

ORLEANS PARISH SIDE  
N. OF HAMMOND HWY.

From Tie-in to Existing F/W (near Sta 539+95) to ~540+81  
(tied-back F/W, and Free standing)

FLOODWALL

✓ REINFORCED CONCRETE CAP

$2.08 \times 1.33 \times 119 \times \frac{1}{27} = 12.2 \text{ c.y.}$

✓ PZ-27 STEEL SHEET PILING

$46.83 \text{ DEPTH} \times 119 \text{ L.F.} = 5572.8 \text{ } \square'$

ANCHOR WALL

✓ REINFORCED CONCRETE CAP

$3.5' \times 3.0' \times 66' \times \frac{1}{27} = 25.7 \text{ c.y.}$

✓ HP 14 X 102 STEEL PILES

VERTICAL PILES :  $56' \times 10 = 560 \text{ L.F.}$

100% BATTERED PILES :  $59' \times 22 = 1298 \text{ LF}$

✓ 10" X 10" CREOSOTED WALES

$71 \text{ LF} \times 2 = 142 \text{ LF} + 25\% \text{ OVERLAP} \approx 180 \text{ LF.}$   
(1500 BF)

✓ STRUCTURAL STEEL TIEBACK SYSTEM

2"  $\phi$  TIE ROD

5 @ 47' LENGTH = 235 LF

6 @ 32' (AVG) LENGTH = 192 LF

$427 \text{ LF} \times 10.69 \frac{\#}{\text{LF}} = 4565 \text{ \#}$

R 6 X 6 X 3/8  $32 \times 3.8 = 122.5 \sim 125 \text{ \#}$

BOLTS 3/4"

$5 \times 10 \times 1.5 \frac{\#}{\text{L}} = 75 \text{ \#}$

PLATE 16 X 12 X 3/8

$32 \times 20.42 \frac{\#}{\text{L}} = 653.3 \sim 655$

TOTAL =  $125 + 4565 + 75 + 655 = 5420 \Rightarrow 5500 \text{ \#}$

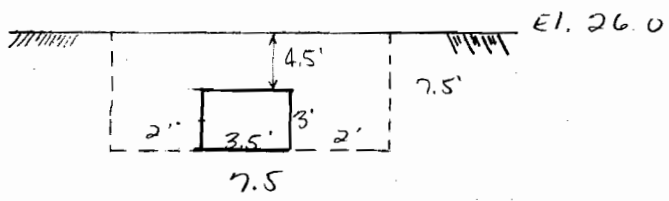
17 NOV 83 LT

ORLEANS PARISH SIDE  
N. OF HAMMOND HWY

STRUCTURAL EXCAVATION

FLOODWALL - NONE

ANCHOR WALL



$$7.5' \times 7.5' \times (119') \times \frac{1}{27} = 247.9 \text{ c.y.}$$

STRUCTURAL BACKFILL

$$[(7.5 \times 7.5) - (3 \times 3.5)] 119 \times \frac{1}{27} = 201.6 \text{ c.y.}$$

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ORLEANS PARISH SIDE  
N. OF HAMMOND HWYFROM STA 540+81.16 TO 545+87 (WHERE <sup>HURRICANE</sup> FLOOD PROTECTION TIES-IN)  
I-WALL ON LEVEE (508 L.F.)✓ REINFORCED CONCRETE

$$1'-4" \times 7' \times 508 \times \frac{1}{27} = 175.1 \text{ CY.}$$

✓ PMA-22 STEEL SHEET PILING

$$19 \times 508 = 9652 \text{ D'}$$

✓ STRUCTURAL EXCAVATION

$$2' \times 5'-4" \times 508 \times \frac{1}{27} = 200.6 \text{ CY.}$$

✓ STRUCTURAL BACKFILL

$$2(2 \times 2) \times 508 \times \frac{1}{27} = 150.5 \text{ CY.}$$

✓ 3-BULB WATERSTOP

$$508/31 \times 7' = 114.7 \text{ LF.}$$

METAIRIE RELIEF CANAL

16 Nov 83 LT

ORLEANS PARISH SIDE  
N. OF HAMMOND HWY.

STA 345 + 87 TO HAMMOND HWY BRIDGE (STA 552 + 59)

I-WALL ON LEVEE (713')

✓ REINFORCED CONCRETE

$$1'-4" \times 7' \times 713' \times \frac{1}{27} = 245.8 \text{ cy}$$

✓ PMA-22 STEEL SHEET PILING

$$19' \times 713' = 13,547 \text{ sq'}$$

✓ STRUCTURAL EXCAVATION

$$2' \times 5'-4" \times 713' \times \frac{1}{27} = 281.4 \text{ c.y.}$$

✓ STRUCTURAL BACKFILL

$$2(2 \times 2) \times 713' \times \frac{1}{27} = 211.2 \text{ cy.}$$

✓ 3-BULB WATER STOP

$$713/31 \times 7' = 161.0 \text{ L.F.}$$

68' CAPPED SHIT PILING

44' Propped wall

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ORLEANS PARISH SIDE  
N. OF HAMMOND HWY.

109' TOTAL LENGTH, 44' PROPPED WALL  
2'-1" x 1'-4" CAP ON P2-27 SHEET PILE

✓ REINFORCED CONCRETE CAP

$$109' \times 2.08' \times 1.33' \times \frac{1}{27} = 11.2 \text{ C.Y.}$$

✓ P2-27 STEEL SHEET PILING

$$109' \times 39.5' = 4305.5$$

✓ TREATED TIMBER PILES

$$9 \text{ VERTICALS @ } 50' = 450 \text{ L.F.}$$

$$15 \text{ BATTERED @ } 53' = \frac{795 \text{ L.F.}}{1245}$$

✓ 10" X 10" CREOSOTED TIMBER WALES

$$44' \times 4' = 176 \text{ L.F.}$$

(1467 BF)

✓ STRUCTURAL STEEL

$$1\frac{1}{2}" \phi \quad 15 \text{ ea.} \quad 5' \times 6.0\% = 450\#$$

$$3/4" \phi \quad 16 \text{ ea.} \quad 3.5' \times 1.5\% = 84\#$$

$$534\#$$

$$R \quad 6 \times 6 \times 3/8 \quad 30 \text{ ea}$$

$$3.8 \times 30 = 114\#$$

$$\text{TOTAL} = 648\# \sim 650\#$$

METAIRIE RELIEF CANAL  
16 NOV 83 LT

JEFFERSON PARISH SIDE  
N. OF HAMMOND HWY

APPROXIMATELY  
STA 541+43.8 TO HAMMOND HWY (STA 552+59) 1158 LF.  
OF TIED BACK WALL

FLUODWALL

✓ REINFORCED CONCRETE CAP

$$2.07 \times 1.33 \times 1158 \times \frac{1}{27} = 118.1 \text{ cy.}$$

✓ P2-27 STEEL SHEET PILING

$$38' \times 1158' = 44,004 \text{ sq'}$$

ANCHORWALL

✓ REINFORCED CONCRETE

$$3.5 \times 3.0 \times 1158 \times \frac{1}{27} = 450.3 \text{ cy.}$$

✓ TREATED TIMBER PILES

$$46' \times \frac{1158}{2} = 26,634 \text{ L.F.}$$

✓ 10" x 10" CREOSOTED WALES

$$2 \times 1158 \text{ L.F.} + 25\% \text{ EXTRA} = 2895 \text{ L.F.}$$

(29,125 BF)

✓ STRUCTURAL STEEL TIE-BACK SYSTEM

2" φ TIE ROD (AVG LENGTH 27') @ 6'

$$1158/6 \times 27' \times 10.69 \#/\text{LF} = 55,705.6 \#$$

3/4" φ BOLTS

$$193 \times 5 \times 1.5 \#/\text{L} = 1447.5 \#$$

R 16 x 12 x 3/8

$$193 \times 20.42 \# = 3941.1 \#$$

R 6 x 6 x 3/8

$$193 \times 3.83 \# = 738.8 \#$$

$$\text{TOTAL } 55,705.6 + 1447.5 + 3941.1 + 738.8 = 61,833.1 \Rightarrow 62,000 \#$$

MELAIRIE RELIEF CANAL

17 NOV 83 LT

JEFFERSON PARISH SIDE  
N. OF HAMMOND HWY.

STRUCTURAL EXCAVATION

(NONE FOR FLOODWALL)

ANCHOR WALL

$$7.5' \times 7.5' \times 1158' \times \frac{1}{27} = 2,412.5 \text{ c.y.}$$

STRUCTURAL BACKFILL

$$[(7.5' \times 7.5') - (3.5' \times 3.0')] 1158' \times \frac{1}{27} = 1,961.8 \text{ c.y.}$$

ORLEANS & JEFF PARISH SIDES

S. OF HAMMOND HWY.

I-TYPE FLOODWALL STA 553+27 TO 639+16 (APPROXIMATELY)

- ① 3487' - 7' WALL 16' SHEET PILING
  - ② 2400' 6' WALL 14' " "
  - ③ 550' 5' WALL 14' " "
  - ④ 782' 5' WALL 60' " "
  - ⑤ 1281' 4' WALL 60' " "
- 8500' (ONE SIDE)

① 7' I-WALL

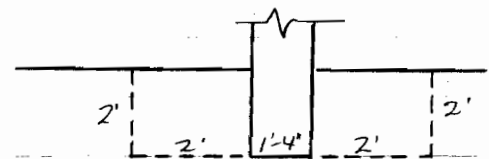
REINFORCED CONCRETE CAP

$7' \times 1.33' \times 3487' \times \frac{1}{27} = 1202.4 \text{ C.Y.}$

PMA-22 STEEL SHEET PILING

$16' \times 3487' = 55,792 \text{ L}^2$

STRUCTURAL EXCAVATION



$2' \times 5.33' \times 3487' \times \frac{1}{27} = 1376.7 \text{ C.Y.}$

STRUCTURAL BACKFILL

$2(2' \times 2') \times 3487' \times \frac{1}{27} = 1033.2 \text{ C.Y.}$

3-BULB WATERSTOP

$3487' / \frac{(31)}{30'-10''} \times 7' = 787.4 \text{ L.F.}$



ORLEANS & JEFF PARISH SIDES  
S. OF HAMMOND HWY.

② 6' WALL

REINFORCED CONCRETE CAP

$$6' \times 1.33' \times 2400' \times \frac{1}{27} = 709.3$$

PMA-22 STEEL SHEET PILING

$$14' \times 2400' = 33,600 \text{ D'}$$

STRUCTURAL EXCAVATION

$$2' \times 5.33' \times 2400' \times \frac{1}{27} = 947.6 \text{ C.Y.}$$

STRUCTURAL BACKFILL

$$2(2' \times 2') \times 2400' \times \frac{1}{27} = 711.1 \text{ C.Y.}$$

3-BULB WATERSTOP

$$\frac{2400'}{(30'-10") \times 3'} \times 6' = 464.5 \text{ L.F.}$$

③

5' I-WALL

REINFORCED CONCRETE CAP

$$5' \times 1.33' \times 550' \times \frac{1}{27} = 135.5 \text{ C.Y.}$$

PMA-22 STEEL SHEET PILING

$$14' \times 550' = 7,700 \text{ D'}$$

STRUCTURAL EXCAVATION

$$2' \times 5.33' \times 550' \times \frac{1}{27} = 217.1 \text{ C.Y.}$$

STRUCTURAL BACKFILL

$$2(2' \times 2') \times 550' \times \frac{1}{27} = 163.0 \text{ C.Y.}$$

3-BULB WATERSTOP

$$\frac{550'}{31} \times 5' = 88.7 \text{ L.F.}$$

ORLEANS & JEFF PARISH SIDES  
S. OF HAMMOND HWY.

④ 5' WALL

REINFORCED CONCRETE CAP

$$5' \times 1.33' \times 782' \times \frac{1}{27} = 192.6 \text{ c.y.}$$

PMA-22 STEEL SHEET PILING

$$60' \times 782' = 46,920 \text{ D'}$$

STRUCTURAL EXCAVATION

$$2 \times 5.33' \times 782' \times \frac{1}{27} = 308.7 \text{ c.y.}$$

STRUCTURAL BACKFILL

$$2(2' \times 2') \times 782' \times \frac{1}{27} = 231.7 \text{ c.y.}$$

3- BULB WATERSTOP

$$\frac{782}{31} \times 5' = 126.1 \text{ L.F.}$$

⑤ 4' WALL

REINFORCED CONCRETE CAP

$$4' \times 1.33' \times 1281' \times \frac{1}{27} = 252.4 \text{ c.y.}$$

PMA-22 STEEL SHEET PILING

$$60' \times 1281' = 76,860 \text{ D'}$$

STRUCTURAL EXCAVATION

$$2 \times 5.33' \times 1281' \times \frac{1}{27} = 505.8 \text{ c.y.}$$

STRUCTURAL BACKFILL

$$2(2' \times 2') \times 1281' \times \frac{1}{27} = 379.6 \text{ c.y.}$$

3- BULB WATERSTOP

$$\frac{1281}{31} \times 4' = 165.3 \text{ L.F.}$$

TOTAL QUANTITIES N. OF HAMMOND HWY ON  
BOTH THE ORLEANS & JEFFERSON PARISH SIDES

REINFORCED CONCRETE

$$12.2 + 25.7 + 175.1 + 245.8 + 118.1 + 450.3 + 11.2 = 1038.4 \text{ CY.}$$

PZ-27 STEEL SHEET PILING

$$5572.8 + 44,004 + 4305.5 = 53,882.3 \text{ D'}$$

PMA-22 STEEL SHEET PILING

$$9652 \text{ D'} + 13,547 \text{ D'} = 23,199 \text{ D'}$$

STRUCTURAL STEEL (TIE-BACK SYSTEMS)

$$5500 + 62,000 + 650 = 67,676 \text{ \#}$$

10" x 10" CREOSOTED TIMBER (WALES)

$$180 + 2895 + 176 = 3251 \text{ L.F.}$$

HP 14 x 102 STEEL PILES

$$560 + 1298 = 1858 \text{ L.F.}$$

TREATED TIMBER PILES

$$26,634 \text{ L.F.} + 1245 \text{ L.F.} = 27,879 \text{ L.F.}$$

STRUCTURAL EXCAVATION

$$247.9 + 200.6 + 281.4 + 2412.5 = 3142.4 \text{ C.Y.}$$

STRUCTURAL BACKFILL

$$201.6 + 150.5 + 211.2 + 1961.8 = 2525.1 \text{ C.Y.}$$

3-BULB WATERSTOP

$$114.7 + 161.0 = 275.7 \text{ L.F.}$$

TOTAL QUANTITIES S. OF HAMMOND HWY. ON  
BOTH THE ORLEANS & JEFFERSON PARISH SIDES

REINFORCED CONCRETE

$$1202.4 + 709.3 + 135.5 + 192.6 + 252.4 = 2492.2$$
$$2 \times (2492.2) = 4984.4 \text{ C.Y.}$$

PMA-22 STEEL SHEET PILING

$$55,792 + 33,600 + 7700 + 46,920 + 76,860 = 220,872$$
$$2 (220,872) = 441,744 \text{ D'}$$

STRUCTURAL EXCAVATION

$$1376.7 + 947.6 + 217.1 + 308.7 + 505.8 = 3355.9$$
$$2 (3355.9) = 6711.9 \text{ C.Y.}$$

STRUCTURAL BACKFILL

$$1033.2 + 711.1 + 163.0 + 231.7 + 379.6 = 2518.6$$
$$2 (2518.6) = 5037.2 \text{ C.Y.}$$

3-BULB WATERSTOP

$$787.4 + 464.5 + 88.7 + 126.1 + 165.3 = 1632.0$$
$$2 (1632.0) = 3264 \text{ L.F.}$$

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TOTALS N<sup>E</sup>S OF HAMMOND HWY. (LAKE TO PUMPING STATION)

REINFORCED CONCRETE

6023 CY.

P2-27 STEEL SHEET PILING

53,883 L.F.

PMA-22 STEEL SHEET PILING

464,943 L.F.

STRUCTURAL STEEL

67,676 #

HP 14X 102 STEEL PILES

1858 L.F.

TREATED TIMBER PILES

27,879 L.F.

10" X 10" CREOSOTED TIMBER (WALES)

3251 L.F.

STRUCTURAL EXCAVATION

9855 C.Y.

STRUCTURAL BACKFILL

7563 C.Y.

3-BULB WATERSTOP

3540 L.F.