

ST. BERNARD HURRICANE LEVEE DAMAGE SURVEY REPORT

PROJECT SUMMARY

Hurricane Protection Project Features –

157,800 ft of Levees and Floodwalls
2 Water Control Structures

6 Road Closure Structures
1 Gravity Drainage Structure

Damage –

Total Length of Levee w/o Cross Section	27,000 ft.
Total Length of Levee w/Reduced Cross Section	4,800 ft.
Total Length of Damaged Floodwall	<u>7,200 ft.</u>
	38,000 ft.

Bayou Bienvenue Control Structure – steel gate, structural, mechanical and electrical damage.

Bayou Dupre Control Structure – structural, mechanical and electrical damage.

Paris Road Closure Structure – structural damage and scour of floodwall backfill.

Road Closure West of Bienvenue – scour of structural backfill.

2 Road Closures near Southern Scrap (STA. 67+00) – scour of structural backfill.

Creedmore Drainage Structure – debris and damage to structure and gate hoists.

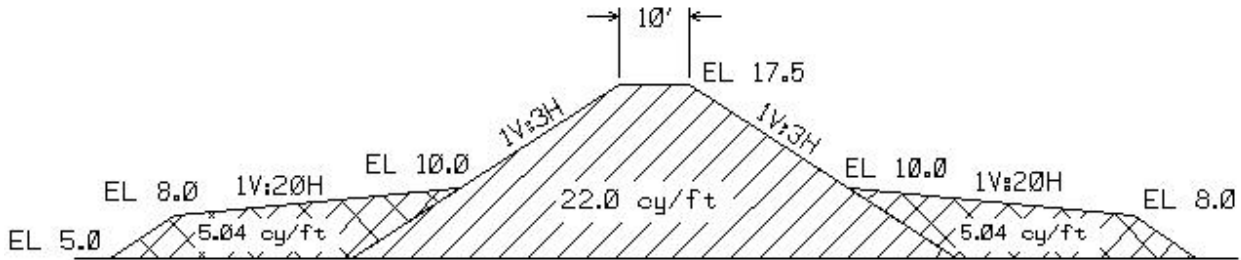
1. Hurricane Levee Between Bayou Bienvenue and Bayou Dupre. There is 19,000 ft. of levee between Bayou Bienvenue and Bayou Dupre that is severely damaged and has lost approximately 12' of levee section and is currently at EL 5.0.



There is 2,300 ft. of levee in this reach that has some damage (assume that 50% of the levee section gone).



The repaired levee cross section is shown below. This was the typical cross section used to estimate the required quantities.



Quantities:

660,000 cy fill

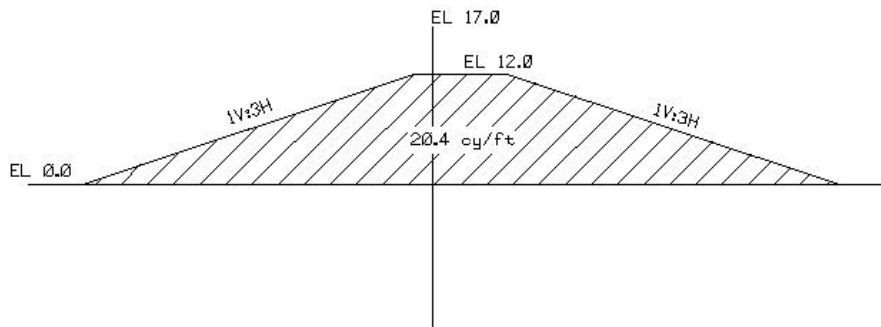
55 acre borrow area

There is a total of 4,300 ft. of sheet pile floodwall in this reach that was badly damaged and will require replacement. There are three segments of sheetpile which make up this quantity. These will be replaced with 30' sheets – see section below.

Segment A:	Length – 1130 ft.	Condition – badly damaged; replacement required
Segment B:	Length – 720 ft.	Condition – badly damaged; replacement required
Segment C:	Length – 2450 ft.	Condition – badly damaged; replacement required



The cross section below is the cross section used to estimate repairs.



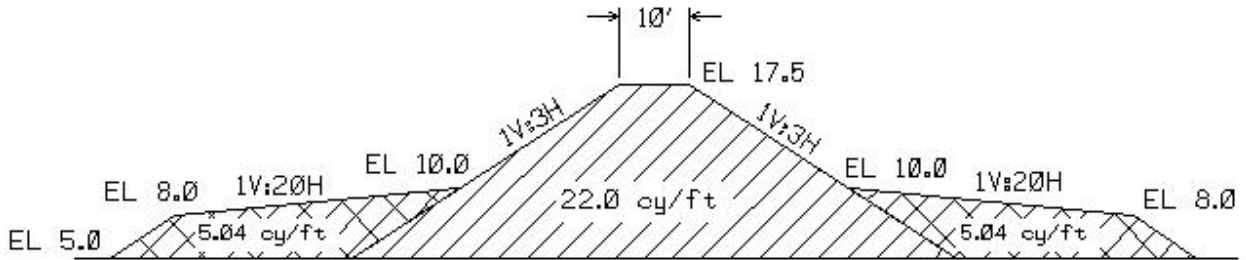
2. Hurricane Levee Between Bayou Dupre and STA. 1054+00. There is an 8,000 ft. section of the levee immediately southeast of Bayou Dupre that is severely damaged and has lost approximately 12 feet of levee section and is at approximately El. 5.0.



There is 2,500 ft. of levee from Bayou Dupre to STA 1007+91 that lost approximately 8' of elevation (assume that 50% of the levee section is gone)



The repaired levee cross section is shown below. This was the typical cross section used to estimate the required quantities.



Quantities:

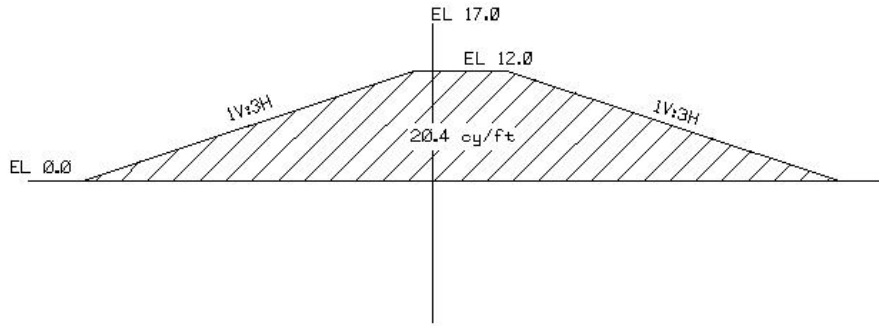
480,000 cy fill

45 acre borrow area

There is 700 ft. of this reach that is sheet pile floodwall that has been damaged and will require replacement.



The cross section below is the cross section used to estimate repairs.



3. Bayou Bienvenue Control Structure. This control structure was damaged during the storm event. The adjacent floodwall was hit by a loose barge and the fill around the adjacent floodwalls was eroded away due to overtopping. In addition there was damage to the mechanical and electrical systems that operate the sector gates.



4. Bayou Dupre Control Structure. This control structure was damaged during the storm event. Adjacent sections of floodwall failed and the fill around other sections of floodwalls was eroded away due to overtopping. In addition there was damage to the mechanical and electrical systems that operate the sector gates.



5.

IHNC Floodwall. There are two segments of floodwall just north of the IHNC Lock on the east side of the canal that were overtopped and breached by the storm event. These two segments are 350 ft. and 850 ft. in length. The overtopping caused severe damage to these segments and they will need to be replaced.



There are two segments of floodwall that were overtopped and the loss of foundation and backfill material on the protected side of the wall has caused some movement of the wall. These two segments are 200 ft. and 2000 ft. in length.



There are two segments of floodwall that were overtopped with loss of foundation and backfill material on the protected side of the wall. There has not been any movement of these two segments. These segments are 620 ft. and 2000 ft. in length.



6.

Closure Structure and I-Wall West of Bienvenue. This closure structure and adjacent I-wall segments were damaged during the storm event. There was scour of the structural backfill resulting from overtopping of the closure gate and I-wall.



7. Paris Road Closure Structure. This closure structure was damaged during the storm event. There was scour of the structural backfill resulting from overtopping of the closure panels and additional damages due to impact from a loose barge.



8.

Closure Structures Near Southern Scrap. There are two road closure structures that were damaged during the storm event. These closure structures are located at STA. 42+00 and STA. 68+00. There was scour of the structural backfill resulting from overtopping of the floodwall and the closure gates.



9. Levee Damage Along Intracoastal Waterway. There are small areas of scour on the backside of the levee between STA. 65+008 and STA. 277+20. This scour was the result of localized overtopping of the levees in this reach.



10. Creedmore Gravity Drainage Structure. The levee district has been unable to fully close the two 72-inch sluice gates on drainage structure. One sluice gate is approximately 50% closed and the other is approximately 90% closed. The cause of the sluice gates being stuck is apparently debris under the gate slides. Since there are trash racks on the inlet structure to these drains the debris must have come in through the outlet structure. While attempting to close the sluice gates against this debris the gate hoists were both damaged.

