

# *Hurricane & Storm Damage Risk Reduction System*

## **West Bank and Vicinity Mississippi River Levees Co-Located Work**

Individual Environmental Report Supplement 33.a

Belle Chasse Auditorium  
Dec. 12, 2011

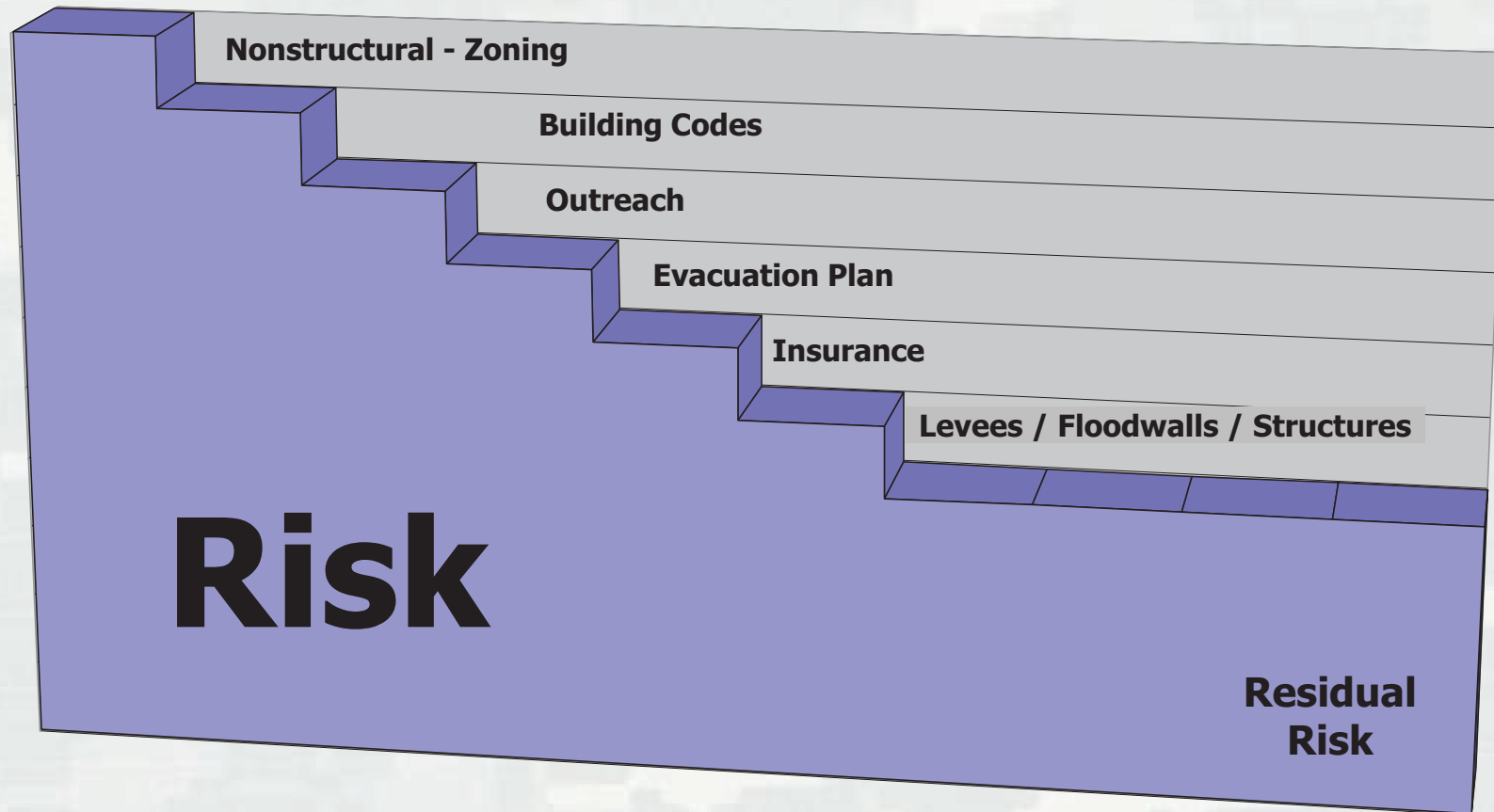


US Army Corps of Engineers  
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# Risk – Shared Responsibility

Initial Risk



**BUILDING STRONG®**

# National Environmental Policy Act: NEPA

- Required of all major federal actions
- Analyze potential impacts to the human and natural environment and investigate reasonable alternatives
- Public involvement is KEY!
- Goal: more informed decision making through public involvement
- Analysis documented in Individual Environmental Reports (IER)
- Corps has made alternative arrangements to expedite project timelines

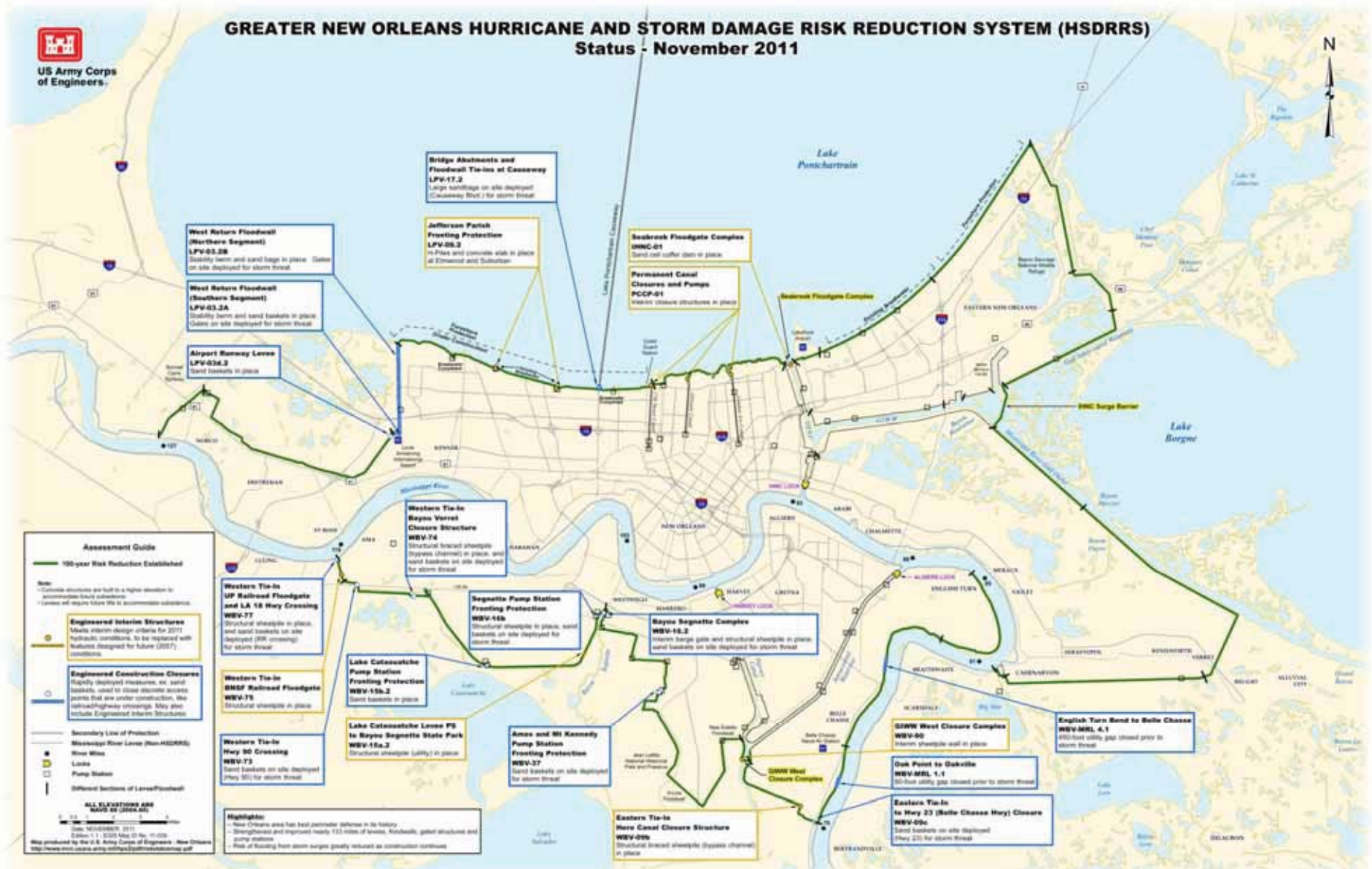


# Meeting Purpose

- Describe methods and impacts associated with construction of higher and stronger risk reduction features in the Belle Chasse sub-basin
- Accept feedback on the proposal to build more resilient risk reduction features on the Mississippi River Levees in Plaquemines and Orleans parishes from English Turn to Oakville, LA as part of the West Bank & Vicinity hurricane system



# Hurricane and Storm Damage Risk Reduction System (HSDRRS)



# Greater New Orleans Levee Overview

- Mississippi River Levees protect against a riverine flood event
- In southeast Louisiana Mississippi River Levees are an integral part of the hurricane system
- In the Greater New Orleans area, Mississippi River Levees serve to reduce risk from both riverine and hurricane flood risks



*Many Mississippi River levee stretches include gravel topped crowns and concrete slope paving on the flood side.*



# Engineered Alternative Measures Construction

- Defend against a 1 percent storm surge event
- Meet the requirements for accreditation
- Constructed primarily within existing right-of-way
- Included steep slopes
- Substantially complete Dec. 2011



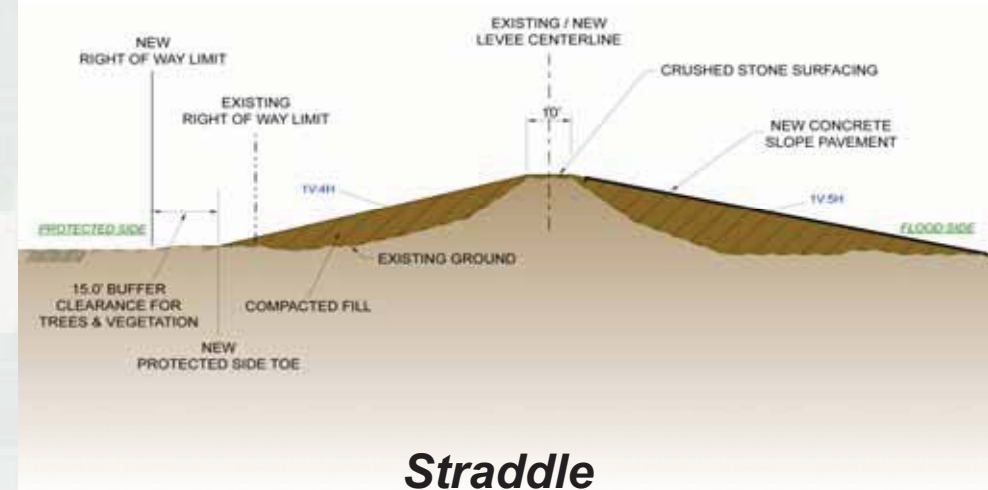
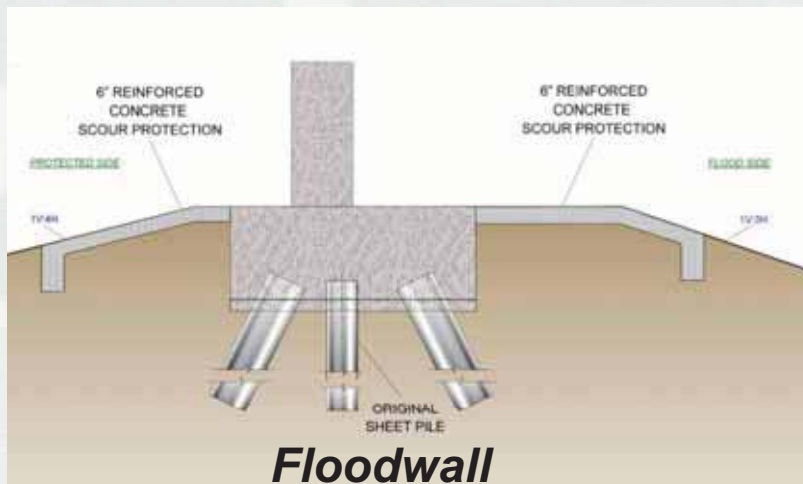
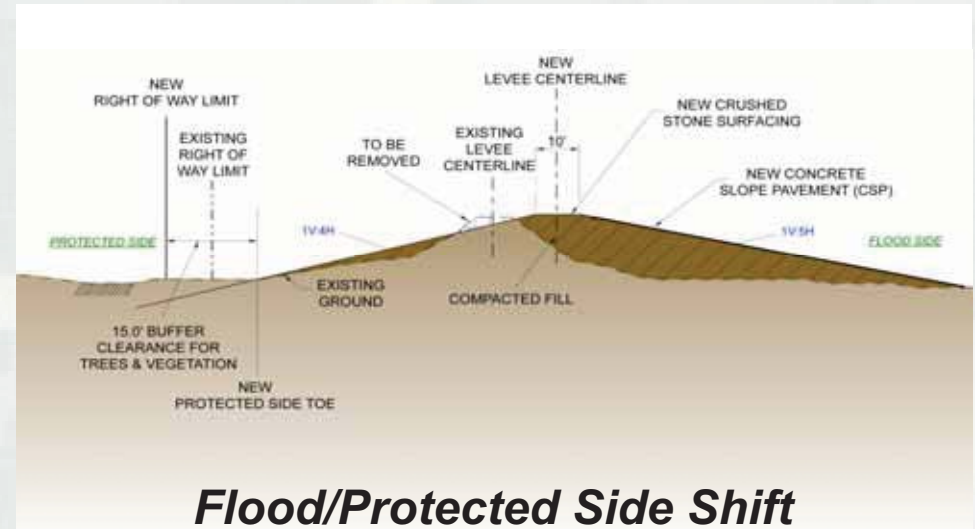
*Engineered Alternative Measures were constructed primarily within existing right-of-way and with steep slopes.*



# Alternatives Considered

## Criteria Used to identify Proposed Action:

1. Risk and Reliability
2. Time/Constructability
3. Total Project Cost
4. Human Impacts and Natural Environmental
5. Operations & Maintenance Impacts





# Proposed Resilient Features

## Individual Environmental Report Supplement 33.a proposes:

- Shift earthen levee to the **flood side, protected side** or **straddle** to generate milder slopes and ease Operations and Maintenance
- Remove top soil to create milder slopes and build new concrete **floodwalls**
- Acquire new right-of-way
- Minimize potential environmental and cultural resources impacts
- **Armor** earthen levees only



# Proposed Resilient Features

## Armoring

- Armoring prevents erosion and scour on the protected side of levees and floodwalls
- Earthen levees throughout the hurricane system will be armored
- Armoring could include placement of:
  - Grass
  - Articulated Concrete Blocks
  - High Performance Turf Reinforcement Mats

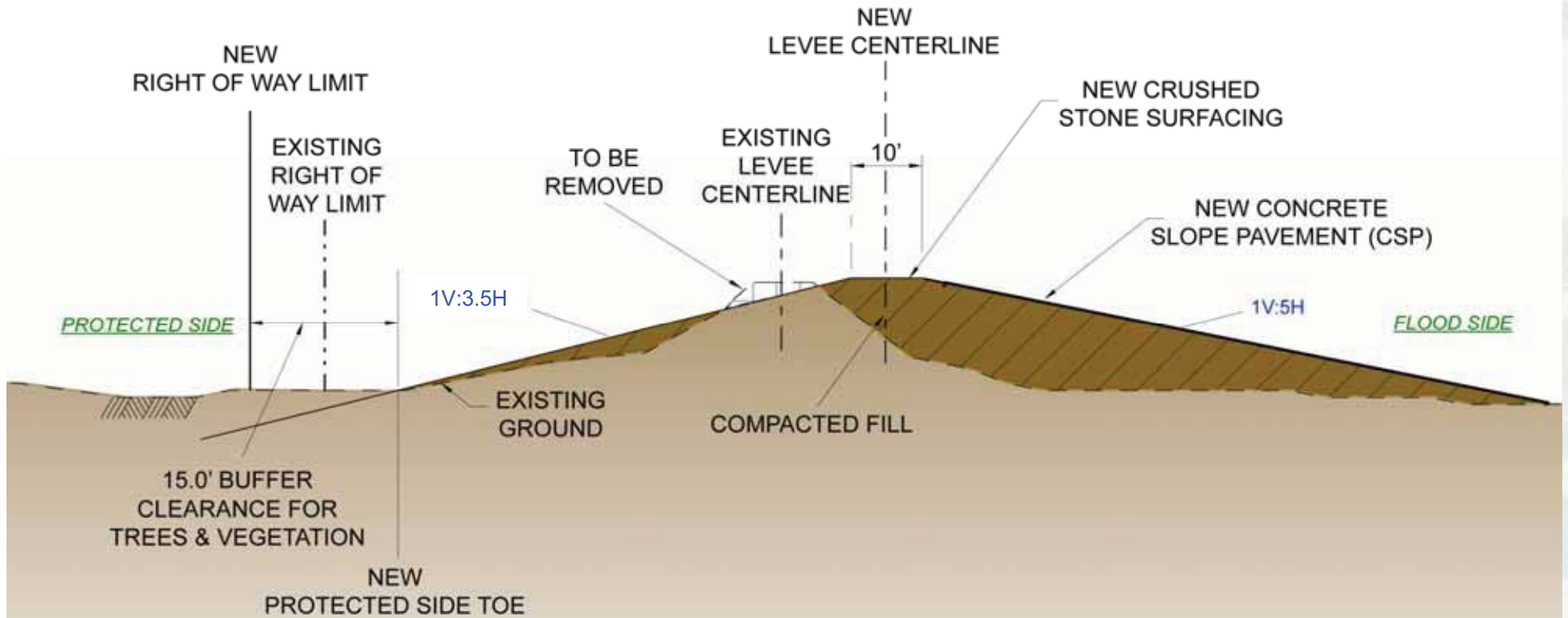


*The Corps is considering placement of armoring throughout the hurricane system.  
Above – examples of armoring used in other areas of the system.*



# US Coast Guard Facility to Oak Rd.

## Proposed Resilient Features Levee Shift (WBV-MRL 5.2)



***EAM elevation 21 ft  
RF elevation 22 to 23.5 ft***

# US Coast Guard Facility to Oak Rd.

Proposed Resilient Features  
Levee Shift (WBV-MRL 5.2)

## AFTER THE PROPOSED ACTION

AERIAL VIEW LOOKING DUE EAST

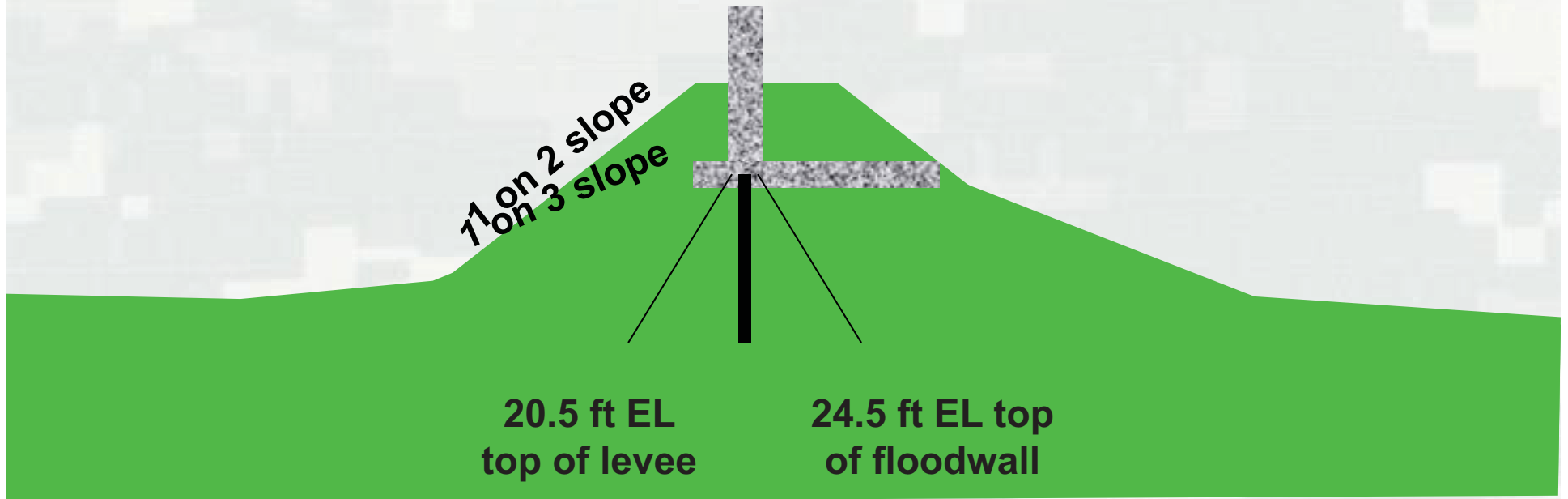


# Oak Road to Belle Chasse

## Proposed Resilient Features Floodwall (WBV-MRL 4.2)

Protected Side

Flood Side



20.5 ft EL  
top of levee

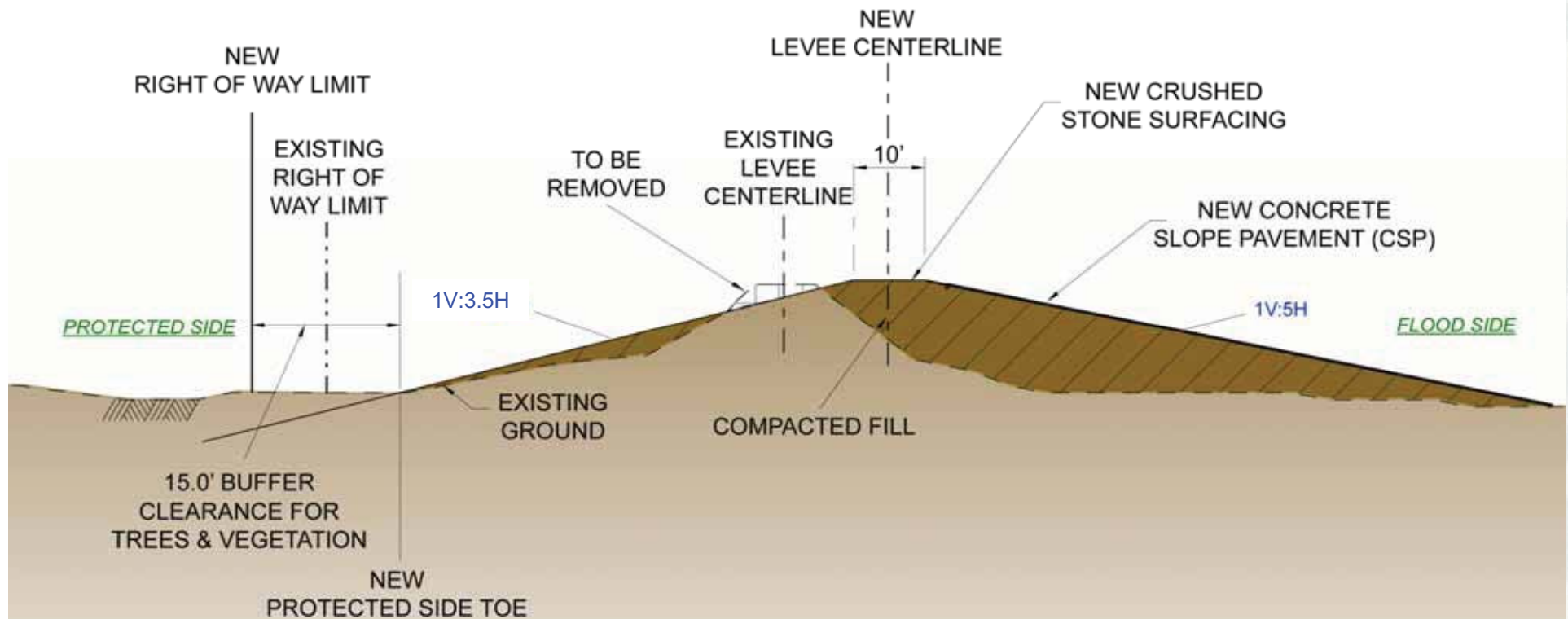
24.5 ft EL top  
of floodwall

Engineered Resilient Features Measures



# Belle Chasse to Oak Point

## Proposed Resilient Features Levee Shift and Floodwall (WBV-MRL 3.2)



***EAM elevation 20.5 ft  
RF elevation 21 ft***

# Belle Chasse to Oak Point

Proposed Resilient Features  
Levee Shift and Floodwall (WBV-MRL 3.2)

## AFTER THE PROPOSED ACTION

AERIAL VIEW LOOKING DUE EAST

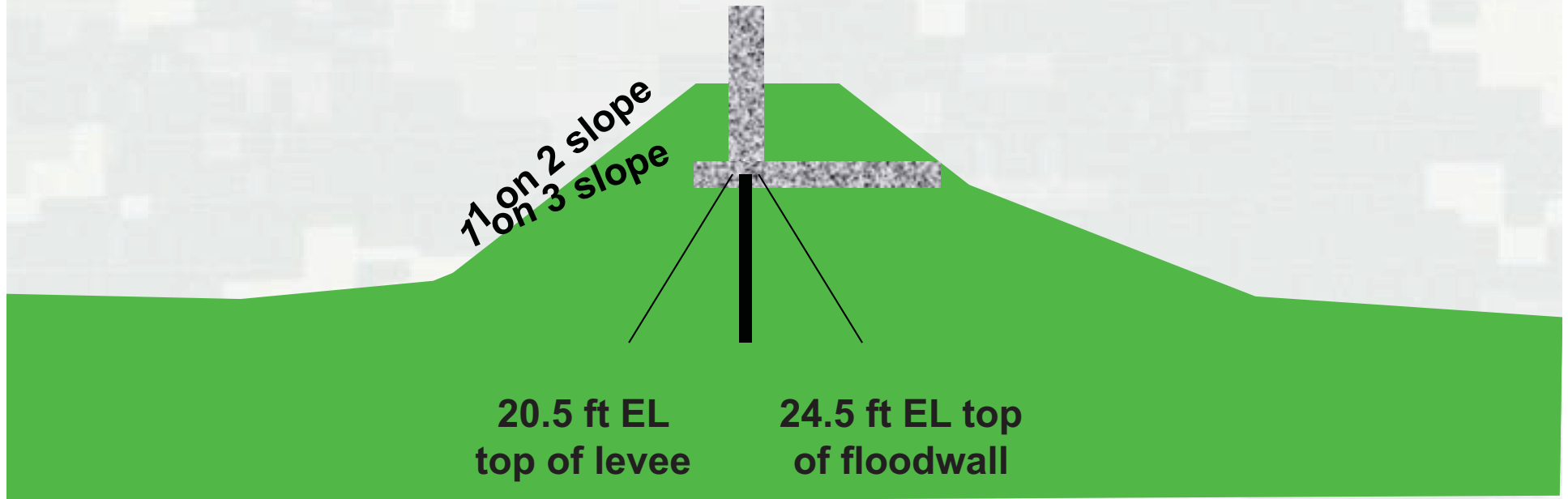


# Oak Point (Chevron Oronite)

## Proposed Resilient Features Floodwall (WBV-MRL 2.2)

Protected Side

Flood Side



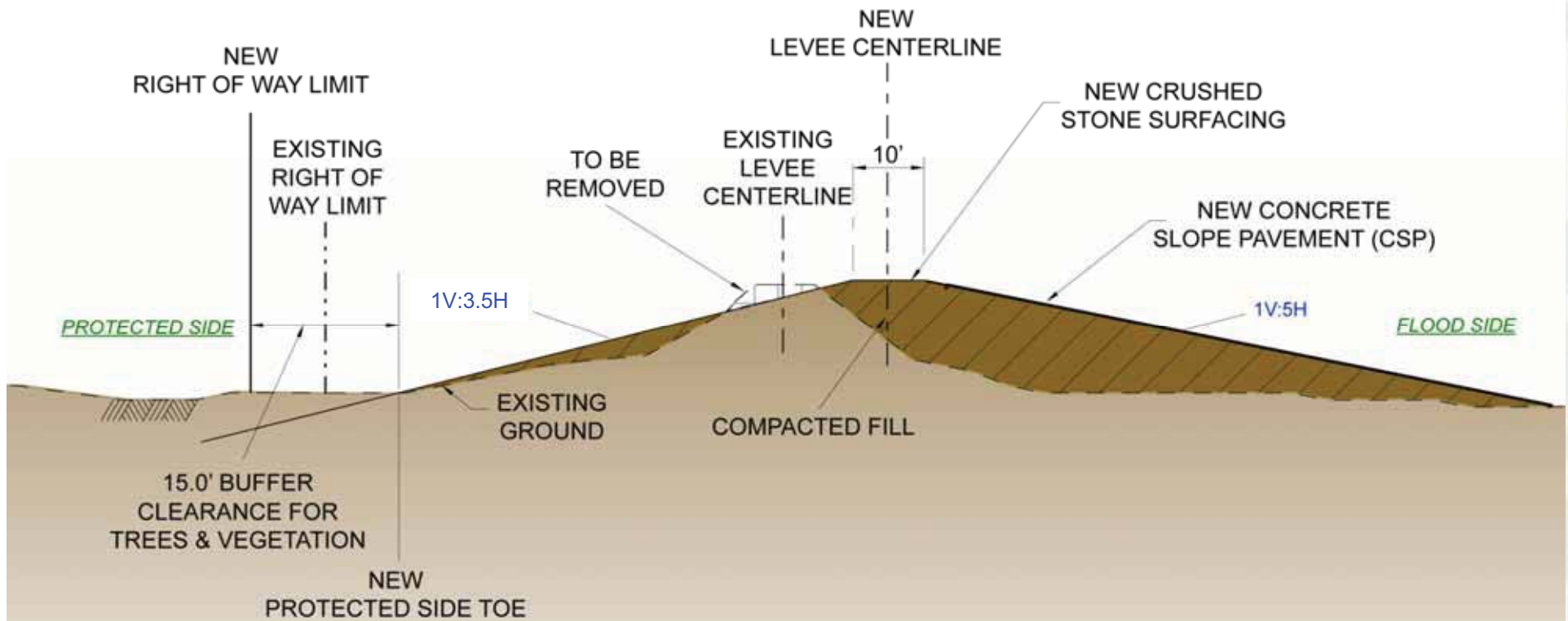
Engineered Resilient Features Measures





# Oak Point to Oakville

## Proposed Resilient Features Levee Shift (WBV-MRL 1.2b)



***EAM elevation 21.5 ft  
RF elevation 21.5 ft***

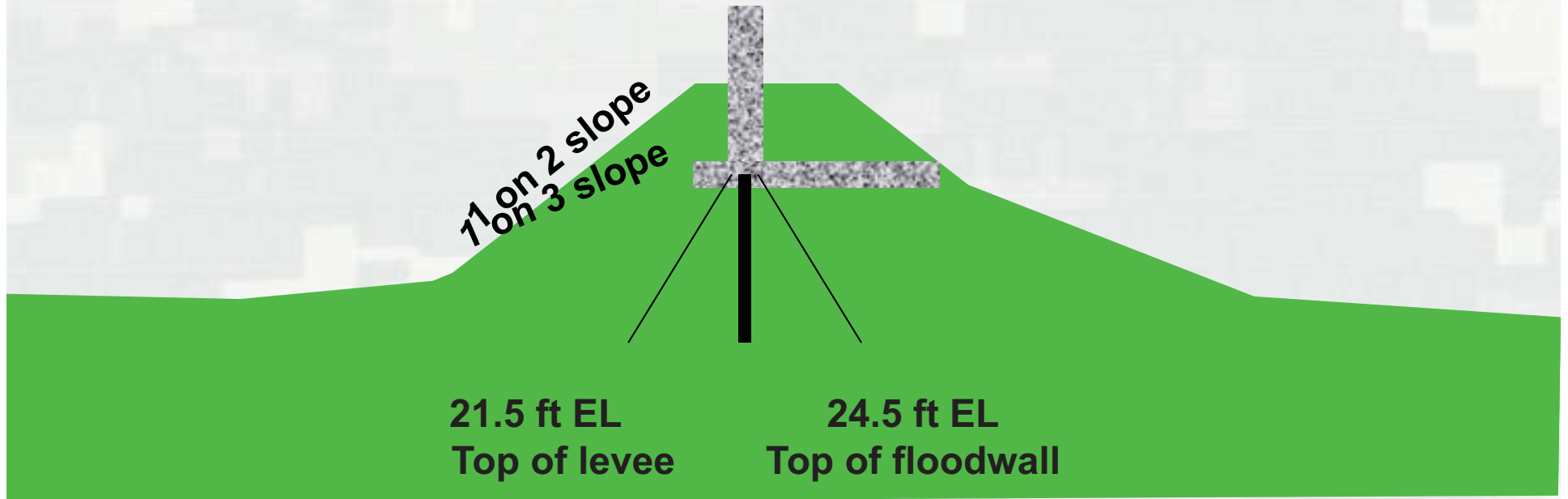
# Oak Point to Oakville

## Proposed Resilient Features

### Floodwall (WBV-MRL 1.2a)

Protected Side

Flood Side



Engineered Resilient Features Measures



# Oak Point to Oakville

## Proposed Resilient Features Floodwall (WBV-MRL 1.2a)

### AFTER THE PROPOSED ACTION



# Emergency Bypass

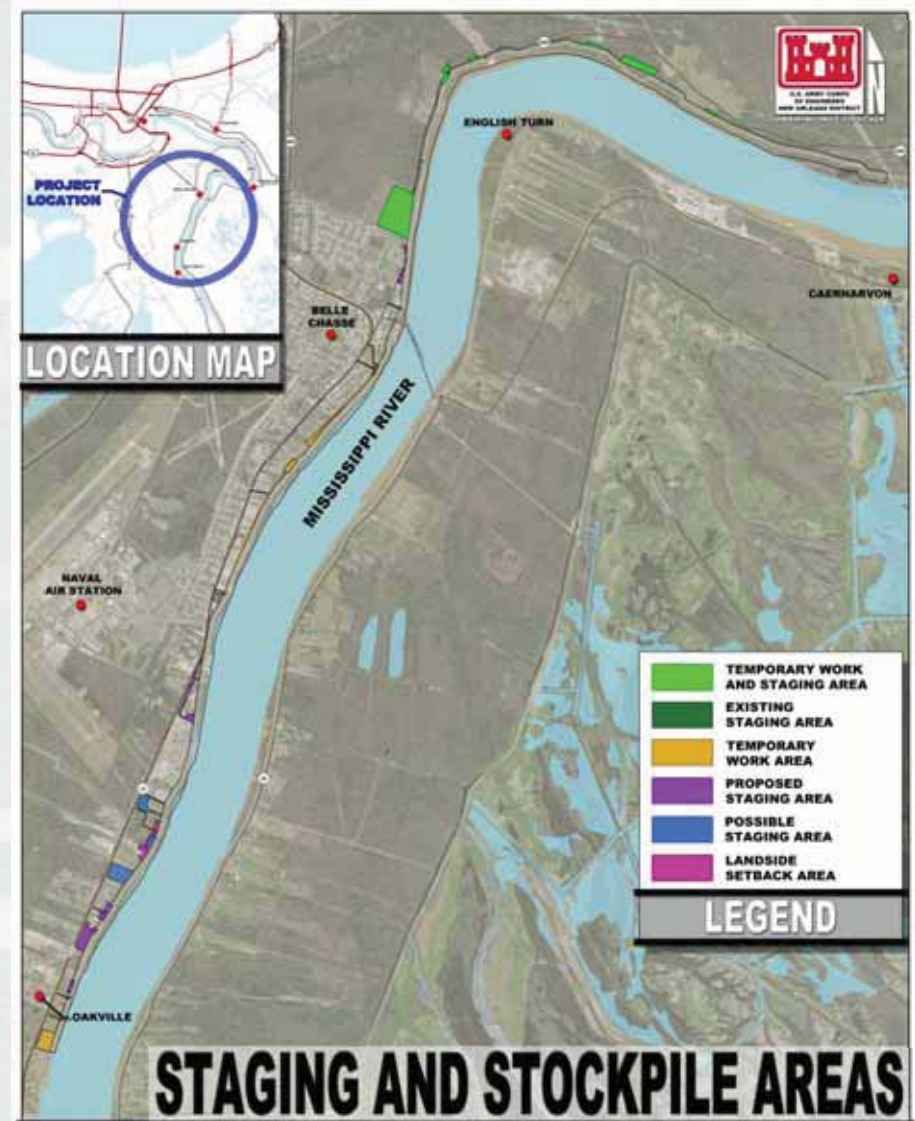


*The Emergency Bypass Road is in place, Construction of the Resilient Features will be coordinated so there is always an Emergency Access Road available for use by authorized personnel.*



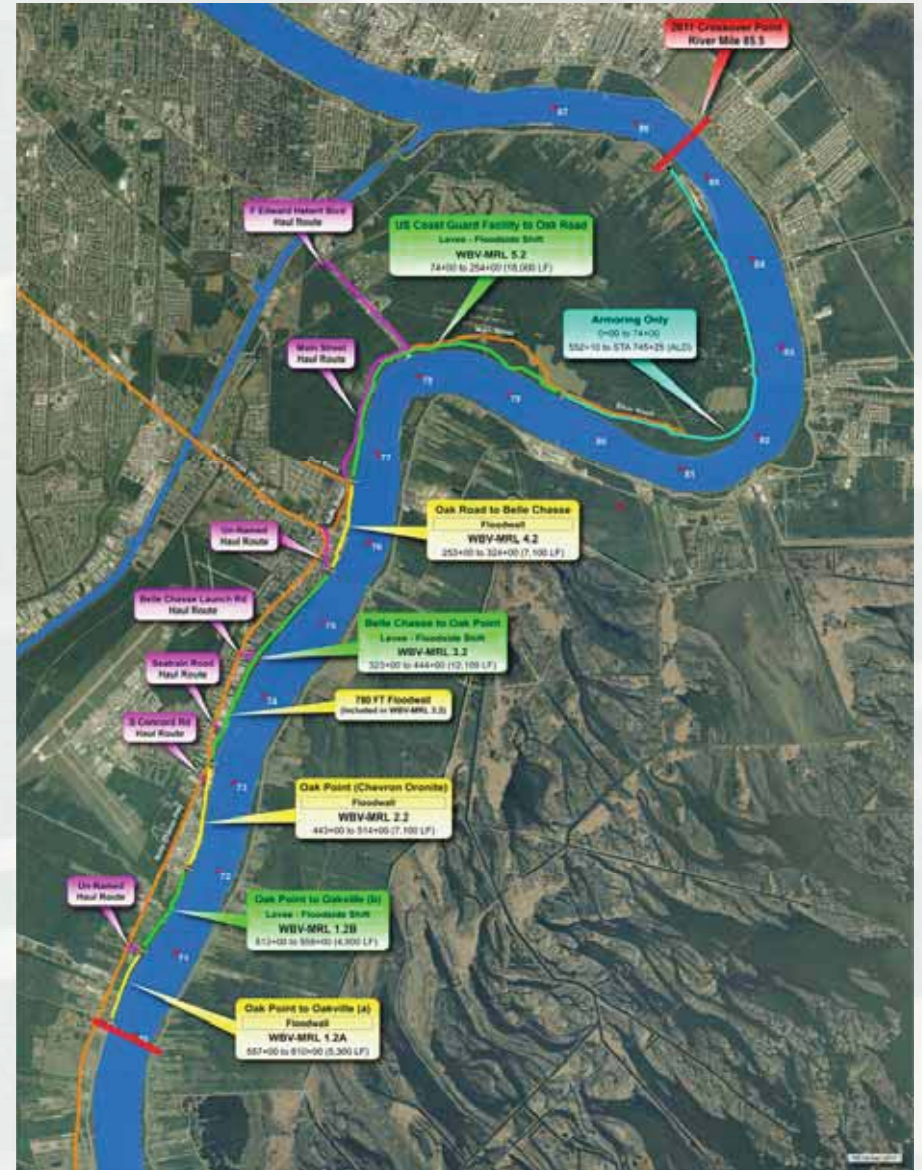
# Staging & Stockpile Areas

- Proposed staging areas:
  - Strategically positioned throughout the project area
  - Minimize impacts
  - Store equipment and supplies
- Anticipated impacts:
  - Sounds of safety equipment
  - Increased traffic
  - Elevated dust levels



# Haul Routes

- Corps will identify travel and haul routes for construction contractors
- Unpaved roads will be watered as necessary to minimize dust
- Local law enforcement agencies are responsible for enforcing traffic laws



# Cultural Resources Investigation

- Historic research documented:
  - Numerous historic plantations
  - One historic fort
  - One historic river transportation facility
  - Small communities
- Survey revealed 13 archaeological sites
- Ongoing study will determine eligibility for listing on the National Register of Historic Places

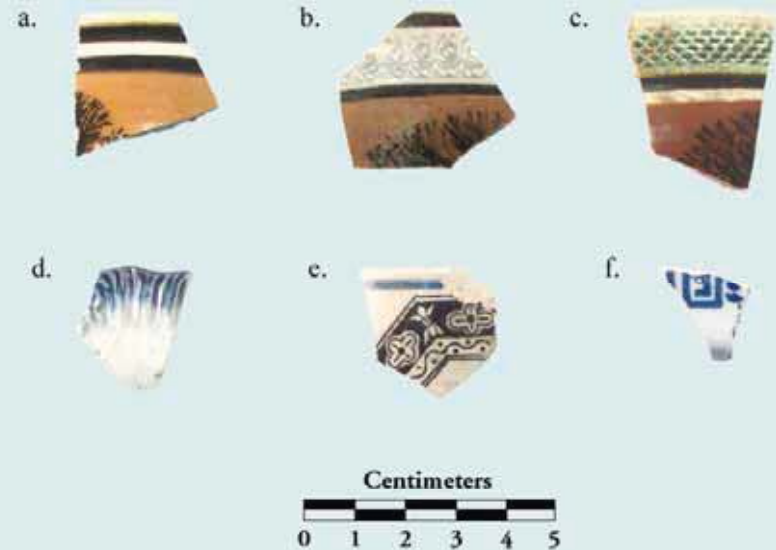


*Excavation done at plantation sites revealed culturally significant resources.*



# Cultural Resources Investigation

- Results on file with the Louisiana Division of Archaeology
- The Corps proposes to implement conditions to mitigate or avoid impacts to cultural resources
- The Corps is developing an agreement with the State Historic Preservation Officer for identifying and evaluating cultural resources in the project corridor



*Selected historic ceramic artifacts recovered from one of the plantation sites. The three on the top are examples of mocha pearlware, and the three on the bottom are blue painted pearlwares. These artifacts date from the late eighteenth to mid nineteenth centuries.*





# Safety

- Safety is the Corps' single greatest priority
- Each day we are working towards building a system that will reduce your risk
- We are committed to implementing and promoting safety measures for the benefit of our team



# What To Expect During Construction

- **Construction impacts**
  - Elevated noise levels from motors, pumps, generators, pile driving, etc.
  - Increased truck traffic
- **Corps' efforts to minimize impacts**
  - Work hours limited to daylight hours, except for minor variances
  - Vibration monitoring
  - Wet unpaved roads (to minimize dust)
  - Staging equipment to minimize safety sounds



*Construction of concrete floodwalls will require pile driving.*

**Construction Hotline 877-427-0345**



# Currently Available for Public Review

- IERS 25 - Government Furnished Borrow Material #3, Orleans Parish, Louisiana
  - Public review through Dec. 28, 2011
- IERS 33.a – *West Bank and Vicinity - Mississippi River Levees Co-located work*
  - Public review through Dec. 29, 2011
- Comments can be submitted by:
  - Calling 504-862-1544
  - E-mailing [mvnenvironmental@usace.army.mil](mailto:mvnenvironmental@usace.army.mil)
  - Or at any time at [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov)



# Comprehensive Environmental Document (CED)

Purpose of the CED: Discuss Cumulative benefits and impacts of the Hurricane and Storm Damage Risk Reduction System, Mitigation, Data Gaps

Draft CED Release Date TBD. Draft CED document will address cumulative impacts and benefits, operations and maintenance and other data gaps that have been finalized at that time.

Future CED documents. Additional documents will be prepared to update cumulative impacts and provide information about additional commitments (i.e. long term monitoring and analysis at Bayou aux Carpes and Inner Harbor Navigation Canal) or IER documents in preparation as the monitoring or additional NEPA documents are completed.

A CED Specific Public Scoping Meeting was held on 2 September 2009. Information from that scoping meeting can be found under Project/CED or under the meeting data on [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov)



# **Upcoming Public Meetings**

**Larose to Golden Meadow Hurricane Risk Reduction Project**

**Post Authorization Change Scoping Meeting**

**Veterans of Foreign War #8538**

**2322 VFW Avenue**

**Larose, LA 70373**

**Open House 6 to 6:30 p.m.**

**Presentation 6:30 p.m., followed by a discussion**



# Opportunities for Public Input

- Regular Public Meetings throughout the Hurricane and Storm Damage Risk Reduction System (HSDRRS) Area
- Make sure to sign in tonight to get on our meeting notification mailing list
- Comments can be submitted at any time at [www.nolaenvironmental.gov](http://www.nolaenvironmental.gov)
- Individual Environmental Reports (IER) 30-day Public Review

**Questions and comments regarding Hurricane Risk Reduction Projects should be addressed to:**

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New Orleans, LA 70160-0267  
Telephone: 504-862-1544

**[E-mail: mvnenvironmental@usace.army.mil](mailto:mvnenvironmental@usace.army.mil)**





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**[YouTube.com/TeamNewOrleans](https://www.youtube.com/user/TeamNewOrleans)**



# Web-based Resources

[www.nolaenvironmental.gov](http://www.nolaenvironmental.gov)

<http://www.mvn.usace.army.mil>

**NOLA Environmental**  
NEW ORLEANS, LOUISIANA  
Environmental Compliance Data Bank  
www.nolaenvironmental.gov

PROJECTS MEETINGS LIBRARY DATA VIEWER GET INVOLVED RELATED LINKS

Welcome to NOLA Environmental! This site has been set up to share with the public the efforts being made by the U.S. Army Corps of Engineers and other federal and state agencies in south Louisiana regarding the environmental compliance for proposed federal and state Hurricane Risk Reduction Projects. Additional information pertaining to other federal and state agencies' hurricane recovery efforts in southeast Louisiana will also be posted on the site as it becomes available.

The U.S. Army Corps of Engineers, Mississippi Valley Division, New Orleans District implemented Alternative Arrangements on March 13, 2007 under the provisions of the Council on Environmental Quality Regulations for Implementing the National Environmental Policy Act (40 CFR § 1506.11) Learn more...

**Announcements**

- Draft IER 30 Public Comment Period 8/14 - 9/12
- Federal Register Notice of EPA's Modification of the 1985 Clean Water Act Section 404(c) Final Determination for Bayou aux Carpes is now available (7/28)
- East Baton Rouge EA #431 Drafts Public Comment Period 7/22 - 8/20
- Draft IER 29 Public Comment Period 7/22 - 8/20
- The Decision Record for IER 5 has been signed by the District Commander (June 30, 2009)
- The Decision Record for IER 1 has been signed by the District Commander (June 29, 2009)

**Upcoming**

- 09/17/2009 - Public Meeting (Plaquemines Parish Federal Levees (St. Jude to Venice))
- 09/17/2009 - Public Meeting (Plaquemines Parish Federal Levees (St. Jude to Venice))

**Newly Available**

**NEW >>** NOLA Environmental Basle Data Viewer

- 03 Sept 09 Public Meeting Presentation Plaquemines Parish Pump Stations; GWW West Closure Complex
- News Release 02 September 09 Corps to discuss upcoming Belle Chasse construction

**FEATURED PROJECT**

USACE-MVN Emergency Alternative Arrangements Greater New Orleans Hurricane and Storm Damage Risk Reduction System Projects

ABOUT US SERVICES BUSINESS CAREERS REFERENCES PRESS ROOM CONTACT US LINKS

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**PUBLIC INFORMATION**

**Hurricane & Storm Damage Risk Reduction**  
How the Corps is reducing risk >>

**Public Meetings**  
8/26/09 - New Orleans, LA >>  
8/31/09 - New Orleans, LA >>  
9/2/09 - New Orleans, LA >>

Pre-Proposal Conference - 8/14/09 >>

Building a Stronger Corps - A Snapshot of How the Corps is Applying Lessons Learned from Katrina >>

NOLA Environmental  
Find meeting presentations & more >>

**TOP HEADLINES**

**ASK THE CORPS**

The Corps wants to hear from you!

**Q. Where can I find information related to bidding on contracts advertised by the Corps?**

**A. For more information on Corps contracts and registering your business, please click here.**

Submit questions or comments to [askthecorps@usace.army.mil](mailto:askthecorps@usace.army.mil).

Corps revises London Ave. Outfall Canal ICS operating procedures  
Revised 06/29/2009

RSS (What is RSS?)

Last updated 09/09/2009

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**FEATURED VIDEOS**

**Inner Harbor Navigation Canal**  
Reduces risk to New Orleans East, Metro New Orleans, the 9th Ward & St. Bernard from storm surge. Watch >>

**Seabrook Floodgate**  
Three construction site alternatives are presented in this video for a navigable surge barrier planned for the IHNC area near the Plaquemines Parish, LA.

