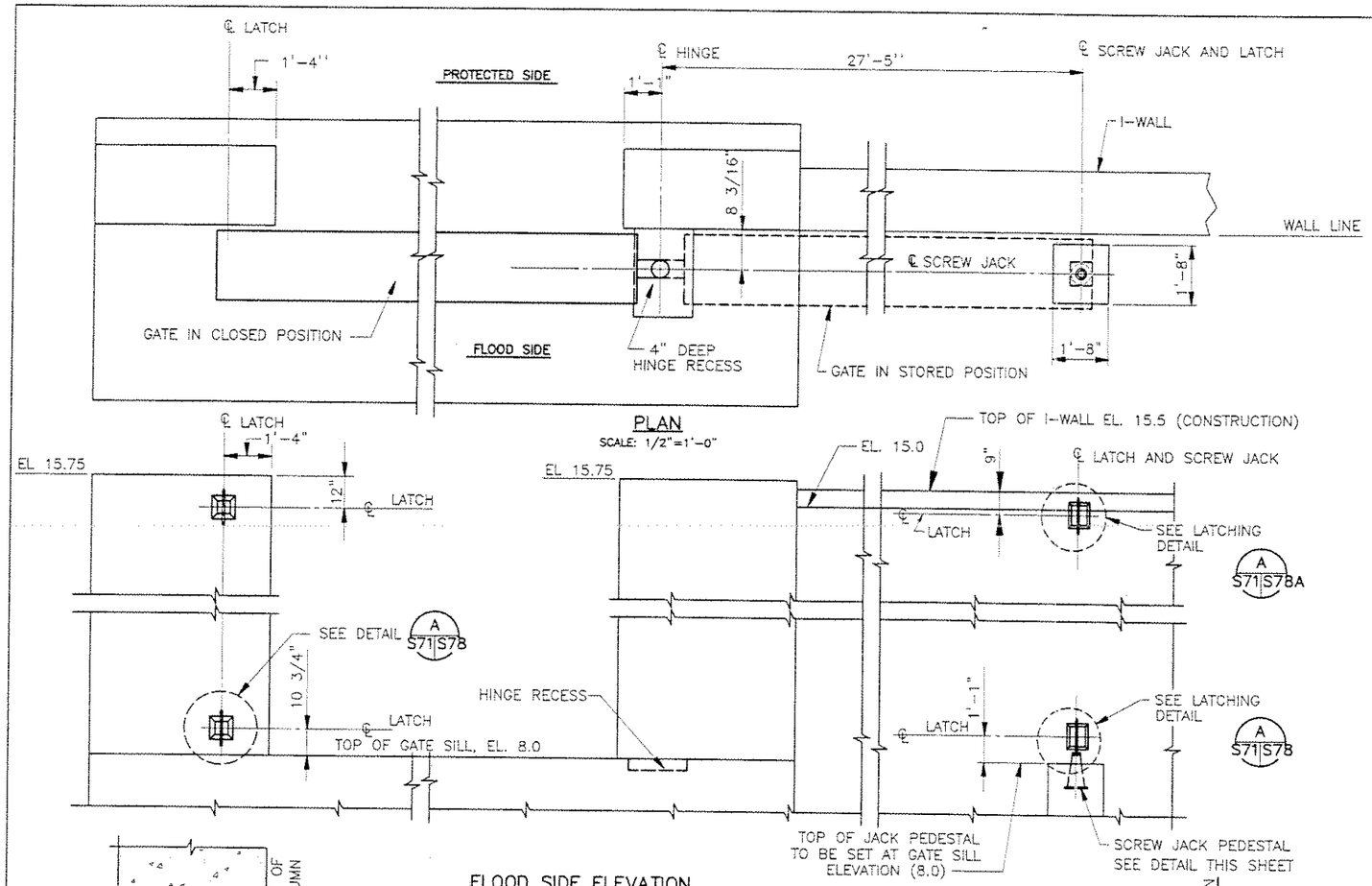
NOTE:
1. VERTICAL #5 BARS SHALL BE EMBEDDED INTO THE BASE SLAB AS SHOWN

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

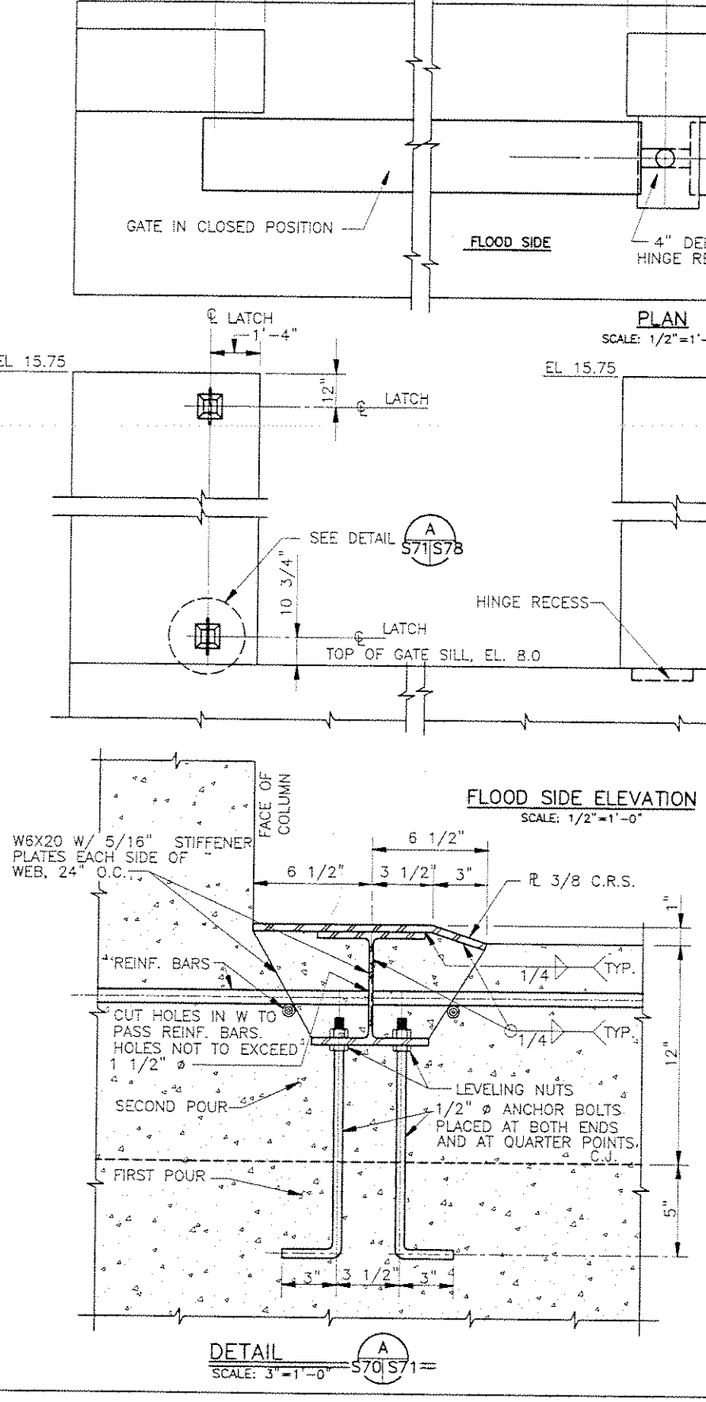
SWING GATE NO. 2 MONOLITH

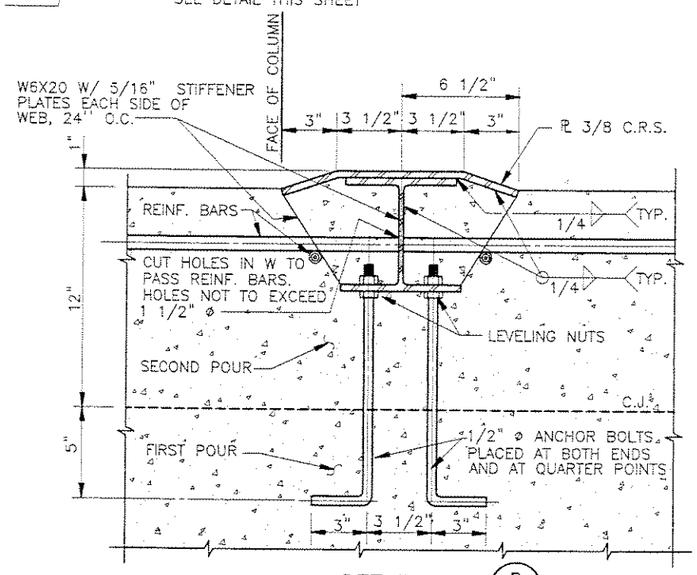
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

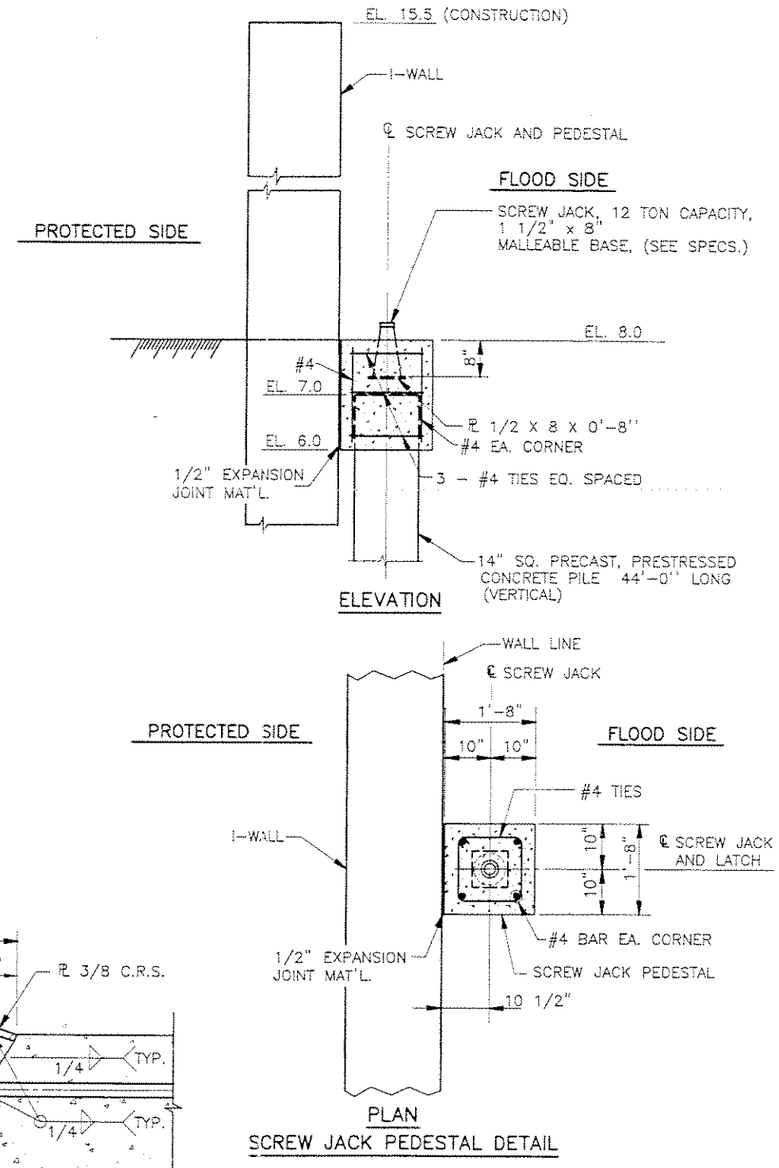
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SW1
DRAWN BY: H.L.K.	1=48	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



PLAN
SCALE: 1/2"=1'-0"





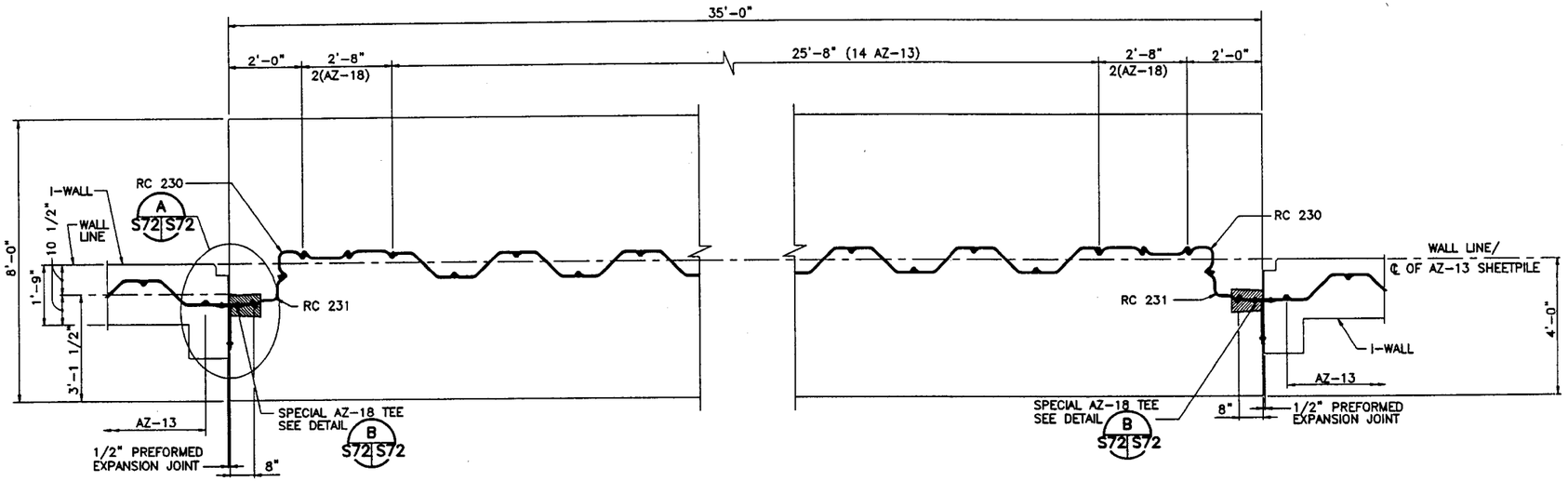


SCALE: LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO.2 MONOLITH DETAILS

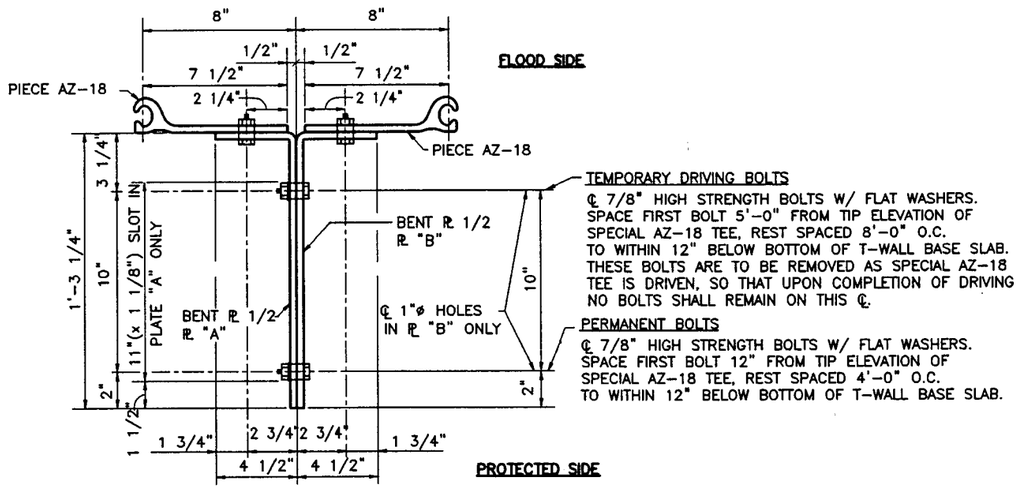
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SW2
DRAWN BY: H.L.K.	1=24	10/97	FILE NO.
CHECKED BY: G.P/H	DATE: 10/97		504-006



SHEET PILE LAYOUT FOR GATE NO. 2

SCALE: 1/2"=1'-0"



TEMPORARY DRIVING BOLTS

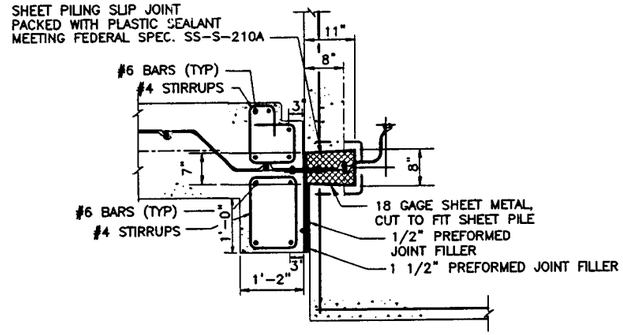
℄ 7/8" HIGH STRENGTH BOLTS W/ FLAT WASHERS. SPACE FIRST BOLT 5'-0" FROM TIP ELEVATION OF SPECIAL AZ-18 TEE, REST SPACED 8'-0" O.C. TO WITHIN 12" BELOW BOTTOM OF T-WALL BASE SLAB. THESE BOLTS ARE TO BE REMOVED AS SPECIAL AZ-18 TEE IS DRIVEN, SO THAT UPON COMPLETION OF DRIVING NO BOLTS SHALL REMAIN ON THIS ℄.

PERMANENT BOLTS

℄ 7/8" HIGH STRENGTH BOLTS W/ FLAT WASHERS. SPACE FIRST BOLT 12" FROM TIP ELEVATION OF SPECIAL AZ-18 TEE, REST SPACED 4'-0" O.C. TO WITHIN 12" BELOW BOTTOM OF T-WALL BASE SLAB.

DETAIL B S72 S72

SCALE: 3"=1'-0"



DETAIL A S72 S72

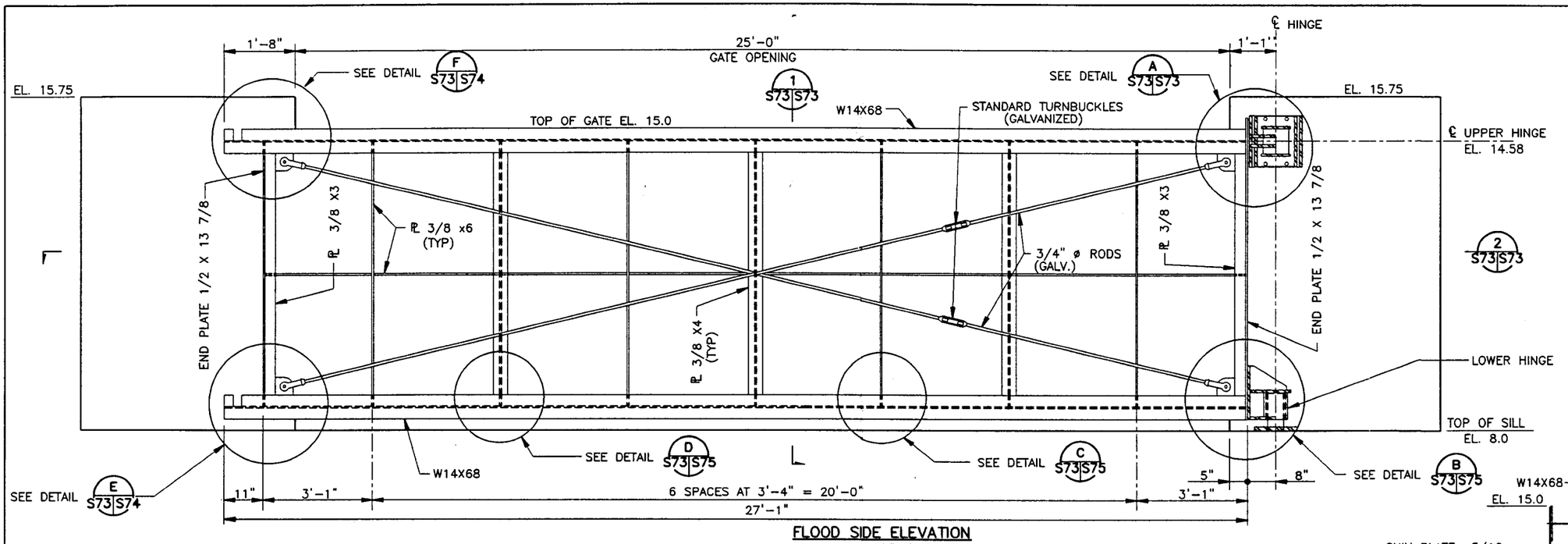
N.T.S.

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO.2 SHEET PILE LAYOUT

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SW3
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



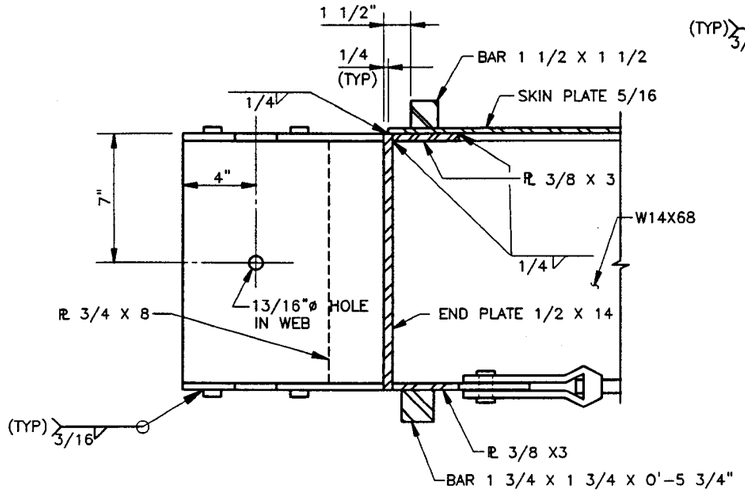
Oct 16, 1997 - 16:38:18[P&O FILE: C:\CAD\ACAD\504-006\CONST96\SW4] [Login: Roy Keel]

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

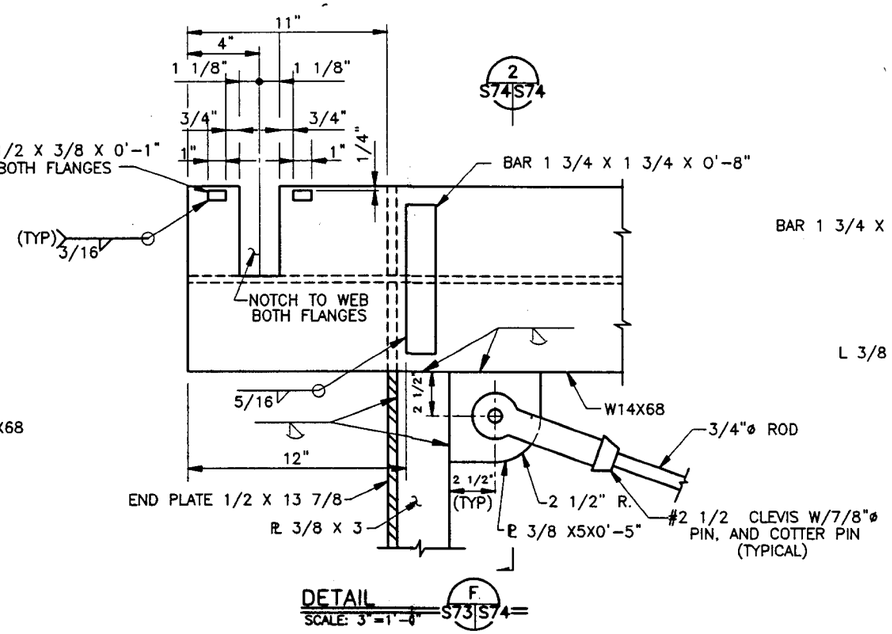
SWING GATE NO. 2 DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

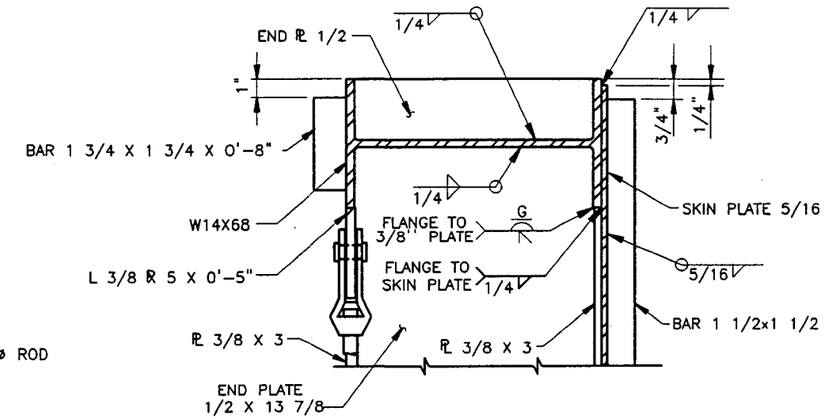
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SW4
DRAWN BY: J.M.R.	1=16	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



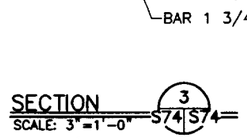
SECTION 3 S74 S74
SCALE: 3"=1'-0"



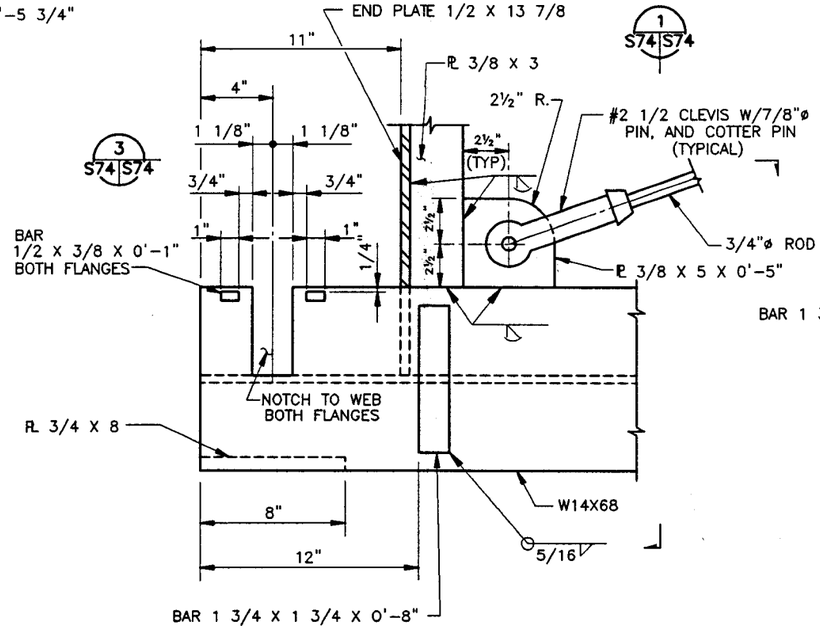
DETAIL F S73 S74
SCALE: 3"=1'-0"



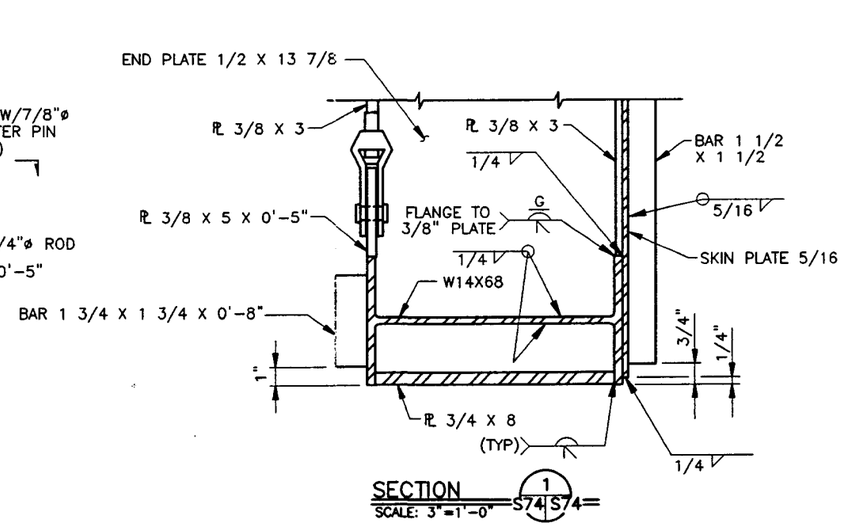
SECTION 2 S74 S74
SCALE: 3"=1'-0"



SECTION 3 S74 S74
SCALE: 3"=1'-0"



DETAIL E S73 S74
SCALE: 3"=1'-0"



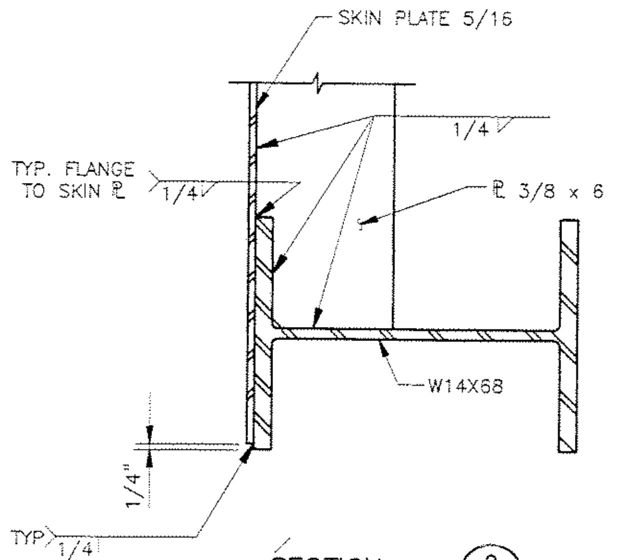
SECTION 1 S74 S74
SCALE: 3"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

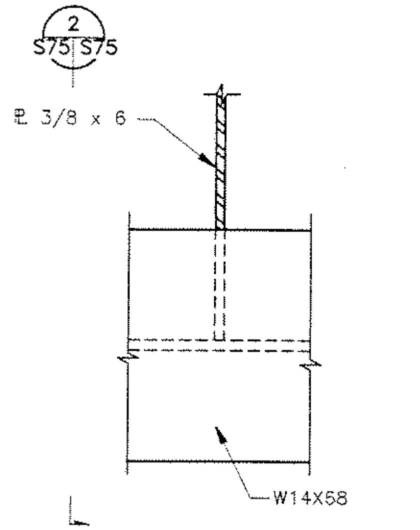
SWING GATE NO. 2 DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

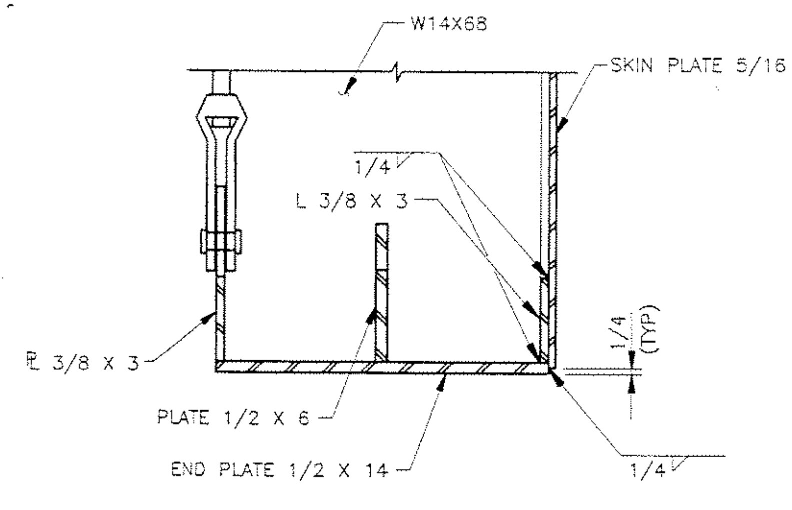
DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SW5
DRAWN BY: J.M.R.	1=4	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



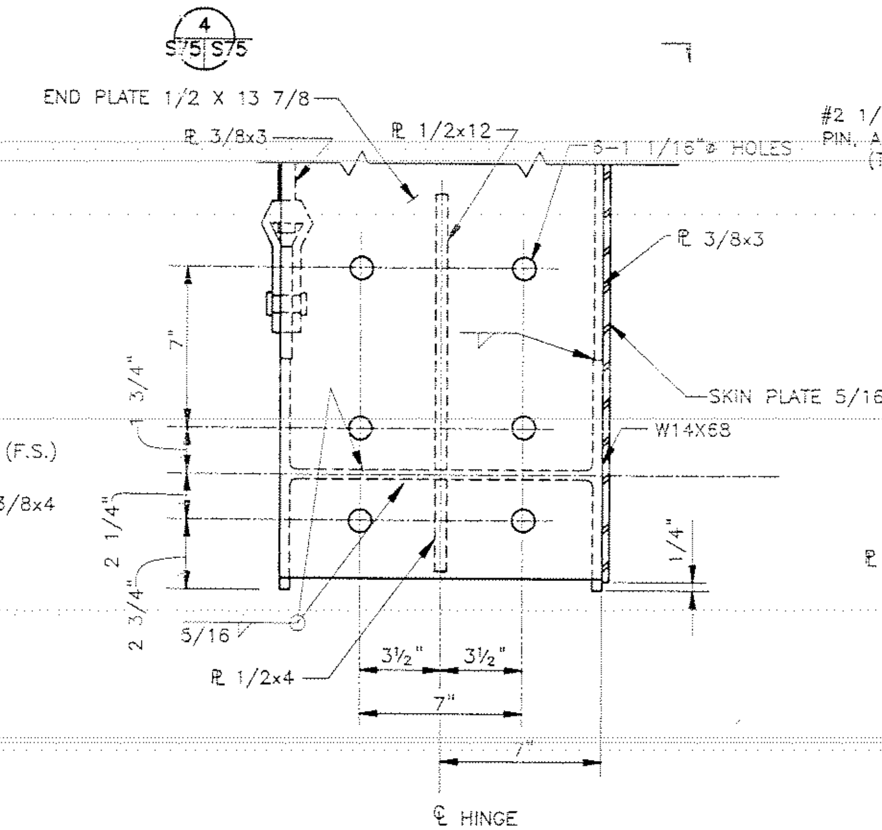
SECTION 2 S75 S75
SCALE: 3"=1'-0"



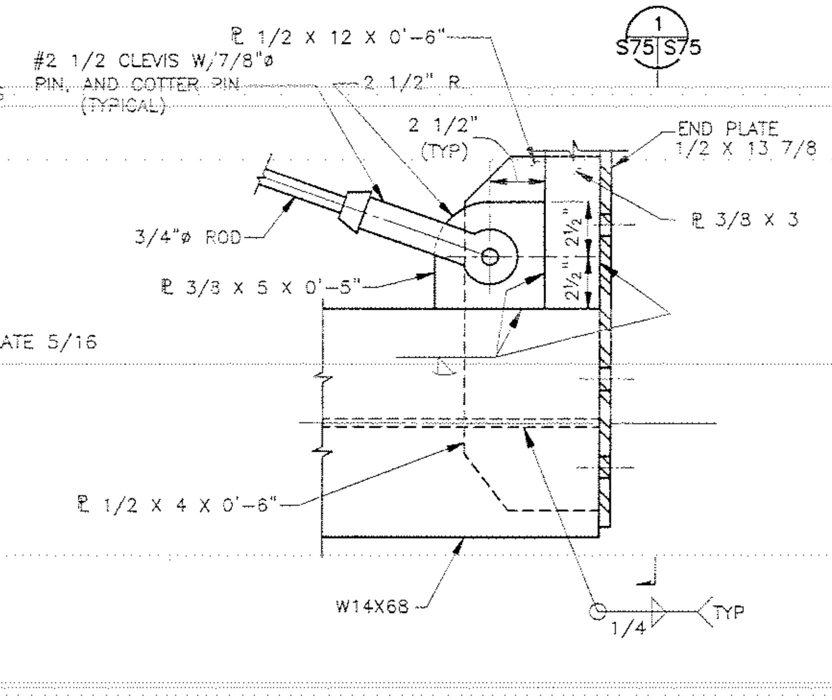
TYPICAL DETAIL C S73 S75
SCALE: 3"=1'-0"



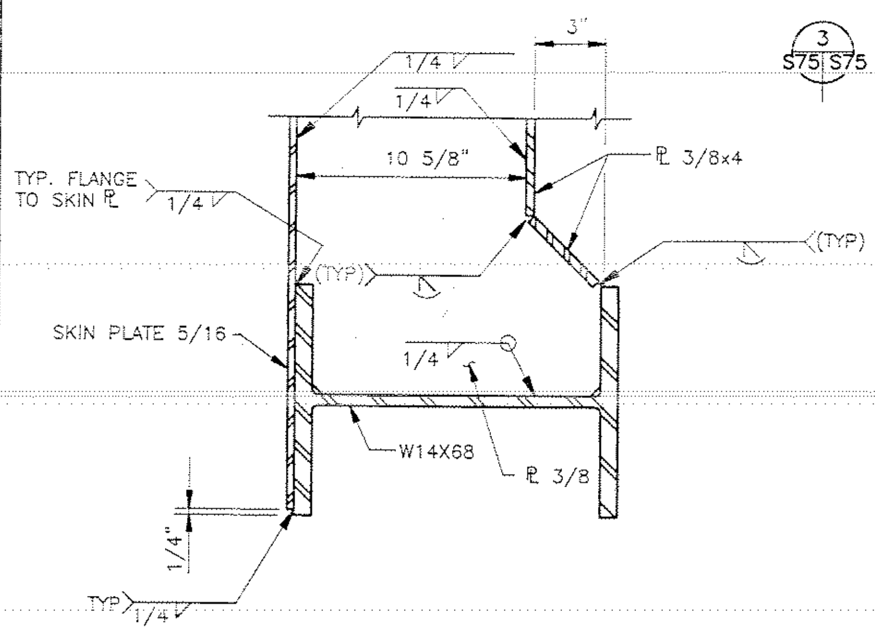
SECTION 4 S75 S75
SCALE: 3"=1'-0"



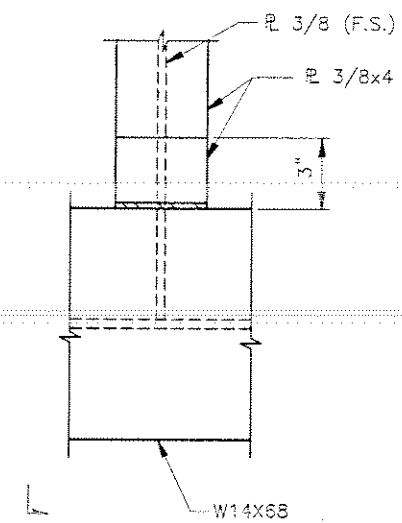
SECTION 1 S75 S75
SCALE: 3"=1'-0"



DETAIL B S73 S75
SCALE: 3"=1'-0"



SECTION 3 S75 S75
SCALE: 3"=1'-0"



TYPICAL DETAIL D S73 S75
SCALE: 3"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO. 2 DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=4	PLOT DATE: 10/97	CADD FILE: SW5
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		

PLATE S75

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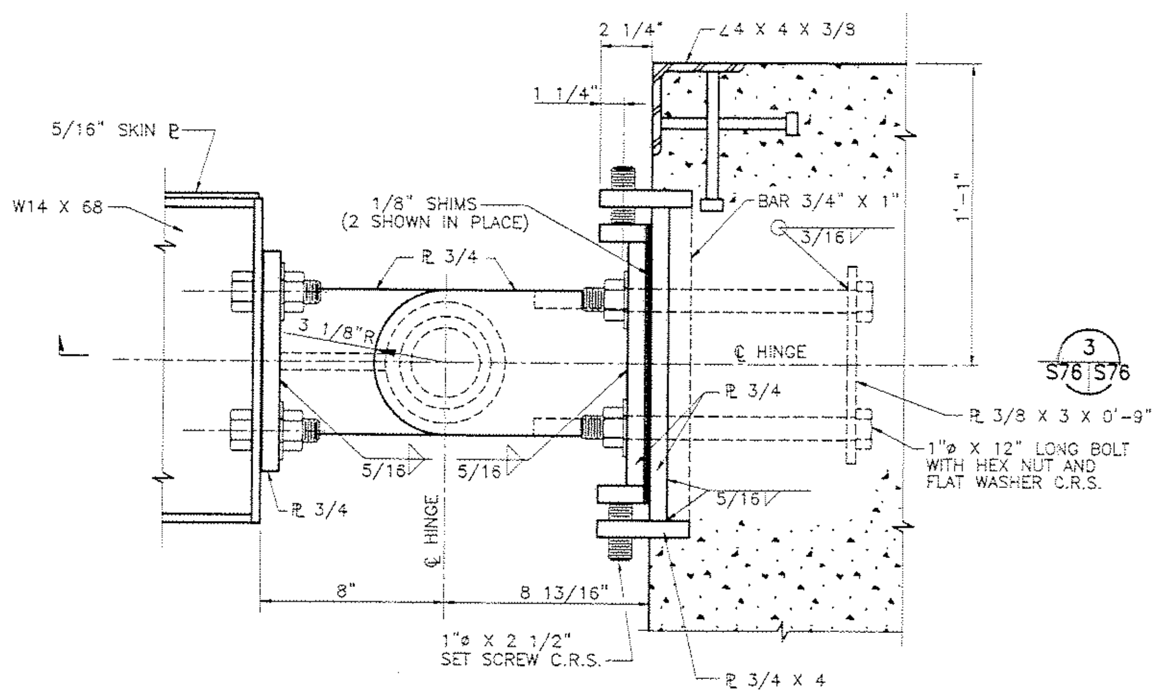
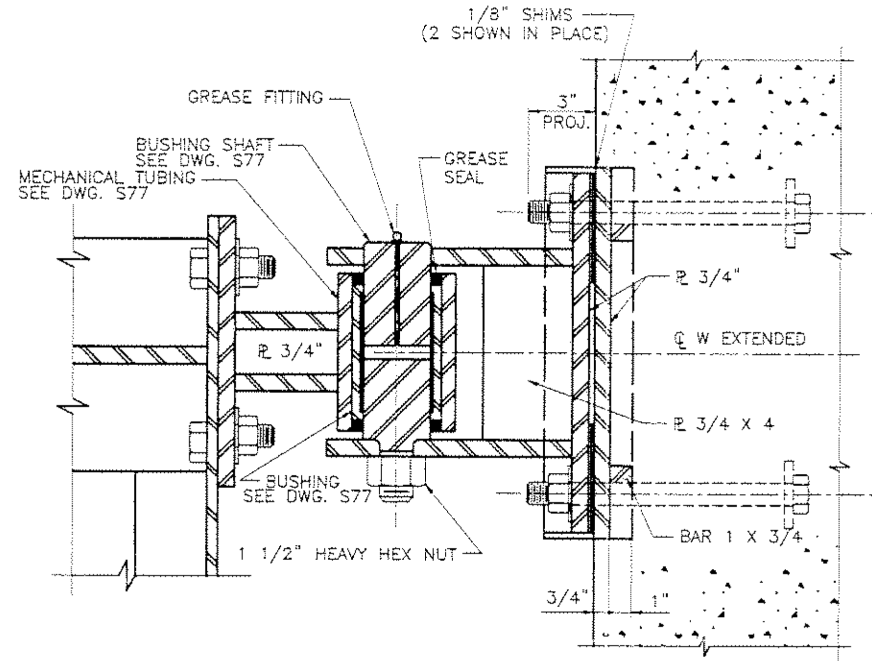
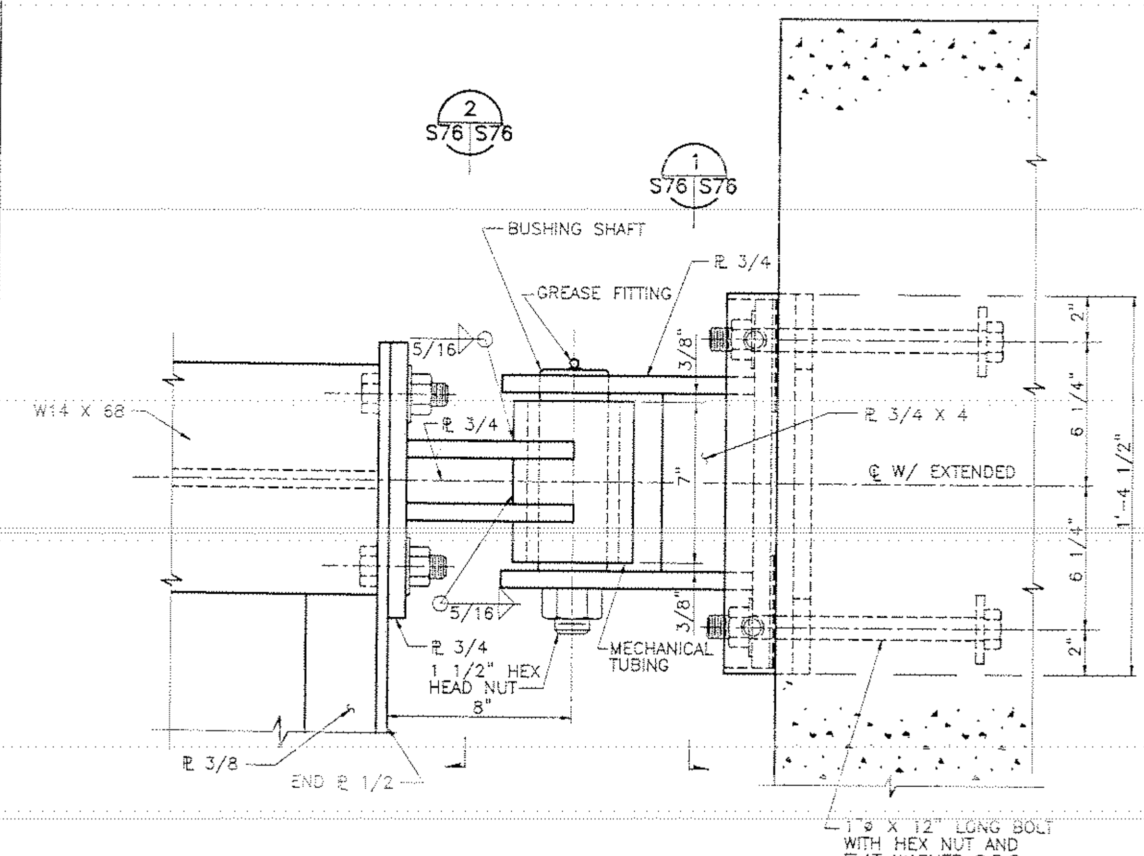


PLAN

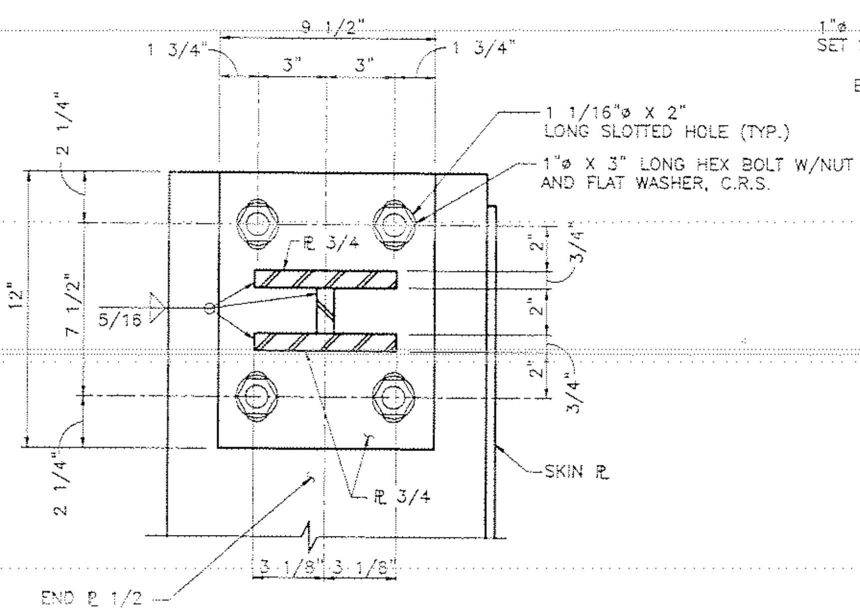


SECTION 3 S76|S76

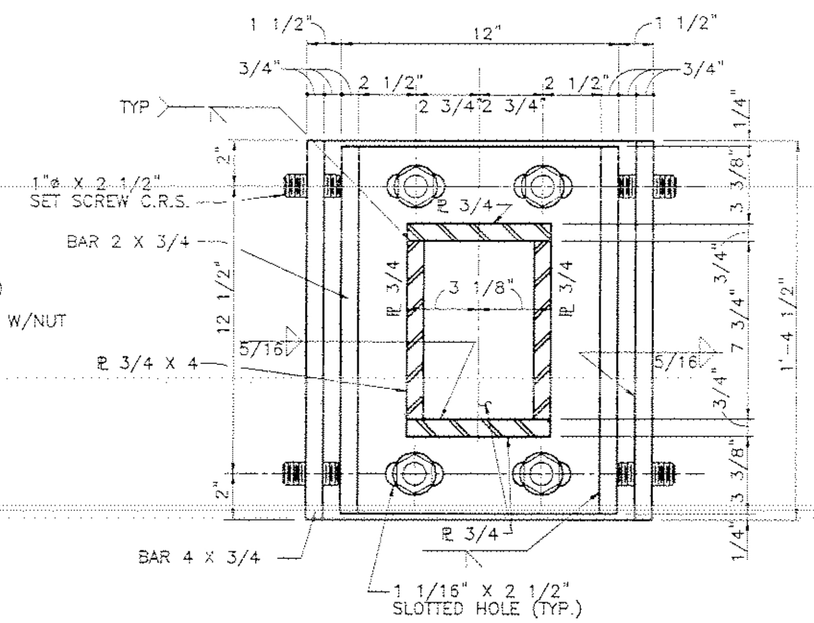
NOTE: WELDS SHOWN ARE TYPICAL FOR SIMILAR JOINTS WHERE NOT SHOWN.



ELEVATION



SECTION 2 S76|S76



SECTION 1 S76|S76

UPPER HINGE
SCALE: 3"=1'-0"

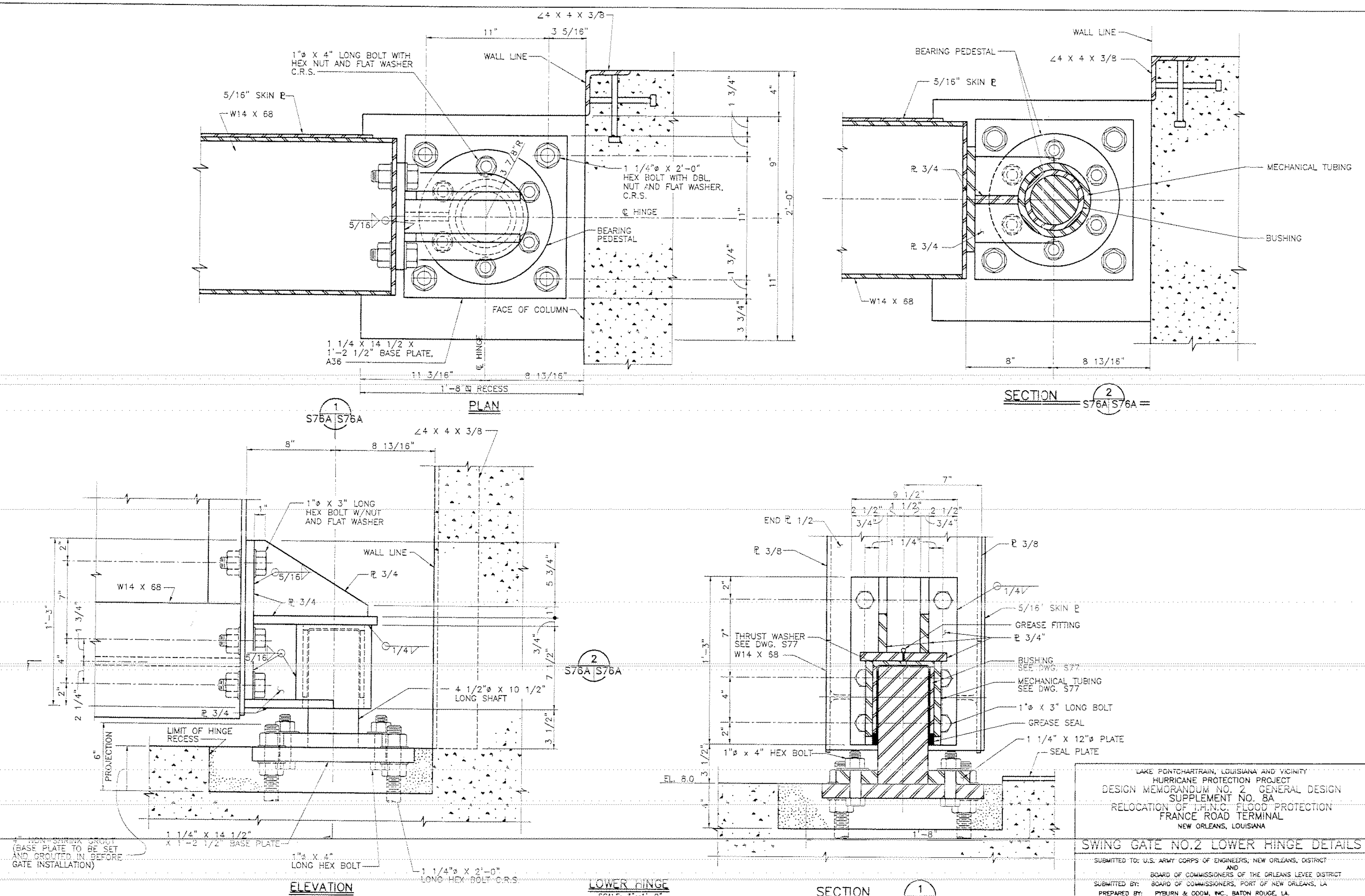
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 3A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO.2 UPPER HINGE DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE: 1=24	PLOT DATE: 10/97	CADD FILE: SW7
DRAWN BY: H.L.K.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		

PLATE S76



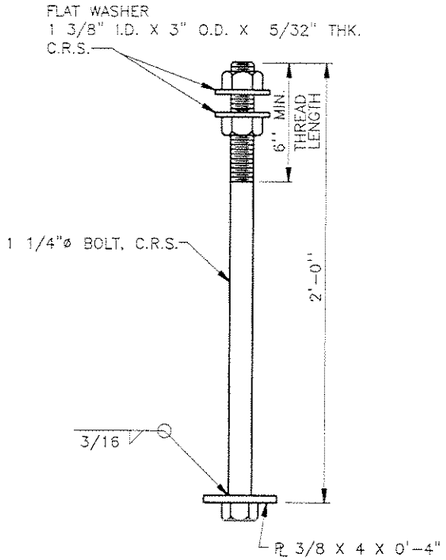
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO.2 LOWER HINGE DETAILS

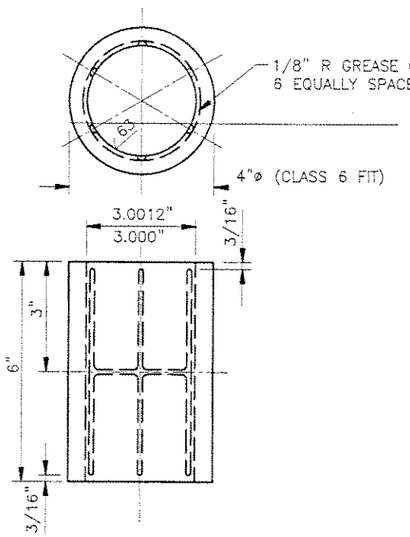
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=24	PLOT DATE: 10/97	CADD FILE: SW7A
DRAWN BY: J.M.R.	DATE: 10/97		FILE NO. 504-006
CHECKED BY: G.P.F.			

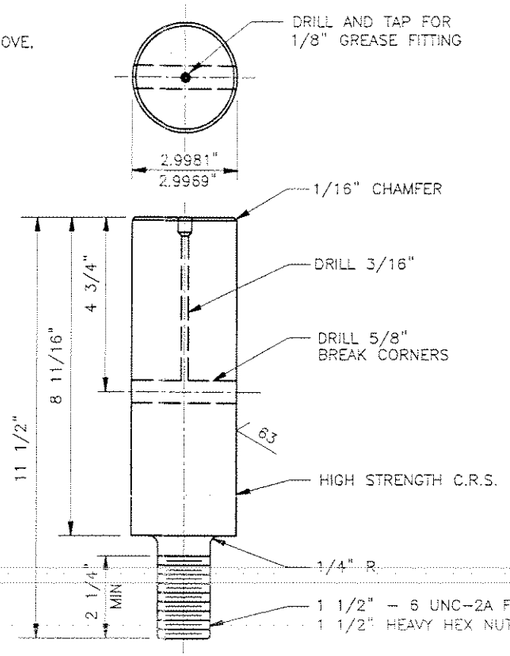
PLATE S76A



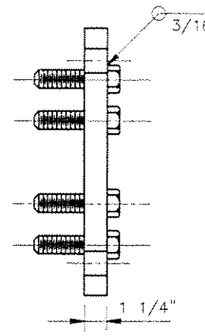
LOWER HINGE
ANCHOR BOLT
SCALE: 3"=1'-0"

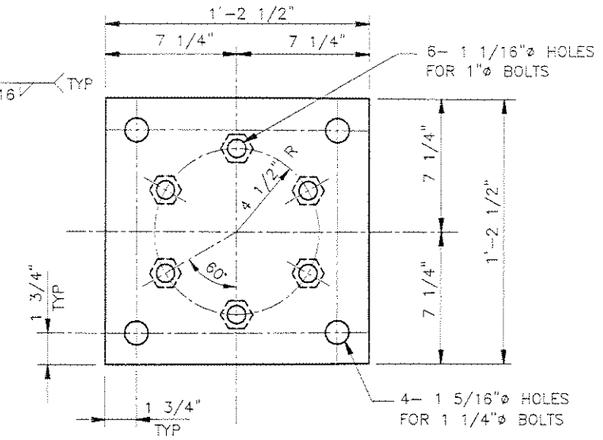


UPPER HINGE
BUSHING
SCALE: 6"=1'-0"

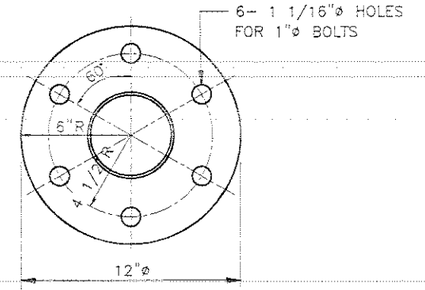


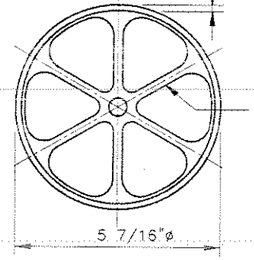
UPPER HINGE SHAFT
SCALE: 6"=1'-0"

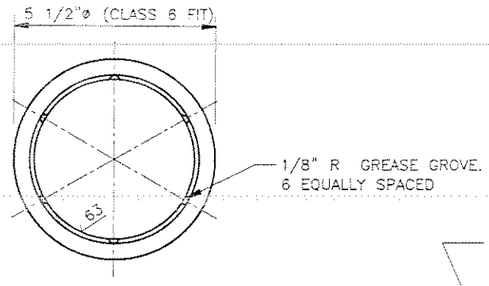


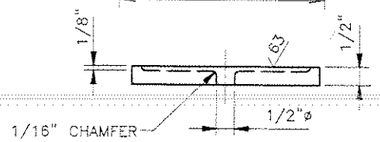


LOWER HINGE
BASE PLATE
SCALE: 3"=1'-0"

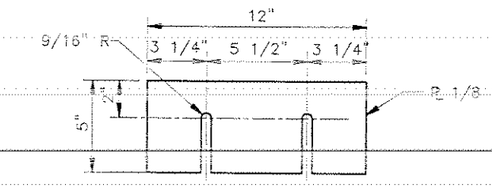




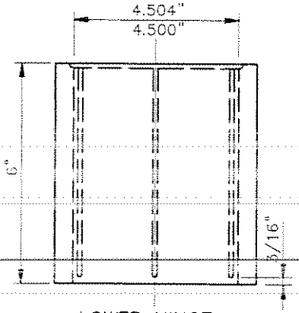




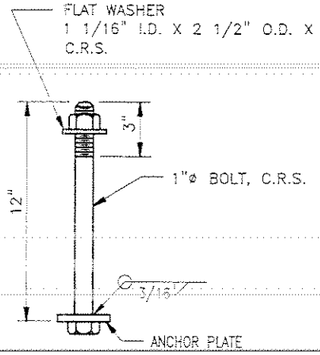
LOWER HINGE
THRUST WASHER
SCALE: 6"=1'-0"



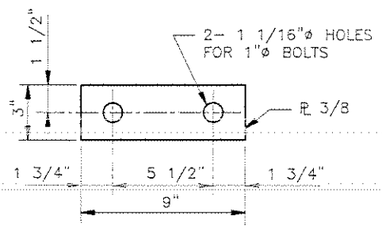
UPPER HINGE
SHIM PLATE
SCALE: 3"=1'-0"



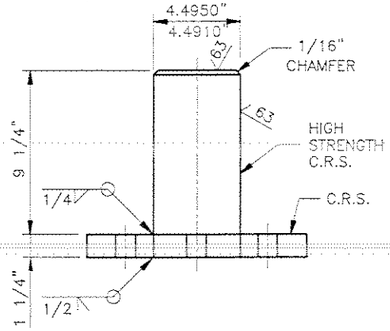
LOWER HINGE
BUSHING
SCALE: 6"=1'-0"



UPPER HINGE
ANCHOR BOLT
SCALE: 3"=1'-0"



UPPER HINGE
ANCHOR BOLT PLATE
SCALE: 3"=1'-0"



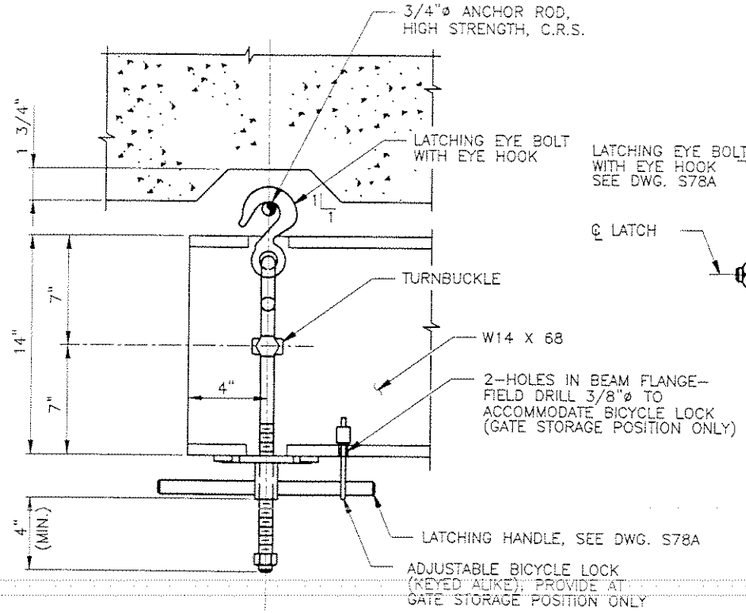
BEARING PEDESTAL
SCALE: 3"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF T.H.N.O. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

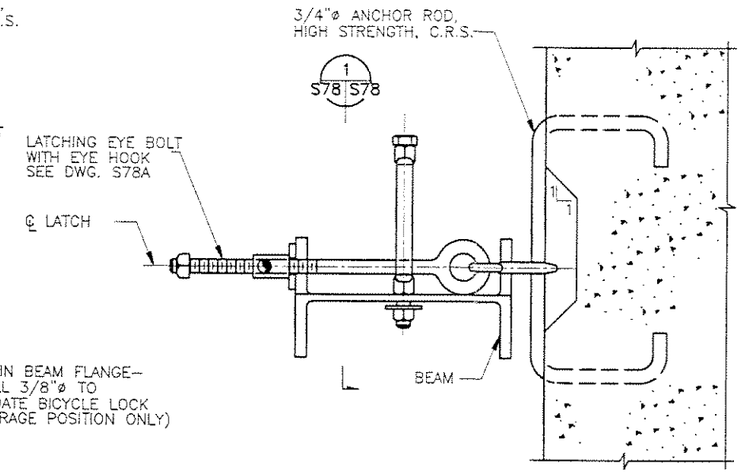
SWING GATE NO.2 HINGE DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

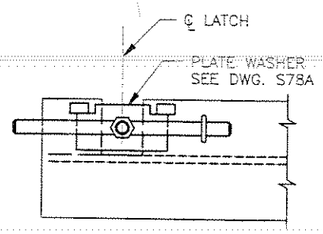
DESIGNED BY: J.P.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SW8
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006



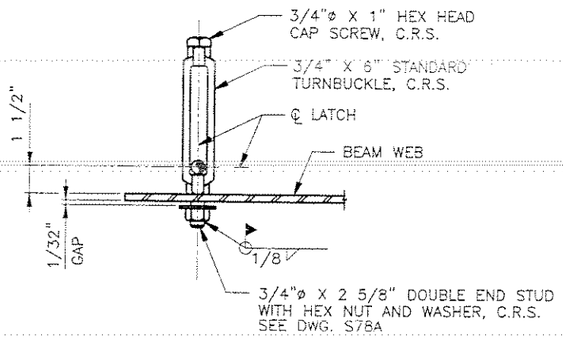
PLAN



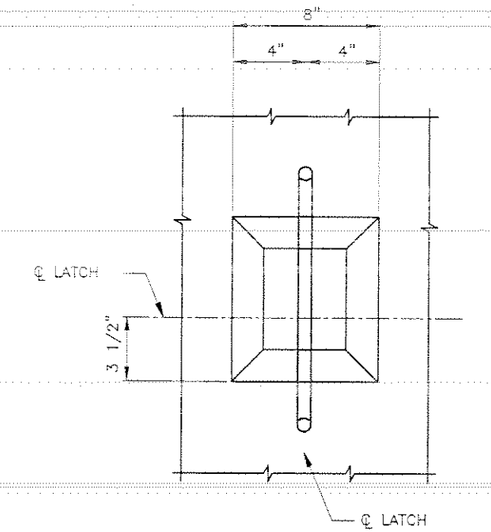
SECTION AT ℄ OF LATCHING DEVICE

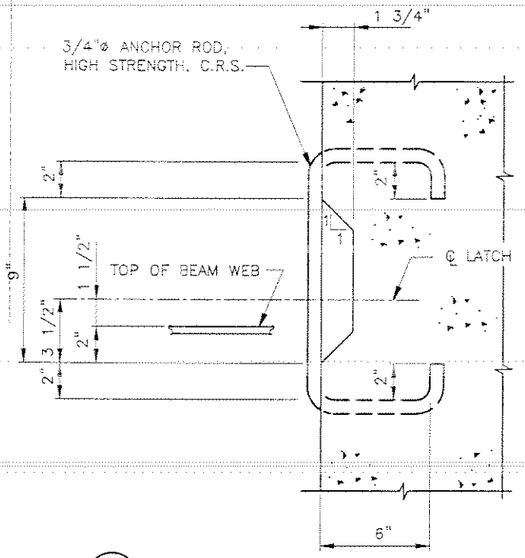


ELEVATION



SECTION 1 S78 S78





DETAIL A S71 S78
SCALE: 3"=1'-0"

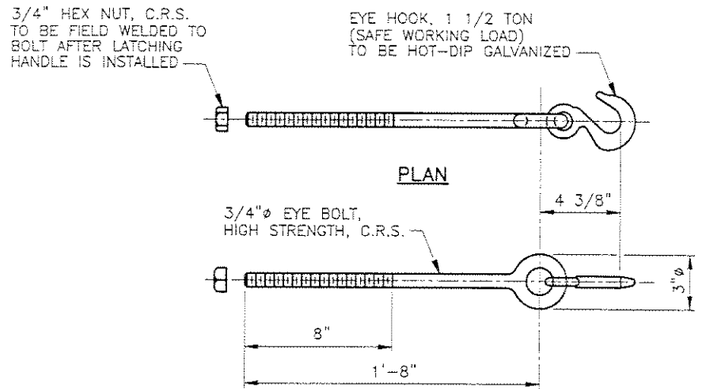
LATCHING DEVICE
SCALE: 3"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO.2 LATCHING DETAILS

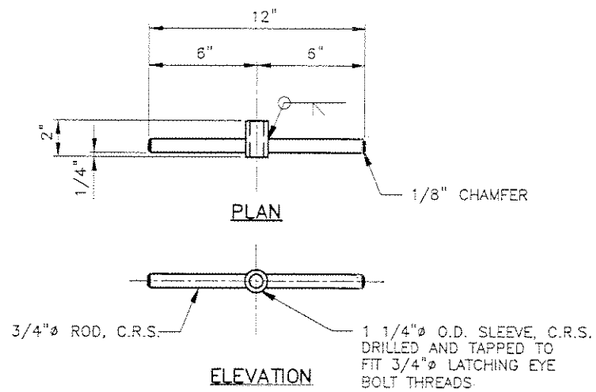
SUBMITTED TO: U.S. ARMY, CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.N.	PLOT SCALE:	PLOT DATE:	CADD FILE: SWG
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-005

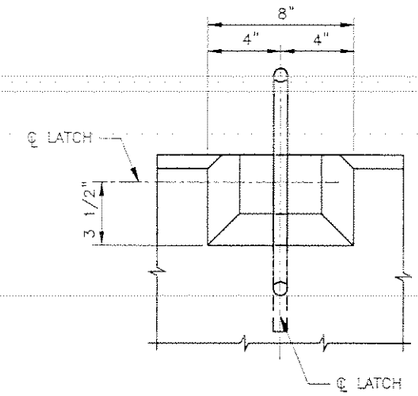


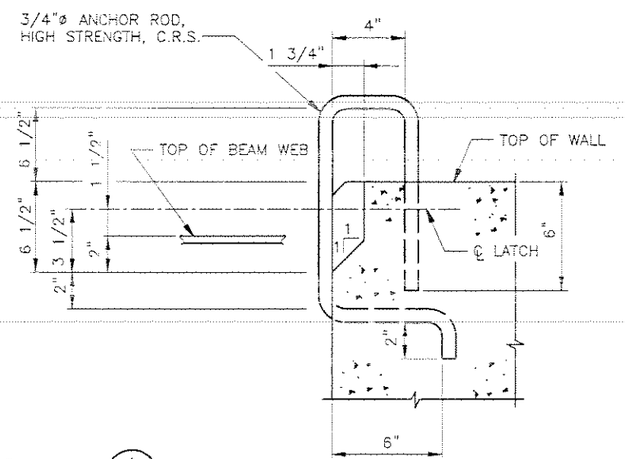
ELEVATION

LATCHING EYE BOLT W/EYE HOOK
SCALE: 3"=1'-0"



LATCHING HANDLE
SCALE: 3"=1'-0"





DETAIL A S71 S78A
SCALE: 3"=1'-0"

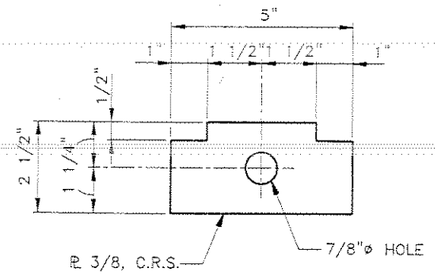
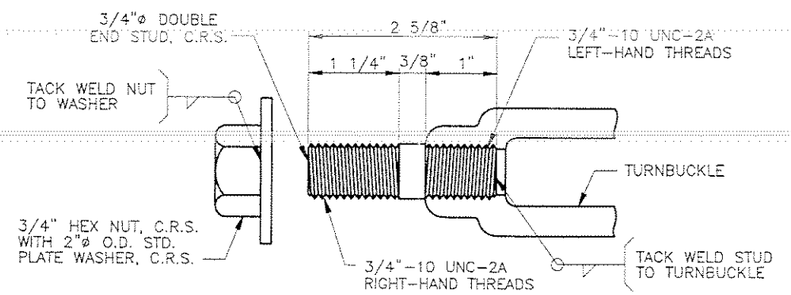


PLATE WASHER
SCALE: 6"=1'-0"



DOUBLE END STUD
SCALE: 12"=1'-0"

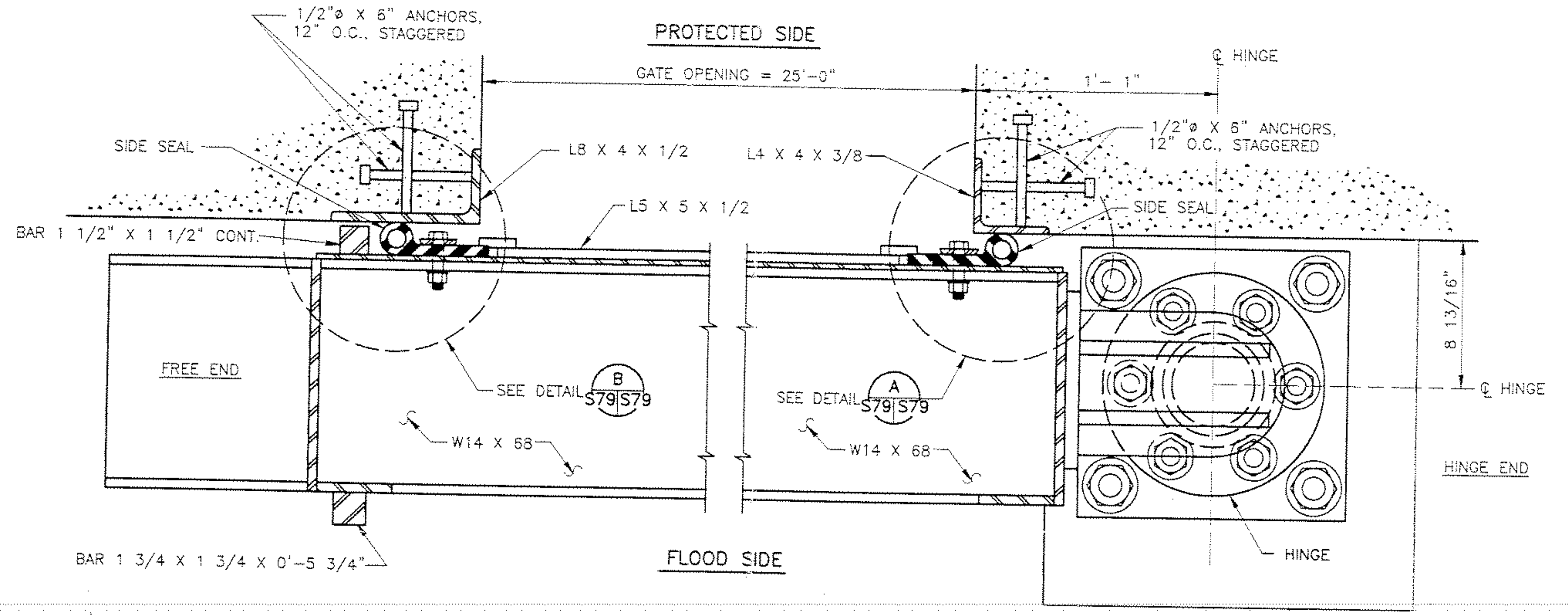
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO. 2 LATCHING DETAILS

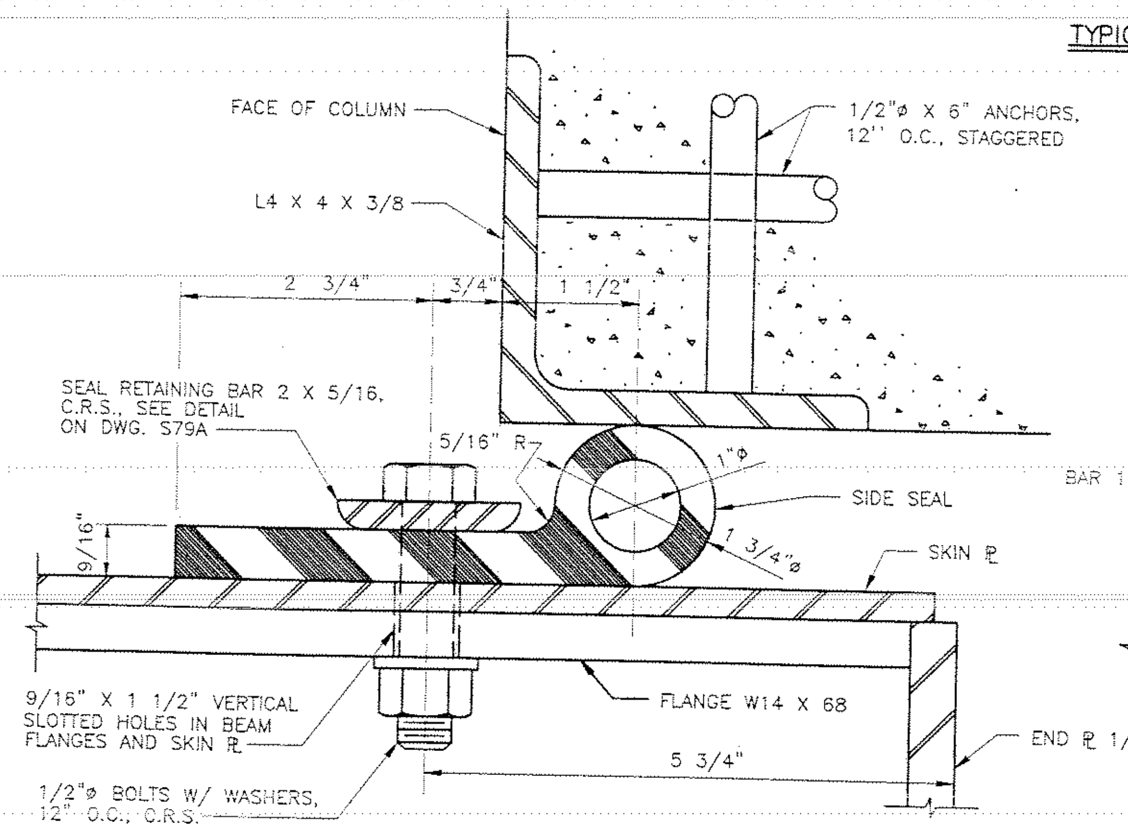
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA.
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE: 1=24	PLOT DATE: 10/97	CADD FILE: SW8A
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: H.L.K.	DATE: 10/97		

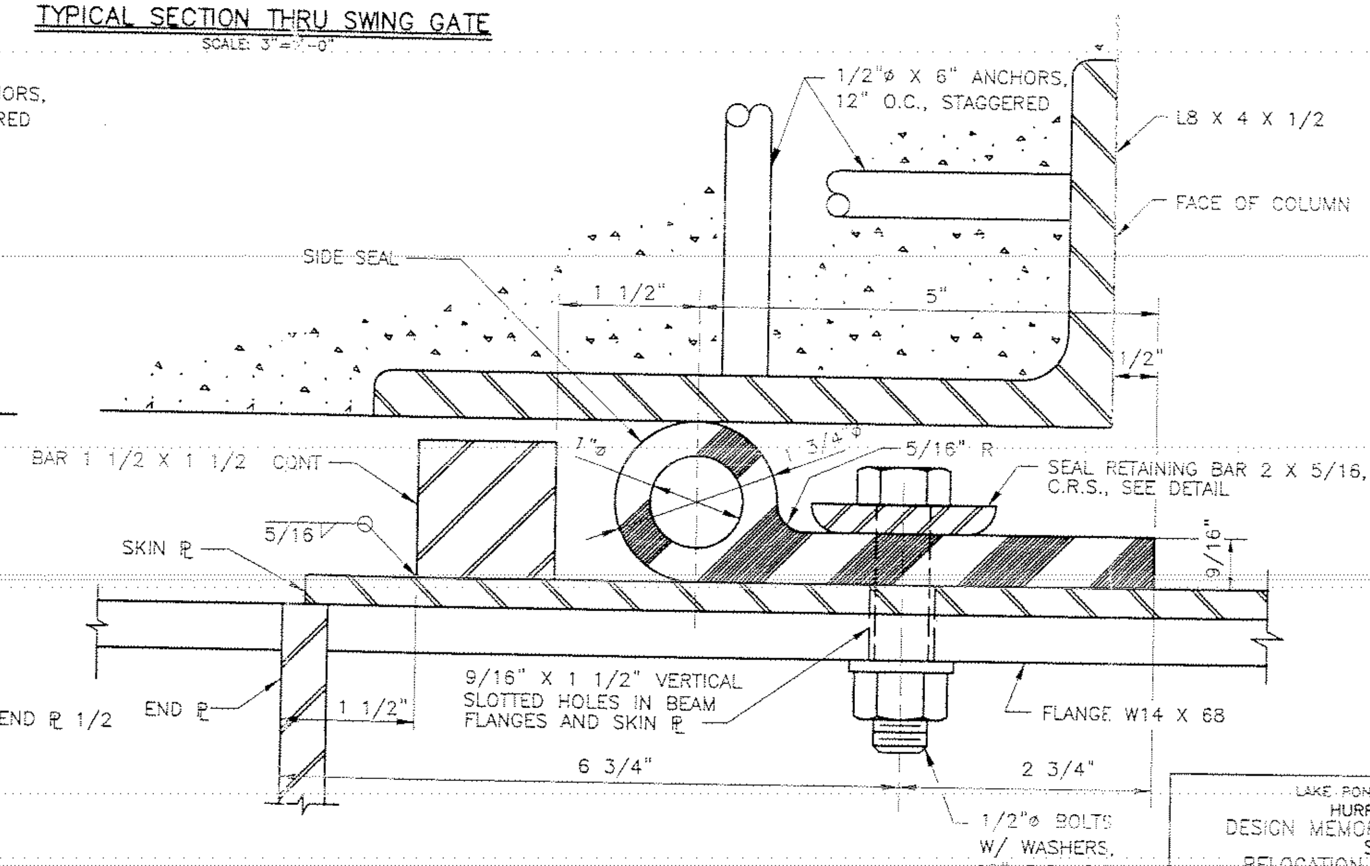
PLATE S78A



TYPICAL SECTION THRU SWING GATE
SCALE: 3"=1'-0"



DETAIL A S79 S79
SCALE: 12"=1'-0"



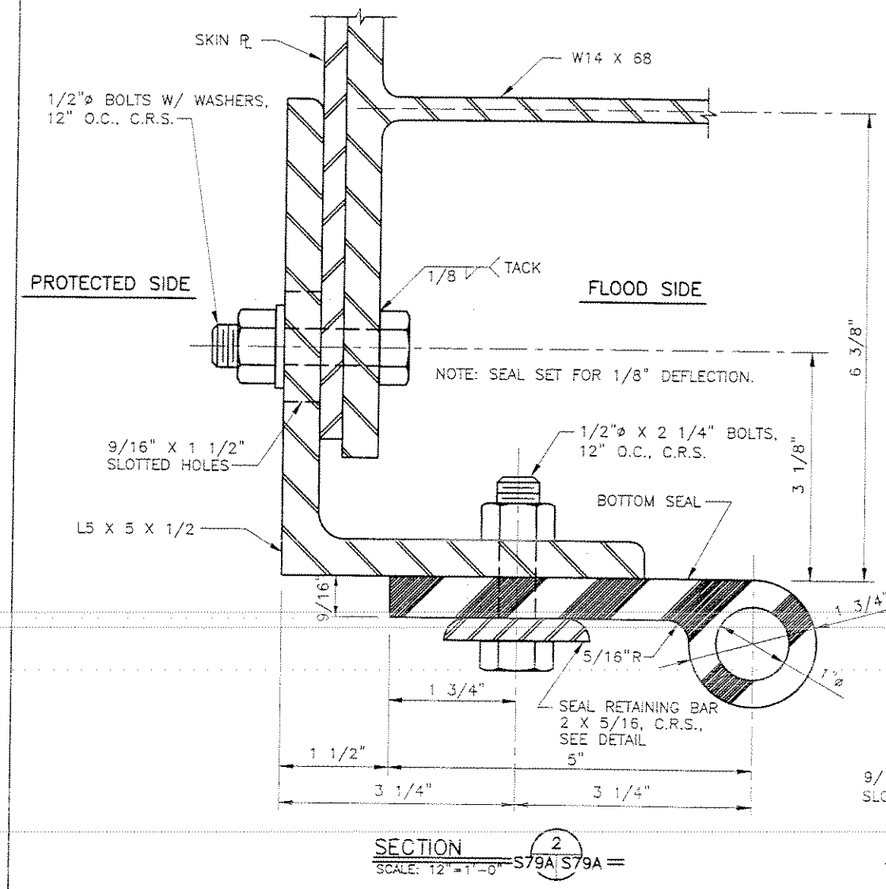
DETAIL B S79 S79
SCALE: 12"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

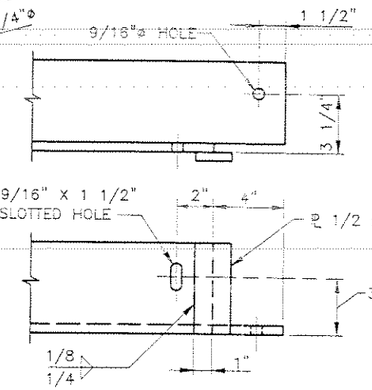
SWING GATE NO. 2 SEAL DETAILS

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

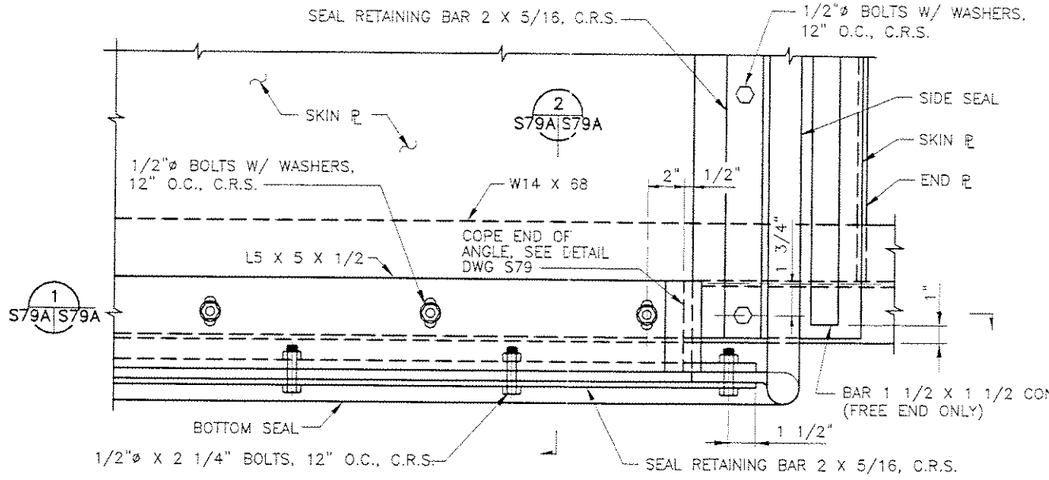
DESIGNED BY: J.F.H.	PLOT SCALE: 1=24	PLOT DATE: 10/97	CADD FILE: SW10
DRAWN BY: J.M.R.			FILE NO. 504-006
CHECKED BY: G.P.F.	DATE: 10/97		



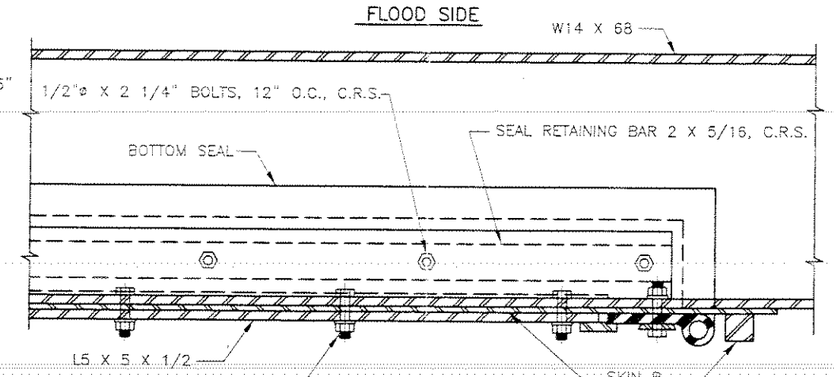
SECTION (2 / S79A | S79A)
SCALE: 12"=1'-0"



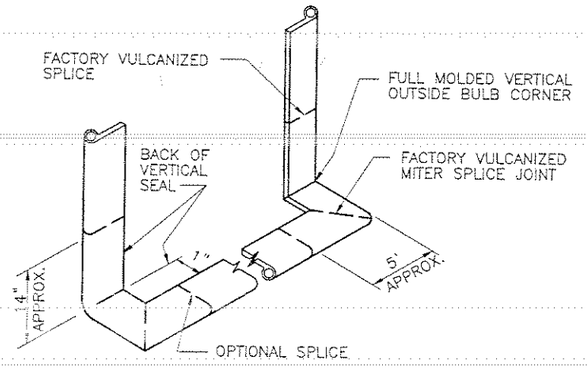
END OF L 5 X 5 X 1/2
SCALE: 3"=1'-0"



END ELEVATION — PROTECTED SIDE
SCALE: 3"=1'-0"

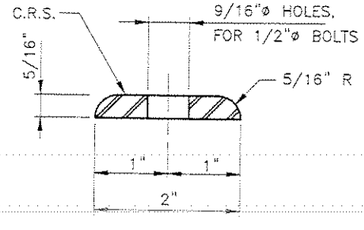


SECTION (1 / S79A | S79A)
SCALE: 3"=1'-0"



CORNER DETAIL, TYPICAL BOTH SIDES

TYPICAL GATE SEAL
NOT TO SCALE



SEAL RETAINING BAR
SCALE: 12"=1'-0"

NOTES:
ALL SPLICES WILL BE FACTORY MADE IN HEAVY STEEL PRESS TYPE MOLDS UNDER PRESSURE AND HEAT.
ALL SPLICE JOINTS MUST DEVELOP STRENGTH OF AT LEAST 50% OF THE MINIMUM TENSILE STRENGTH REQUIRED OF THE RUBBER.
SEAL CLAMP ANGLES SHALL BE PAINTED ON ALL SIDES PRIOR TO ASSEMBLY.
AFTER ASSEMBLY AND SEAL ADJUSTMENTS ARE MADE, ALL GAPS IN SEALS AND SEAL SUPPORTS SHALL BE SEALED WITH A SILICONE RUBBER SEALANT TO PROVIDE WATERTIGHT JOINTS.

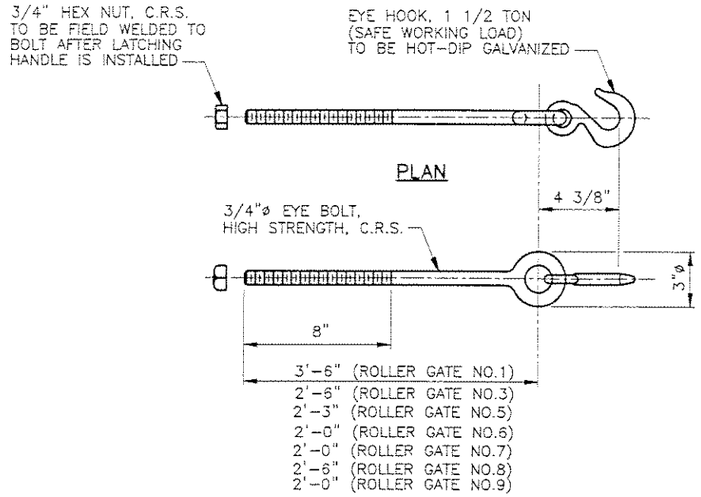
LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

SWING GATE NO.2 SEAL SUPPORT DETAILS

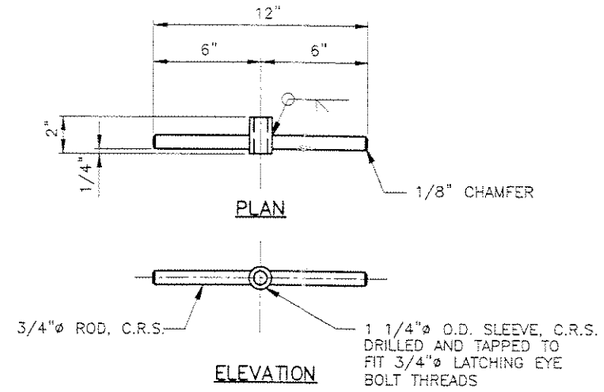
SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT AND BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: SW10A
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504--006

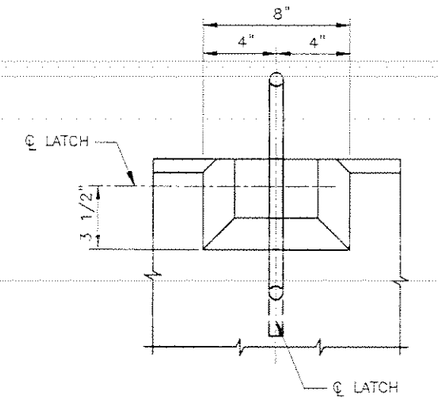
PLATE S79A

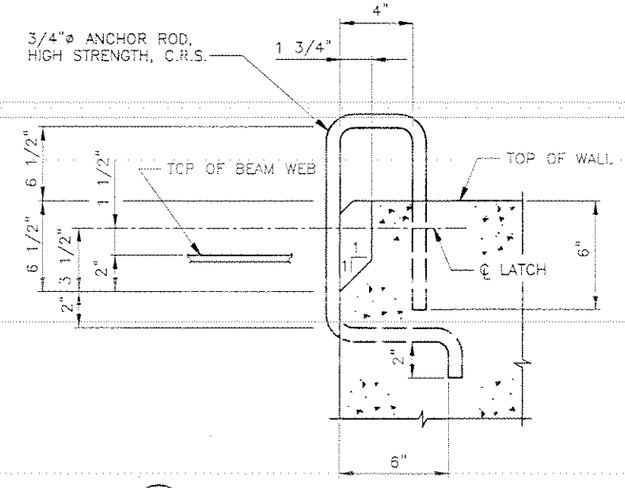


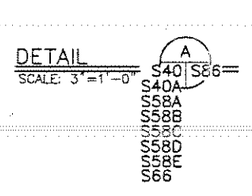
LATCHING EYE BOLT W/EYE HOOK
SCALE: 3"=1'-0"



LATCHING HANDLE
SCALE: 3"=1'-0"







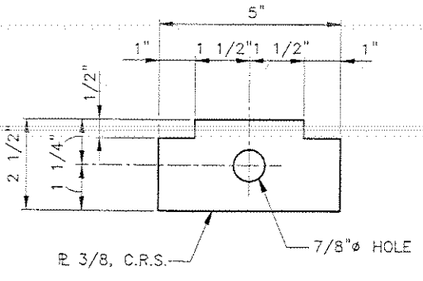
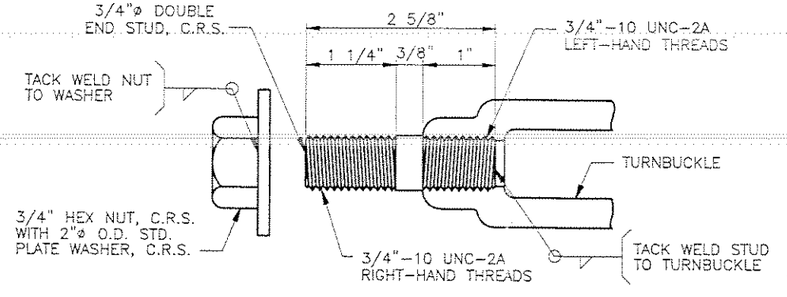


PLATE WASHER
SCALE: 3"=1'-0"



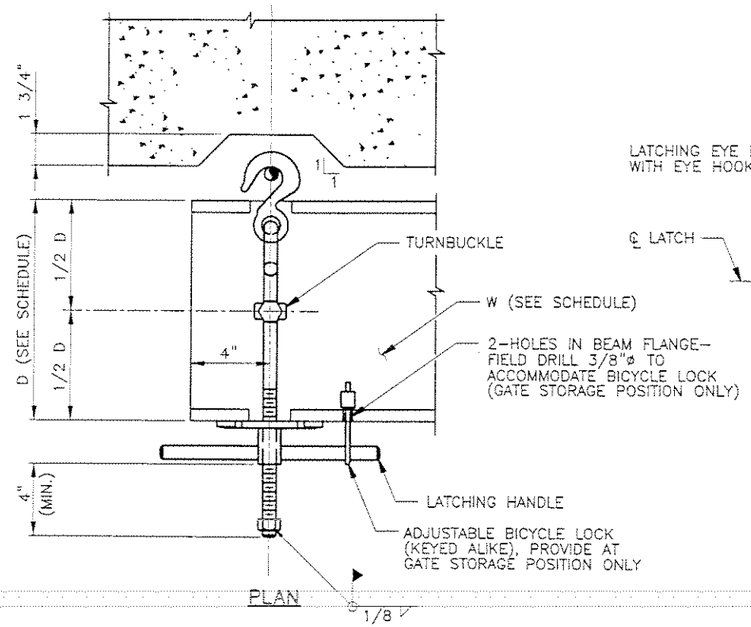
DOUBLE END STUD
SCALE: 12"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF L.H.N.O. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

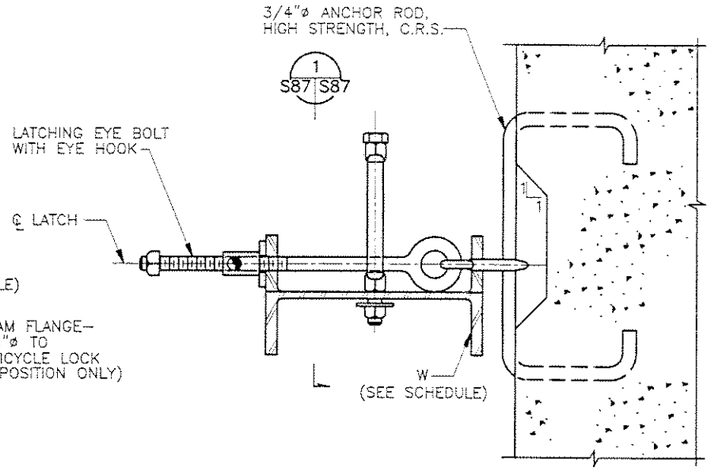
LATCHING DETAILS & ROLLER GATES

SUBMITTED TO: U.S. ARMY, CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT. SCALE:	PLOT. DATE:	CADD FILE: LD18G157
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006

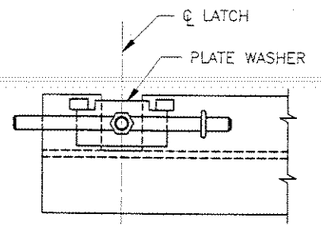


PLAN

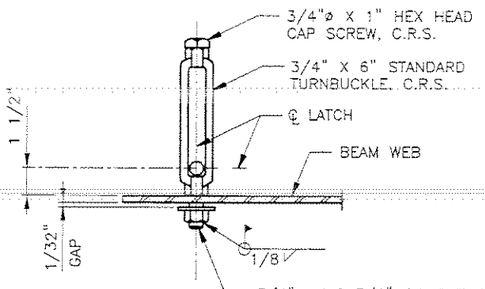


SECTION AT ℄ OF LATCHING DEVICE

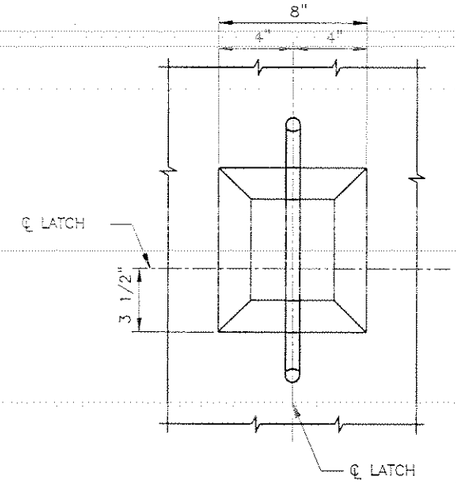
W SECTION SCHEDULE		
GATE NO.	W	D (in)
1	W36x150	35 7/8
3	W24x55	23 5/8
5	W21x44	20 5/8
6 & 7	W18x60	18 1/4
8	W24x55	23 5/8
9	W18x35	17 3/4

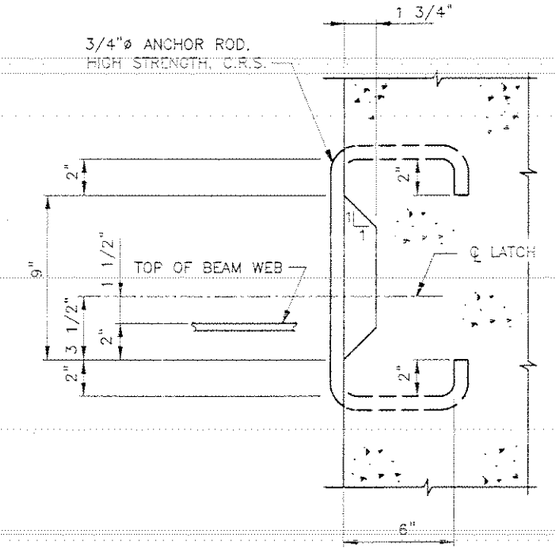


ELEVATION



SECTION 1 S87 S87





DETAIL A S10 S87 S11 S40 S40A S64
SCALE: 3"=1'-0"

LATCHING DEVICE
SCALE: 3"=1'-0"

LAKE PONTCHARTRAIN, LOUISIANA AND VICINITY
HURRICANE PROTECTION PROJECT
DESIGN MEMORANDUM NO. 2 GENERAL DESIGN
SUPPLEMENT NO. 8A
RELOCATION OF I.H.N.C. FLOOD PROTECTION
FRANCE ROAD TERMINAL
NEW ORLEANS, LOUISIANA

LATCHING DETAILS - ALL ROLLER GATES

SUBMITTED TO: U.S. ARMY CORPS OF ENGINEERS, NEW ORLEANS, DISTRICT
AND
BOARD OF COMMISSIONERS OF THE ORLEANS LEVEE DISTRICT
SUBMITTED BY: BOARD OF COMMISSIONERS, PORT OF NEW ORLEANS, LA
PREPARED BY: PYBURN & ODOM, INC., BATON ROUGE, LA.

DESIGNED BY: J.F.H.	PLOT SCALE:	PLOT DATE:	CADD FILE: LDRG167
DRAWN BY: J.M.R.	1=24	10/97	FILE NO.
CHECKED BY: G.P.F.	DATE: 10/97		504-006

PLATE S87