

**ATTACHMENTS - ENGINEERING DESIGNS AND MAPS**

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# Orange-Jefferson CSRM TSP

Rev.	Description

Drawn by:	Date:
Designed by:	Scale:
Reviewed by:	Approval Recommended:
Submitted by:	Chief Engineer Branch:
Chief Geo. & Structural Section:	Chief Engineering and Construction Division:
Approved by:	

U.S. ARMY ENGINEER DISTRICT GALVESTON  
CORPS OF ENGINEERS,  
GALVESTON, TEXAS  
  
PREPARED UNDER THE DIRECTION OF  
RICHARD P. FANNEY, COL.,  
DISTRICT COMMANDER

Sabine to Galveston, Texas  
Orange and Jefferson County  
Core Borings and CP's

Beaumont A New Levee

Orange 3 New Levee

Jefferson Main New Levee

### Legend

- Proposed Levee
- Proposed Floodwall





# Port Arthur and Vicinity CSRM TSP

Rev.	Date	Description

Drawn by:	Date:	Rev:
Designed by: <td> </td> <td> </td>		
Reviewed by: <td> </td> <td> </td>		
Submitted by: <td> </td> <td> </td>		
Chief Geos & Structural Section <td> </td> <td> </td>		
Chief Engineer Branch <td> </td> <td> </td>		
Chief Engineering and Construction Division <td> </td> <td> </td>		

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Sabine to Galveston, Texas  
Orange and Jefferson County  
Core Borings and CP 18  
  
Drawing No.  
**G-02**

### Legend

- Existing Levee
- Existing Floodwall
- Failure Points



Closure Structure  
Raise

8-10 Foot I-Wall Raise

I-Wall Raise Near Tank Farm

I-Wall Raise Near Valero



**Freeport and Vicinity  
CSRM TSP**

Rev.	Date	Description

Drawn by:	Date:
Designed by:	Scale:
Reviewed by:	Approval Recommended:
Submitted by:	Chief Engineer Branch:
Chief Geo. & Structural Section:	Chief Engineering and Construction Division:
Approved by:	

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Oyster Creek Levee Raise

East Storm Levee Raise

DOW Barge Canal  
Gate Structure

Tide Gate I-Wall Raise

South Storm Levee Raise

Freeport Dock Floodwall Raise

Old River Levee Raise at DOW Thumb

**Legend**

- Existing Levee
- Existing Floodwall
- Failure Points





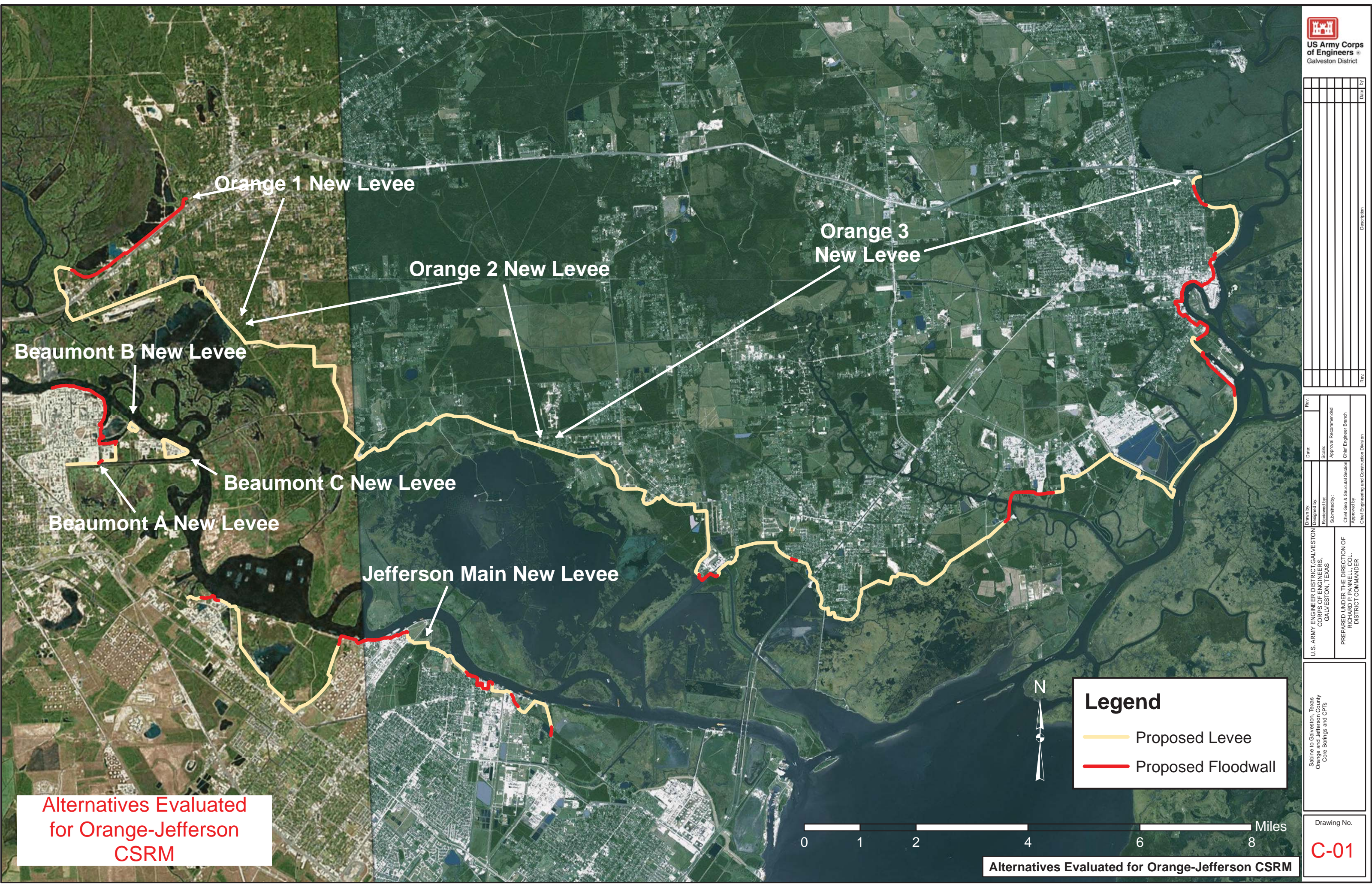
Rev.	Description

Drawn by:	Date:
Designed by:	Scale:
Reviewed by:	Approval Recommended:
Submitted by:	Chief Engineer Branch:
Chief Geo. & Structural Section:	Chief Engineering and Construction Division:
Approved by:	

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Sabine to Galveston, Texas  
Orange and Jefferson County  
Core Borings and CFBs

Drawing No.  
**C-01**



**Alternatives Evaluated  
for Orange-Jefferson  
CSRM**

**Legend**

- Proposed Levee
- Proposed Floodwall

0 1 2 4 6 8 Miles

**Alternatives Evaluated for Orange-Jefferson CSRM**



Rev.	Date	Description

Drawn by: Brad Burrows	Date: 31 July 2015	Rev:
Designed by: Brad Burrows	Scale: 1" = 55,602'	
Reviewed by:	Approval Recommended	
Submitted by:	Chief Engineer Branch	
Approved by:	Chief Engineering and Construction Division	

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Sabine to Galveston, Texas  
Orange and Jefferson County  
Core Borings and CP'fs

Drawing No.  
**C-02**

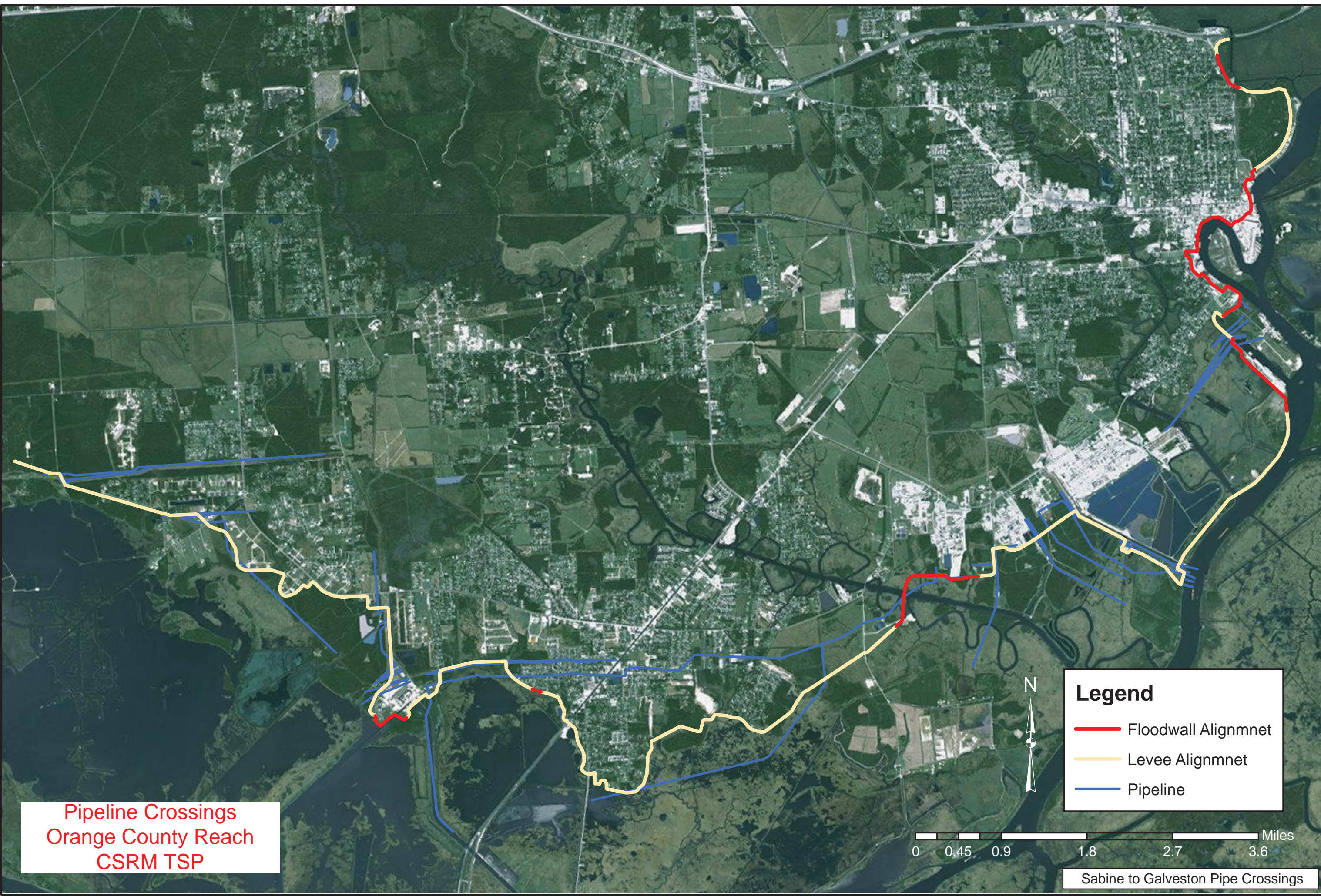
Pipeline Crossings  
Orange County Reach  
CSRMs TSP

**Legend**

- Floodwall Alignmnet
- Levee Alignmnet
- Pipeline



Sabine to Galveston Pipe Crossings





Pipeline Crossings  
 Jefferson County Main Reach  
 CSRMS TSP



Rev.	Date	Description

Drawn by: Brad Burrows	Date: 31 July 2015	Rev:
Designed by: Brad Burrows	Scale: 1" = 50,000'	Approval Recommended
Reviewed by:	Submitted by:	Chief Engineer Branch
Submitted by:	Chief Geo & Structural Section	Chief Engineering and Construction Division
Approved by:	Richard P. Fannell, COL., DISTRICT COMMANDER	

Sabine to Galveston, Texas  
 Orange and Jefferson County  
 Core Borings and CP'ls

Drawing No.  
**C-03**

**Legend**

- Floodwall Alignmnet
- Levee Alignmnet
- Pipeline

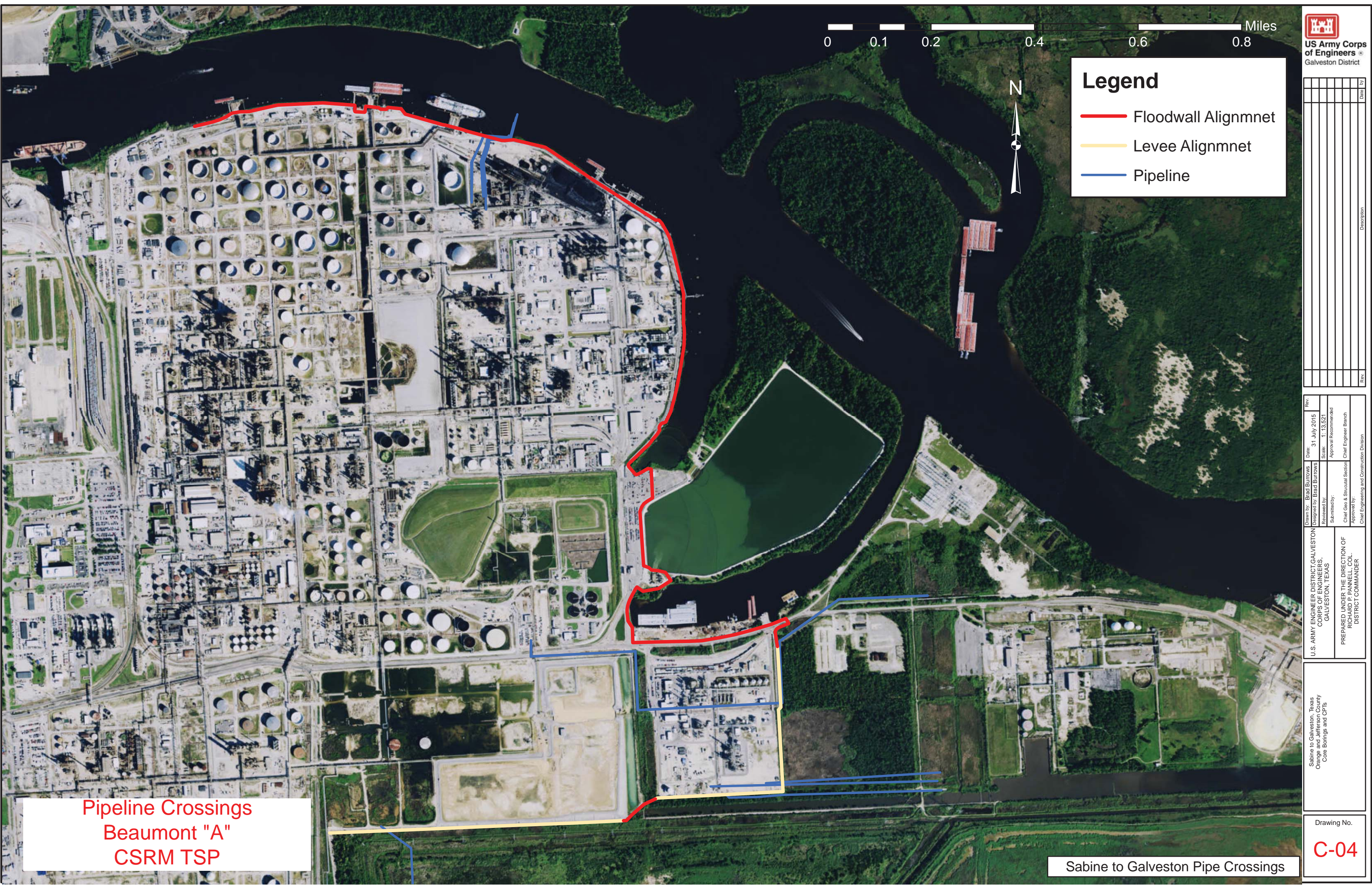


Sabine to Galveston Pipe Crossings



**Legend**

- Floodwall Alignmnet
- Levee Alignmnet
- Pipeline



Pipeline Crossings  
 Beaumont "A"  
 CSR M TSP

Sabine to Galveston Pipe Crossings

Rev.	Description

Drawn by: Brad Burrows  
 Designed by: Brad Burrows  
 Reviewed by: [Signature]  
 Submitted by: [Signature]  
 Approved by: Chief Geos & Structural Section, Chief Engineer Branch, Chief Engineering and Construction Division.

Date: 31 July 2015  
 Scale: 1:13,621  
 Approval Recommended

Sabine to Galveston, Texas  
 Orange and Jefferson County  
 Core Borings and CP's

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Drawing No.  
**C-04**

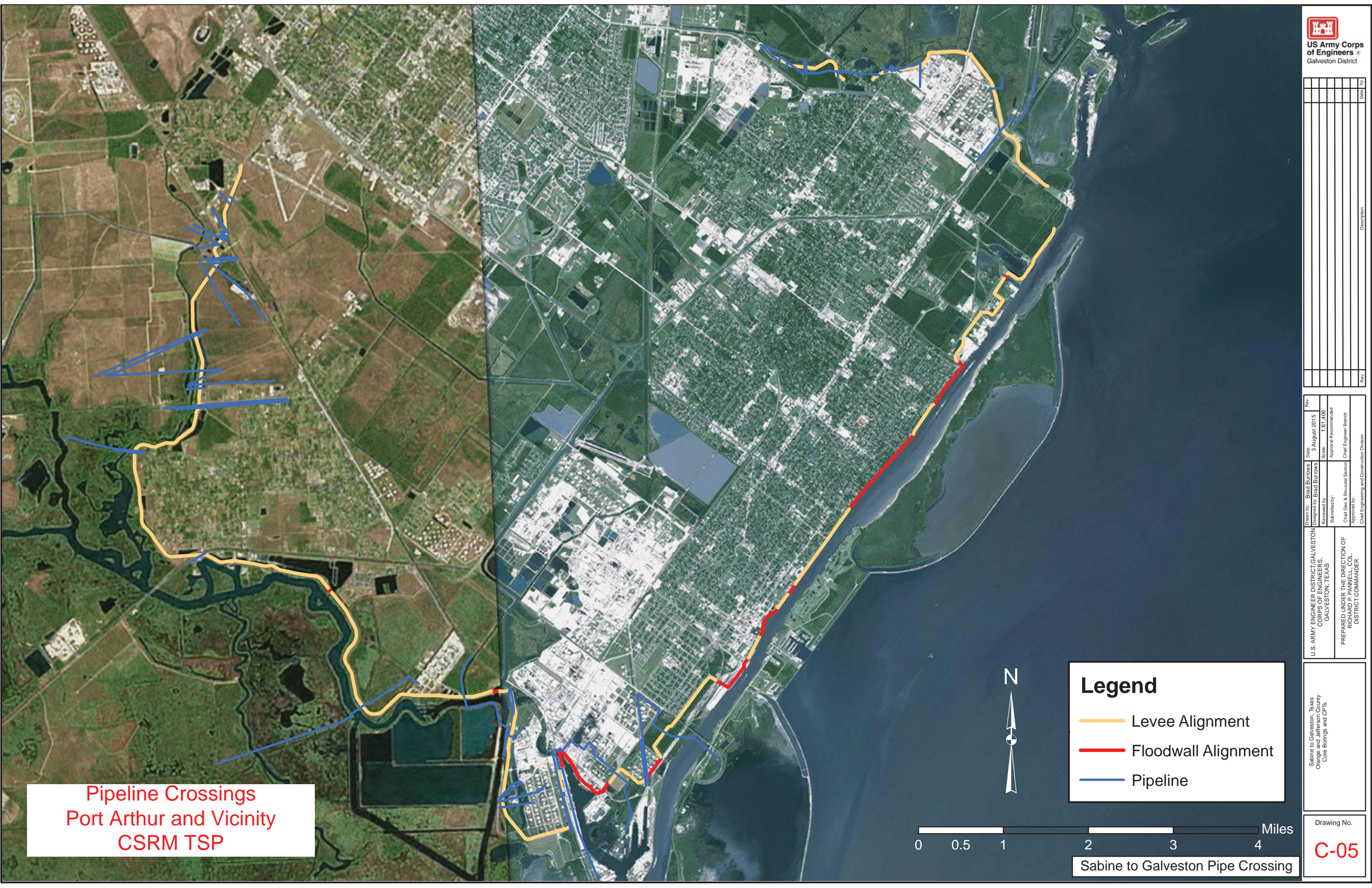


Rev.	Date	Description

Drawn by: Brad Burrows	Date: 3 August 2015	Rev:
Designed by: Brad Burrows	Scale: 1:61,406	
Reviewed by:	Approval Recommended	
Submitted by:	Chief Engineer Branch	
Chief Geo & Structural Section	Chief Engineer Branch	
Approved by:	Chief Engineering and Construction Division	

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**Pipeline Crossings  
Port Arthur and Vicinity  
CSRMM TSP**

**Legend**

- Levee Alignment
- Floodwall Alignment
- Pipeline



Sabine to Galveston Pipe Crossing



**Pipeline Crossings  
Freeport and Vicinity  
CSRM TSP**



**Legend**

- Levee Alignment
- Floodwall Alignment
- Pipeline



Rev.	Description

Drawn by: Brad Burrows	Date: 3 August 2015	Rev:
Designed by: Brad Burrows	Scale: 1:40,496	
Reviewed by:	Approval Recommended	
Submitted by:	Chief Engineer Branch	
Chief Geos & Structural Section	Chief Engineering and Construction Division	
Approved by:		

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Sabine to Galveston, Texas  
Orange and Jefferson County  
Core Borings and CPTs

Drawing No.

**C-06**

Sabine to Galveston Pipe Crossings



5

4

3

2

1

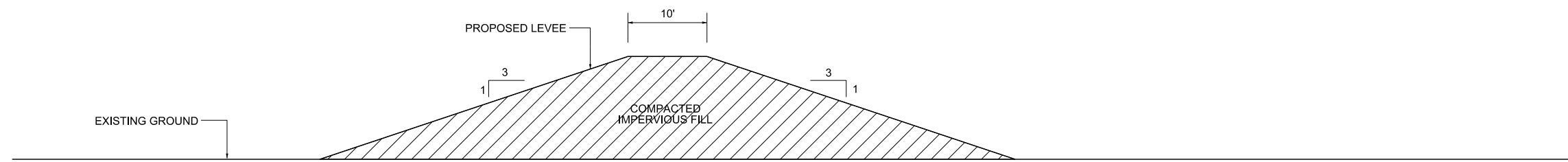
E

D

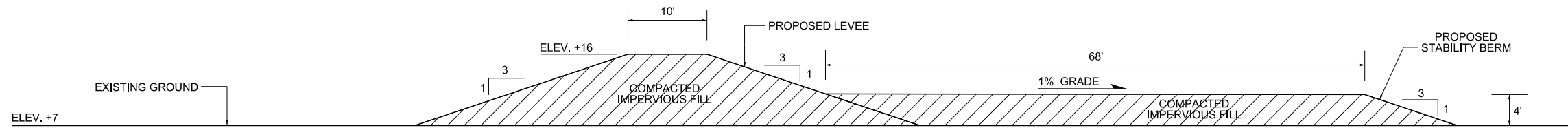
C

B

A



TYPICAL



TYPICAL  
ORANGE STABILITY BERM



U.S. Army Corps  
of Engineers  
Galveston District

Rev.	Description	Date	By

Drawn by: X	Date:	Rev.
Designed by: X	###	###
Checked by: X	Scale: AS SHOWN	
Submitted by:	Approval Recommended:	
Approved by:	Chief, Engineering Branch	
Chief, Engineering and Construction Division		

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DISTRICT COMMANDER

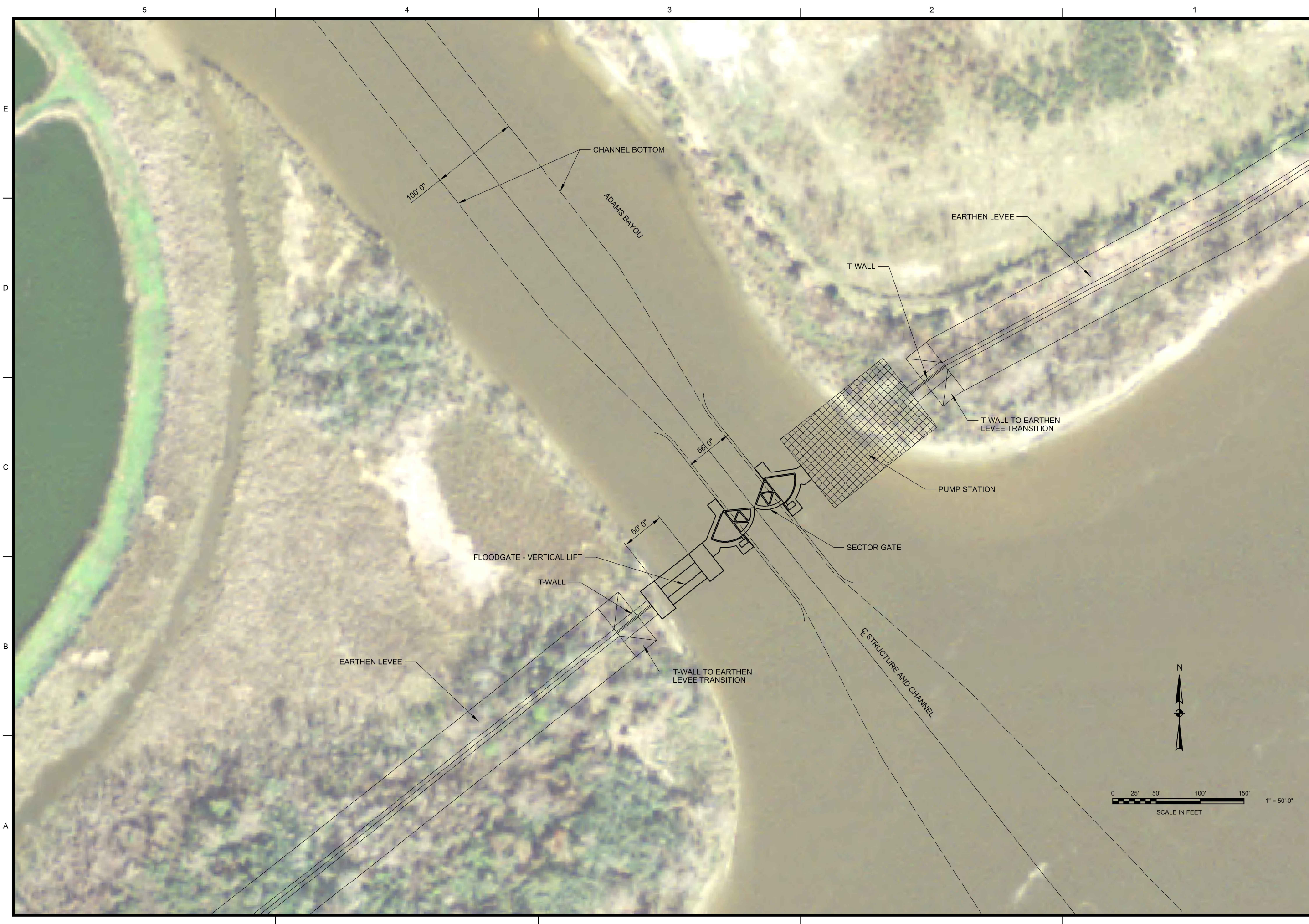
SABINE TO GALVESTON  
FEASIBILITY STUDY

TYPICALS

Sheet No.:

**B-01**





E  
D  
C  
B  
A

5 4 3 2 1



Rev.	Date	Description

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CORPS OF ENGINEERS  
GALVESTON, TEXAS

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DISTRICT COMMANDER

Drawn by:	CJM	Date:	###/###/###	Rev.:
Designed by:	CJM	Scale:	AS SHOWN	
Checked by:	X	Approval Recommended:		
Submitted by:		Chief, Engineering Branch		
Approved by:		Chief, Engineering and Construction Division		

SABINE TO GALVESTON  
FEASIBILITY STUDY

ADAMS BAYOU  
GATE STRUCTURE PLAN

Sheet No.:

**S-01**







5

4

3

2

1

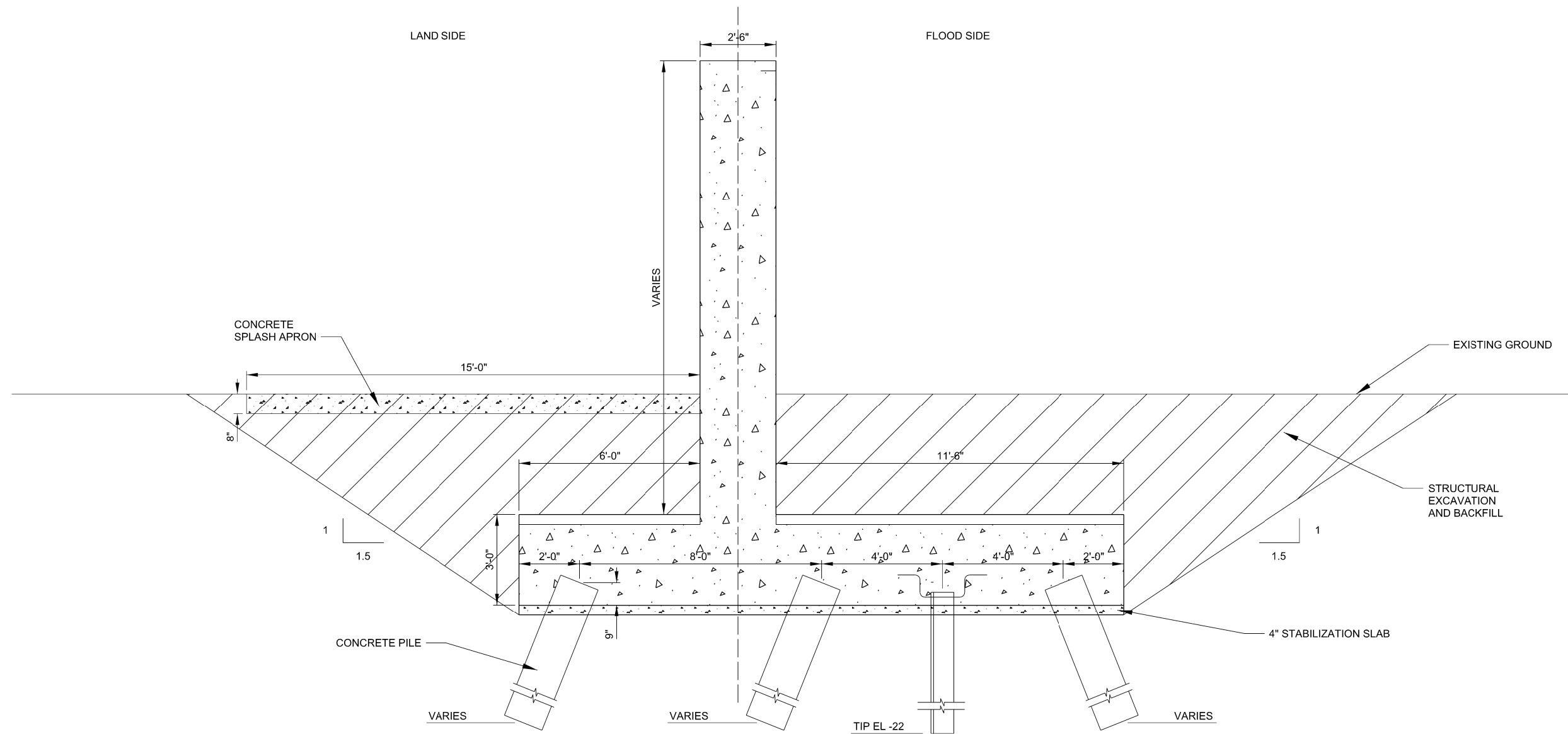
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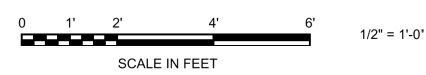
B

A



**ASSUMPTIONS:**

- 1. EXISTING GROUND AT EL 5.0
- 2. STRUCTURAL EXCAVATION TO BOTTOM OF FLOODWALL CONSTRUCTION.
- 3. SIMILAR SOIL CONDITIONS EXIST IN ALL FLOODWALL LOCATIONS.
- 4. 16" SQUARE PRESTRESSED CONCRETE PILE. 3 PILES/ROW AT 5 FT SPACING. FOR COST ESTIMATING PURPOSES, PILES ARE 60' IN LENGTH.



Rev.	Description	Date	By

Drawn by:	CJM	Date:		Rev.	
Checked by:	X	Scale:	AS SHOWN	Approval Recommended:	
Submitted by:		Chief, Engineering Branch:		Chief, Engineering and Construction Division:	
Approved by:					

U.S. ARMY ENGINEER DISTRICT, GALVESTON  
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 RICHARD P. PANNELL, COL., C.E.,  
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SABINE TO GALVESTON  
 FEASIBILITY STUDY

FLOODWALL  
 TYPICAL SECTION

Sheet No.:

**S-03**