



DEPARTMENT OF THE ARMY

U.S. Army Corps of Engineers
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

CECW-CE

JAN 7 2009

MEMORANDUM FOR DIRECTOR TASK FORCE HOPE, U.S. ARMY CORPS OF
ENGINEERS, MISSISSIPPI DIVISION, 7400 LEAKE
AVENUE, NEW ORLEANS, LA 70118-3651

SUBJECT: Inner Harbor Navigation Canal Lake Borgne Barrier Wall – Conditional Waiver for
Deflections of the Proposed Floodwall Structures

1. Reference memorandum, dated 22 December 2008, subject as above.
2. Conditional waiver for deflections of the proposed floodwall structure is approved.
3. Point of contact is Anjana Chudgar, 513-684-6210.

FOR THE COMMANDER:

A handwritten signature in black ink, appearing to read "J. Dalton", written over a horizontal line.

JAMES C. DALTON, P.E.
Chief, Engineering and Construction
Directorate of Civil Works



REPLY TO
ATTENTION OF

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

Hurricane Protection Office

DEC 22 2008

MEMORANDUM THRU Director Task Force Hope, U. S. Army Corps of Engineers,
Mississippi Division, 7400 Leake Ave, New Orleans, LA 70118-3651

*12/22 KDB/hy
CONCUR*

FOR Mr. James Dalton, Chief, Engineering and Construction, Headquarters, U. S. Army Corps
of Engineers, 441 G Street N. W., Washington DC 20314-1000

SUBJECT: Inner Harbor Navigation Canal Lake Borgne Barrier Wall – Conditional Waiver for
Deflections of the Proposed Floodwall Structure

1. Request a conditional waiver that permits estimated deflections of the floodwall in excess of nearest relevant Corps criteria deflection limitations. After deflections are verified by lateral load tests, a final waiver will be requested. The conditional waiver is requested to maintain the schedule to provide advance measures by hurricane season 2009.

2. Below are excerpts from the nearest relevant Corps criteria.

a. **HSDRRS, Updated June 12, 2008:** “Maximum structural deflections at pile heads:

Case with 33⅓% overstress allowed:

Vertical – 0.67” or less

Horizontal – 1.0” or less”

b. **EM 1110-2-2906:** “Calculated pile cap deformation should be checked against functional and geometric constraints on the structure. These values are usually ¼-inch axially and ½-inch laterally. For unusual or extreme loads these values should be increased.”

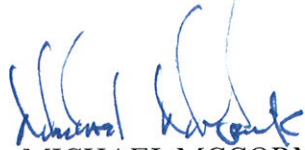
3. Deflection analysis of the floodwall using conservative soil values indicates maximum horizontal deflections will be on the order of 1½ to 2 inches with negligible vertical deflections. This calculated deflection exceeds the limitations of the above Corps criteria by 1-inch. Lateral load tests will be performed to verify the soil parameters used to calculate horizontal deflections. A full scale field verification test will be performed to mimic load conditions. With the refined soil parameters, it is expected that the calculated lateral deflection will decrease.

4. The HSDRRS criterion is written in reference to T-walls and I-walls. The EM 1110-2-2906 criterion is written in reference to locks and dams. Neither structure performs the same as the floodwall. Deflections noted above are within the elastic range of both the structure and soil; therefore, the deflections are not detrimental to the performance of this floodwall. Attached please find a plan and cross section of the barrier wall.

CE-MVN-HPO

SUBJECT: Inner Harbor Navigation Canal Lake Borgne Barrier Wall – Conditional Waiver for Deflections of the Proposed Floodwall Structure

5. Point of Contact is Angela DeSoto-Duncan, (504) 862-2733.

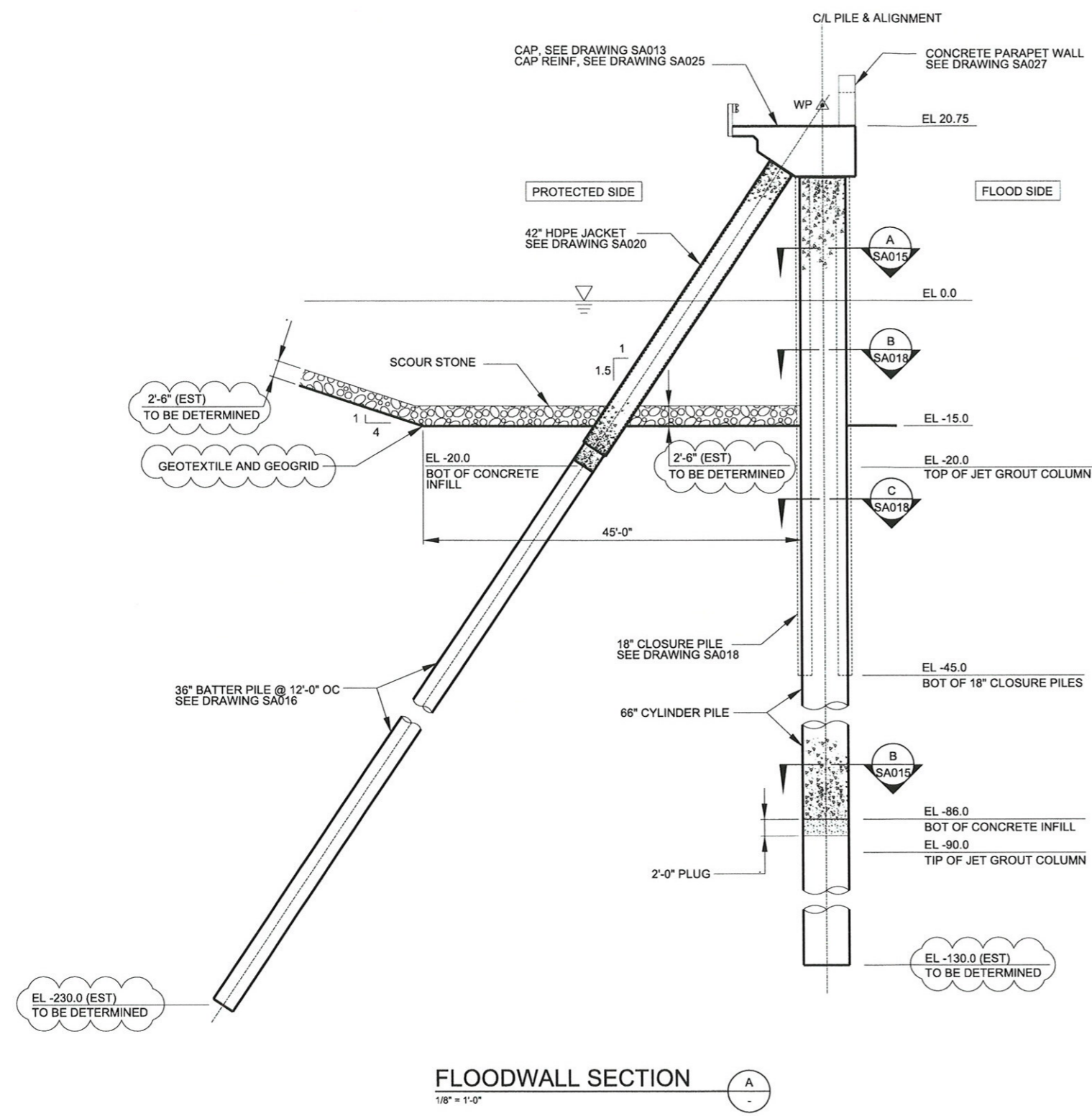


MICHAEL MCCORMICK
COL, EN
Commanding

Encl

CF:
Mr. Robert Fitzgerald
Chief, E&C, MVD

D
C
B
A



FLOODWALL SECTION
1/8" = 1'-0"

- NOTES:
- FOR 36" BATTER PILE: A252 GRADE 45 STEEL OR API 5LGRX42. SEE DRAWING SA016.
 - THE SOIL AROUND THE 18" CLOSURE PILES WILL BE JET GROUTED.
 - CONSTRUCTION SEQUENCE OF INSTALLING 18" CLOSURE PILES AFTER 66" CYLINDER PILES ARE INSTALLED.
 - JET GROUT FROM EL -90.0 TO EL -20.0.
 - IMMEDIATELY AFTER JET GROUTING WHILE THE GROUT IS STILL FLUID, PLACE THE 18" CLOSURE PILES IN PAIRS TO EL -45.0.
 - THE PAIR OF 18" CLOSURE PILES ARE HELD TIGHT AGAINST THE 66" CYLINDER PILES WITH TIE RODS THRU THE 18" CLOSURE PILES. SUPPORT THE CLOSURE PILES AS REQUIRED.
 - AFTER THE GROUT HAS SET FOR MINIMUM 14 DAYS, REMOVE TOP TIE ROD. CLEAN OUT THE INTERSTITIAL SPACE BETWEEN THE 18" CLOSURES & 66" PILES DOWN TO TOP OF JET GROUT COLUMNS. PLACE GROUT BAG IN THE INTERSTITIAL SPACE. RECONNECT TOP TIE ROD, AND FILL GROUT BAG WITH GROUT IN TWO STAGES:

FIRST STAGE IS FROM EL -20.0 TO EL 0.0
SECOND STAGE IS FROM EL 0.0 TO EL 14.75

BEGIN SECOND STAGE ONLY AFTER FIRST STAGE GROUT HAS REACHED 1000psi. FC OF GROUT IS 4000psi.
 - GEOTEXTILE AND GEOGRID TO BE PLACED BETWEEN BATTER PILES AFTER THEY ARE DRIVEN AND CLOSURE PILES ARE PLACED. FOLLOWED BY PLACEMENT OF THE SCOUR STONE. GEOTEXTILE PER LOUISIANA CLASS D.



PROGRESS PRINT 90% SUBMITTAL

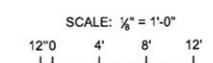
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B	DWN BY: BB7/MCL		
C	PROGRESS PRINT 90% SUBMITTAL	12/18/2008	

DESIGNED BY: George Foltore	DATE: 1/17/2008
DWN BY: BB7/MCL	SOLICITATION NO.: 12/18/2008
CONTRACT NO. V090046-0008	FILE NUMBER: H-4-0246
TRUCK SCALE / PLOT DATE: AS SHOWN 12/18/2008	FILE NAME: SA012.dgn
SIZE: ANSE D	



INNER HARBOR NAVIGATION CANAL
HURRICANE PROTECTION PROJECT
LAKE BORGNE BARRIER
ORLEANS & ST. BERNARD PARISHES, LA
FLOODWALL
ELEVATION BEFORE SETTLEMENT

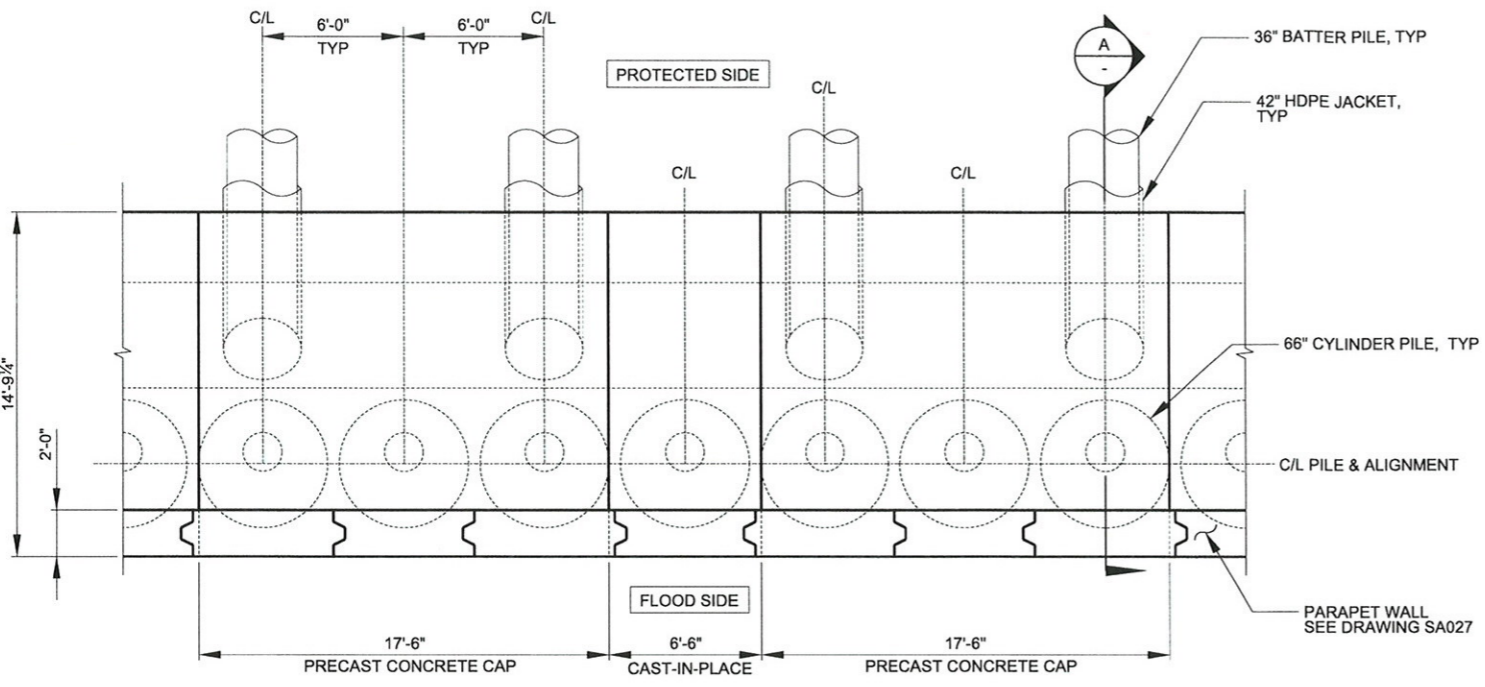
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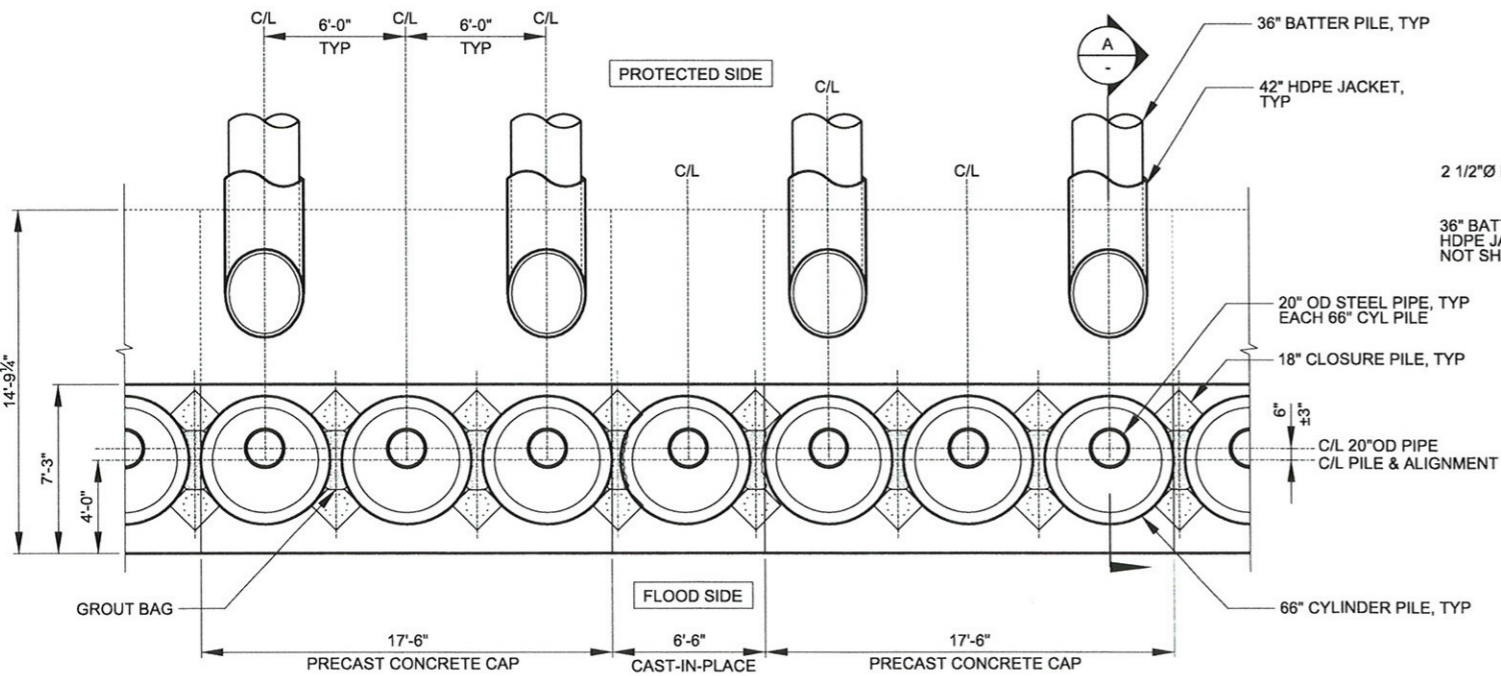
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REGISTRATION NO. C-041783

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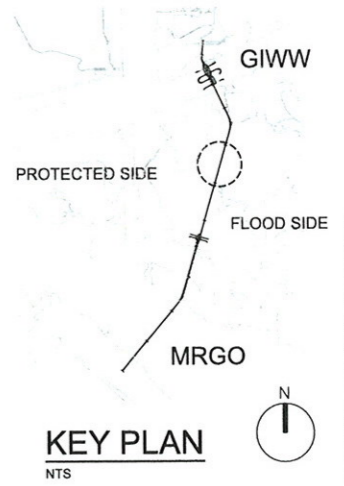
TYPICAL UNO
FLOODWALL PLAN AT EL 26.00
 1/4" = 1'-0"



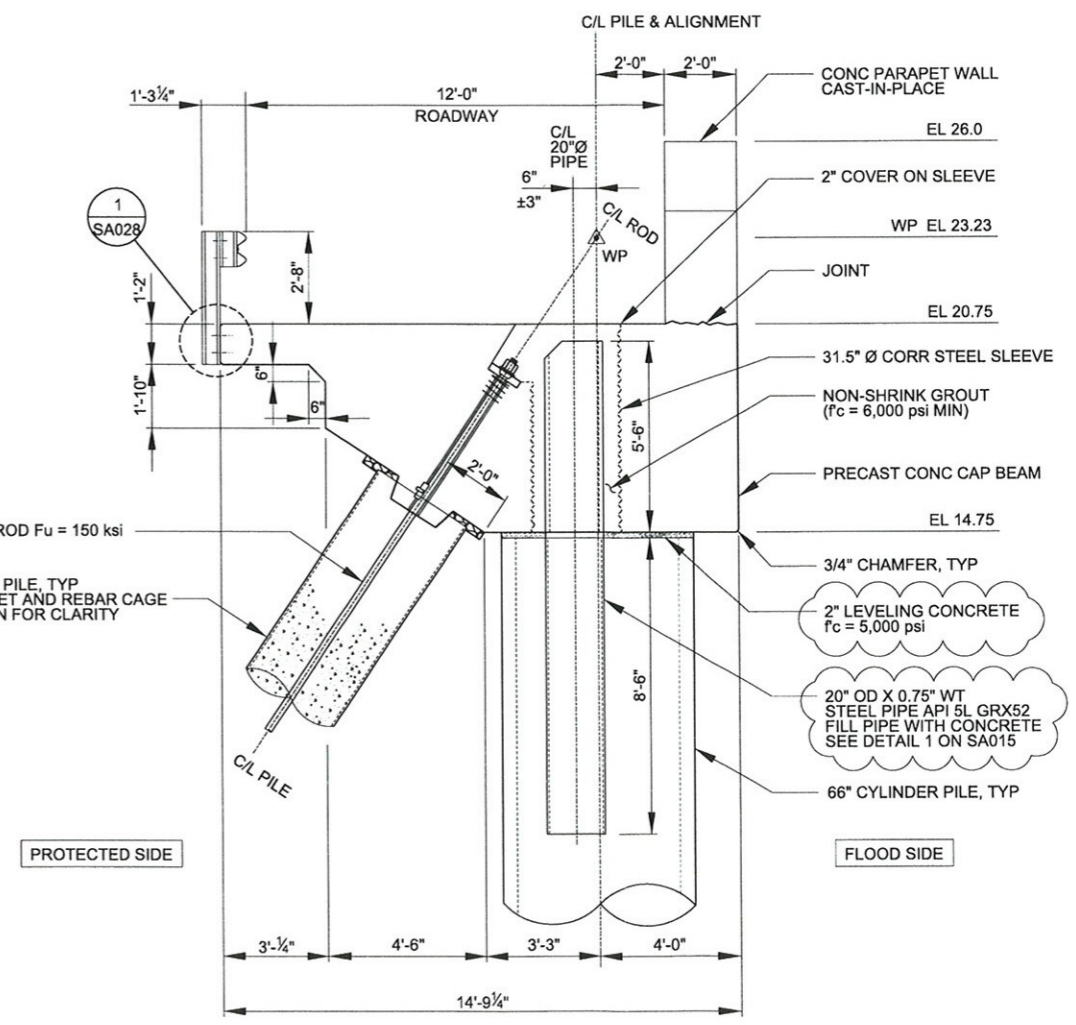
TYPICAL UNO
FLOODWALL PLAN AT EL 14.75
 1/4" = 1'-0"

NOTES:

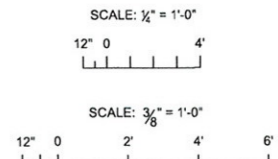
1. AFTER THE CYLINDER, CLOSURE AND BATTER PILES ARE INSTALLED, PERFORM THE FOLLOWING OPERATIONS:
 - A. INSTALL CYLINDER PILE REINFORCING STEEL CAGES AND FILL W/ CONCRETE ($f_c = 5,000$ psi). THE 20"Ø STEEL PIPE SHALL BE EMBEDDED IN THE CONCRETE.
 - B. PLACE HDPE JACKET AROUND BATTER PILE. SEE DWG SA020.
 - C. PLACE BATTER PILE INFILL CONCRETE FROM EL -20.0 TO THE BOTTOM OF THE REINFORCING STEEL CAGE.
 - D. INSTAL REINFORCING STEEL CAGE INSIDE BATTER PILE.
 - E. SET THE PRECAST CONCRETE CAP SECTION AT THE RIGHT POSITION WITH THE RUBBER SEAL PLACED BETWEEN CAP AND BATTER PILE.
 - F. INSERT 2 1/2" HS ROD THROUGH GREASE SLEEVE, INTO THE BATTER PILE.
 - G. FILL THE TOP OF THE BATTER PILE WITH PEA GRAVEL CONCRETE ($f_c = 5,000$ psi). THROUGH ONE OF THE 5"Ø POURING SLEEVES, VIBRATE THROUGH THE OTHER, UNTIL CONCRETE FLOWS FREELY OUT THE 3" VENT OPENING. CLOSE 3" VENT AND FILL POURING SLEEVES.
 - H. GROUT THE 20"Ø STEEL PIPE TO THE PRECAST CAP WITH HS NON-SHRINK GROUT ($f_c = 6,000$ psi).
 - I. STRESS 2 1/2"Ø PT ROD PER NOTE 3, SA016. INSTAL CORROSION INHIBITING GREASE / WAX.
 - J. POUR PT POCKET.



KEY PLAN
 NTS



SECTION
 3/8" = 1'-0"



PROGRESS PRINT 90% SUBMITTAL

DESIGNED BY: George F. Foster	CAD BY: JMS	DATE: 12/18/2008	PROJECT NO. / CONTRACT NO. / FILE NUMBER: 12192008 / 12192008 / H-4-4846
INNER HARBOR NAVIGATION CANAL HURRICANE PROTECTION PROJECT LAKE BORGNE BARRIER ORLEANS & ST. BERNARD PARISHES, LA FLOODWALL PRECAST CAP PLANS AND SECTION		SHEET IDENTIFICATION SA013 SHEET OF	