

INDEX TO SHEETS

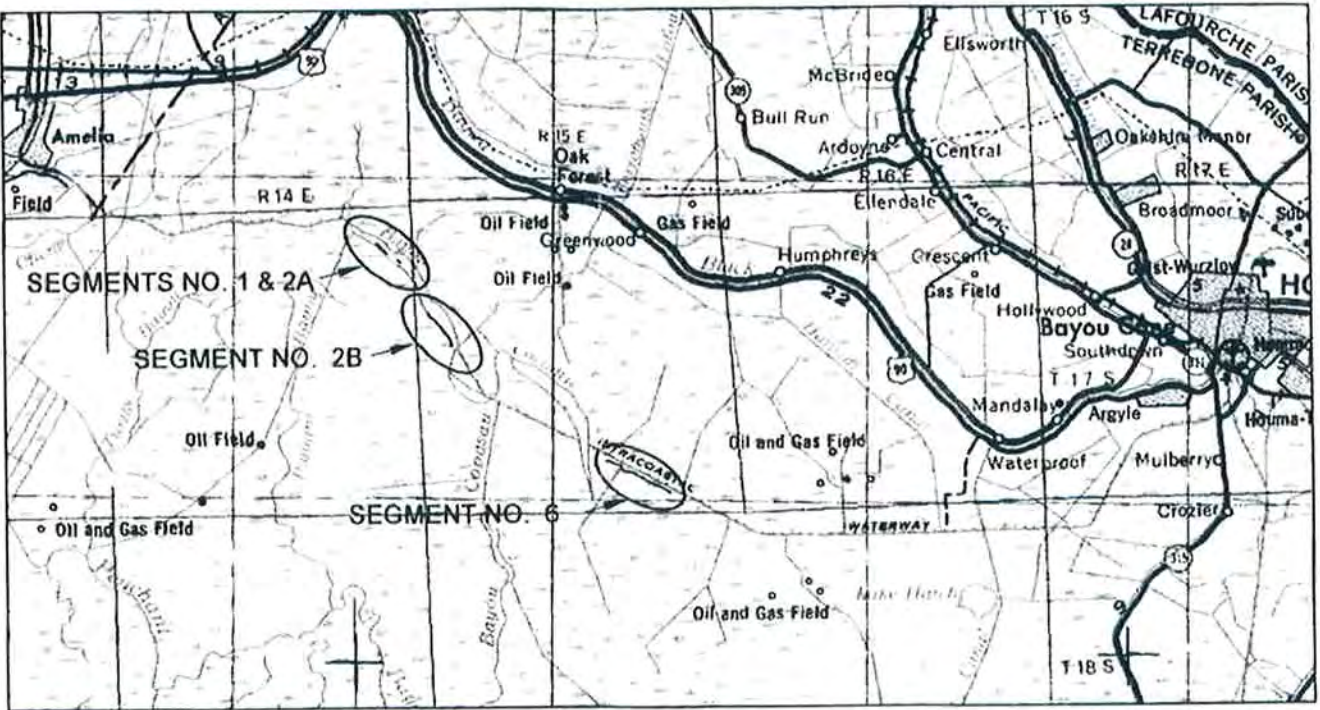
SHEET NO.	DESCRIPTION
1	TITLE PAGE
2	SUMMARY OF ESTIMATED QUANTITIES & GENERAL NOTES
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STATE OF LOUISIANA  
OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH

BREACH CLOSURES ALONG  
GULF INTRACOASTAL WATERWAY (GIWW)

CIAP PROJECT No. TE-43(EB)

TERREBONNE PARISH



VICINITY MAP



*[Signature]*  
CONSULTANT PROJECT ENGINEER

02/16/09  
DATE

*[Signature]*  
OCPR CHIEF - ENGINEERING & OPERATIONS DIVISION

3/31/09  
DATE

*[Signature]*  
OCPR ENGINEER ADMINISTRATOR

3/30/09  
DATE

*[Signature]*  
OCPR ENGINEER MANAGER

07/29/2009  
DATE

*[Signature]*  
OCPR PROJECT ENGINEER

03/23/09  
DATE

AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY
1	10/04/10	AS BUILT DRAWING	KPR



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY KSP

DESIGNED BY KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER TE-43(EB)

FEDERAL PROJECT NUMBER N/A

APPROVED BY KPR

TITLE PAGE

DATE 02/13/09

SHEET 1 OF 30

GENERAL NOTES

1. TYPE OF CONSTRUCTION IS CLASSIFICATION III (HEAVY CONSTRUCTION) SHORELINE PROTECTION.
2. ALL ELEVATIONS ARE GIVEN IN THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET. ALL HORIZONTAL COORDINATES ARE GIVEN IN THE NORTH AMERICAN DATUM OF 1983 (NAD 83), LOUISIANA STATE PLANE, SOUTH ZONE, U.S. SURVEY FEET. BENCHMARKS IN THE PROJECT AREA ARE SHOWN ON SHEET 3.
3. MEAN LOW WATER (MLW) EQUALS 1.1 FT. NAVD 88, AND MEAN HIGH WATER(MHW) EQUALS 1.8 FT. NAVD 88.
4. AERIAL IMAGES USED FOR PROJECT DRAWING BACKGROUNDS ARE EITHER 2005 DOQQ IMAGES OR 2008 AERIALS FLOWN FOR THIS PROJECT. SOURCE OF AERIAL IS NOTED ON EACH DRAWING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NAVIGATING FROM A NAVIGABLE WATER BODY TO THE SITE. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR NAVIGATING WITHIN THE LIMITS OF THE PROJECT SITE AND DREDGING ONLY WITHIN THE LIMITS OF THE FLOTATION AND ACCESS CHANNELS. THE OCPR PROJECT ENGINEER OR INSPECTOR SHALL MONITOR EQUIPMENT OPERATIONS DURING CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL LAND OWNERS, UTILITIES, AND PIPELINE OPERATORS FIVE (5) WORKING DAYS PRIOR TO MOBILIZATION. ALL PIPELINES SHALL BE INITIALLY MARKED WITH BUOYS BY THE CONTRACTOR. THE CONTRACTOR SHALL MAINTAIN BUOYS DURING CONSTRUCTION AND SHALL HAVE ADEQUATE NAVIGATIONAL EQUIPMENT ON THEIR VESSELS TO AVOID DREDGING IN RESTRICTED AREAS. PIPELINE OPERATORS KNOWN TO HAVE PIPELINES IN THE VICINITY ARE SHOWN ON ALL PLAN VIEW SHEETS. THE CONTRACTOR SHALL CALL LOUISIANA-ONE-CALL AND PIPELINE SAFETY (225) 342-3417, FIVE (5) WORKING DAYS PRIOR TO MOBILIZATION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE CLEARANCES FROM THE PIPELINES SET FORTH IN THE PLAN DRAWINGS OR IN THE BID DOCUMENTS. NO EXCAVATION IS ALLOWED WITHIN ANY AREA RESTRICTED BY THE PIPELINE COMPANIES AND SET FORTH ON THE PLANS. PIPELINE LOCATIONS SHOWN ON THE PLANS ARE BASED ON SURVEYS PERFORMED FOR NRCS IN 2003.

PIPELINE CONTACT INFORMATION:

ENTERPRISE PRODUCTS (LPG)  
CONTACT:  
PH. (888) 506-8528

WILLIAMS PIPELINE SERVICES  
CONTACT:  
PH. (800) 440-8475

7. THE PROJECT FEATURES AND QUANTITIES SHOWN ARE BASED ON FIELD SURVEYS PERFORMED IN 2003 FOR THE DESIGN OF THIS PROJECT. ACTUAL FIELD CONDITIONS MAY HAVE CHANGED SINCE THE DESIGN SURVEYS WERE PERFORMED. PRE-CONSTRUCTION SURVEYS, PERFORMED BY THE CONTRACTOR, WILL BE USED BY THE ENGINEER TO UPDATE THESE CONSTRUCTION PLANS. THE ENGINEER WILL USE THESE UPDATED CROSS SECTIONS AS FINAL BASELINE CONDITIONS OF THE FILL AND EXCAVATION AREAS IN THE PLANS PRIOR TO CONSTRUCTION. THE ALIGNMENT FOR THE ROCK BREAKWATERS MAY BE REVISED BY THE ENGINEER BEFORE CONSTRUCTION TO REFLECT CHANGES IN THE FIELD CONDITIONS.
8. INITIAL PLACEMENT OF TEMPORARY NAVIGATION SIGNS SHALL BE 10' OUTSIDE OF THE SPOIL PLACEMENT. TEMPORARY NAVIGATION SIGNS AND PILINGS SHALL BE REMOVED PRIOR TO DEMOBILIZATION.
9. ANY DAMAGE TO EXISTING U.S. COAST GUARD NAVIGATION AIDS OR PRIVATE NAVIGATION AIDS SHALL BE REPAIRED BY THE CONTRACTOR TO THE U.S. COAST GUARD STANDARDS AT THE EXPENSE OF THE CONTRACTOR.
10. THE ESTIMATED ROCK QUANTITIES SHOWN IN THE SUMMARY OF ESTIMATED QUANTITIES ARE FOR BIDDING PURPOSES ONLY AND CALCULATED ACCORDING TO THE CONDITIONS SURVEYED IN 2003 FOR THE DESIGN OF THIS PROJECT. THE ROCK QUANTITIES WERE CALCULATED USING THE END AREA METHOD OF SECTIONS AT THE BEGINNING, END, AND EVERY SURVEY TRANSECT ALONG ROCK BREAKWATER ALIGNMENT. THE ROCK QUANTITIES ASSUMED VARYING RATES OF SETTLEMENT FOR THE BREAKWATERS AS SHOWN IN THE FINAL DESIGN REPORT. AN IN-PLACE UNIT WEIGHT OF 1.55 TONS/CU. YDS. WAS ASSUMED FOR THE ROCK. ACTUAL QUANTITIES WILL BE BASED ON BARGE DISPLACEMENT MEASUREMENTS. SEE THE TECHNICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. THE OWNER RESERVES THE RIGHT TO ADJUST QUANTITIES HIGHER OR LOWER WITHOUT ADJUSTMENT OF THE UNIT PRICE.
11. AVOID IMPACTS TO EXISTING VEGETATION: FOR PROTECTION OF EXISTING VEGETATION, ACCESS TO OR MOVEMENT OUTSIDE OF THE DEFINED PROJECT SITE SHALL GENERALLY BE PROHIBITED WITHIN VEGETATED AREAS FOR PERSONNEL OR MATERIAL ACCESS OR STORAGE.
12. CLEARING OF TREES AND WOODY VEGETATION SHALL BE PERFORMED ON ALL AREAS WHERE SUCH MATERIALS ARE WITHIN THE PROPOSED LIMITS OF THE GEOTEXTILE FABRIC TO BE PLACED UNDER THE DIKE. MAXIMUM CLEARING SHALL BE 3 FEET BEYOND THE LIMITS OF THE GEOTEXTILE FABRIC. ALL TREES AND WOODY VEGETATION SHALL BE CUT LEVEL WITH THE GROUND SURFACE. IN AREAS WHERE TREES ARE LOCATED IN THE WATER, THOSE TREES AND STUMPS SHALL BE REMOVED SUCH THAT NO WOOD MATERIAL PROJECTS ABOVE THE MUD LINE. ALL MATERIAL CLEARED SHALL BE PLACED ON THE MARSH SIDE OF THE DIKE ALIGNMENT. THE MAXIMUM HEIGHT OF DEBRIS DISPOSAL PILE SHALL BE +5.0' NAVD 88. NO DIRECT PAYMENT WILL BE MADE FOR CLEARING.
13. THE DREDGE MATERIAL FROM FLOTATION CHANNELS MUST BE PERMANENTLY DEPOSITED ON THE MARSH SIDE OF THE DIKE ALIGNMENT WHERE POSSIBLE. IN SOME REACHES, PLACEMENT OF THE SPOIL BEHIND THE DIKE ALIGNMENT MAY NOT BE POSSIBLE DUE TO THE PROXIMITY OF THE EXISTING BANKLINE TO THE DIKE ALIGNMENT. IN THESE AREAS, DREDGE MATERIAL FROM FLOTATION CHANNELS SHALL BE TEMPORARILY DEPOSITED ON THE GIWW SIDE OF THE ACCESS CHANNEL. SPOIL MATERIAL SHALL NOT BE DEPOSITED OUTSIDE OF THE CONSTRUCTION LIMITS SHOWN ON THE PLANS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER. NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE NAVIGATION FAIRWAY OR WITHIN THE PIPELINE RIGHTS-OF-WAY. ALL SPOIL PLACED WITHIN THE GIWW STRUCTURAL LIMITS SHALL BE PLACED BACK IN THE FLOTATION CHANNEL AT THE END OF CONSTRUCTION. ALL REQUIRED MAINTENANCE OF THE ACCESS AND FLOTATION CHANNELS SHALL BE PERFORMED AT NO DIRECT PAY.

SUMMARY OF ESTIMATED QUANTITIES

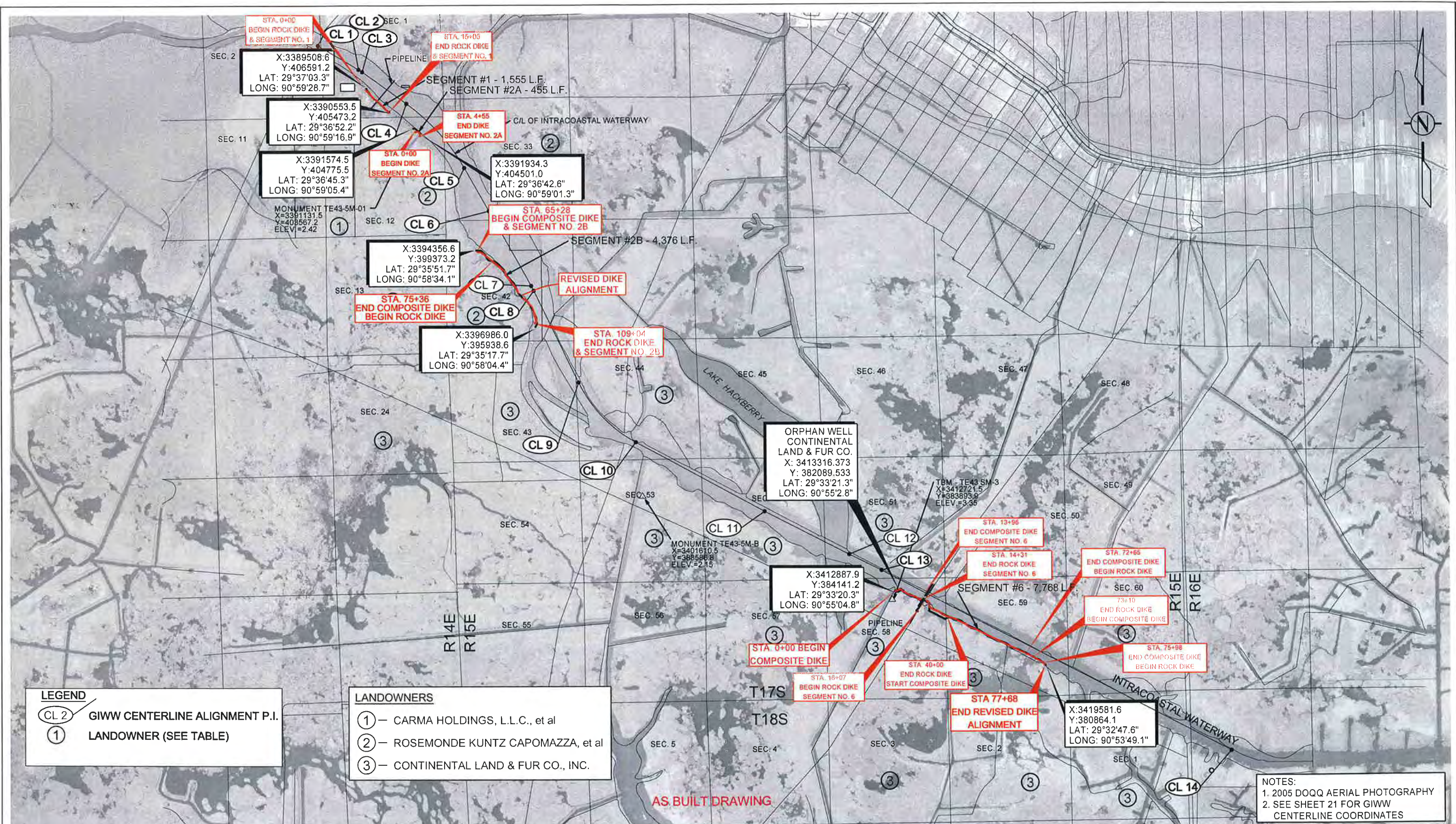
BASE BID				
ITEM No.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	INSTALLED QUANTITY
1	MOBILIZATION & DEMOBILIZATION	LUMP	1	1
2	CONSTRUCTION SURVEYS	LUMP	1	1
3	ACCESS AND FLOTATION CHANNELS	LUMP	1	1
4	250 LB. CLASS ROCK	TON	83,500	96,348
5	LIGHTWEIGHT AGGREGATE, ENCAPSULATED	CU. YD.	8,000	11,519.86
6	WOVEN GEOTEXTILE FABRIC	SQ. YD.	60,300	48,804
7	SETTLEMENT PLATES	EA.	16	16
8	TEMPORARY WARNING SIGNS	EA.	16	16
9	PERMANENT WARNING SIGNS	EA.	Ø	16

AS BUILT DRAWING

2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR
REV.	DATE	DESCRIPTION	BY



OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA	SUMMARY OF ESTIMATED QUANTITIES & NOTES
		STATE PROJECT NUMBER: TE-43(EB)	
DRAWN BY: KSP		FEDERAL PROJECT NUMBER: N/A	DATE: 02/13/09
DESIGNED BY: KPR		APPROVED BY: KPR	SHEET 2 OF 30



**LEGEND**

- CL 2 GIWW CENTERLINE ALIGNMENT P.I.  
① LANDOWNER (SEE TABLE)

**LANDOWNERS**

- ① — CARMA HOLDINGS, L.L.C., et al  
② — ROSEMONDE KUNTZ CAPOMAZZA, et al  
③ — CONTINENTAL LAND & FUR CO., INC.

NOTES:  
1. 2005 DOQQ AERIAL PHOTOGRAPHY  
2. SEE SHEET 21 FOR GIWW CENTERLINE COORDINATES

4000' 2000' 0' 4000' 8000'

REV.	DATE	DESCRIPTION	BY
1	10/04/10	AS BUILT	KPR



**OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH**

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

**BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA**

STATE PROJECT NUMBER: TE-43(EB)

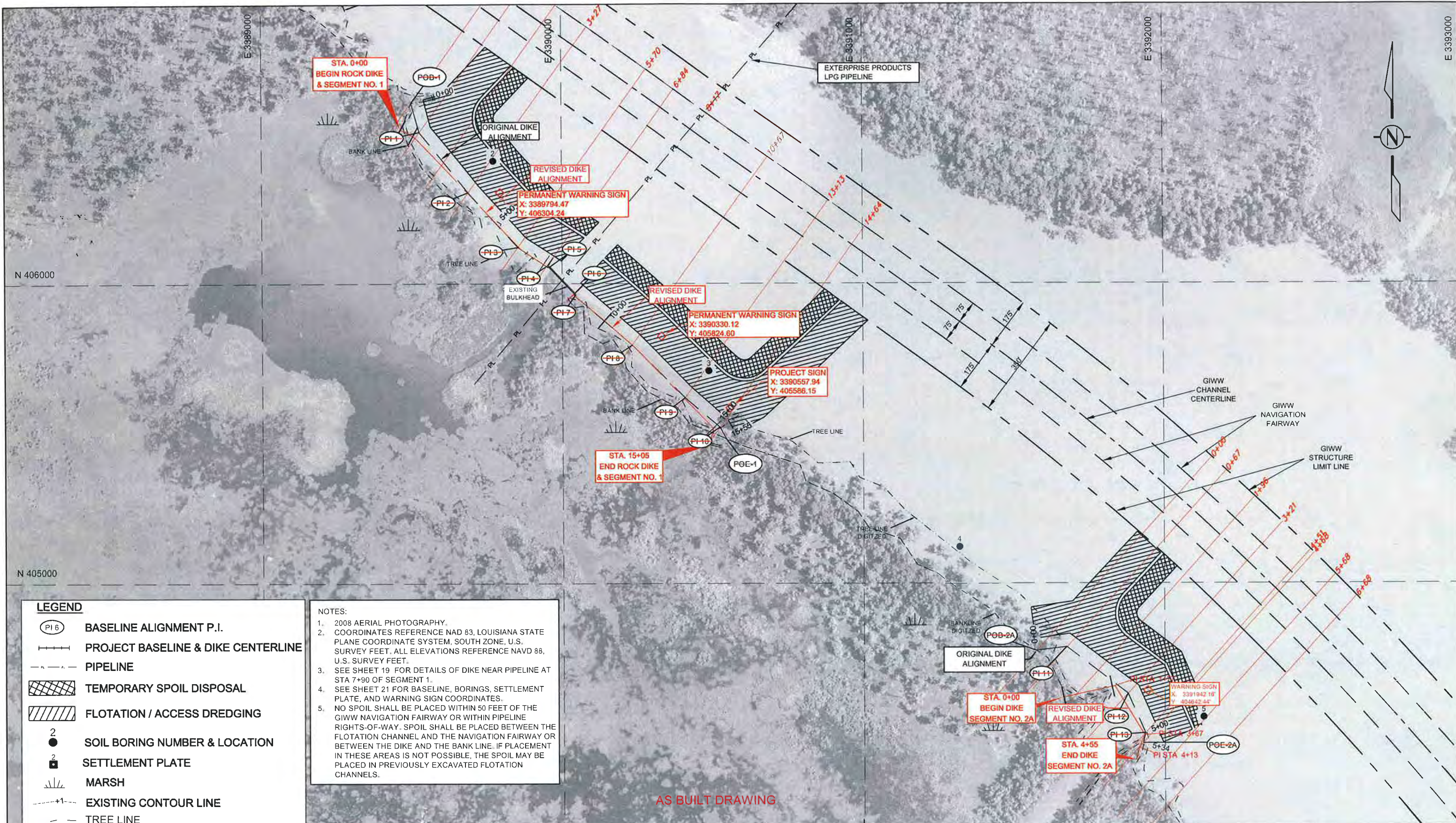
FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

**OVERALL PROJECT PLAN**

DATE: 02/13/09

SHEET 3 OF 30



**LEGEND**

- PI 6 BASELINE ALIGNMENT P.I.
- PROJECT BASELINE & DIKE CENTERLINE
- PIPELINE
- TEMPORARY SPOIL DISPOSAL
- FLOTATION / ACCESS DREDGING
- 2 SOIL BORING NUMBER & LOCATION
- 2 SETTLEMENT PLATE
- MARSH
- EXISTING CONTOUR LINE
- TREE LINE
- BANK LINE
- TOE OF DIKE

**NOTES:**

- 2008 AERIAL PHOTOGRAPHY.
- COORDINATES REFERENCE NAD 83, LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, U.S. SURVEY FEET, ALL ELEVATIONS REFERENCE NAVD 88, U.S. SURVEY FEET.
- SEE SHEET 19 FOR DETAILS OF DIKE NEAR PIPELINE AT STA 7+90 OF SEGMENT 1.
- SEE SHEET 21 FOR BASELINE, BORINGS, SETTLEMENT PLATE, AND WARNING SIGN COORDINATES.
- NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE GIWW NAVIGATION FAIRWAY OR WITHIN PIPELINE RIGHTS-OF-WAY. SPOIL SHALL BE PLACED BETWEEN THE FLOTATION CHANNEL AND THE NAVIGATION FAIRWAY OR BETWEEN THE DIKE AND THE BANK LINE. IF PLACEMENT IN THESE AREAS IS NOT POSSIBLE, THE SPOIL MAY BE PLACED IN PREVIOUSLY EXCAVATED FLOTATION CHANNELS.

AS BUILT DRAWING



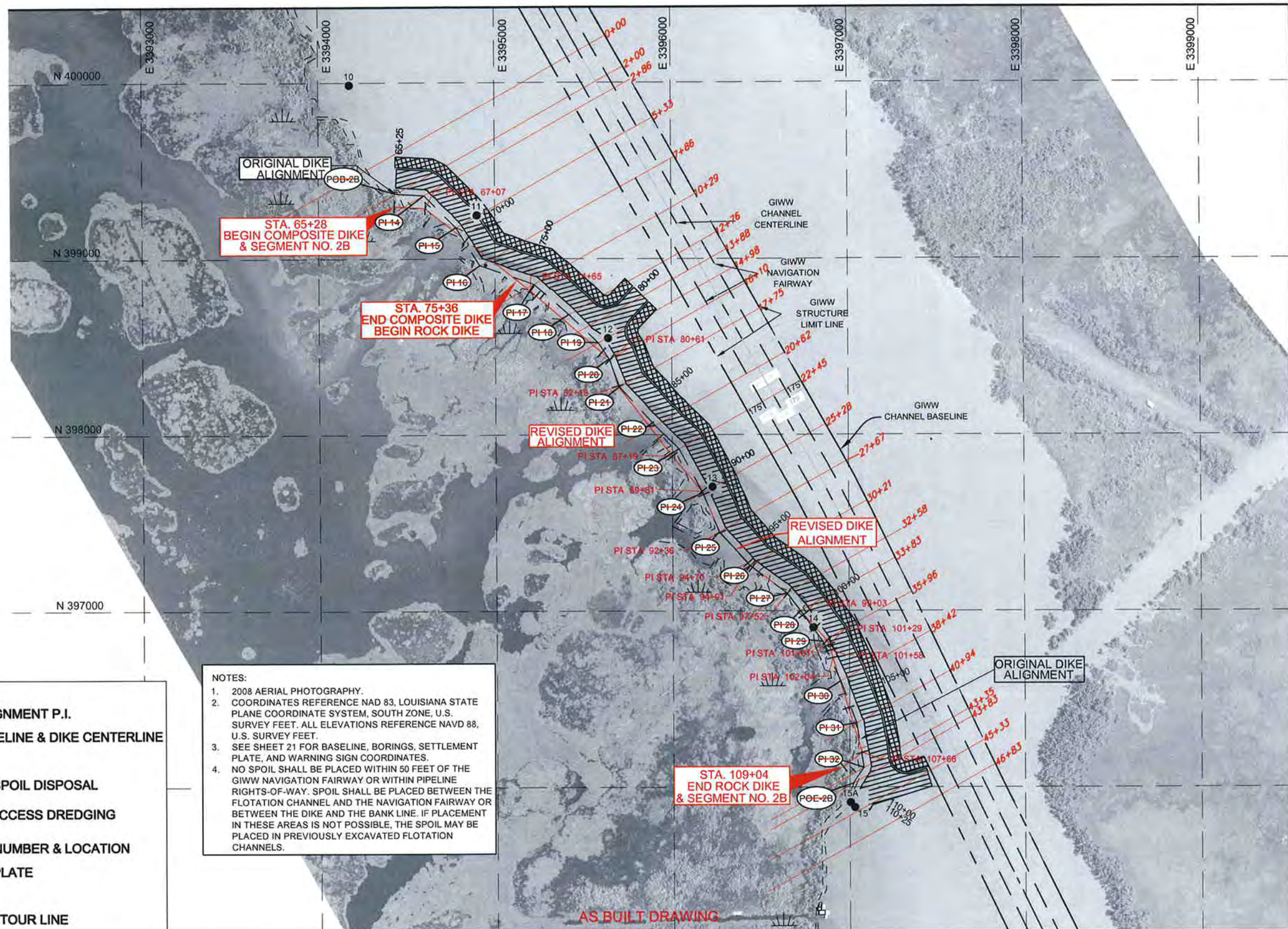
1	10/04/10	AS BUILT	KPR
REV.	DATE	DESCRIPTION	BY

**T. BAKER SMITH**  
PROFESSIONAL CONSULTANTS SINCE 1913  
(985) 868-1050 www.tbsmith.com

OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSPDESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA		ALIGNMENT SHEET SEGMENTS 1 & 2A
STATE PROJECT NUMBER: TE-43(EB)		
FEDERAL PROJECT NUMBER: N/A		DATE: 02/13/09
APPROVED BY: KPR		SHEET 4 OF 30



- LEGEND**
- PI 6 BASELINE ALIGNMENT P.I.
  - PROJECT BASELINE & DIKE CENTERLINE
  - PIPELINE
  - TEMPORARY SPOIL DISPOSAL
  - FLOTATION / ACCESS DREDGING
  - 2 SOIL BORING NUMBER & LOCATION
  - 2 SETTLEMENT PLATE
  - MARSH
  - EXISTING CONTOUR LINE
  - TREE LINE
  - BANK LINE
  - TOE OF DIKE

- NOTES:**
1. 2008 AERIAL PHOTOGRAPHY.
  2. COORDINATES REFERENCE NAD 83, LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, U.S. SURVEY FEET. ALL ELEVATIONS REFERENCE NAVD 88, U.S. SURVEY FEET.
  3. SEE SHEET 21 FOR BASELINE, BORINGS, SETTLEMENT PLATE, AND WARNING SIGN COORDINATES.
  4. NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE GIWW NAVIGATION FAIRWAY OR WITHIN PIPELINE RIGHTS-OF-WAY. SPOIL SHALL BE PLACED BETWEEN THE FLOTATION CHANNEL AND THE NAVIGATION FAIRWAY OR BETWEEN THE DIKE AND THE BANK LINE. IF PLACEMENT IN THESE AREAS IS NOT POSSIBLE, THE SPOIL MAY BE PLACED IN PREVIOUSLY EXCAVATED FLOTATION CHANNELS.

AS BUILT DRAWING

600' 300' 0' 600' 1200'

REV.	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

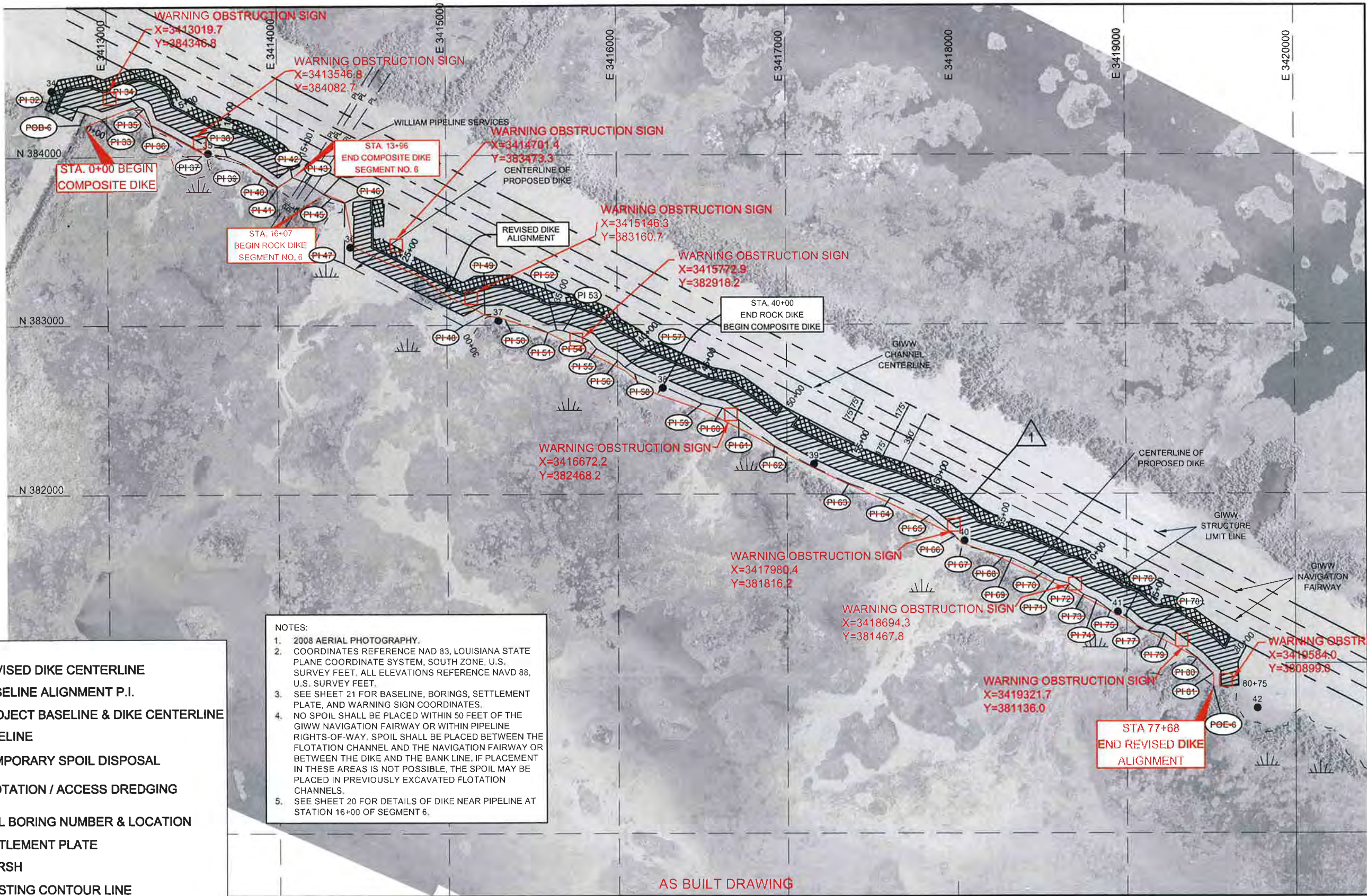
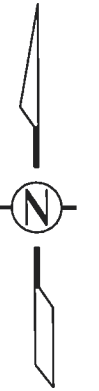
FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

ALIGNMENT SHEET  
SEGMENT 2B

DATE: 02/13/09

SHEET 5 OF 30



**LEGEND**

- REVISED DIKE CENTERLINE
- PI 6 BASELINE ALIGNMENT P.I.
- PROJECT BASELINE & DIKE CENTERLINE
- PIPELINE
- TEMPORARY SPOIL DISPOSAL
- FLOTATION / ACCESS DREDGING
- SOIL BORING NUMBER & LOCATION
- SETTLEMENT PLATE
- MARSH
- EXISTING CONTOUR LINE
- TREE LINE
- BANK LINE
- TOE OF DIKE

**NOTES:**

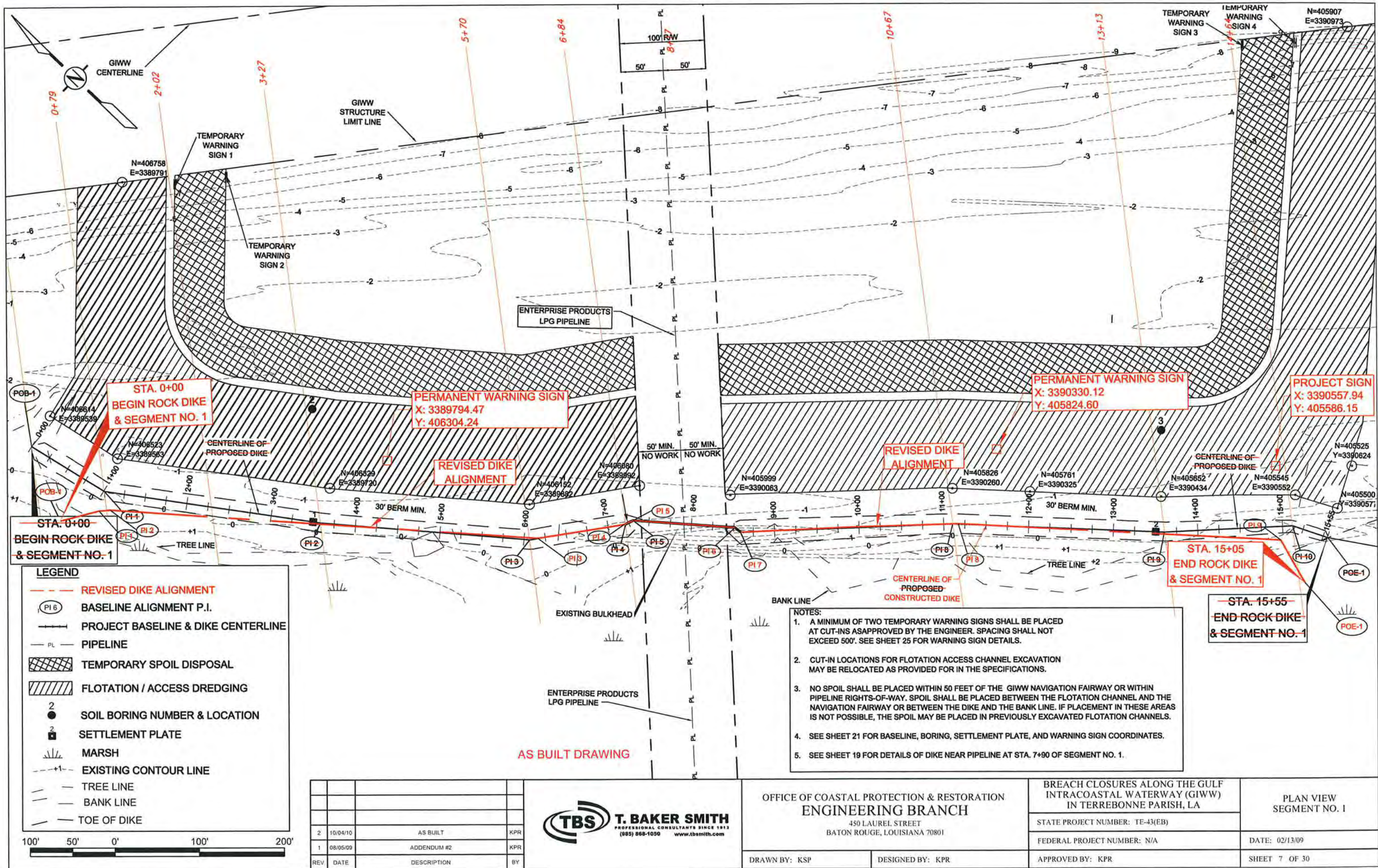
- 2008 AERIAL PHOTOGRAPHY.
- COORDINATES REFERENCE NAD 83, LOUISIANA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, U.S. SURVEY FEET. ALL ELEVATIONS REFERENCE NAVD 83, U.S. SURVEY FEET.
- SEE SHEET 21 FOR BASELINE, BORINGS, SETTLEMENT PLATE, AND WARNING SIGN COORDINATES.
- NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE GIWW NAVIGATION FAIRWAY OR WITHIN PIPELINE RIGHTS-OF-WAY. SPOIL SHALL BE PLACED BETWEEN THE FLOTATION CHANNEL AND THE NAVIGATION FAIRWAY OR BETWEEN THE DIKE AND THE BANK LINE. IF PLACEMENT IN THESE AREAS IS NOT POSSIBLE, THE SPOIL MAY BE PLACED IN PREVIOUSLY EXCAVATED FLOTATION CHANNELS.
- SEE SHEET 20 FOR DETAILS OF DIKE NEAR PIPELINE AT STATION 16+00 OF SEGMENT 6.

AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR

**TBS T. BAKER SMITH**  
PROFESSIONAL CONSULTANTS SINCE 1913  
(985) 868-1050 www.tbsmith.com

OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA		ALIGNMENT SHEET SEGMENT 6	
		STATE PROJECT NUMBER: TE-43(EB)			
				FEDERAL PROJECT NUMBER: N/A	DATE: 02/13/09
DRAWN BY: KSP		DESIGNED BY: KPR		APPROVED BY: KPR	SHEET 6 OF 30



AS BUILT DRAWING

- NOTES:
1. A MINIMUM OF TWO TEMPORARY WARNING SIGNS SHALL BE PLACED AT CUT-INS AS APPROVED BY THE ENGINEER. SPACING SHALL NOT EXCEED 500'. SEE SHEET 25 FOR WARNING SIGN DETAILS.
  2. CUT-IN LOCATIONS FOR FLOTATION ACCESS CHANNEL EXCAVATION MAY BE RELOCATED AS PROVIDED FOR IN THE SPECIFICATIONS.
  3. NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE GIWW NAVIGATION FAIRWAY OR WITHIN PIPELINE RIGHTS-OF-WAY. SPOIL SHALL BE PLACED BETWEEN THE FLOTATION CHANNEL AND THE NAVIGATION FAIRWAY OR BETWEEN THE DIKE AND THE BANK LINE. IF PLACEMENT IN THESE AREAS IS NOT POSSIBLE, THE SPOIL MAY BE PLACED IN PREVIOUSLY EXCAVATED FLOTATION CHANNELS.
  4. SEE SHEET 21 FOR BASELINE, BORING, SETTLEMENT PLATE, AND WARNING SIGN COORDINATES.
  5. SEE SHEET 19 FOR DETAILS OF DIKE NEAR PIPELINE AT STA. 7+90 OF SEGMENT NO. 1.

REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



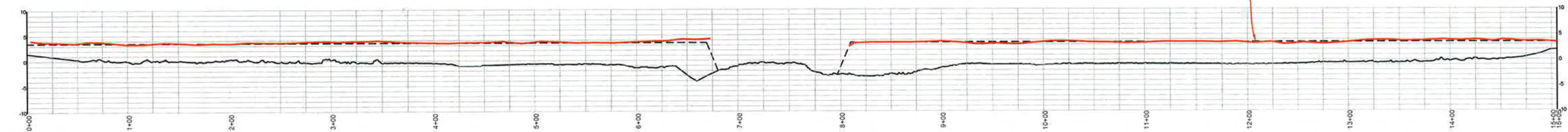
OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP      DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA		PLAN VIEW SEGMENT NO. 1	
STATE PROJECT NUMBER: TE-43(EB)		DATE: 02/13/09	
FEDERAL PROJECT NUMBER: N/A		SHEET 7 OF 30	
APPROVED BY: KPR			

DIKE CENTERLINE PROFILE

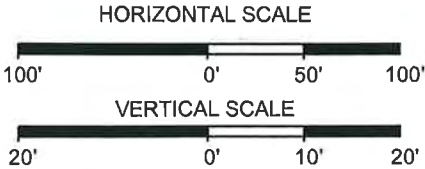
FINAL SURVEY  
(3-29-10)



NOTES:

- 1. ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
- 2. ELEVATIONS ARE BASED ON NAVD 88 US SURVEY FEET (GEOID 99) AS DERIVED FROM PROJECT CONTROL.
- 3. TOPOGRAPHIC SURVEY DATA ACQUISITION PERFORMED WITH RTK AND CONVENTIONAL SURVEY METHODS.
- 4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
- 5. FINAL SURVEY DATA ACQUISITION WAS PERFORMED MARCH 29, 2010.

LEGEND	
<span style="color: red;">—</span>	FINAL SURVEY
<span style="color: black;">---</span>	CL PROFILE
<span style="color: black;">---</span>	DIKE TEMPLATE
<span style="color: black;">—</span>	NAT GROUND

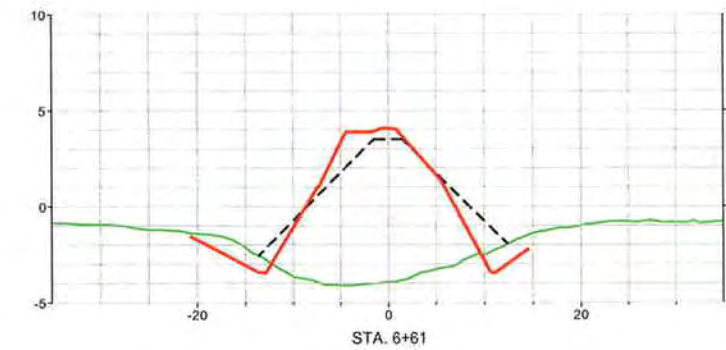
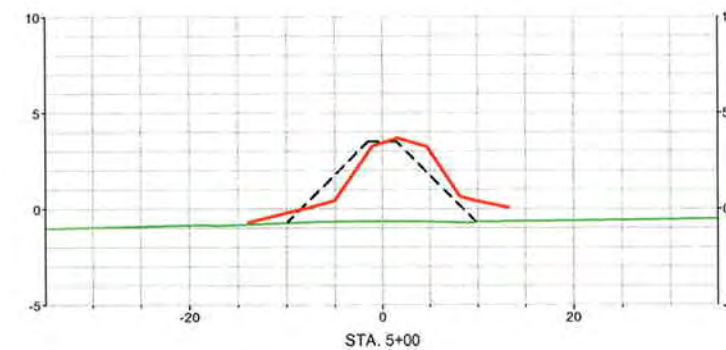
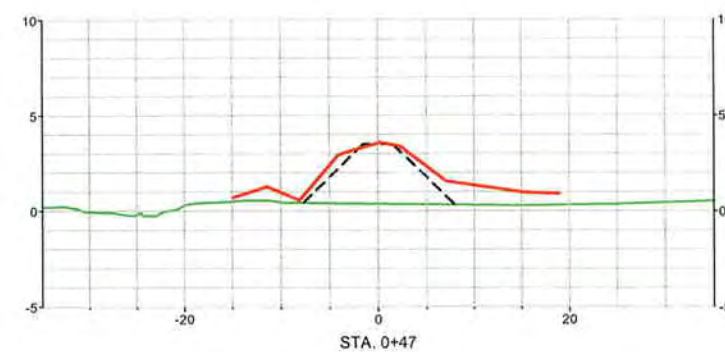
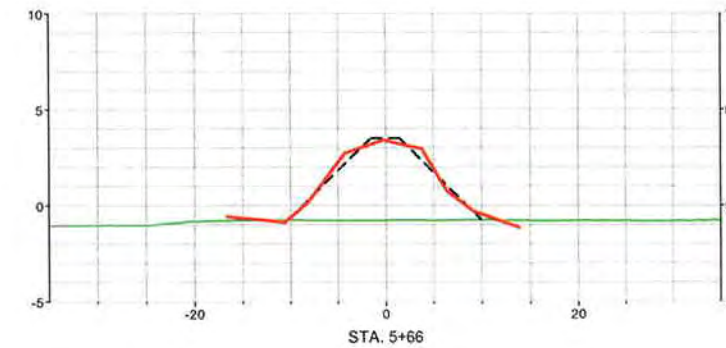
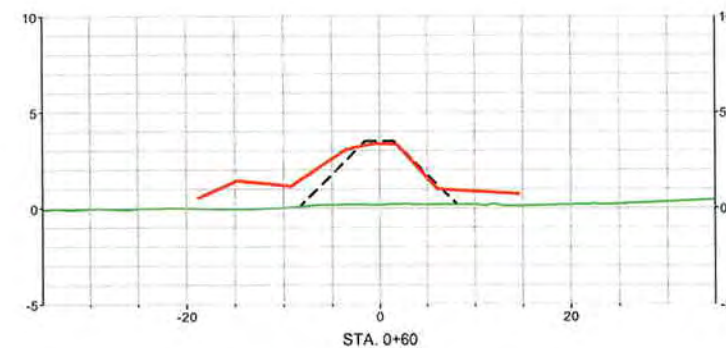
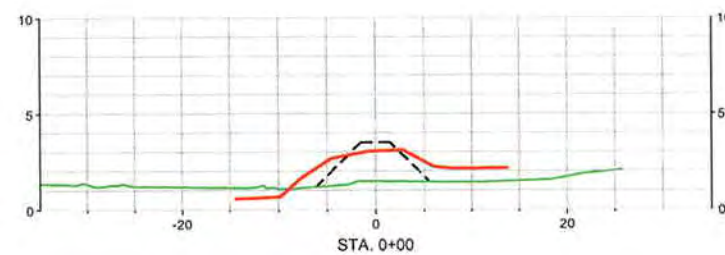


REV.	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA. 70517

OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA	DIKE CENTERLINE PROFILE SEGMENT NO. 1
		STATE PROJECT NUMBER: TE-43(EB)	
DRAWN BY:		FEDERAL PROJECT NUMBER: N/A	DATE: 02/13/09
DESIGNED BY:		APPROVED BY:	SHEET 7a OF 30

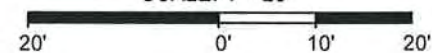


#### NOTES:

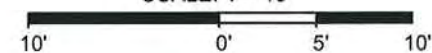
1. ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
2. ELEVATIONS ARE BASED ON NAVD 88 US SURVEY FEET (GEOID 99) AS DERIVED FROM PROJECT CONTROL.
3. TOPOGRAPHIC SURVEY DATA ACQUISITION PERFORMED WITH RTK AND CONVENTIONAL SURVEY METHODS.
4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
5. FINAL SURVEY DATA ACQUISITION WAS PERFORMED MARCH 29, 2010.

LEGEND	
<span style="color: red;">—</span>	FINAL SURVEY CROSS-SECTION
<span style="color: black;">- - -</span>	DIKE TEMPLATE
<span style="color: green;">—</span>	NAT GROUND

HORIZONTAL SCALE  
SCALE: 1"= 20'



VERTICAL SCALE  
SCALE: 1"= 10'



REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUx BRIDGE, LA. 70517

OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

FEDERAL PROJECT NUMBER: N/A

CROSS SECTIONS  
SEGMENT NO. 1

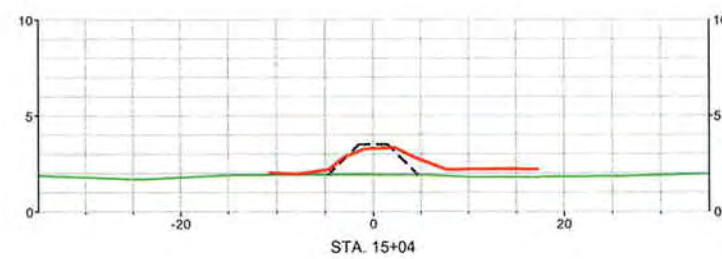
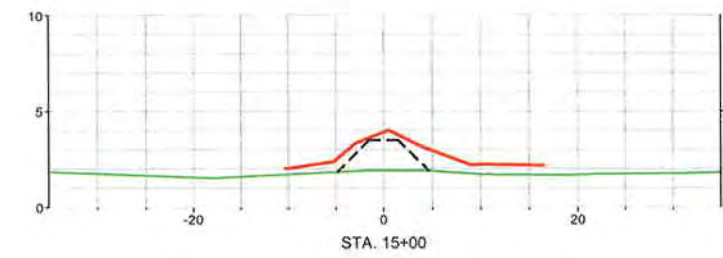
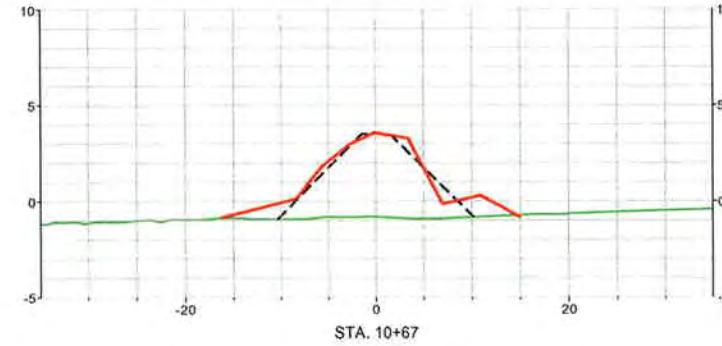
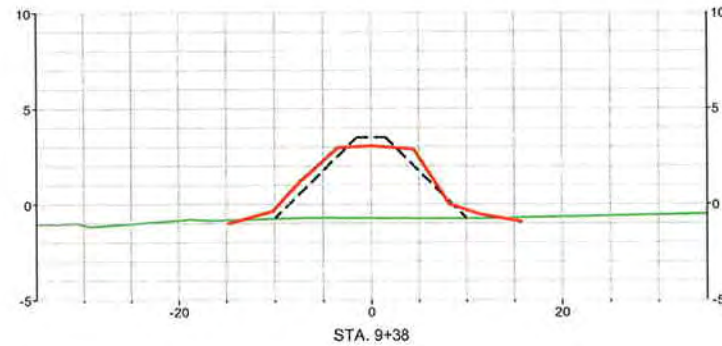
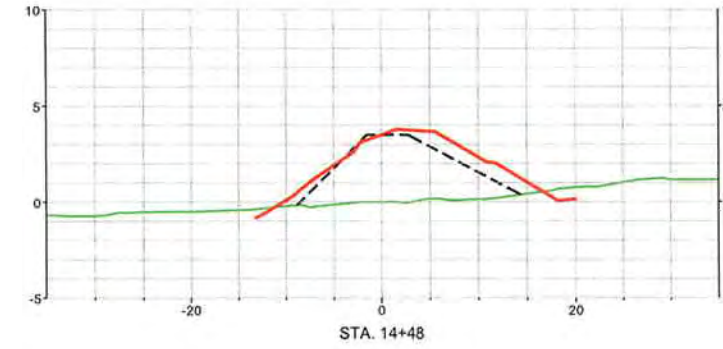
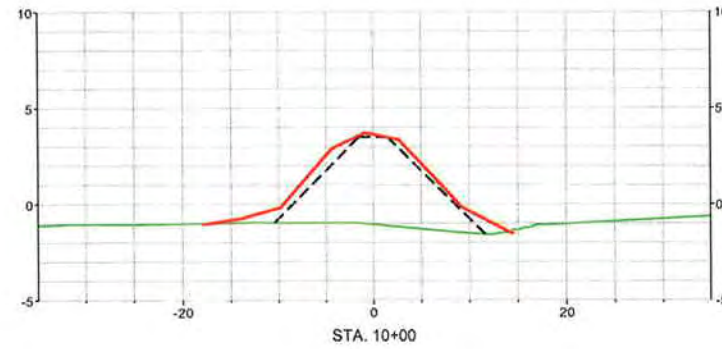
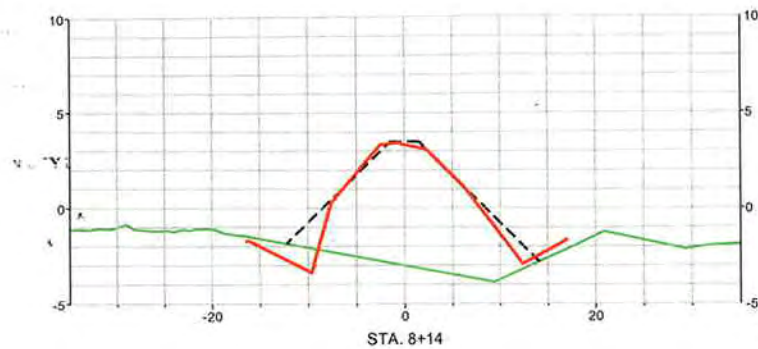
DATE: 02/13/09

DRAWN BY:

DESIGNED BY:

APPROVED BY:

SHEET 75 OF 30



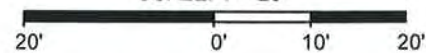
#### NOTES:

1. ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
2. ELEVATIONS ARE BASED ON NAVD 88 US SURVEY FEET (GEOID 99) AS DERIVED FROM PROJECT CONTROL.
3. TOPOGRAPHIC SURVEY DATA ACQUISITION PERFORMED WITH RTK AND CONVENTIONAL SURVEY METHODS.
4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
5. FINAL SURVEY DATA ACQUISITION WAS PERFORMED MARCH 29, 2010.

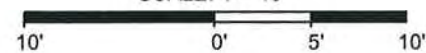
#### LEGEND

- FINAL SURVEY CROSS-SECTION
- - - DIKE TEMPLATE
- NAT GROUND

HORIZONTAL SCALE  
SCALE: 1"= 20'



VERTICAL SCALE  
SCALE: 1"= 10'



REV.	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA. 70517

OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

FEDERAL PROJECT NUMBER: N/A

CROSS SECTIONS  
SEGMENT NO. 1

DATE: 02/13/09

SHEET 7c OF 30

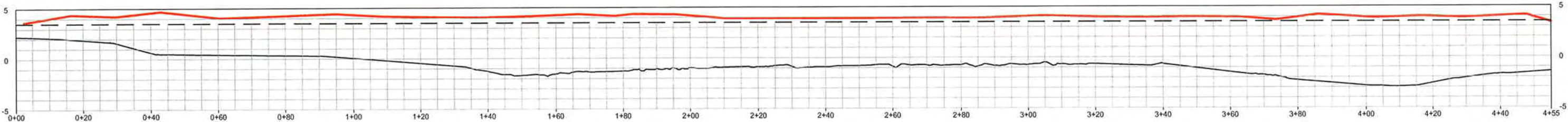
DRAWN BY:

DESIGNED BY:

APPROVED BY:



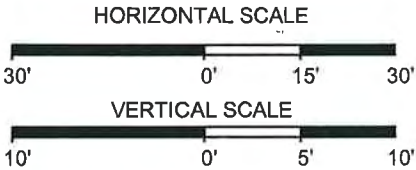
Profile View of Revised Centerline



NOTES:

- 1. ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
- 2. ELEVATIONS ARE BASED ON NAVD 88 US SURVEY FEET (GEOID 99) AS DERIVED FROM PROJECT CONTROL.
- 3. TOPOGRAPHIC SURVEY DATA ACQUISITION PERFORMED WITH RTK AND CONVENTIONAL SURVEY METHODS.
- 4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
- 5. FINAL SURVEY DATA ACQUISITION WAS PERFORMED APRIL 14, 2010.

LEGEND	
<div></div>	FINAL DIKE CENTERLINE
<div></div>	DIKE TEMPLATE
<div></div>	BD SURVEY



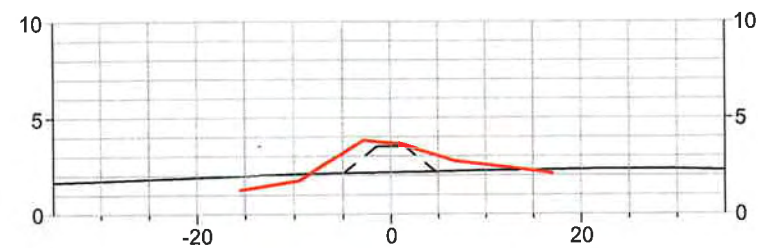
REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



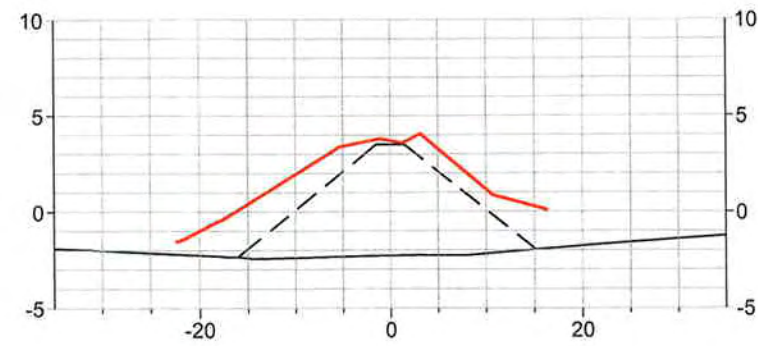
ASBUILT DRAWING

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA. 70517

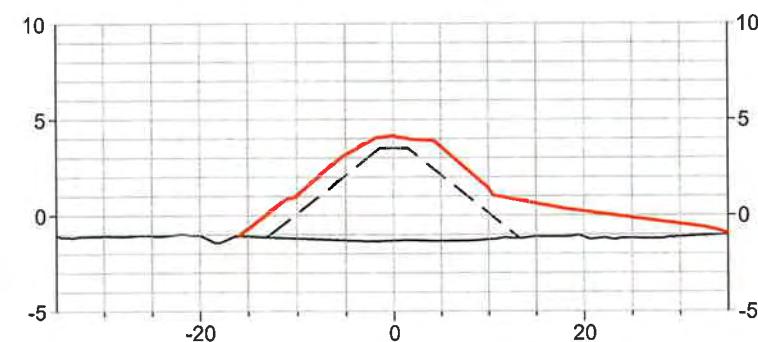
OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW)	DIKE CENTERLINE PROFILE SEGMENT NO. 2A
		STATE PROJECT NUMBER: TE-43(EB)	
		FEDERAL PROJECT NUMBER: N/A	DATE: 02/13/09
DRAWN BY:		DESIGNED BY:	SHEET 8a OF 30



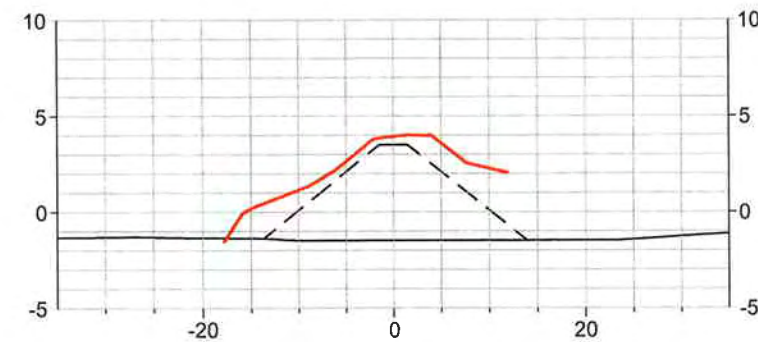
STA. 0+05



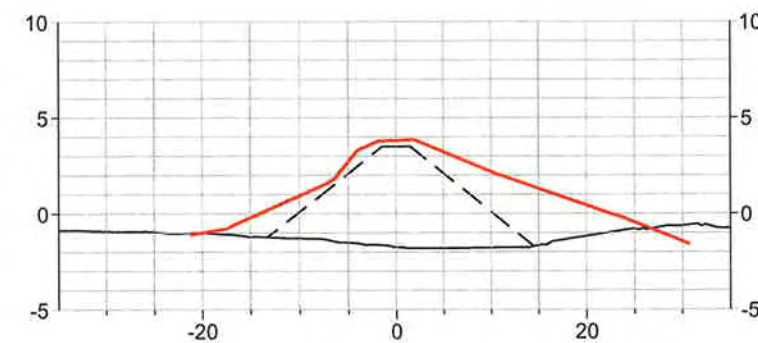
STA. 4+25



STA. 1+68



STA. 4+52



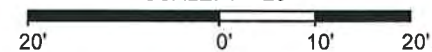
STA. 3+68

NOTES:

1. ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
2. ELEVATIONS ARE BASED ON NAVD 88 US SURVEY FEET (GEOID 99) AS DERIVED FROM PROJECT CONTROL.
3. TOPOGRAPHIC SURVEY DATA ACQUISITION PERFORMED WITH RTK AND CONVENTIONAL SURVEY METHODS.
4. THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
5. FINAL SURVEY DATA ACQUISITION WAS PERFORMED APRIL 14, 2010.

LEGEND	
<span style="color: red;">—</span>	FINAL DIKE CROSS-SECTIONS
- - -	DIKE TEMPLATE
—	BD SURVEY

HORIZONTAL SCALE  
SCALE: 1"= 20'



VERTICAL SCALE  
SCALE: 1"= 10'



REV.	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



ASBUILT DRAWING

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA. 70517

OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)

STATE PROJECT NUMBER: TE-43(EB)

FEDERAL PROJECT NUMBER: N/A

APPROVED BY:

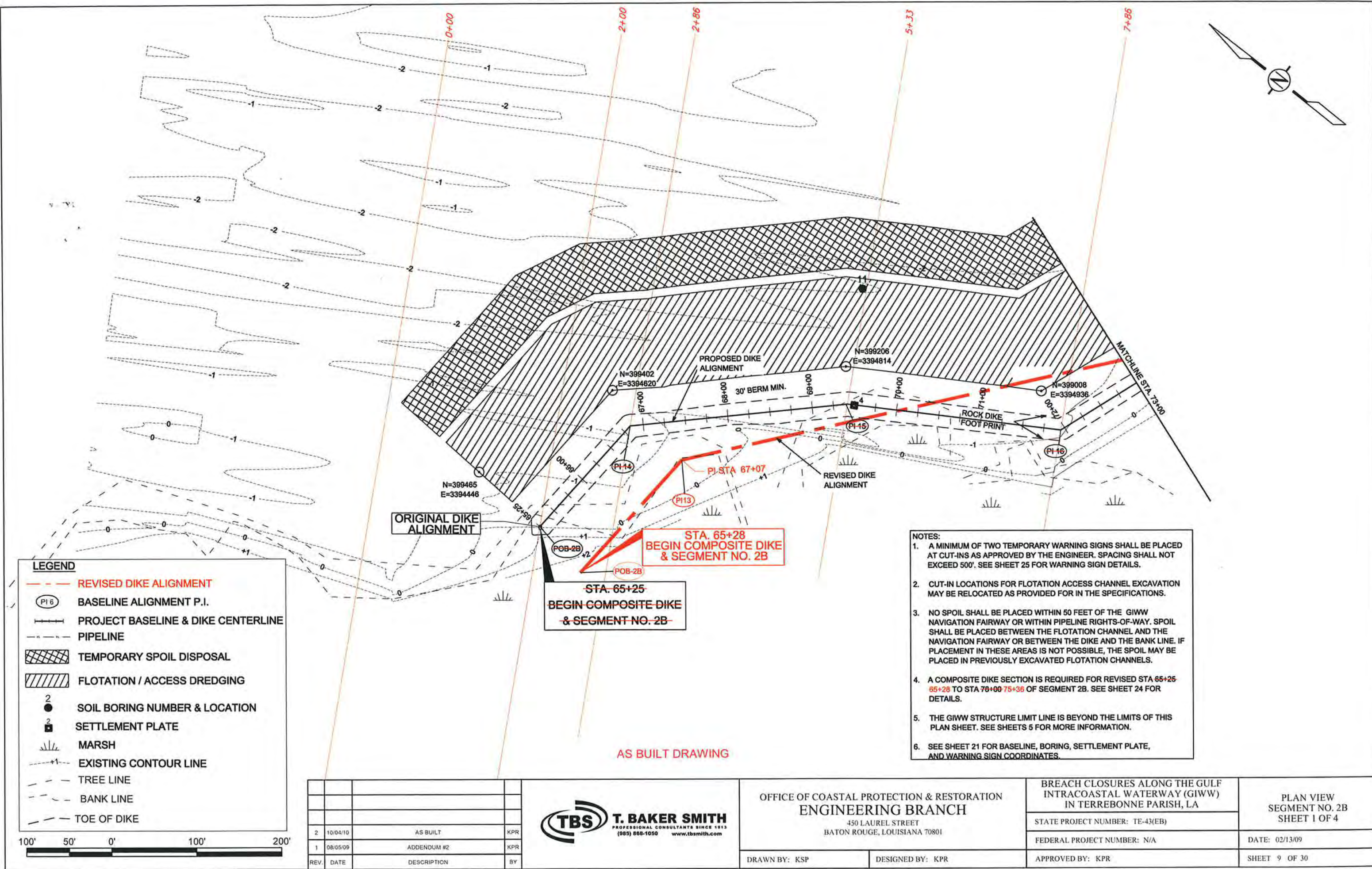
DIKE CENTERLINE PROFILE  
SEGMENT NO. 2A

DATE: 02/13/09

SHEET 8b OF 30

DRAWN BY:

DESIGNED BY:



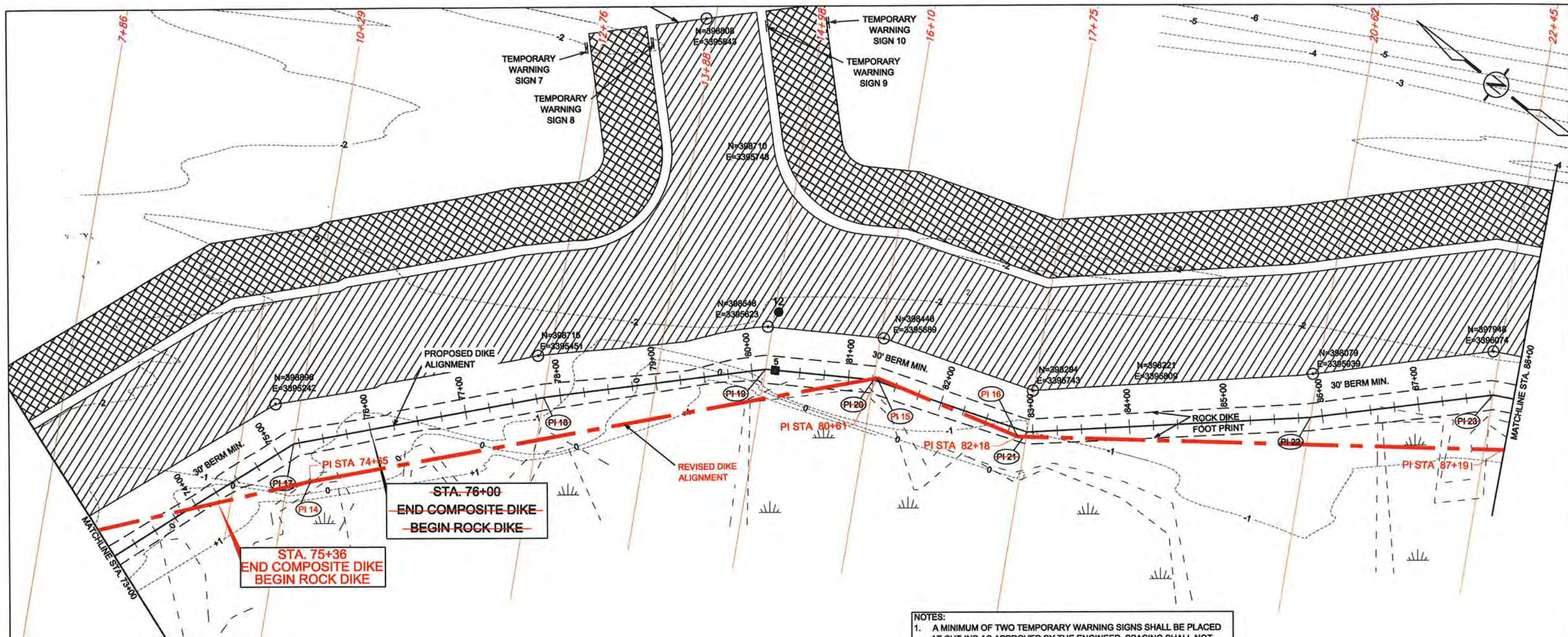
- LEGEND**
- REVISED DIKE ALIGNMENT
  - PI-6 BASELINE ALIGNMENT P.I.
  - PROJECT BASELINE & DIKE CENTERLINE
  - PIPELINE
  - TEMPORARY SPOIL DISPOSAL
  - FLOTATION / ACCESS DREDGING
  - 2 SOIL BORING NUMBER & LOCATION
  - 2 SETTLEMENT PLATE
  - MARSH
  - +1 EXISTING CONTOUR LINE
  - TREE LINE
  - BANK LINE
  - TOE OF DIKE



REV.	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA	PLAN VIEW SEGMENT NO. 2B SHEET 1 OF 4
DRAWN BY: KSP		DESIGNED BY: KPR	DATE: 02/13/09
APPROVED BY: KPR		STATE PROJECT NUMBER: TE-43(EB)	SHEET 9 OF 30
		FEDERAL PROJECT NUMBER: N/A	



**LEGEND**

- **REVISED DIKE ALIGNMENT**
- PI 6 **BASELINE ALIGNMENT P.I.**
- PROJECT BASELINE & DIKE CENTERLINE**
- PIPELINE**
- TEMPORARY SPOIL DISPOSAL**
- FLOTATION / ACCESS DREDGING**
- SOIL BORING NUMBER & LOCATION**
- SETTLEMENT PLATE**
- MARSH**
- EXISTING CONTOUR LINE**
- TREE LINE**
- BANK LINE**
- TOE OF DIKE**



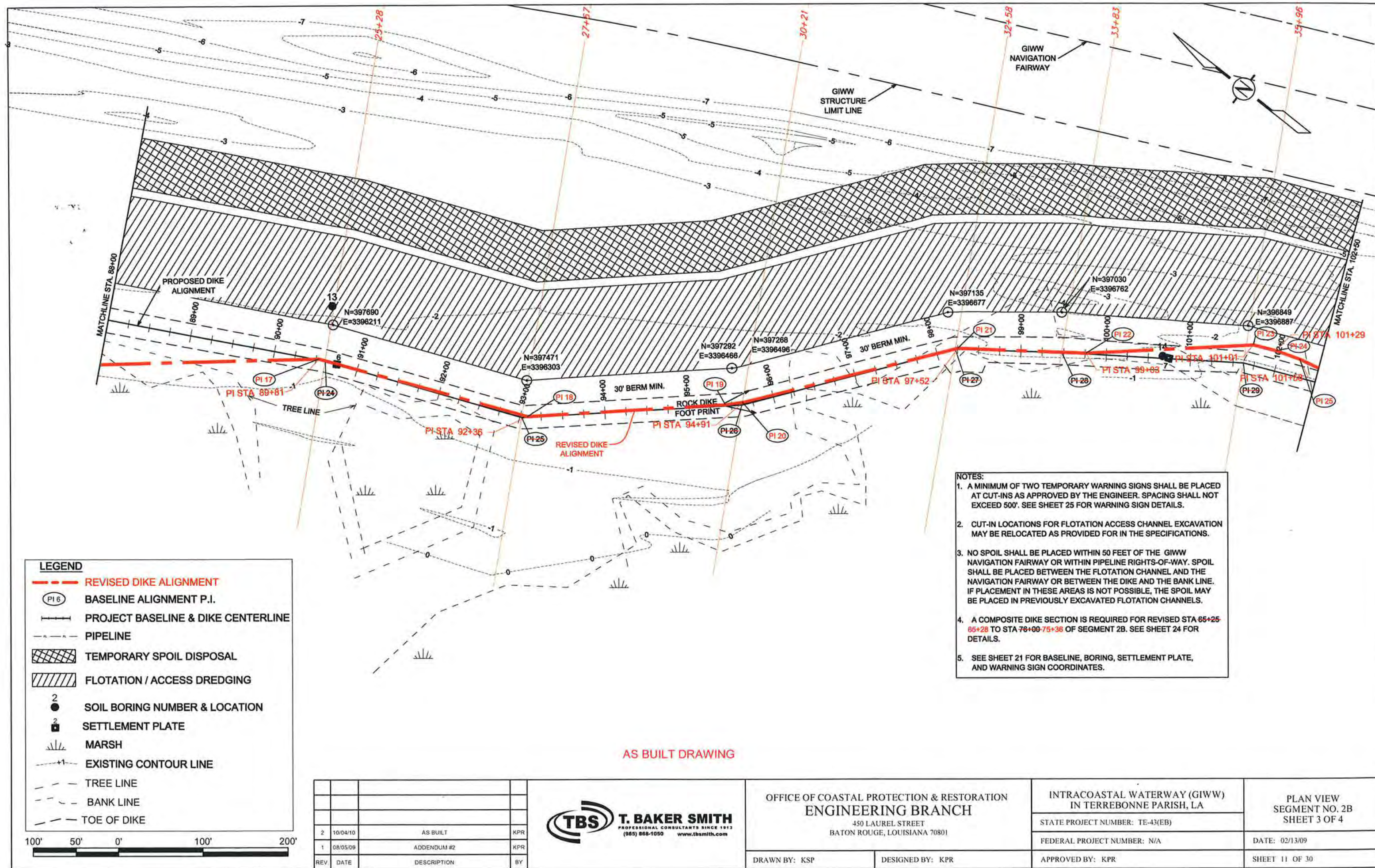
AS BUILT DRAWING

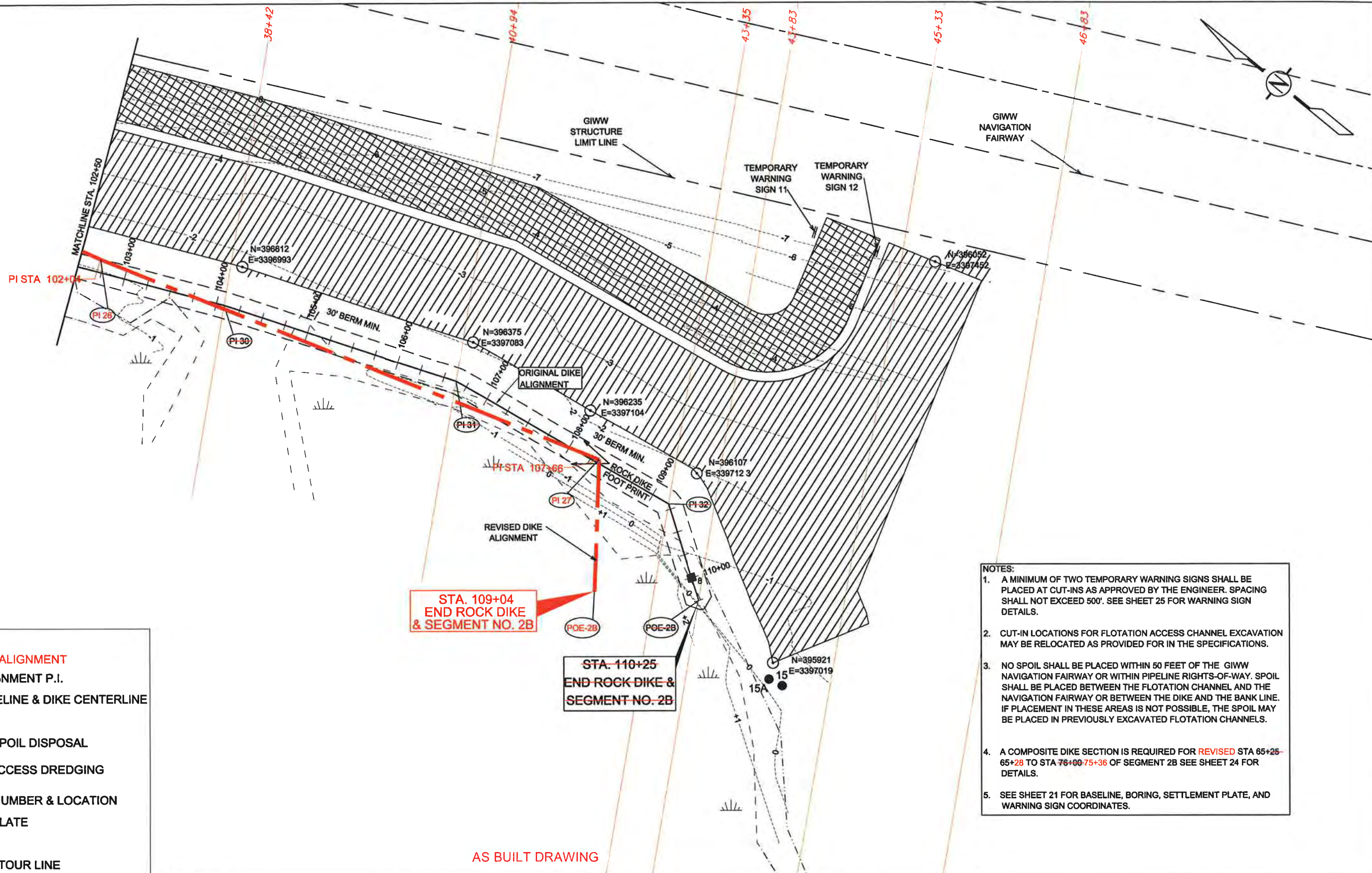
- NOTES:**
1. A MINIMUM OF TWO TEMPORARY WARNING SIGNS SHALL BE PLACED AT CUT-INS AS APPROVED BY THE ENGINEER. SPACING SHALL NOT EXCEED 500'. SEE SHEET 25 FOR WARNING SIGN DETAILS.
  2. CUT-IN LOCATIONS FOR FLOTATION ACCESS CHANNEL EXCAVATION MAY BE RELOCATED AS PROVIDED FOR IN THE SPECIFICATIONS.
  3. NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE GIWW NAVIGATION FAIRWAY OR WITHIN PIPELINE RIGHTS-OF-WAY. SPOIL SHALL BE PLACED BETWEEN THE FLOTATION CHANNEL AND THE NAVIGATION FAIRWAY OR BETWEEN THE DIKE AND THE BANK LINE. IF PLACEMENT IN THESE AREAS IS NOT POSSIBLE, THE SPOIL MAY BE PLACED IN PREVIOUSLY EXCAVATED FLOTATION CHANNELS.
  4. A COMPOSITE DIKE SECTION IS REQUIRED FOR REVISED STA 85+28 TO STA 85+25 TO STA 78+00 75+86 OF SEGMENT 2B. SEE SHEET 24 FOR DETAILS.
  5. THE GIWW STRUCTURE LIMIT LINE IS BEYOND THE LIMITS OF THIS PLAN SHEET. SEE SHEETS 5 FOR MORE INFORMATION.
  6. SEE SHEET 21 FOR BASELINE, BORING, SETTLEMENT PLATE, AND WARNING SIGN COORDINATES.

REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR

**T. BAKER SMITH**  
PROFESSIONAL CONSULTANTS SINCE 1913  
(855) 868-1050 www.tbsmith.com

<b>OFFICE OF COASTAL PROTECTION &amp; RESTORATION ENGINEERING BRANCH</b> <small>450 LAUREL STREET BATON ROUGE, LOUISIANA 70801</small>		<b>BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA</b>		<b>PLAN VIEW SEGMENT NO. 2B SHEET 2 OF 4</b>	
		STATE PROJECT NUMBER: TE-43(EB)		DATE: 02/13/09	
DRAWN BY: KSP		DESIGNED BY: KPR		APPROVED BY: KPR	
				FEDERAL PROJECT NUMBER: N/A	
				SHEET 10 OF 30	





- NOTES:
1. A MINIMUM OF TWO TEMPORARY WARNING SIGNS SHALL BE PLACED AT CUT-INS AS APPROVED BY THE ENGINEER. SPACING SHALL NOT EXCEED 500'. SEE SHEET 25 FOR WARNING SIGN DETAILS.
  2. CUT-IN LOCATIONS FOR FLOTATION ACCESS CHANNEL EXCAVATION MAY BE RELOCATED AS PROVIDED FOR IN THE SPECIFICATIONS.
  3. NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE GIWW NAVIGATION FAIRWAY OR WITHIN PIPELINE RIGHTS-OF-WAY. SPOIL SHALL BE PLACED BETWEEN THE FLOTATION CHANNEL AND THE NAVIGATION FAIRWAY OR BETWEEN THE DIKE AND THE BANK LINE. IF PLACEMENT IN THESE AREAS IS NOT POSSIBLE, THE SPOIL MAY BE PLACED IN PREVIOUSLY EXCAVATED FLOTATION CHANNELS.
  4. A COMPOSITE DIKE SECTION IS REQUIRED FOR REVISED STA 65+25-65+28 TO STA 76+00-75+36 OF SEGMENT 2B SEE SHEET 24 FOR DETAILS.
  5. SEE SHEET 21 FOR BASELINE, BORING, SETTLEMENT PLATE, AND WARNING SIGN COORDINATES.

AS BUILT DRAWING

**LEGEND**

- REVISED DIKE ALIGNMENT
- PI 6 BASELINE ALIGNMENT P.I.
- PROJECT BASELINE & DIKE CENTERLINE
- PIPELINE
- TEMPORARY SPOIL DISPOSAL
- FLOTATION / ACCESS DREDGING
- 2 SOIL BORING NUMBER & LOCATION
- 2 SETTLEMENT PLATE
- MARSH
- EXISTING CONTOUR LINE
- TREE LINE
- BANK LINE
- TOE OF DIKE

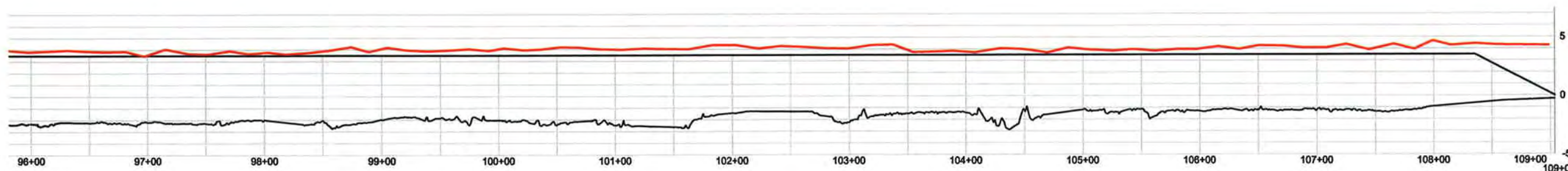
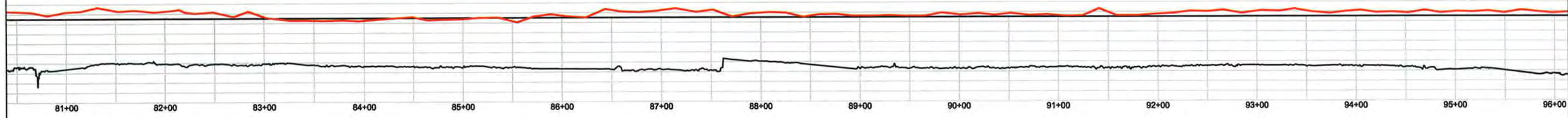
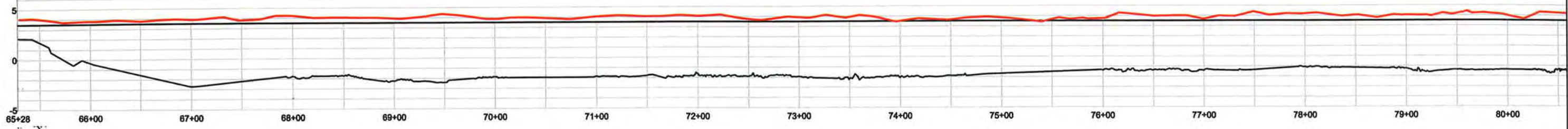


REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	09/05/09	ADDENDUM #2	KPR

**TBS T. BAKER SMITH**  
 PROFESSIONAL CONSULTANTS SINCE 1913  
 (985) 898-1050 www.tbsmith.com

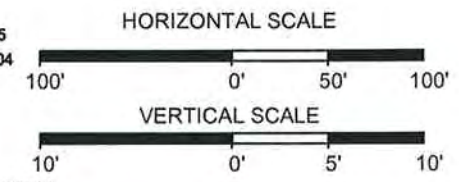
OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA		PLAN VIEW SEGMENT NO. 2B SHEET 4 OF 4	
DRAWN BY: KSP		DESIGNED BY: KPR		DATE: 02/13/09	
APPROVED BY: KPR		FEDERAL PROJECT NUMBER: N/A		SHEET 12 OF 30	
		STATE PROJECT NUMBER: TE-43(EB)			

Profile View of Revised Centerline



**LEGEND**

- FINAL DIKE CENTERLINE
- DIKE TEMPLATE
- BD SURVEY



- NOTES:
- ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
  - ELEVATIONS ARE BASED ON NAVD 88 US SURVEY FEET (GEOID 99) AS DERIVED FROM PROJECT CONTROL.
  - TOPOGRAPHIC SURVEY DATA ACQUISITION PERFORMED WITH RTK AND CONVENTIONAL SURVEY METHODS.
  - THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
  - FINAL SURVEY DATA ACQUISITION WAS PERFORMED APRIL 5, 2010 and APRIL 26, 2010. OBSTRUCTION WARNING SIGNS ACQUIRED AUGUST 10, 2010.

REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR

**AS BUILT DRAWING**

**T. BAKER SMITH**  
PROFESSIONAL CONSULTANTS SINCE 1913  
(885) 868-1050 www.tbamlth.com

OFFICE OF COASTAL PROTECTION & RESTORATION  
**ENGINEERING BRANCH**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP      DESIGNED BY: KPR

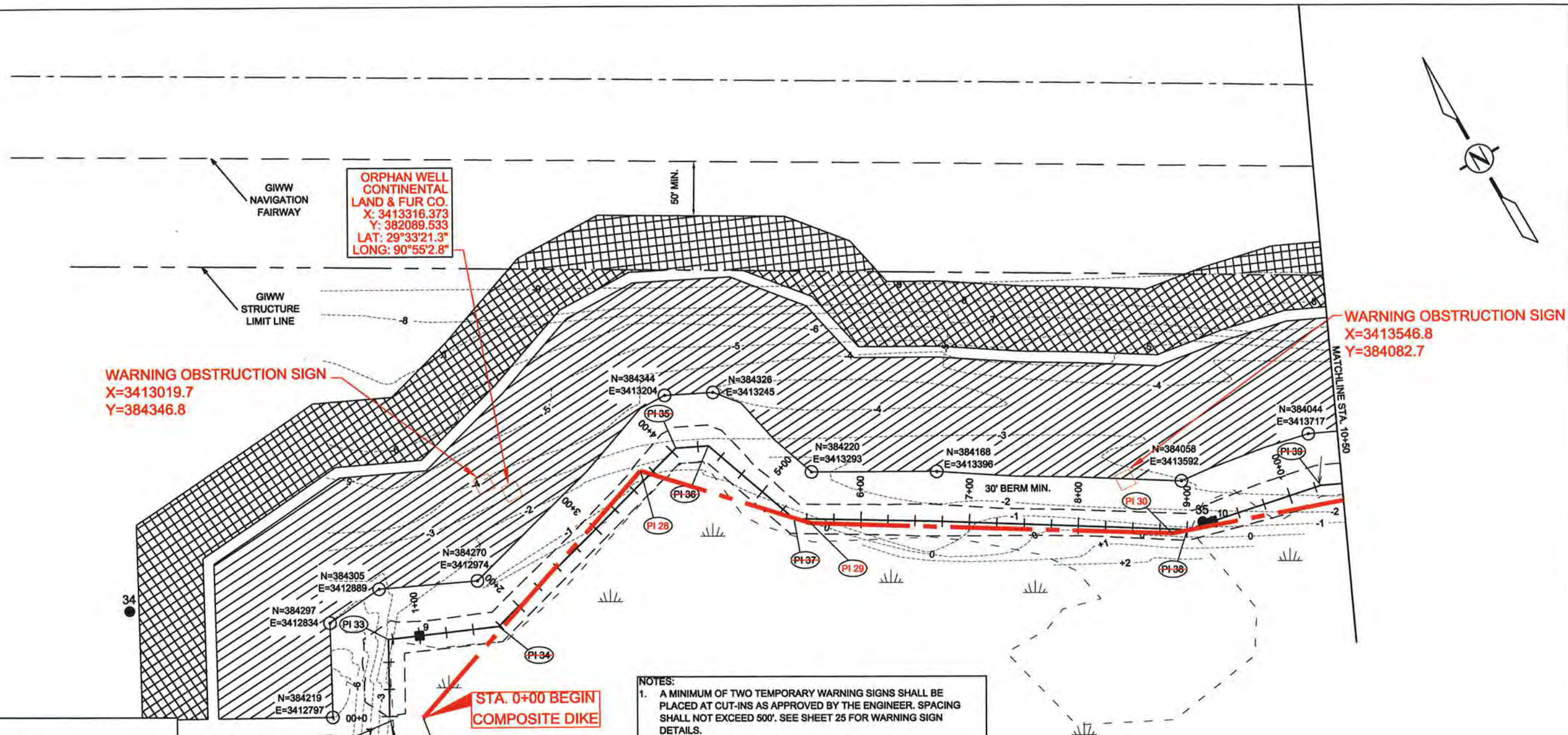
BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)  
FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

PLAN VIEW  
SEGMENT NO. 2B  
SHEET 4 OF 4

DATE: 02/13/09  
SHEET 12a OF 30



AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

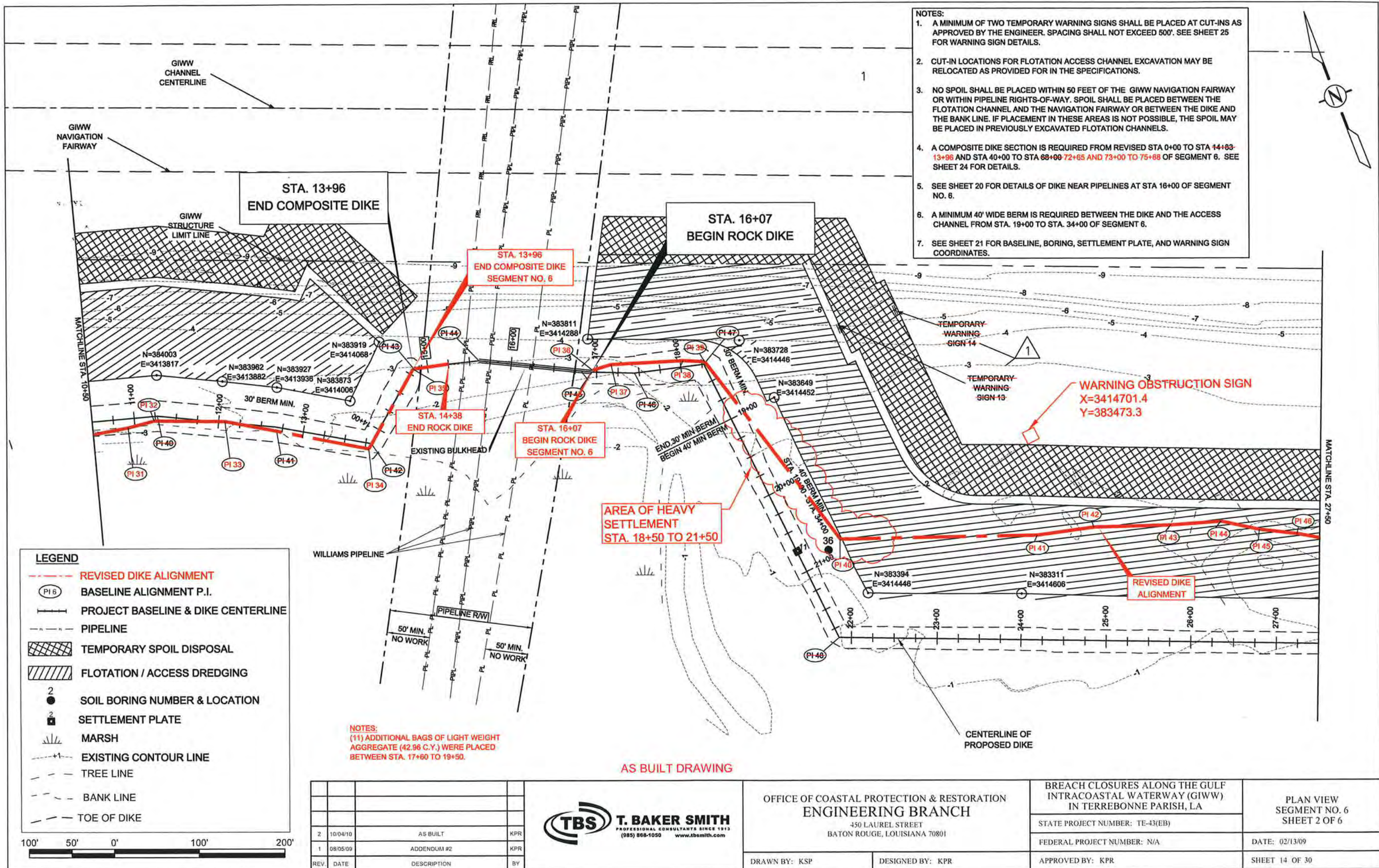
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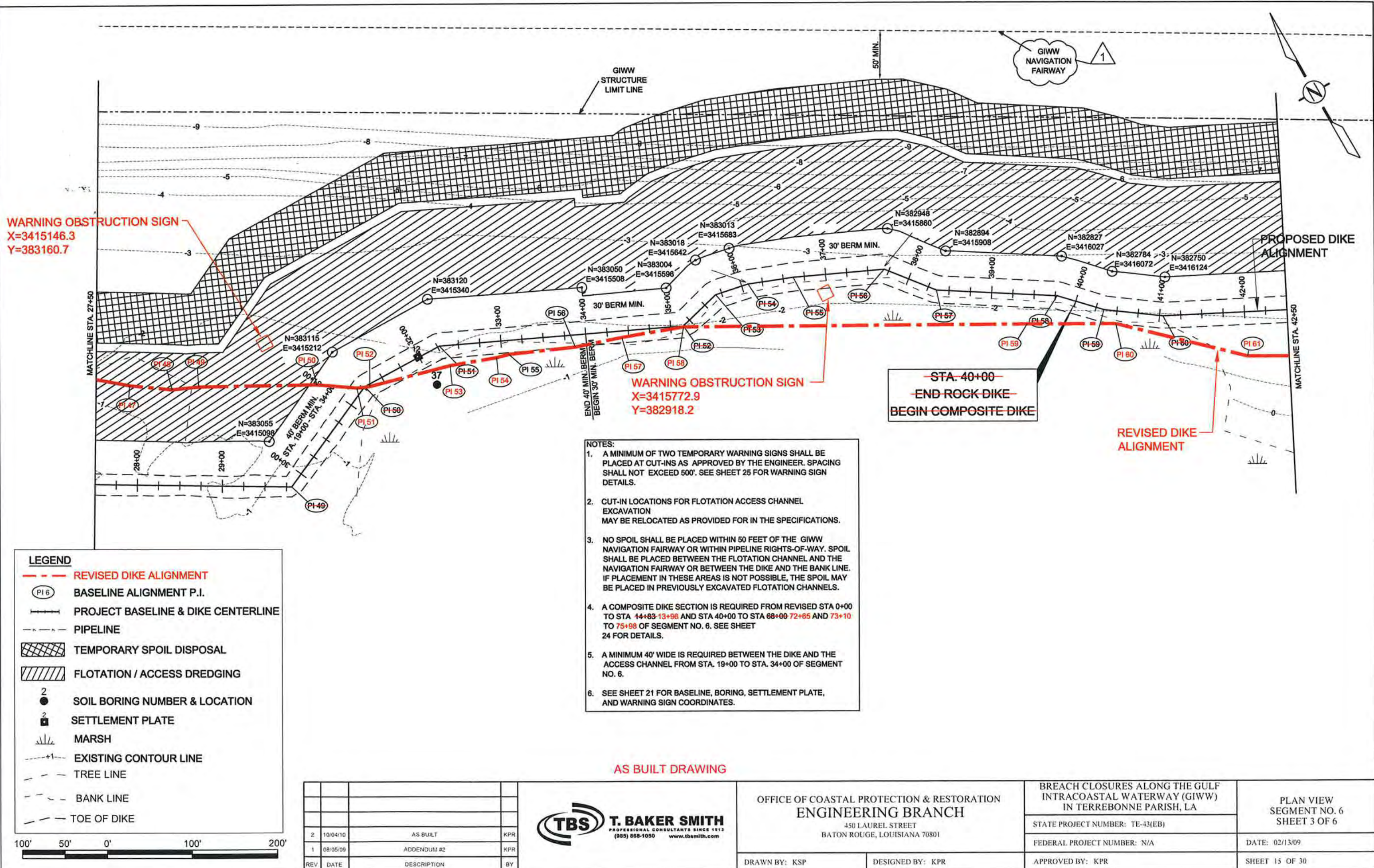
APPROVED BY: KPR

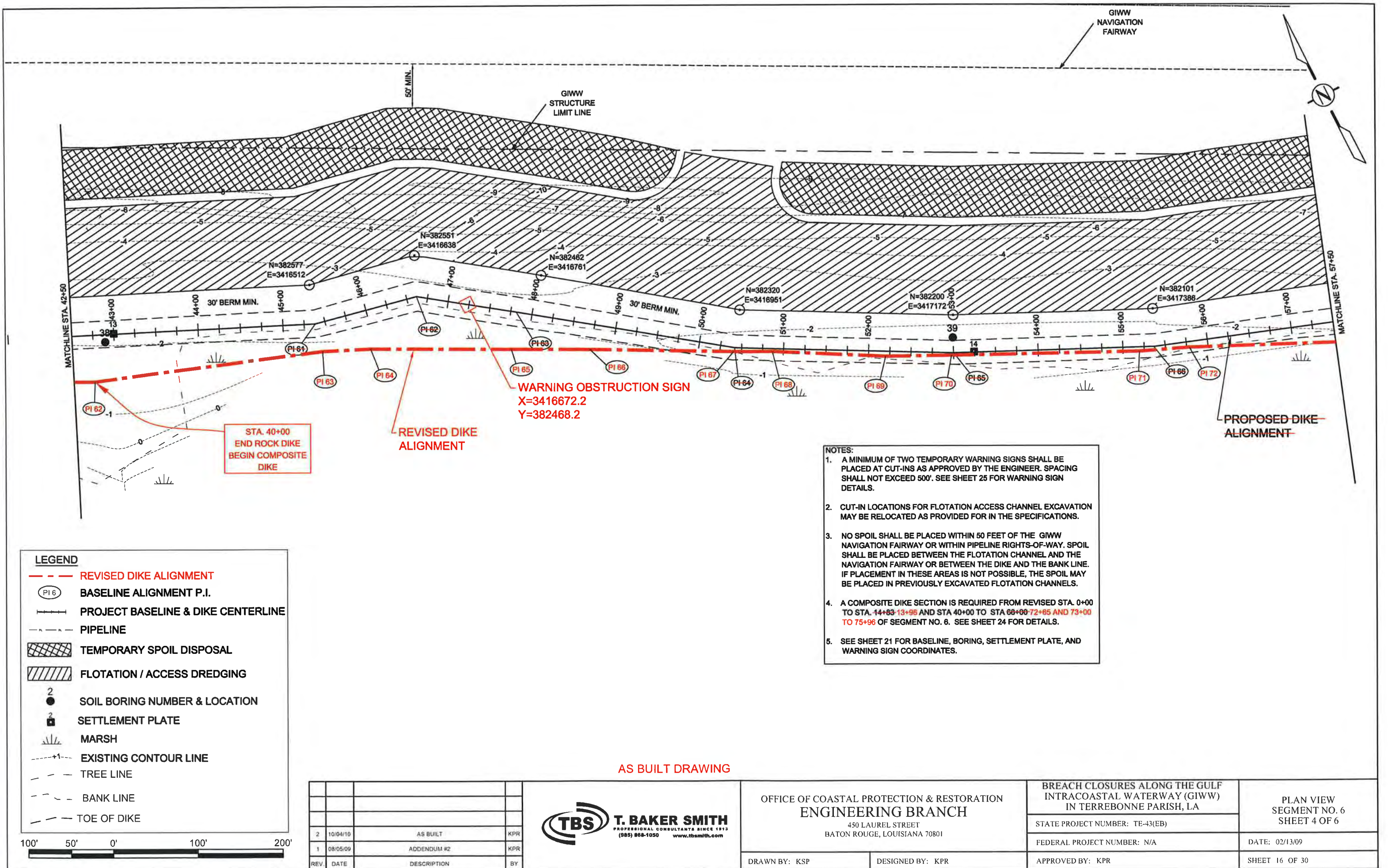
PLAN VIEW  
SEGMENT NO. 6  
SHEET 1 OF 6

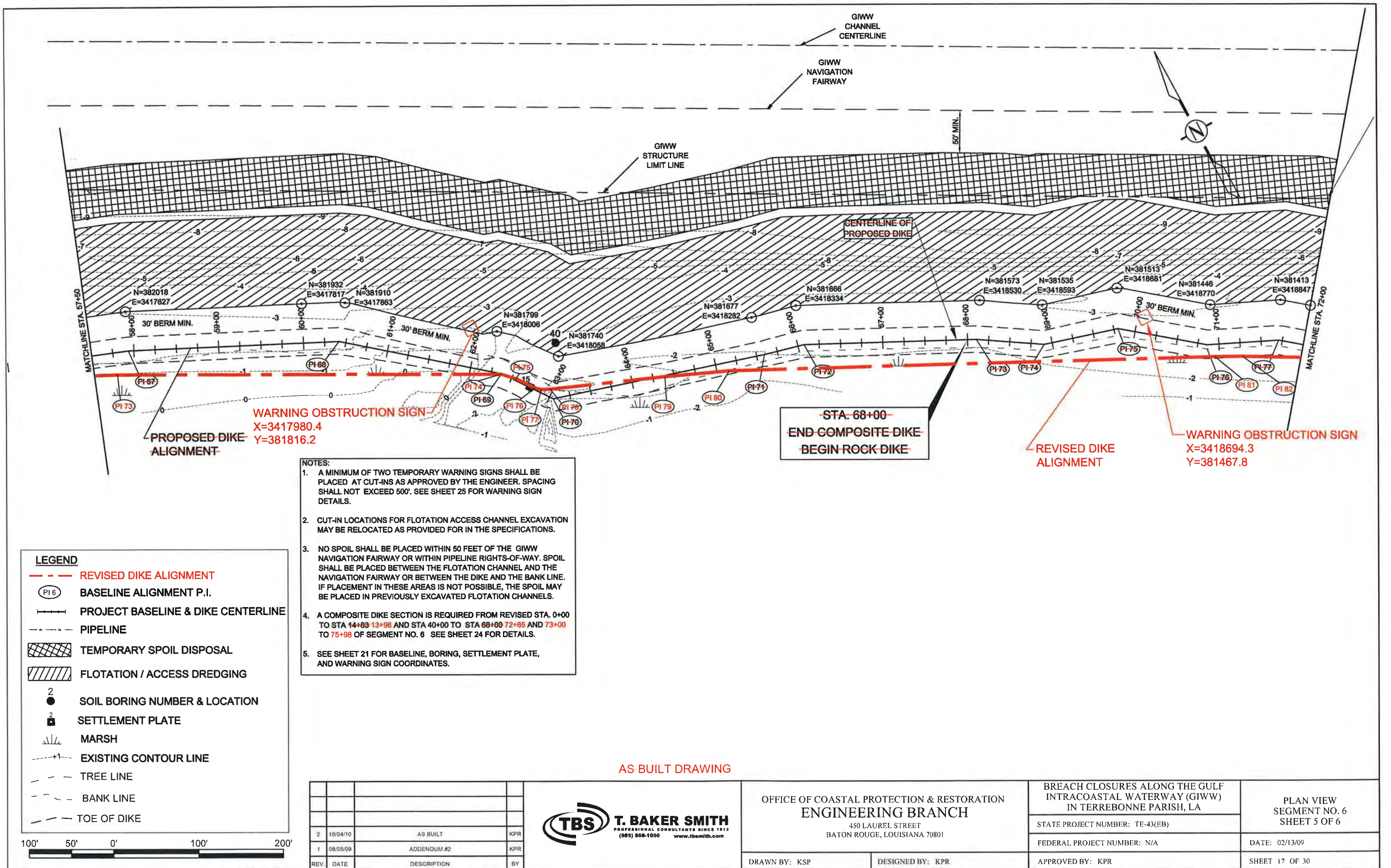
DATE: 02/13/09

SHEET 13 OF 30









- NOTES:
1. A MINIMUM OF TWO TEMPORARY WARNING SIGNS SHALL BE PLACED AT CUT-INS AS APPROVED BY THE ENGINEER. SPACING SHALL NOT EXCEED 500'. SEE SHEET 25 FOR WARNING SIGN DETAILS.
  2. CUT-IN LOCATIONS FOR FLOTATION ACCESS CHANNEL EXCAVATION MAY BE RELOCATED AS PROVIDED FOR IN THE SPECIFICATIONS.
  3. NO SPOIL SHALL BE PLACED WITHIN 50 FEET OF THE GIWW NAVIGATION FAIRWAY OR WITHIN PIPELINE RIGHTS-OF-WAY. SPOIL SHALL BE PLACED BETWEEN THE FLOTATION CHANNEL AND THE NAVIGATION FAIRWAY OR BETWEEN THE DIKE AND THE BANK LINE. IF PLACEMENT IN THESE AREAS IS NOT POSSIBLE, THE SPOIL MAY BE PLACED IN PREVIOUSLY EXCAVATED FLOTATION CHANNELS.
  4. A COMPOSITE DIKE SECTION IS REQUIRED FROM REVISED STA. 0+00 TO STA. 14+83.13+98 AND STA. 40+00 TO STA. 68+00 72+85 AND 73+00 TO 75+98 OF SEGMENT NO. 6. SEE SHEET 24 FOR DETAILS.
  5. SEE SHEET 21 FOR BASELINE, BORING, SETTLEMENT PLATE, AND WARNING SIGN COORDINATES.

- LEGEND**
- REVISED DIKE ALIGNMENT
  - (PI 6) BASELINE ALIGNMENT P.I.
  - PROJECT BASELINE & DIKE CENTERLINE
  - PIPELINE
  - TEMPORARY SPOIL DISPOSAL
  - FLOTATION / ACCESS DREDGING
  - 2 SOIL BORING NUMBER & LOCATION
  - 2 SETTLEMENT PLATE
  - MARSH
  - EXISTING CONTOUR LINE
  - TREE LINE
  - BANK LINE
  - TOE OF DIKE

100' 50' 0' 100' 200'

REV.	DATE	DESCRIPTION	BY
2	10/04/10	AS BUILT	KPR
1	08/05/09	ADDENDUM #2	KPR



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

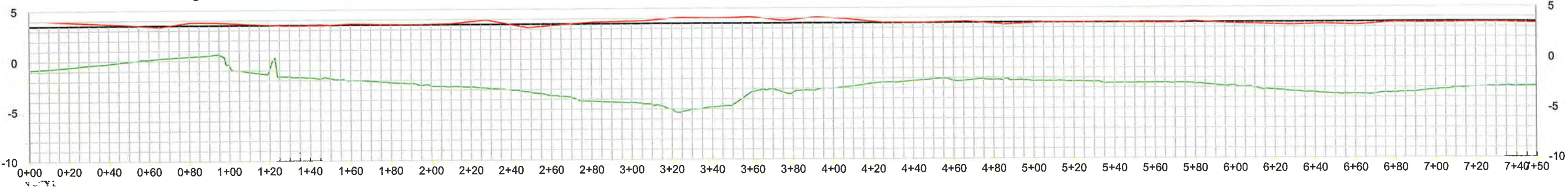
PLAN VIEW  
SEGMENT NO. 6  
SHEET 6 OF 6

DATE: 02/13/09

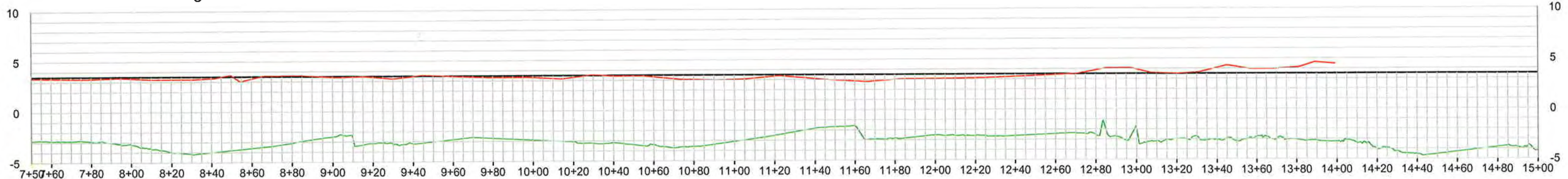
SHEET 18 OF 30

AS BUILT DRAWING

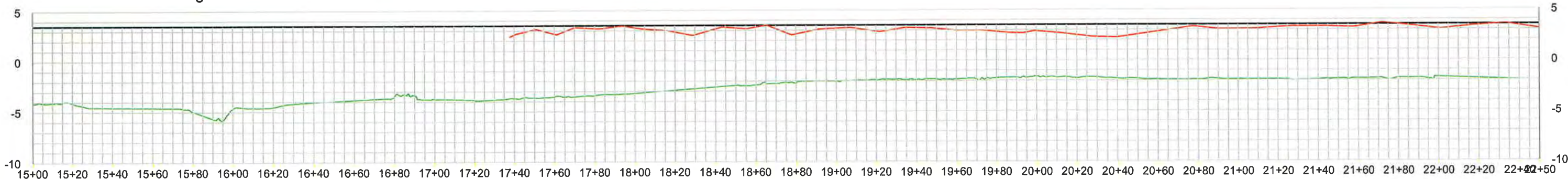
Revised Centerline Alignment



Revised Centerline Alignment



Revised Centerline Alignment



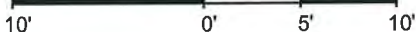
LEGEND

- FINAL SURVEY
- DIKE TEMPLATE
- BD SURVEY

HORIZONTAL SCALE



VERTICAL SCALE



NOTES:

- ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
- ELEVATIONS ARE BASED ON NAVD 88 US SURVEY FEET (GEOID 99) AS DERIVED FROM PROJECT CONTROL.
- TOPOGRAPHIC SURVEY DATA ACQUISITION PERFORMED WITH RTK AND CONVENTIONAL SURVEY METHODS.
- THIS DRAWING INDICATES GENERAL CONDITIONS AT THE TIME OF SURVEY.
- FINAL SURVEY DATA ACQUISITION WAS PERFORMED APRIL 5, 2010 and APRIL 26, 2010. OBSTRUCTION WARNING SIGNS ACQUIRED AUGUST 10, 2010.

AS BUILT DRAWING

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA. 70517

REV	DATE	DESCRIPTION	BY



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

FEDERAL PROJECT NUMBER: N/A

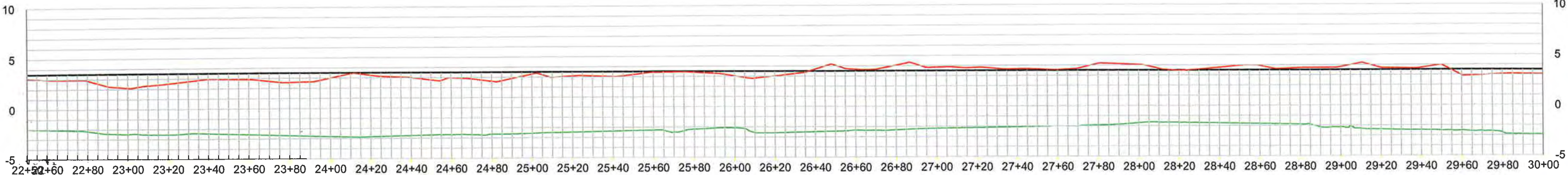
APPROVED BY: KPR

CENTERLINE PROFILE OF  
SEGMENT NO. 6

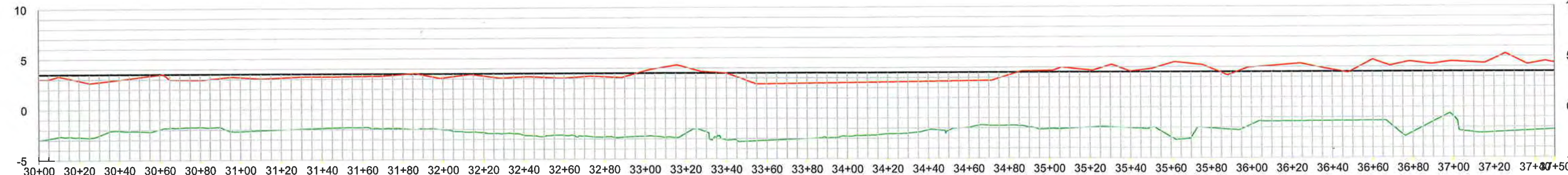
DATE: 02/13/09

SHEET 18a OF 30

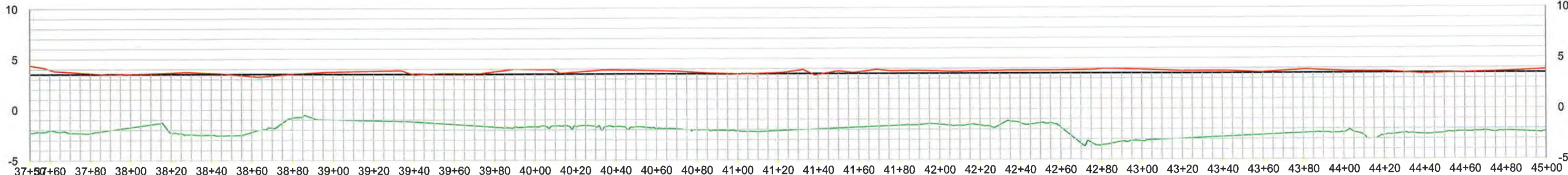
Revised Centerline Alignment



Revised Centerline Alignment



Revised Centerline Alignment



- NOTES:
1. ALL HORIZONTAL COORDINATES ARE BASED ON LOUISIANA SOUTH ZONE - NAD83 HPGN DATUM, US SURVEY FOOT AS DERIVED FROM PROJECT CONTROL VIA GPS KINEMATIC OBSERVATIONS.
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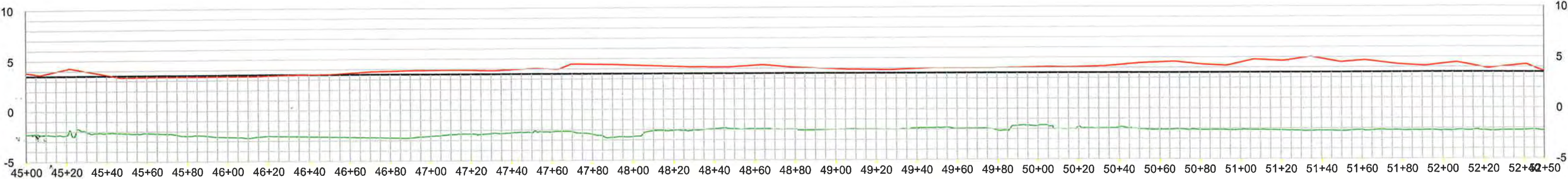
REV.	DATE	DESCRIPTION	BY



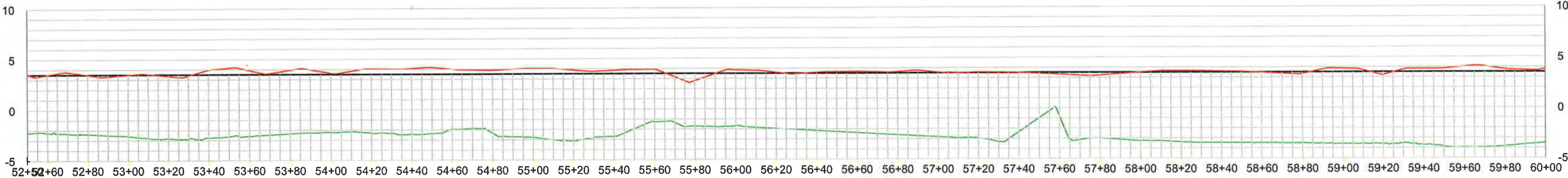
AS BUILT DRAWING      PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA: 70517

OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA		CENTERLINE PROFILE OF SEGMENT NO. 6
		STATE PROJECT NUMBER: TE-43(EB)		
				FEDERAL PROJECT NUMBER: N/A
DRAWN BY: KSP	DESIGNED BY: KPR	APPROVED BY: KPR		SHEET 18b OF 30

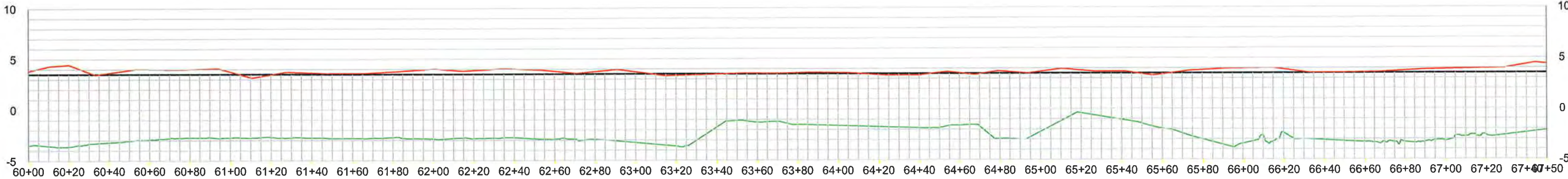
Revised Centerline Alignment



Revised Centerline Alignment



Revised Centerline Alignment



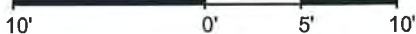
LEGEND

- FINAL SURVEY
- DIKE TEMPLATE
- BD SURVEY

HORIZONTAL SCALE



VERTICAL SCALE



NOTES:

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REV.	DATE	DESCRIPTION	BY

AS BUILT DRAWING

PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA. 70517



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

FEDERAL PROJECT NUMBER: N/A

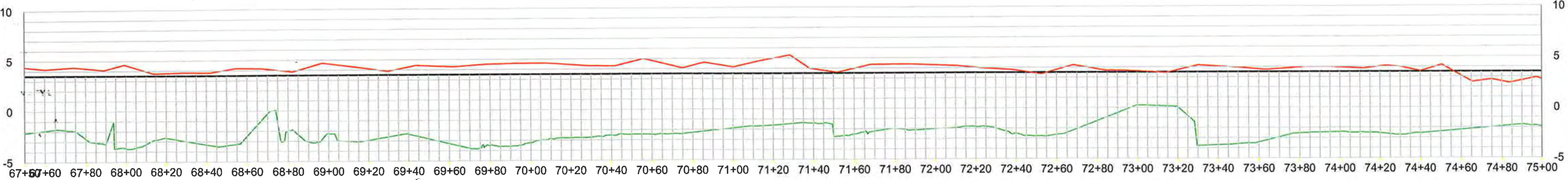
APPROVED BY: KPR

CENTERLINE PROFILE OF  
SEGMENT NO. 6

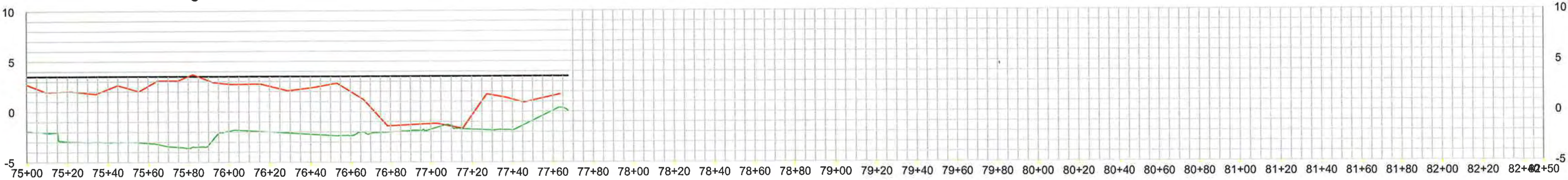
DATE: 02/13/09

SHEET 18c OF 30

Revised Centerline Alignment



Revised Centerline Alignment

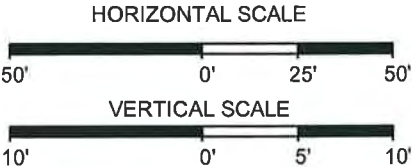


LEGEND

FINAL SURVEY

DIKE TEMPLATE

BD SURVEY



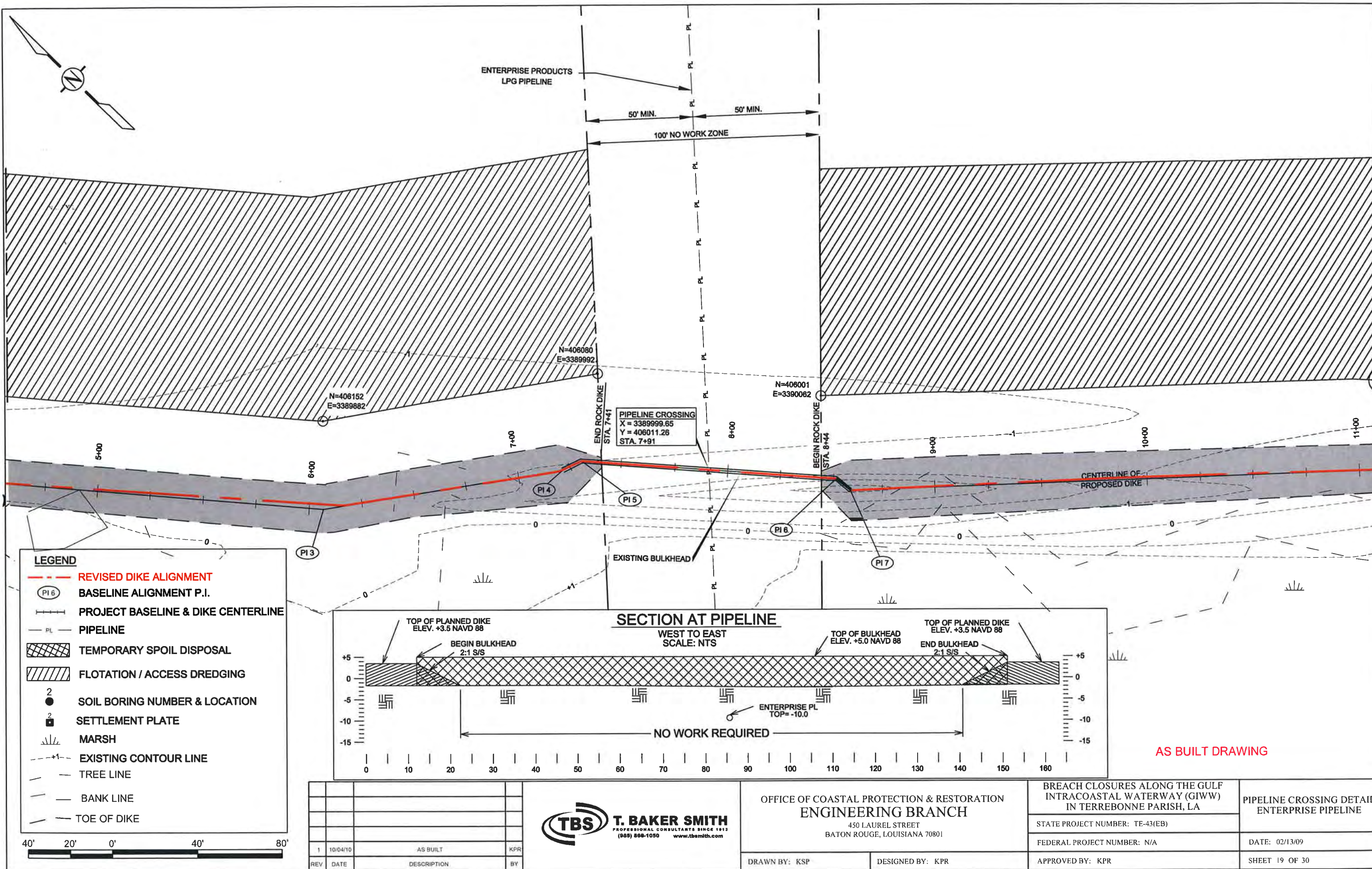
- NOTES:
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REV.	DATE	DESCRIPTION	BY

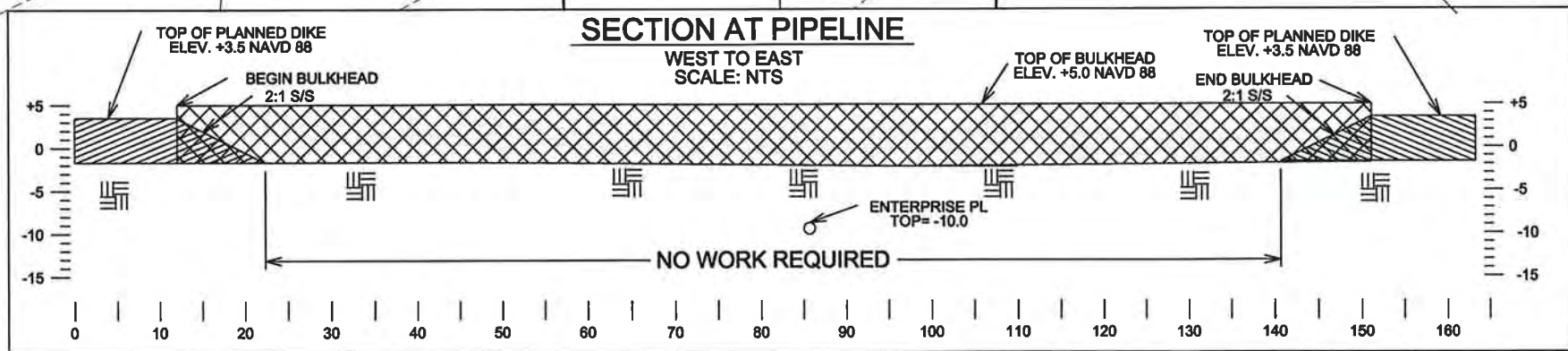


AS BUILT DRAWING      PREPARED BY: HYDROTERRA TECHNOLOGIES, LLC. - 1129 HUVAL LANE, BREAUX BRIDGE, LA. 70517

OFFICE OF COASTAL PROTECTION & RESTORATION ENGINEERING BRANCH 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801		BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA		CENTERLINE PROFILE OF SEGMENT NO. 6
		STATE PROJECT NUMBER: TE-43(EB)		
				FEDERAL PROJECT NUMBER: N/A
DRAWN BY: KSP	DESIGNED BY: KPR	APPROVED BY: KPR		SHEET 18d OF 30

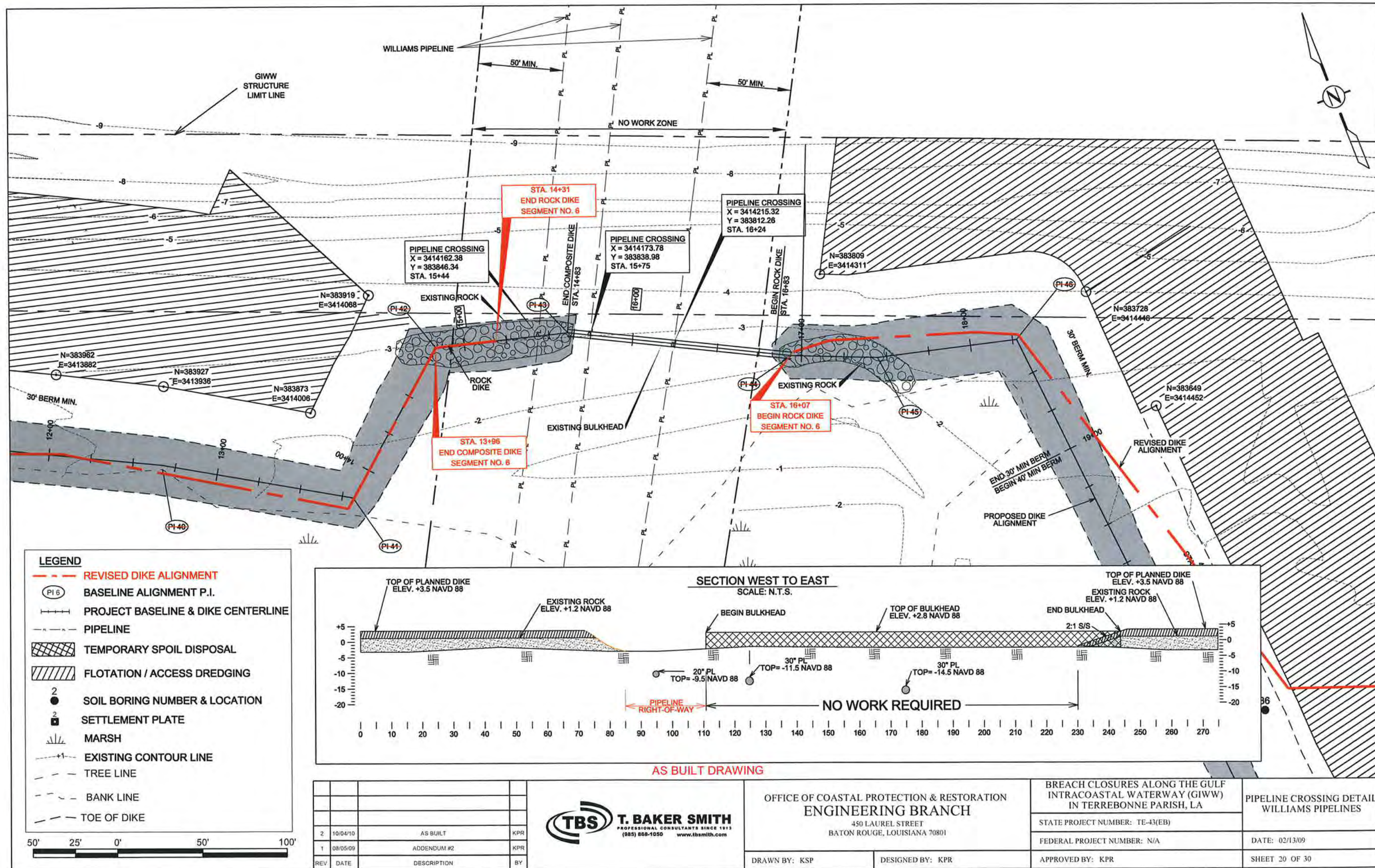


- LEGEND**
- REVISED DIKE ALIGNMENT
  - PI 6 BASELINE ALIGNMENT P.I.
  - PROJECT BASELINE & DIKE CENTERLINE
  - PL PIPELINE
  - TEMPORARY SPOIL DISPOSAL
  - FLOTATION / ACCESS DREDGING
  - 2 SOIL BORING NUMBER & LOCATION
  - 2 SETTLEMENT PLATE
  - MARSH
  - EXISTING CONTOUR LINE
  - TREE LINE
  - BANK LINE
  - TOE OF DIKE



AS BUILT DRAWING

<div><div>TBS</div><div>T. BAKER SMITH</div><div>PROFESSIONAL CONSULTANTS SINCE 1913</div><div>(985) 866-1050 www.tbsmith.com</div></div>	<div>OFFICE OF COASTAL PROTECTION &amp; RESTORATION</div> <div>ENGINEERING BRANCH</div> <div>450 LAUREL STREET</div> <div>BATON ROUGE, LOUISIANA 70801</div>
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DIKE CENTERLINE SEGMENT 1				
SEG. #	PI #	STATION	NORTHING	EASTING
1	POB-1	0+00	406602.51	3389498.38
1		0+00	406514.90	3389463.00
1		0+47	406492.60	3389504.40
1		0+60	406484.20	3389514.90
1	1	1+01	406505.04	3389524.99
1	2	3+59	406303.96	3389686.67
1		5+66	406116.30	3389862.00
1		6+81	406055.00	3389958.70
1	3	6+07	406121.36	3389853.85
1		6+69	406058.70	3389947.50
1		8+10	405958.50	3390042.10
1		8+51	405967.24	3390040.85
1	7	8+60	405958.76	3390041.87
1		9+37	405867.40	3390139.40
1		10+67	405791.10	3390237.00
1	8	11+11	405795.28	3390232.12
1	9	13+60	405618.44	3390408.40
1		14+48	405518.10	3390502.70
1		15+05	405462.20	3390489.60
1	10	15+12	405520.99	3390524.33
1	POE-1	15+55	405482.69	3390544.90

DIKE CENTERLINE SEGMENT 2A				
SEG. #	PI #	STATION	NORTHING	EASTING
2a	POB-2A	0+00	404775.45	3391574.45
2a		0+00	404619.50	3391660.30
2a	11	1+02	404788.06	3391675.78
2a		1+77	404657.60	3391833.30
2a	12	3+57	404632.20	3391877.46
2a		3+67	404494.70	3391931.20
2a		4+13	404452.20	3391913.50
2a		4+55	404411.50	3391904.10
2a	13	5+00	404500.97	3391934.26
2a	POE-2A	5+34	404467.74	3391926.64

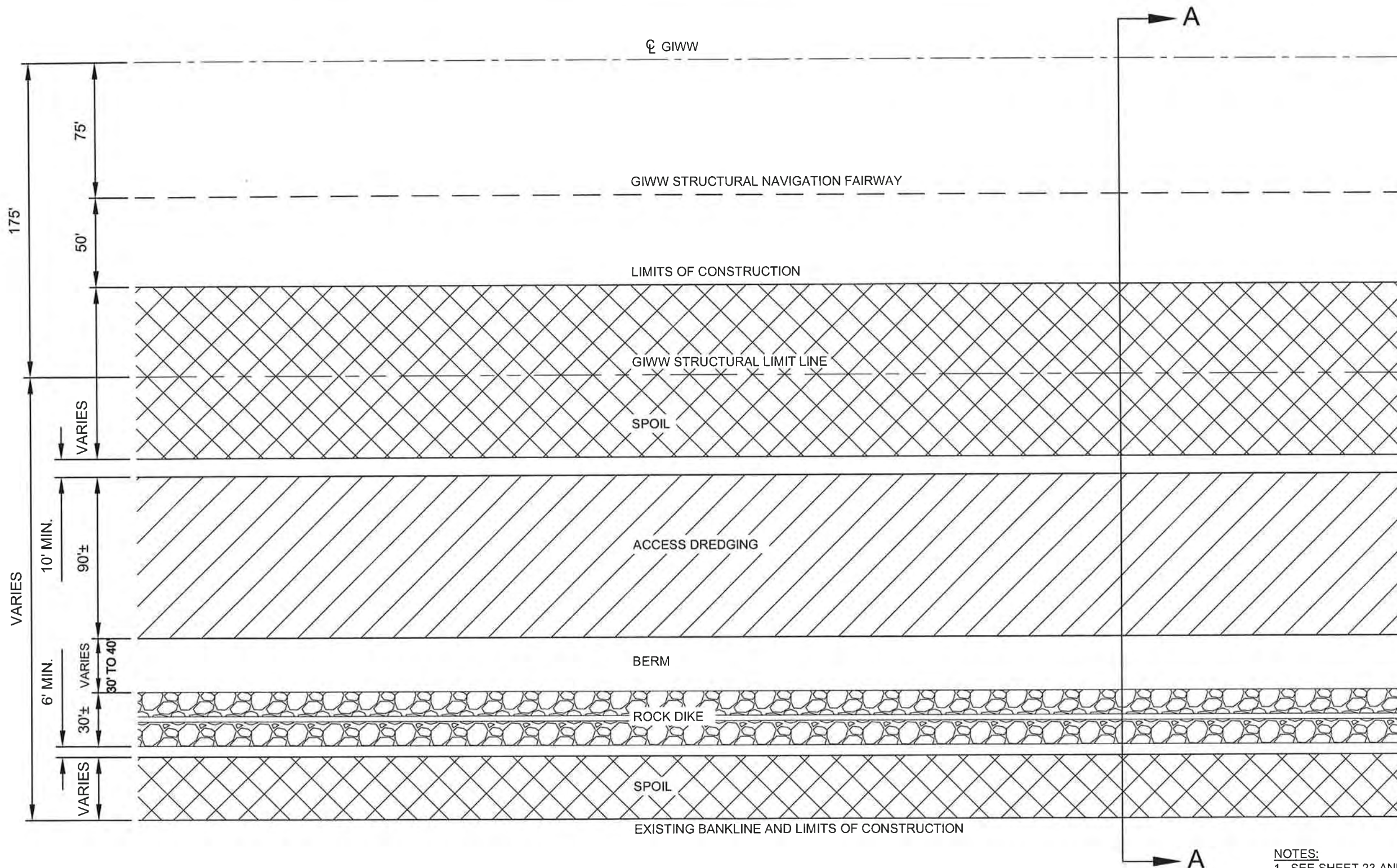
DIKE CENTERLINE SEGMENT 2B				
SEG. #	PI #	STATION	NORTHING	EASTING
2b	POB-2B	65+25	399368.53	3394440.92
2b		65+28	399297.40	3394428.50
2b	14	66+85	399359.73	3394600.28
2b		67+07	399287.30	3394607.20
2b	15	69+42	399176.61	3394780.54
2b	16	71+95	398961.72	3394914.62
2b		74+65	398817.40	3395201.50
2b	17	75+19	398855.23	3395221.23
2b	18	77+83	398683.52	3395420.65
2b	19	80+14	398522.65	3395587.42
2b		80+61	398427.60	3395652.50
2b	20	81+26	398429.16	3395648.55
2b		82+18	398276.30	3395696.50
2b	21	82+94	398271.60	3395706.00
2b	22	85+88	398052.54	3395902.07
2b		87+19	397877.50	3396000.10
2b	23	87+78	397920.02	3396038.53
2b		89+81	397677.60	3396169.20
2b	24	90+61	397670.18	3396171.80
2b		92+36	397443.50	3396270.40
2b	25	93+02	397447.83	3396265.38
2b		94+70	397270.60	3396427.50
2b		94+91	397256.10	3396442.90
2b	26	95+62	397255.29	3396439.32
2b		97+52	397098.90	3396651.70
2b		99+03	396978.10	3396741.90
2b	27	98+22	397100.50	3396648.76
2b	28	99+48	397000.56	3396724.62
2b		101+01	396830.40	3396873.60
2b		101+29	396805.40	3396885.10
2b		101+58	396777.30	3396895.00
2b	29	101+62	396826.22	3396849.56
2b		102+04	396733.00	3396905.00
2b	30	104+08	396601.48	3396949.64
2b	31	106+63	396363.27	3397039.73
2b		107+66	396195.50	3397070.00
2b	32	109+19	396110.02	3397079.46
2b	POE-2B	110+25	396022.19	3397020.53

DIKE CENTERLINE SEGMENT 6				
SEG. #	PI #	STATION	NORTHING	EASTING
6	POB-6	0+00	384195.81	3412844.41
6		0+00.00	384180.6	3412871.5
6	33	0+71	384259.60	3412875.63
6	34	1+73	384223.94	3412971.99
6		3+02.81	384292.4	3413152.9
6	35	4+05	384296.31	3413191.26
6	36	4+35	384284.51	3413218.94
6		4+66.77	384178.5	3413270.8
6	37	5+38	384189.06	3413258.88
6		7+99.57	384020.4	3413563.7
6	38	9+00	384016.00	3413576.86
6		10+03.12	383964.3	3413759.3
6	39	10+30	383996.33	3413705.49
6		10+35.18	383956.5	3413790.4
6		11+17.60	383918.4	3413863.5
6	40	11+28	383960.08	3413795.67
6	41	12+67	383885.60	3413913.42
6		12+89.98	383812.8	3413999.8
6	42	13+81	383817.13	3414005.21
6		13+97.20	383873.0	3414088.5
6	43	14+83	383873.86	3414089.36
6	44	15+61	383846.34	3414162.38
6		16+08.36	383775.8	3414276.0
6		16+31.04	383772.0	3414298.4
6	45	16+94	383774.27	3414274.25
6		17+16.68	383737.5	3414376.7
6		17+42.01	383724.9	3414398.7
6	46	17+45	383750.25	3414318.71
6	47	18+27	383722.44	3414396.73
6		20+04.53	383466.7	3414446.1
6	48	21+86	383364.22	3414392.70
6		22+36.50	383365.9	3414655.1
6		23+03.56	383344.3	3414718.5
6		23+94.20	383305.5	3414800.5
6		24+53.52	383282.6	3414855.2
6		24+99.50	383253.7	3414890.9
6		25+46.35	383228.0	3414930.1
6		26+11.62	383188.3	3414982.0
6		26+61.75	383161.5	3415024.3
6		26+93.40	383150.1	3415053.8
6		28+31.96	383089.3	3415178.3
6		28+78.98	383064.7	3415218.4
6		28+94.08	383059.5	3415232.6
6	49	29+81	382995.68	3415097.24
6		29+92.06	383038.3	3415328.2
6		30+47.63	383021.8	3415381.3
6		30+62.47	383018.7	3415395.8
6	50	31+27	383062.02	3415227.05
6		31+41.03	382990.9	3415469.3
6		31+96.71	382954.2	3415523.0
6	51	32+27	383064.40	3415327.38
6		32+70.34	382954.2	3415593.3
6	52	35+15	382955.18	3415593.70
6	53	35+68	382970.71	3415643.99
6	54	36+08	382964.58	3415683.65
6	55	36+62	382947.55	3415734.83
6		36+74.21	382774.1	3415954.8
6	56	37+69	382907.18	3415834.58
6		37+78.18	382727.5	3416047.7
6	57	38+52	382857.72	3415877.79
6		39+37.86	382623.3	3416168.8
6	58	39+77	382787.39	3416001.28
6		40+11.79	382590.0	3416234.7
6	59	40+35	382748.12	3416043.00
6	60	41+04	382710.36	3416101.29
6		42+83.09	382499.7	3416490.6
6		43+39.39	382476.7	3416542.0
6		45+05.83	382400.8	3416690.1
6	61	45+38	382532.55	3416497.52
6		45+98.21	382358.7	3416772.3
6	62	46+62	382507.31	3416618.24
6		47+67.61	382279.5	3416922.1
6	63	47+81	382437.19	3416715.23
6		48+13.38	382259.0	3416963.0
6		49+47.04	382193.3	3417079.4
6		50+24.70	382159.1	3417149.1
6	64	50+42	382283.02	3416924.97
6		52+46.44	382063.1	3417349.0
6	65	53+00	382160.52	3417152.49
6		53+05.55	382040.5	3417403.6
6		55+05.77	381956.1	3417585.2

DIKE CENTERLINE SEGMENT 6 CONT.				
SEG. #	PI #	STATION	NORTHING	EASTING
6	66	55+38	382059.70	3417368.13
6	67	57+93	381975.66	3417609.33
6		59+57.39	381751.6	3417987.8
6		59+75.99	381738.7	3418001.2
6		60+00.83	381718.8	3418016.1
6		60+08.56	381713.8	3418022.0
6		60+18.97	381709.5	3418031.5
6	68	60+42	381872.55	3417835.60
6		61+55.19	381661.4	3418158.9
6		62+31.31	381633.2	3418229.6
6	69	62+37	381751.85	3417988.53
6	70	63+05	381697.78	3418029.58
6	71	65+59	381631.32	3418275.26
6	72	66+08	381620.46	3418322.23
6		68+03.49	381388.9	3418747.1
6	73	68+10	381534.01	3418505.62
6		68+35.91	381374.6	3418776.1
6	74	68+90	381492.59	3418574.23
6	75	69+80	381469.51	3418660.57
6		69+91.60	381301.4	3418913.6
6		70+09.25	381292.5	3418928.8
6		70+37.47	381280.4	3418954.3
6	76	70+86	381405.40	3418745.11
6	77	71+71	381371.82	3418823.11
6	78	72+72	381310.33	3418903.03
6	79	73+65	381281.87	3418991.95
6		73+95.85	381108.4	3419268.7
6	80	74+81	381205.68	3419079.40
6	81	75+27	381190.12	3419123.00
6		75+46.36	381037.3	3419401.3
6		75+69.59	381022.8	3419419.5
6	82	76+23	381177.56	3419217.41
6		76+96.72	380933.2	3419509.7
6		77+08.70	380921.4	3419511.8
6		77+67.79	380862.3	3419511.0
6	83	78+69	381030.30	3419415.09
6	84	80+00	380937.60	3419507.90
6	POE-6	80+75	380862.63	3419510.19

GEOTECHNICAL BORINGS			
BORING #	NORTHING	EASTING	DEPTH
1	407030.39	3389015.38	28'
2	406406.37	3389776.30	19'
3	405721.63	3390493.29	28'
4	405138.24	3391315.93	92'
5	404554.84	3392129.77	19'
10	400005.44	3394182.92	19'
11	399250.05	3394891.51	28'
12	398555.42	3395644.09	19'
13	397708.73	3396220.61	27'
14	396952.98	3396805.70	52'
15	395903.09	3397012.11	17'
15A	395913.17	3397003.24	8'
34	384390.31	3412672.12	92'
35	384019.87	3413583.14	19'
36	383460.44	3414427.19	28'
37	383046.40	3415317.77	19'
38	382615.51	3416255.57	28'
39	382194.52	3417131.53	52'
40	381753.54	3418060.57	19'
41	381302.29	3418936.69	28'
42	380729.68	3419769.13	18'

SETTLEMENT PLATES		
PLATE #	NORTHING	EASTING
1	406311.01	3389680.99
2	405625.79	3390401.07
3	404523.91	3391924.33
4	399169.44	3394784.52
5	398514.13	3395592.78
6	397657.30	3396177.42
7	396897.77	3396798.94
8	396042.94	3397034.45
9	384249.54	3412902.81
10	384012.08	3413601.32
11	383476.80	3414394.43
12	383064.64	3415299.24
13	382630.80	3416280.33
14	382150.66	3417174.82
15	381722.58	3418011.31
16	381295.32	3418953.66



- NOTES:
1. SEE SHEET 23 AND 24 FOR TYPICAL SECTION A-A
  2. SEE SHEETS 7-18 AND SHEETS 23-24 FOR REQUIRED BERM WIDTH BETWEEN THE DIKE AND THE EXCAVATION.



AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

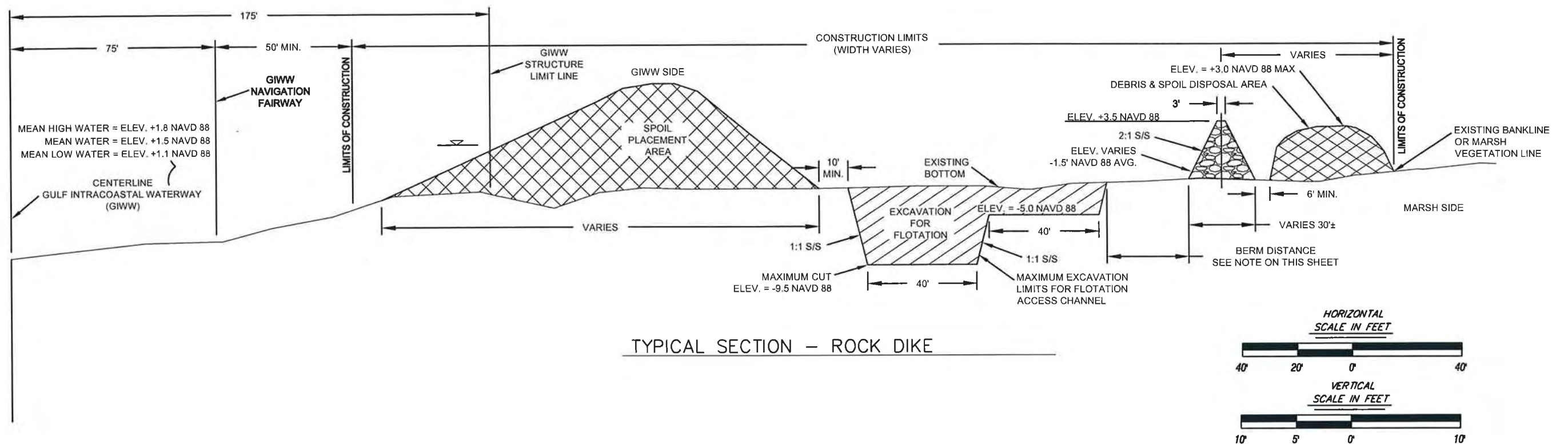
FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

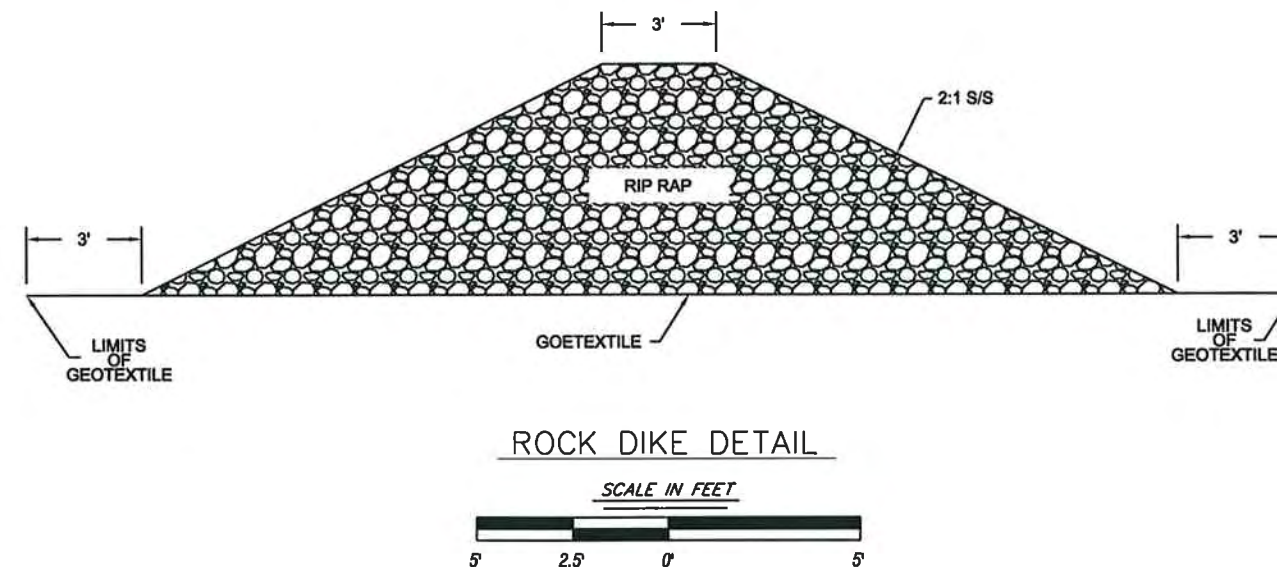
TYPICAL PLAN VIEW  
DIKE ALIGNMENT

DATE: 02/13/09

SHEET 22 OF 30



- NOTE:
1. TREES WITHIN THE FOOTPRINT OF THE DIKE SHALL BE REMOVED AND PLACED ON THE MARSH SIDE OF THE STRUCTURE.
  2. THE BERM DISTANCE SHALL BE 30' EXCEPT FOR THE FOLLOWING REACH WHICH SHALL BE 40': SEGMENT 6-STA. 19+00 TO STA. 34+00.
  3. THE DREDGE MATERIAL FROM FLOTATION CHANNELS MUST BE PERMANENTLY DEPOSITED ON THE MARSH SIDE OF THE DIKE ALIGNMENT WHERE POSSIBLE. IN SOME REACHES, PLACEMENT OF THE SPOIL BEHIND THE DIKE ALIGNMENT MAY NOT BE POSSIBLE DUE TO THE PROXIMITY OF THE EXISTING BANKLINE TO THE DIKE ALIGNMENT. IN THESE AREAS, DREDGE MATERIAL FROM FLOTATION CHANNELS SHALL BE TEMPORARILY DEPOSITED ON THE GIWW SIDE OF THE ACCESS CHANNEL. SPOIL THAT IS PLACED TOWARDS THE GIWW CHANNEL CENTERLINE SHALL BE BACK FILLED INTO THE ACCESS CHANNEL AFTER CONSTRUCTION OF THE DIKE IS COMPLETE. SPOIL THAT IS PLACED ON THE MARSH SIDE OF THE DIKE SHALL BE PLACED ONLY IN OPEN WATER, AND TO THE ELEVATION TOLERANCES SHOWN IN THE TYPICAL SECTION. NO SPOIL SHALL BE PLACED BEYOND THE EXISTING BANK LINE OR ON EXISTING VEGETATED MARSHES.
  4. FOR THE PURPOSE OF SPOIL PLACEMENT BEHIND THE DIKE, THE EXISTING BANK LINE SHALL BE DEFINED AS THE POINT WHERE WATER MEETS LAND AT MEAN WATER ELEVATION.
  5. THE CONTRACTOR WILL BE ALLOWED TO PLACE SPOIL NEAR TREES AND WOODY SHRUBS THAT ARE LOCATED IN OPEN WATER BETWEEN THE EXISTING BANKLINE AND THE DIKE.



AS BUILT DRAWING

REV.	DATE	DESCRIPTION	BY



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

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BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

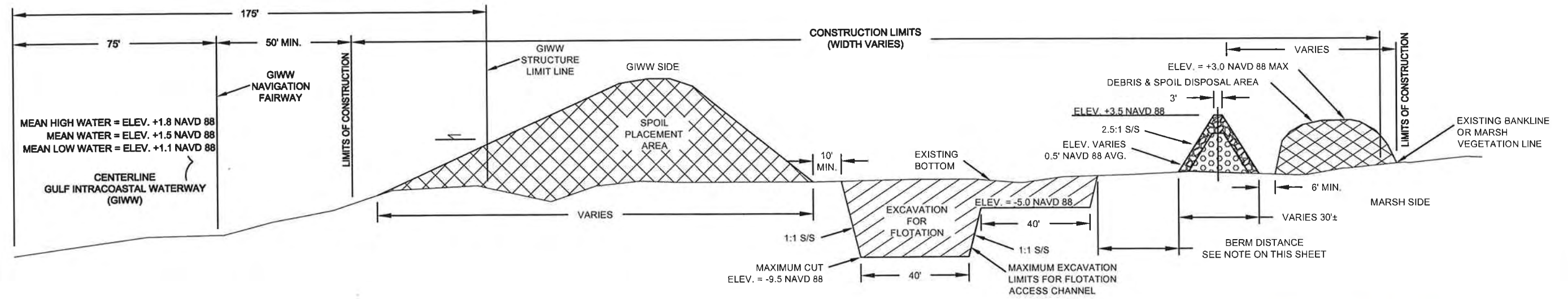
FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

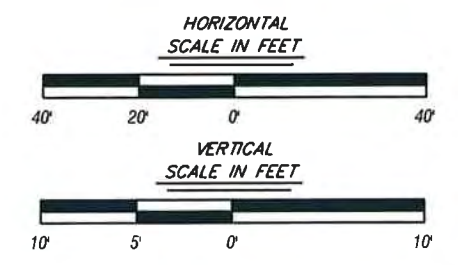
TYPICAL SECTION  
TOTAL ROCK DIKE

DATE: 02/13/09

SHEET 23 OF 30

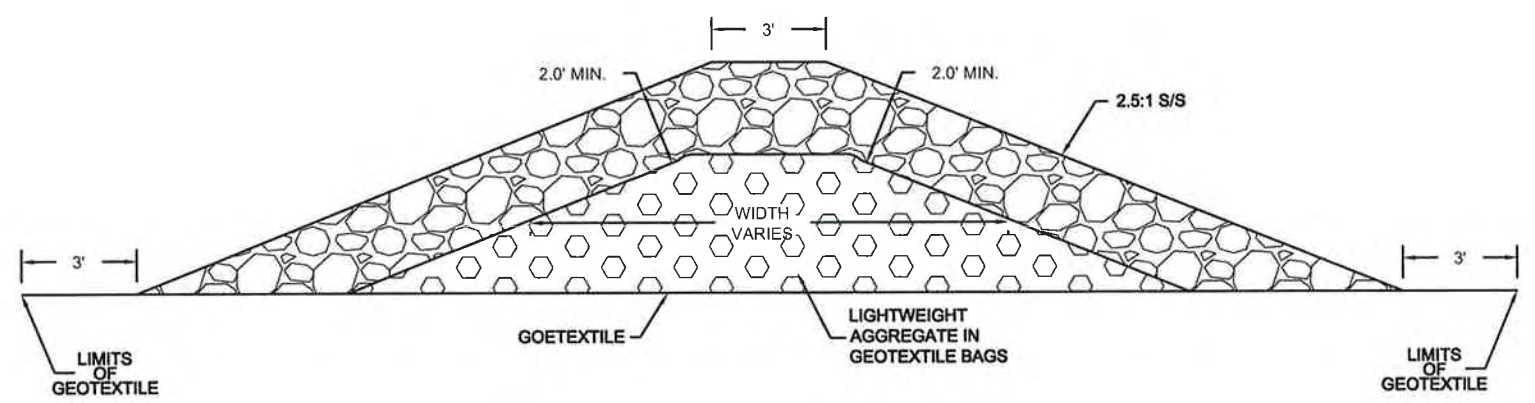


TYPICAL SECTION - COMPOSITE ROCK DIKE

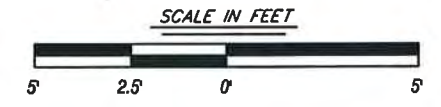


1. TREES WITHIN THE FOOTPRINT OD THE DIKE SHALL BE REMOVED AND PLACED ON THE MARSH SIDE OF THE STRUCTURE.
2. THE BERM DISTANCE SHALL BE 30' EXCEPT FOR THE FOLLOWING REACH WHICH SHALL BE 40': SEGMENT 6-STA. 19+00 TO STA. 34+00.
3. WIDTH AND HEIGHT OF BAGGED LIGHTWEIGHT AGGREGATE IS VARIABLE. A MINIMUM OF 2' OF ROCK COVERAGE SHALL BE PLACED ON SIDES AND TOP OF BAGGED AGGREGATE.
4. THE DREDGE MATERIAL FROM FLOTATION CHANNELS MUST BE PERMANENTLY DEPOSITED ON THE MARSH SIDE OF THE DIKE ALIGNMENT WHERE POSSIBLE. IN SOME REACHES, PLACEMENT OF THE SPOIL BEHIND THE DIKE ALIGNMENT MAY NOT BE POSSIBLE DUE TO THE PROXIMITY OF THE EXISTING BANKLINE TO THE DIKE ALIGNMENT. IN THESE AREAS, DREDGE MATERIAL FROM FLOTATION CHANNELS SHALL BE TEMPORARILY DEPOSITED ON THE GIWW SIDE OF THE ACCESS CHANNEL. SPOIL THAT IS PLACED TOWARDS THE GIWW CHANNEL CENTERLINE SHALL BE BACK FILLED INTO THE ACCESS CHANNEL AFTER CONSTRUCTION OF THE DIKE IS COMPLETE. SPOIL THAT IS PLACED ON THE MARSH SIDE OF THE DIKE SHALL BE PLACED ONLY IN OPEN WATER, AND TO THE ELEVATION TOLERANCES SHOWN IN THE TYPICAL SECTION. NO SPOIL SHALL BE PLACED BEYOND THE EXISTING BANK LINE OR ON EXISTING VEGETATED MARSHES.
5. THE QUANTITIES SHOWN IN THE TABLE FOR CU. YDS./ LIN. FT. OF LIGHTWEIGHT AGGREGATE ARE BASED ON DESIGN SURVEYS PERFORMED IN 2003. THESE QUANTITIES WILL BE RECALCULATED BY THE ENGINEER USING PRE-CONSTRUCTION SURVEYS PERFORMED BY THE CONTRACTOR.
6. FOR THE PURPOSE OF SPOIL PLACEMENT BEHIND THE DIKE, THE EXISTING BANK LINE SHALL BE DEFINED AS THE POINT WHERE WATER MEETS LAND AT MEAN WATER ELEVATION.
7. THE CONTRACTOR WILL BE ALLOWED TO PLACE SPOIL NEAR TREES AND WOODY SHRUBS THAT ARE LOCATED IN OPEN WATER BETWEEN THE EXISTING BANKLINE AND THE DIKE.

COMPOSITE REACHES LIGHT WEIGHT AGGREGATE		
SEGMENT	REACH	CY/LF
2A	0+00 to 5+34	0.64
2B	65+25 to 76+00	0.91
6	0+00 to 4+50	0.81
6	4+50 to 14+83	1.65
6	40+00 to 45+00	1.66
6	45+00 to 58+00	1.52
6	58+00 to 68+00	1.53



COMPOSITE ROCK DIKE DETAIL  
(ALTERNATIVE)



AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

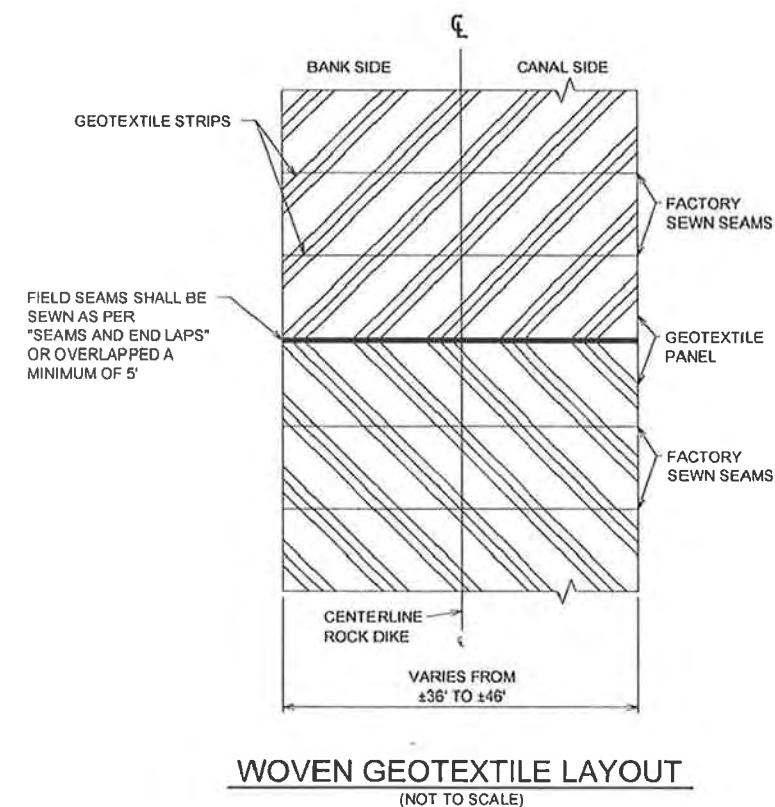
TYPICAL SECTION 2  
COMPOSITE ROCK DIKE

DRAWN BY: KSP	DESIGNED BY: KPR	APPROVED BY: KPR	DATE: 02/13/09
STATE PROJECT NUMBER: TE-43(EB)		FEDERAL PROJECT NUMBER: N/A	
SHEET 24 OF 30			

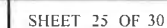


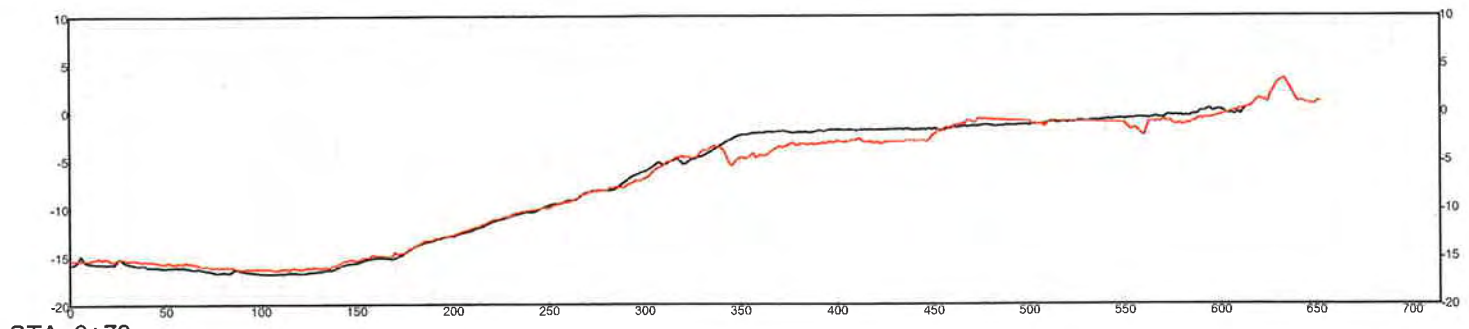
1. SETTLEMENT PLATES SHALL BE INSTALLED ALONG THE CENTERLINE OF THE ROCK DIKE AS SHOWN ON SHEETS.
2. THE SETTLEMENT PLATES SHALL BE SURVEYED WITHIN A DAY OF INSTALLATION AND WITNESSED BY THE OCPR INSPECTOR UNTIL THE ROCK IS ACCEPTED.
3. SETTLEMENT PLATES SHALL BE BUILT USING GALVANIZED STEEL PER SPECIFICATION TS-4.

1. WARNING SIGNS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS OR AS REQUIRED BY THE SPECIFICATIONS.
2. THE 2" BORDER ON THE WARNING SIGN WILL BE A REFLECTIVE MATERIAL OF ORANGE COLOR. THE LETTERING FIELD WILL BE A REFLECTIVE MATERIAL OF WHITE COLOR. THE LETTERING FOR THE WARNING SIGNS WILL BE BLACK. ALL SIGNS MUST MEET U.S. COAST GUARD STANDARDS: IN ACCORDANCE WITH 33 CFR330.4 (a) (1) WHICH CAN BE DOWNLOADED AT [http://www.access.gpo.gov/nara/cfr/waisidx\\_02/33cfr330\\_02.html](http://www.access.gpo.gov/nara/cfr/waisidx_02/33cfr330_02.html)
3. NEOPRENE WASHERS SHALL BE PLACED AT ALL POINTS OF CONTACT WITH TWO UNLIKE METALS TO REDUCE GALVANIC CORROSION.
4. HARDWARE FOR TIMBER CONNECTIONS SHALL BE STAINLESS STEEL.
5. ALL TIMBER SHALL BE TREATED WITH CREOSOTE OR CHROMATED COPPER ARSENATE (CCA). SEE TS-8 FOR TREATMENT REQUIREMENTS. ALL TIMBER SHALL BE CAPPED IN ACCORDANCE WITH LA DOT SPECIFICATION 812.06. CAPS SHALL BE ATTACHED TO TIMBERS WITH 2-1/4" ALUMINUM RING SHANKED NAILS.
6. THE CONTRACTOR HAS THE OPTION OF USING A 4"Ø SCHEDULE 80 GALVANIZED METAL PIPE OR OTHER APPROVED MATERIAL FOR TEMPORARY SIGNS. MINIMUM LENGTH OF METAL PIPE IS AS REQUIRED TO MEET THE MINIMUM EMBEDMENT AND TOP ELEVATION REQUIREMENTS.
7. TIMBER PILING SHALL HAVE A NOMINAL 8-INCH DIAMETER BUTT AND 6-INCH MINIMUM DIAMETER AT THE TIP. TIMBER POSTS SHALL HAVE A NOMINAL 4"X4" MINIMUM DIMENSION. MINIMUM LENGTH OF PILING AND POST ARE AS REQUIRED TO MEET THE MINIMUM EMBEDMENT AND TOP ELEVATION REQUIREMENTS.
8. THE WOVEN GEOTEXTILE FABRIC SHALL OVERLAP THE ROCK DIKE EDGE BY A MINIMUM OF 3' ON EACH SIDE. ANY SEAM PARALLEL TO THE ROCK DIKE CENTERLINE SHALL BE SEWN. THE MINIMUM OVERLAP AT THE ROLL/GEOTEXTILE PANEL ENDS, PERPENDICULAR TO THE ROCK DIKE CENTERLINE, SHALL BE FIVE (5) FEET UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
9. THE GEOTEXTILE WIDTH SHOWN INCLUDES A 3' EXTENSION ON EACH SIDE OF THE ROCK DIKE. SEE TS-5 "WOVEN GEOTEXTILE FABRIC" FOR ADDITIONAL REQUIREMENTS.



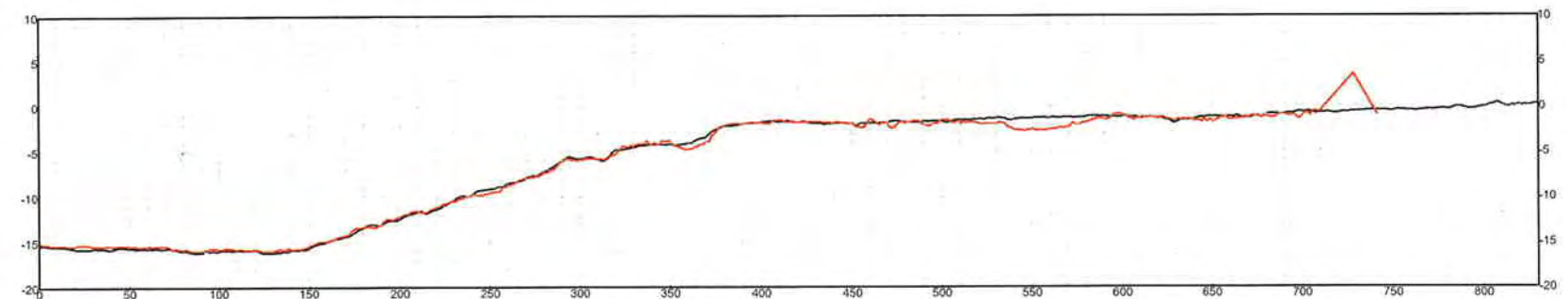
REV	DATE	DESCRIPTION	BY



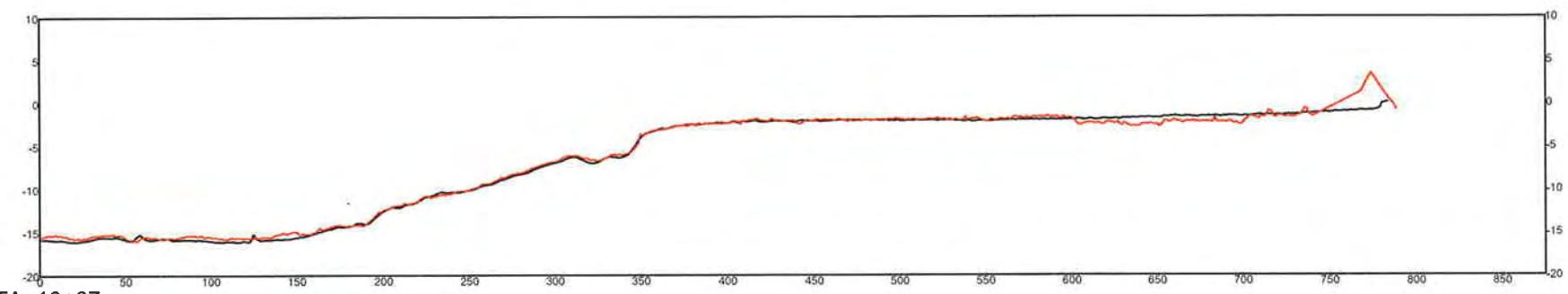


LEGEND	
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<span style="color: black;">—</span>	PRE-CONSTRUCTION SURVEY

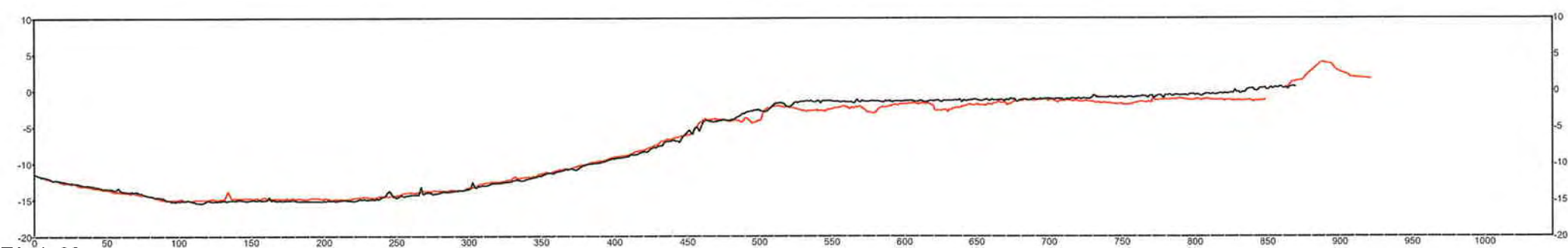
STA. 0+79  
SEGMENT NO. 1



STA. 5+70  
SEGMENT NO. 1



STA. 10+67  
SEGMENT NO. 1



STA. 1+96  
SEGMENT NO. 2A

VERTICAL  
SCALE IN FEET



HORIZONTAL  
SCALE IN FEET



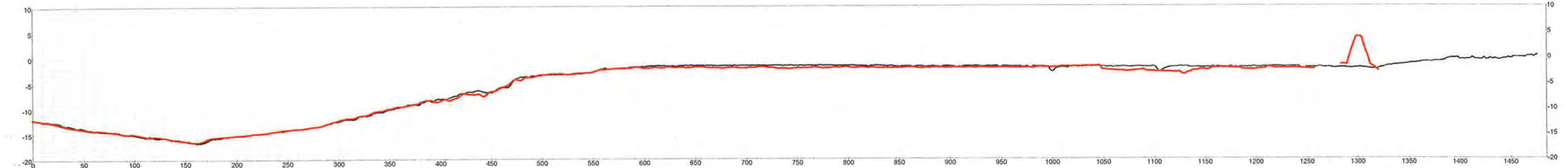
AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY

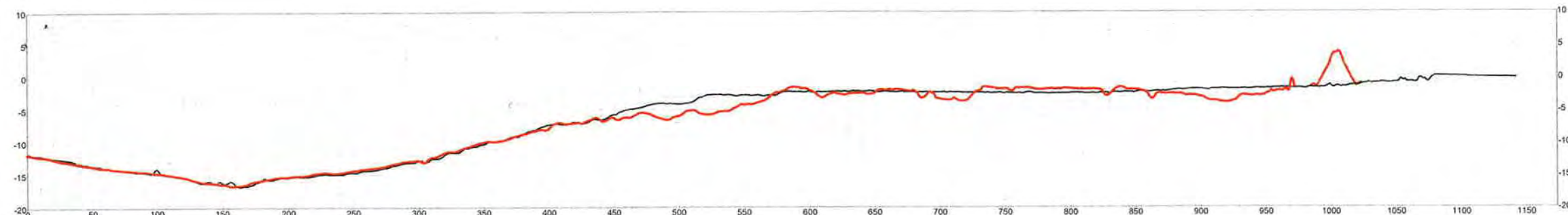


**T. BAKER SMITH**  
PROFESSIONAL CONSULTANTS SINCE 1913  
(985) 868-1050    www.tbsmith.com

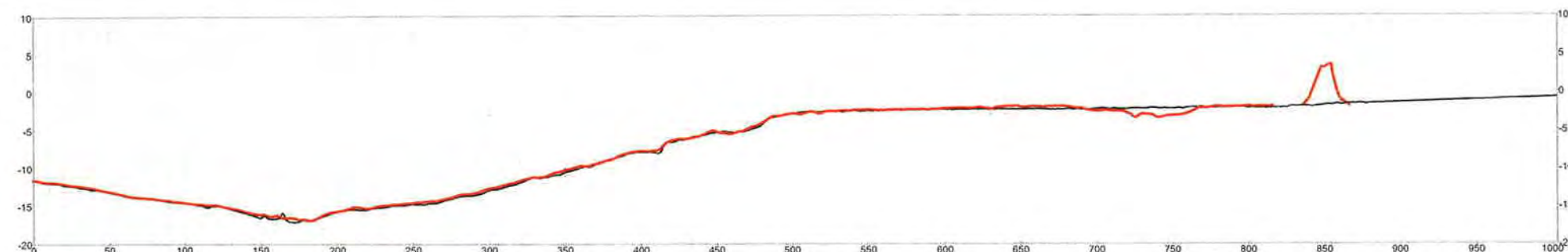
<b>OFFICE OF COASTAL PROTECTION &amp; RESTORATION ENGINEERING BRANCH</b> 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801	BREACH CLOSURES ALONG THE GULF INTRACOASTAL WATERWAY (GIWW) IN TERREBONNE PARISH, LA	CROSS SECTIONS SHEET 1 OF 5
DRAWN BY: KSP	DESIGNED BY: KPR	APPROVED BY: KPR
DATE: 02/13/09		SHEET 26 OF 30



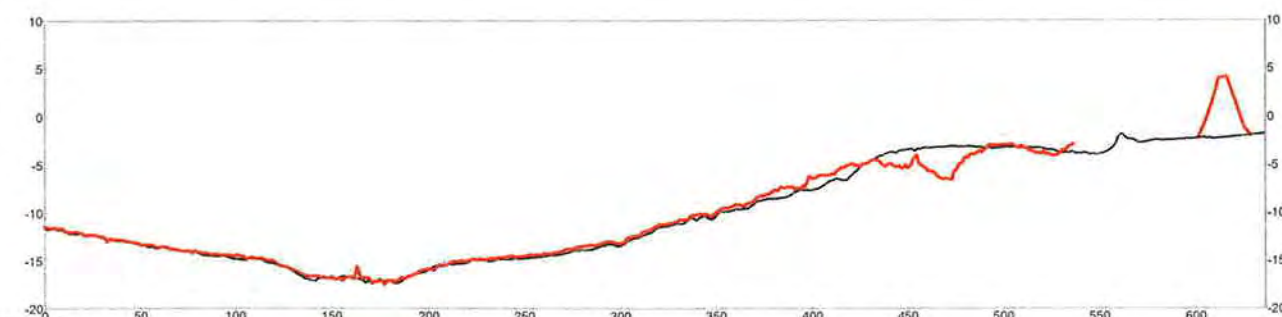
STA. 70+61  
SEGMENT NO. 2B



STA. 78+04  
SEGMENT NO. 2B



STA. 87+73  
SEGMENT NO. 2B



STA. 99+11  
SEGMENT NO. 2B

LEGEND	
<span style="color: red;">—</span>	CHANNEL CHECK SURVEY
<span style="color: black;">—</span>	PRE-CONSTRUCTION SURVEY

VERTICAL  
SCALE IN FEET



HORIZONTAL  
SCALE IN FEET



AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY
1	08/05/09	ADDENDUM #2	KPR



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH

450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

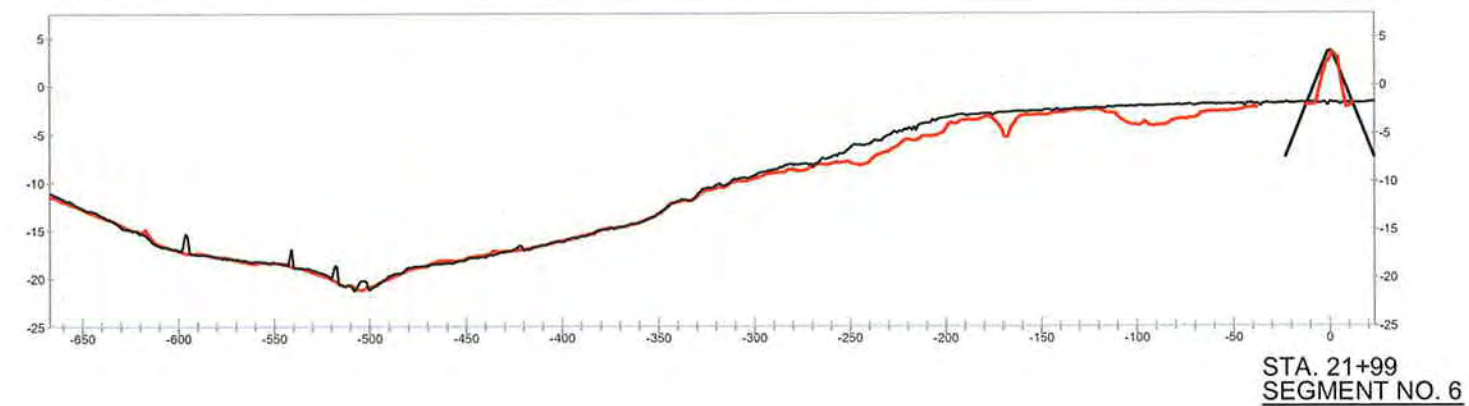
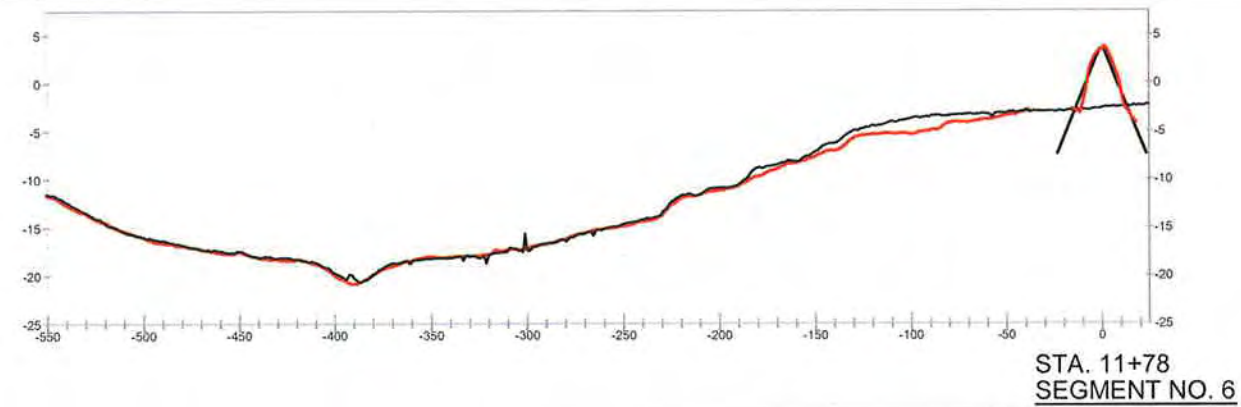
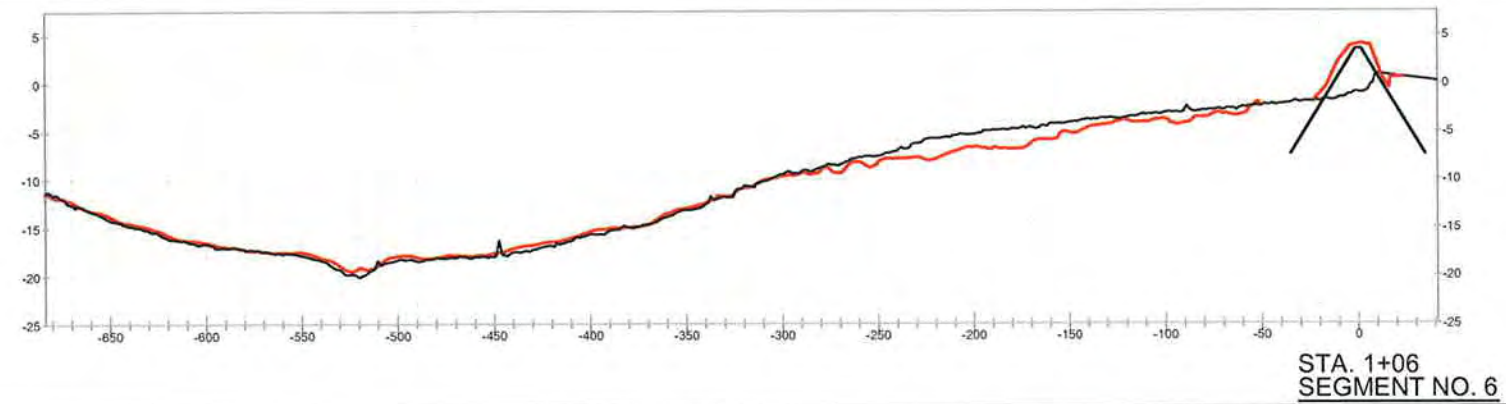
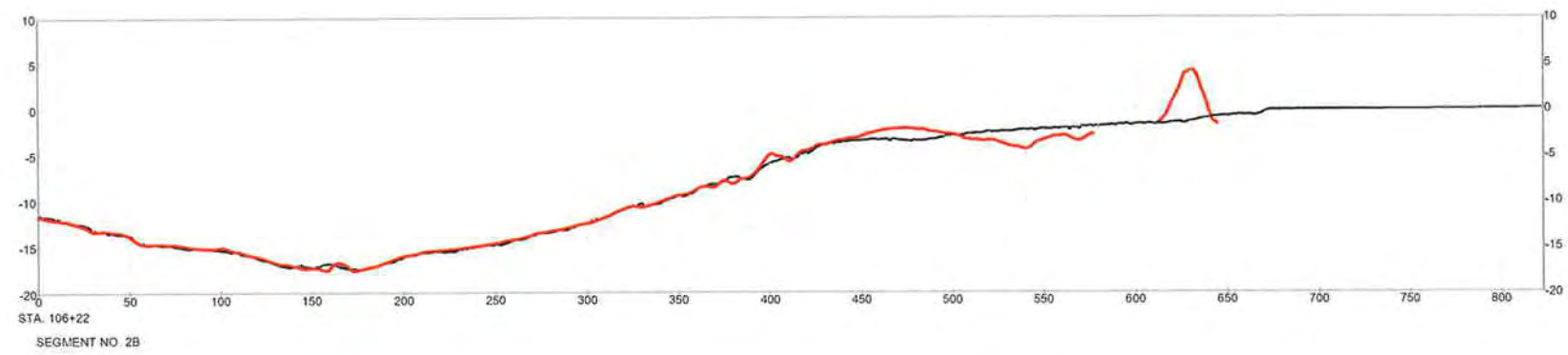
FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

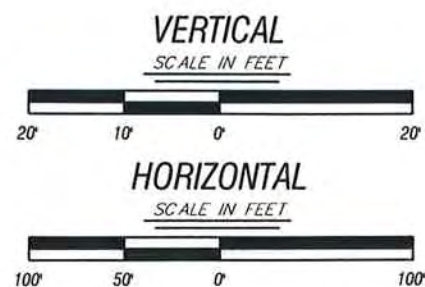
CROSS SECTIONS  
SHEET 2 OF 5

DATE: 02/13/09

SHEET 27 OF 30



LEGEND	
<span style="color: red;">—</span>	CHANNEL CHECK SURVEY
<span style="color: black;">—</span>	PRE-CONSTRUCTION SURVEY



AS BUILT DRAWING

REV	DATE	DESCRIPTION	BY
1	08/05/09	ADDENDUM #2	KPR



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

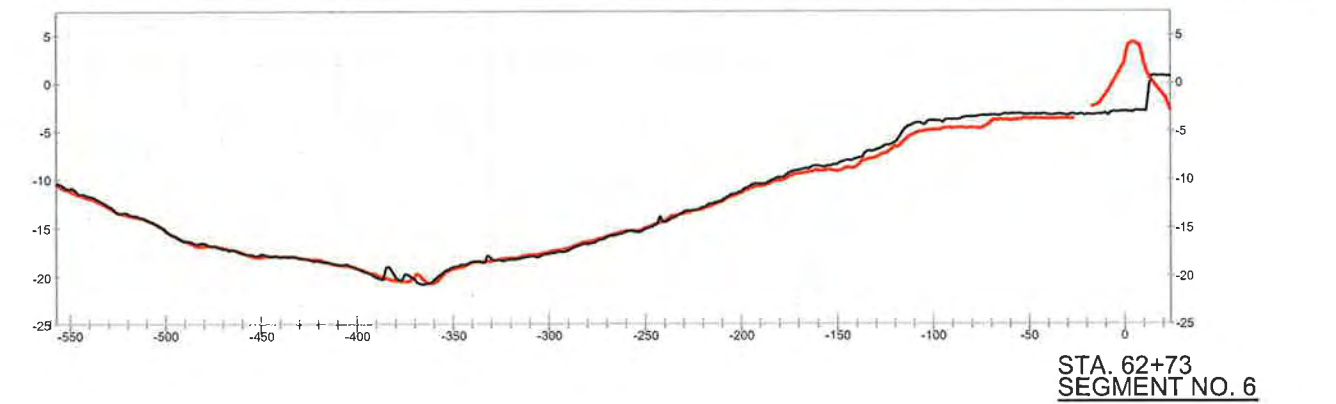
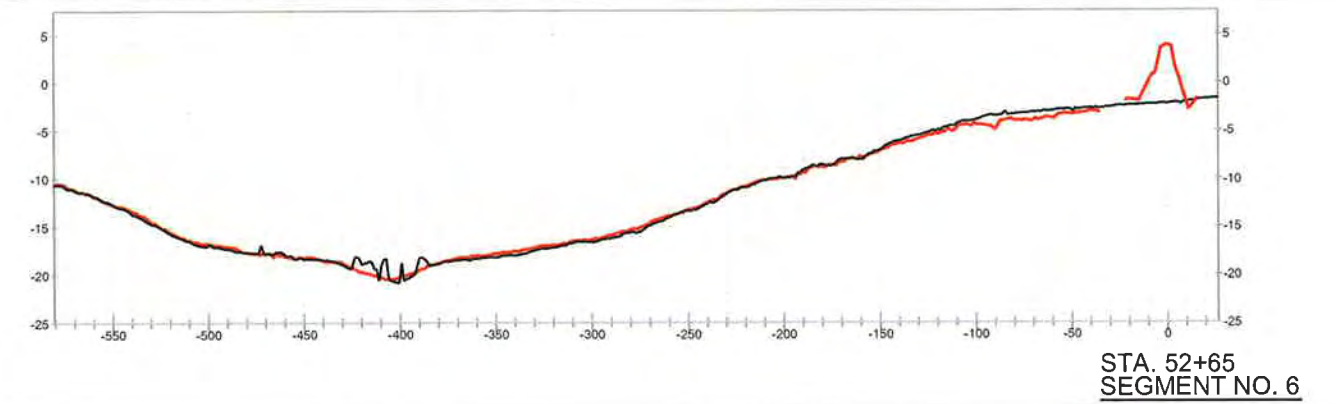
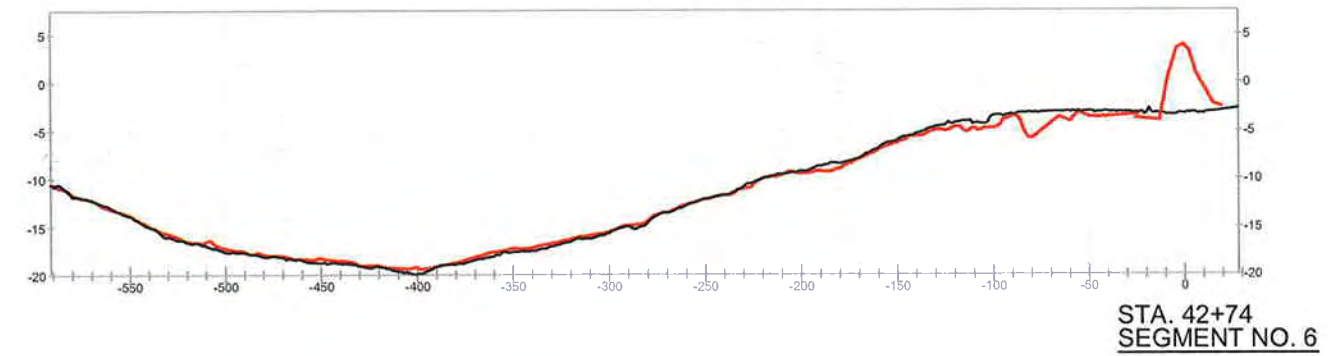
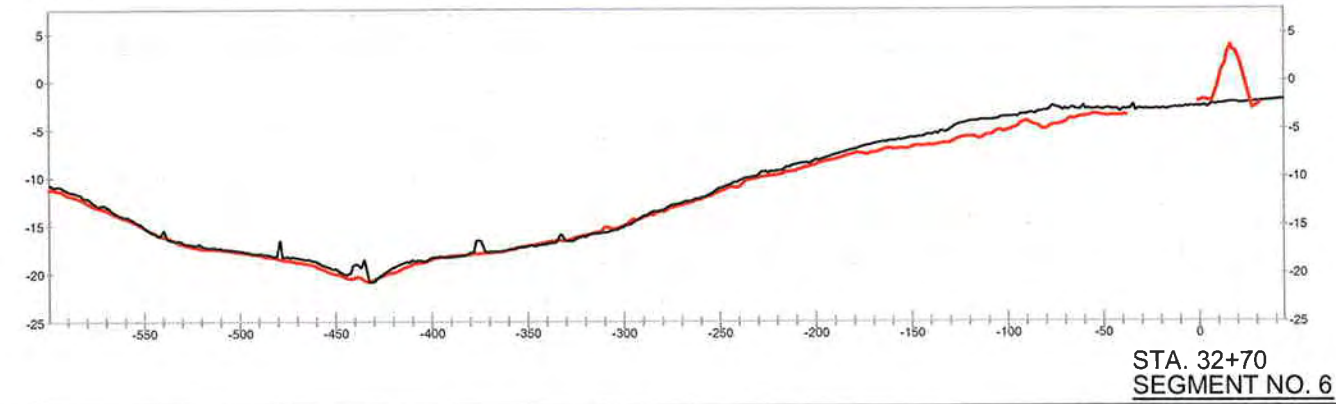
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APPROVED BY: KPR

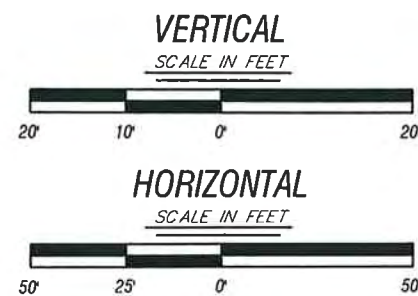
CROSS SECTIONS  
SHEET 3 OF 5

DATE: 02/13/09

SHEET 28 OF 30



LEGEND	
<span style="color: red;">—</span>	CHANNEL CHECK SURVEY
<span style="color: black;">—</span>	PRE-CONSTRUCTION SURVEY



AS BUILT DRAWING

REV.	DATE	DESCRIPTION	BY
1	08/05/09	ADDENDUM #2	KPR



**OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH**  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

DESIGNED BY: KPR

BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

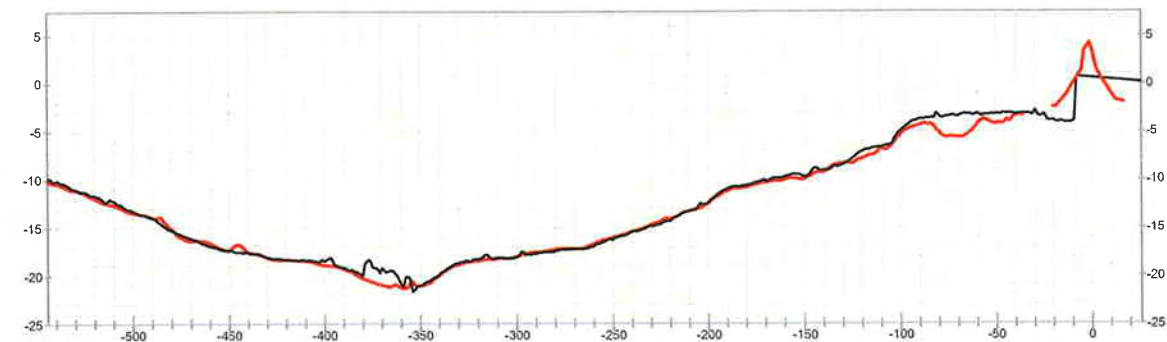
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APPROVED BY: KPR

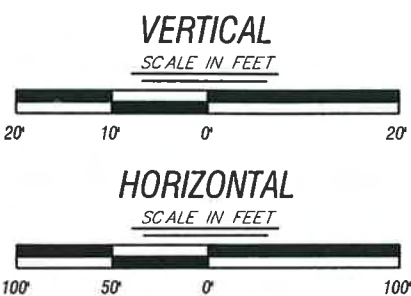
**CROSS SECTIONS  
SHEET 4 OF 5**

DATE: 02/13/09

SHEET 29 OF 30



STA. 73+18  
SEGMENT NO. 6



LEGEND	
<span style="color: red;">—</span>	CHANNEL CHECK SURVEY
—	PRE-CONSTRUCTION SURVEY

AS BUILT DRAWING

1	08/05/09	ADDENDUM #2	KPR
REV.	DATE	DESCRIPTION	BY



OFFICE OF COASTAL PROTECTION & RESTORATION  
ENGINEERING BRANCH  
450 LAUREL STREET  
BATON ROUGE, LOUISIANA 70801

DRAWN BY: KSP

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BREACH CLOSURES ALONG THE GULF  
INTRACOASTAL WATERWAY (GIWW)  
IN TERREBONNE PARISH, LA

STATE PROJECT NUMBER: TE-43(EB)

FEDERAL PROJECT NUMBER: N/A

APPROVED BY: KPR

CROSS SECTIONS  
SHEET 5 OF 5

DATE: 02/13/09

SHEET 30 OF 30