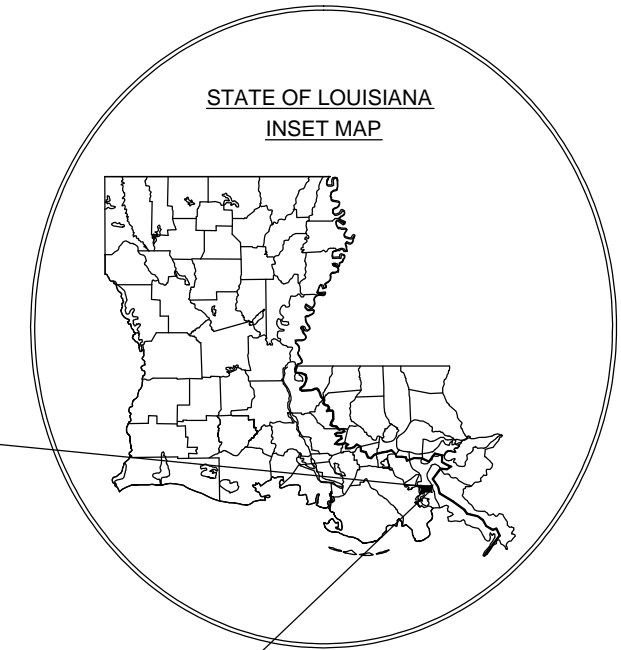
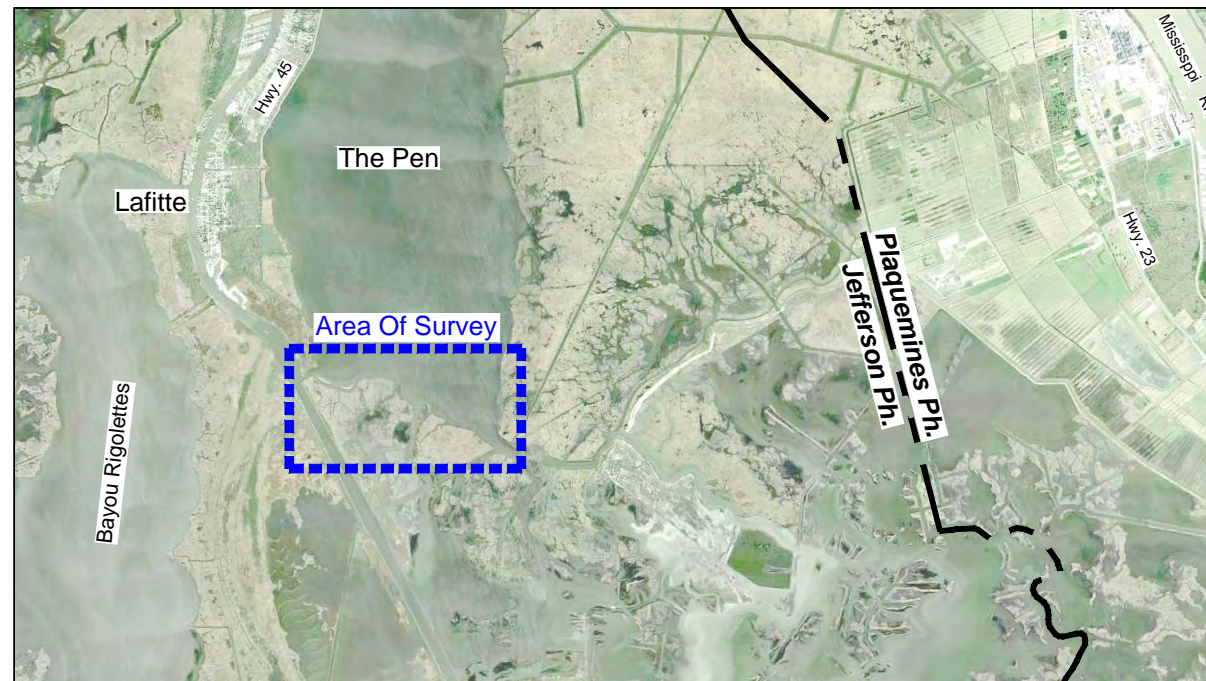
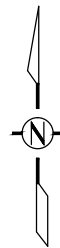


STATE OF LOUISIANA
COASTAL PROTECTION AND RESTORATION AUTHORITY

South Shore of The Pen
Shoreline Protection and Marsh Creation
STATE PROJECT NO. BA-41
Jefferson Parish, Louisiana

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| 4 | WEST REACH 10+00' - 18+00', CENTRAL REACH 00+58' - 05+00' |
| 5 | CENTRAL REACH 05+00' - 20+00' |
| 6 | CENTRAL REACH 20+00' - 33+00' |
| 7 | CENTRAL REACH 33+00' - 45+00' |
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| 9 | CENTRAL REACH 61+00' - 64+19', EAST REACH 00+28' - 12+00' |
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| 22 | EAST REACH X-SECTIONS |



RONALD E. PRATHER
PROFESSIONAL LAND SURVEYOR
LOUISIANA REGISTRATION NO. 4643

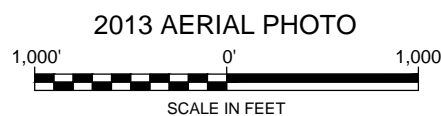
LICENSURE CLASSIFICATION REQUIREMENTS
SEE LA RS.37 FOR CLASSIFICATIONS

PREPARED BY
C&C Technologies
SURVEY SERVICES
730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA, (337) 261-0660
LA REGISTRATION NUMBER: 330

Stantec
500 MAIN STREET
BATON ROUGE, LA
70801

| REV. | DATE | DESCRIPTION | BY |
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Horizontal Datum NAD83(2011) LSZ(1702)Ft
Vertical Datum NAVD88 Height (Geoid 12a) Ft



COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF THE PEN MAINTENANCE PROJECT

STATE PROJECT NUMBER: BA-41

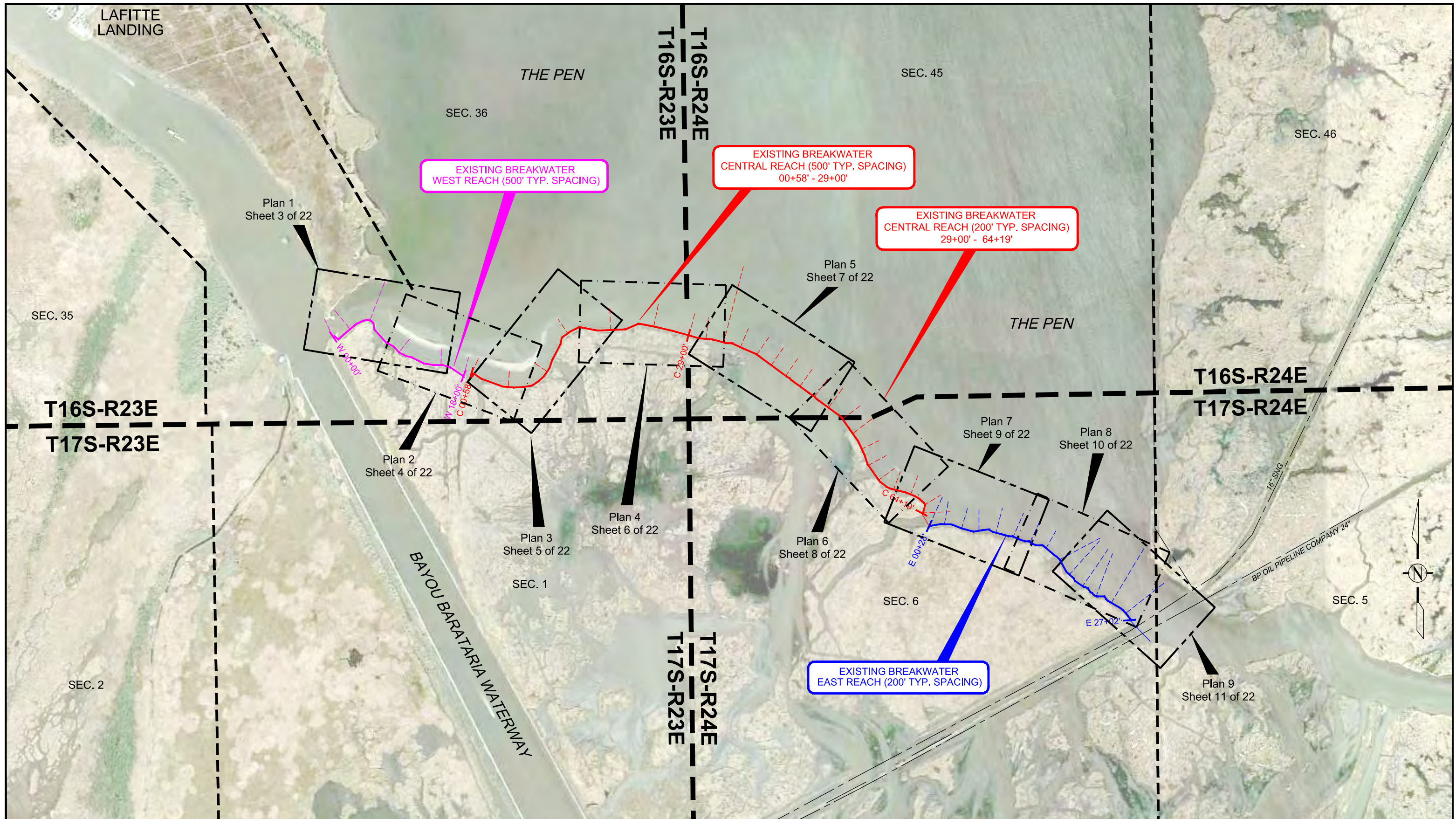
FEDERAL PROJECT NUMBER: BA-41

APPROVED BY: BCH

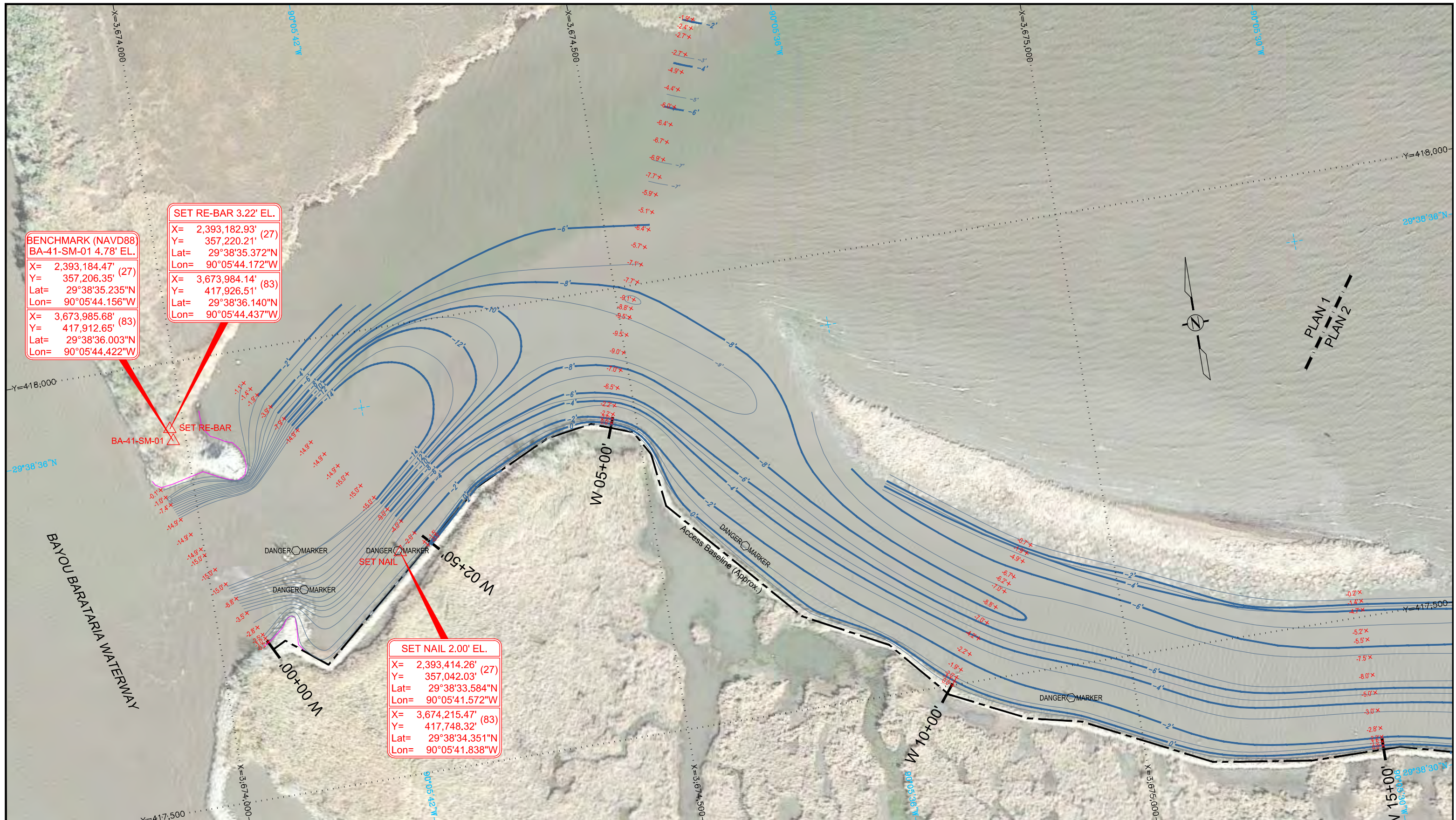
BREAKWATER PLAN 1

DATE: March 25, 2015

SHEET 1 OF 22



| PREPARED BY SURVEY SERVICES 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660 LA. REGISTRATION NUMBER: 330 | 500 MAIN STREET BATON ROUGE, LA 70801 | <table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REV. | DATE | DESCRIPTION | BY | | | | | | | | | | | | | | | | | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT STATE PROJECT NUMBER: BA-41 FEDERAL PROJECT NUMBER: BA-41 | BREAKWATER LAYOUTS DATE: March 25, 2015 |
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| SCALE IN FEET | DRAWN BY: PBH DESIGNED BY: | APPROVED BY: BCH | SHEET 2 OF 22 | | | | | | | | | | | | | | | | | | | | | | | |



**BENCHMARK (NAVD88)
BA-41-SM-01 4.78' EL.**
 X= 2,393,184.47' (27)
 Y= 357,206.35' (83)
 Lat= 29°38'35.235"N
 Lon= 90°05'44.156"W

SET RE-BAR 3.22' EL.
 X= 2,393,182.93' (27)
 Y= 357,220.21' (83)
 Lat= 29°38'35.372"N
 Lon= 90°05'44.172"W

SET NAIL 2.00' EL.
 X= 2,393,414.26' (27)
 Y= 357,042.03' (83)
 Lat= 29°38'33.584"N
 Lon= 90°05'41.572"W

W = WEST REACH

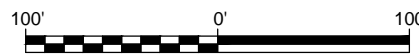
PREPARED BY **C&C Technologies**
 SURVEY SERVICES
 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA, (337) 261-0660
 LA, REGISTRATION NUMBER: 330

Stantec
 500 MAIN STREET
 BATON ROUGE, LA
 70801

| REV. | DATE | DESCRIPTION | BY |
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Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

2013 AERIAL PHOTO



COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF
 THE PEN MAINTENANCE PROJECT

STATE PROJECT NUMBER: BA-41

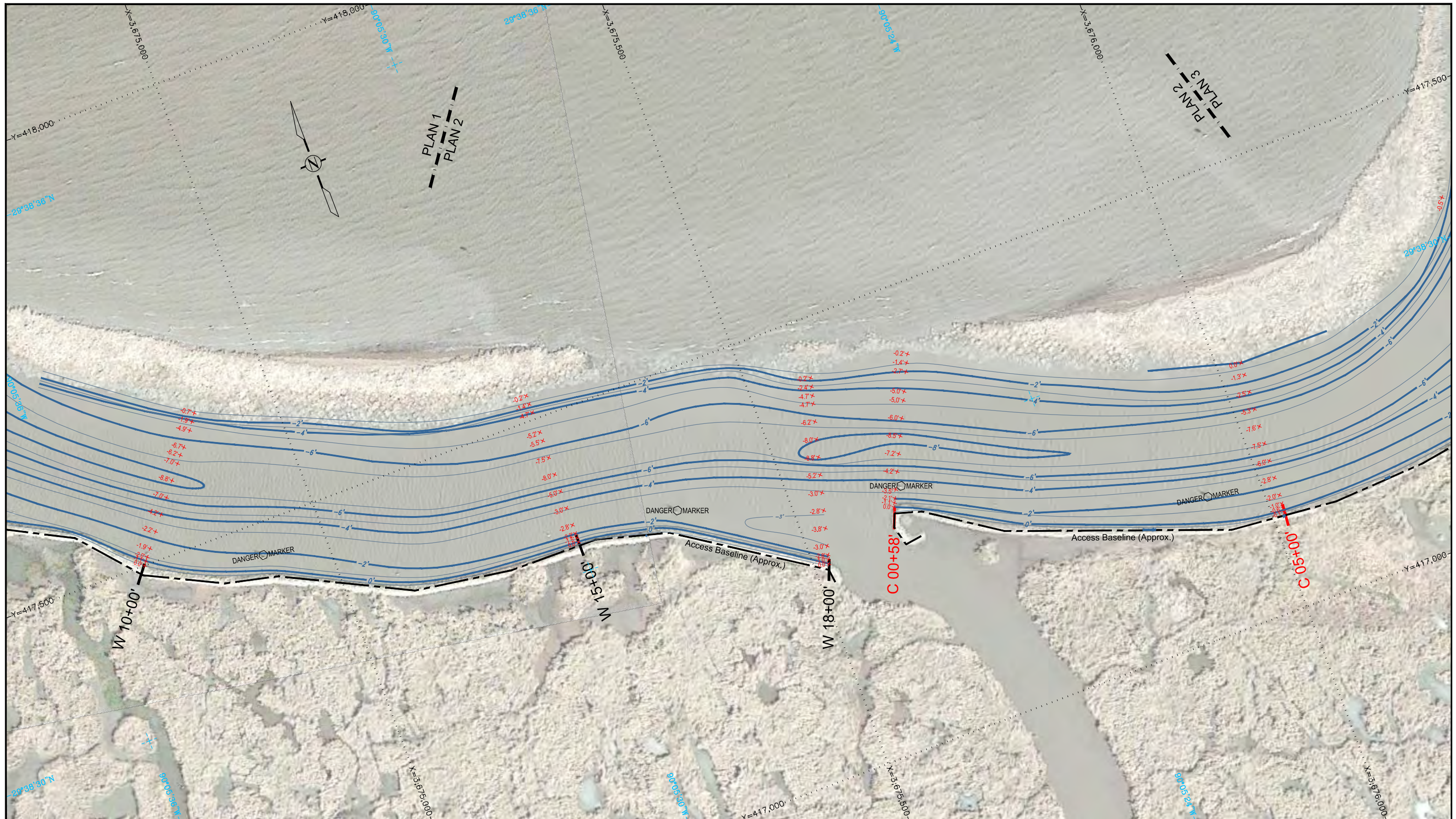
FEDERAL PROJECT NUMBER: BA-41

APPROVED BY: BCH

BREAKWATER
 PLAN I

DATE: March 25, 2015

SHEET 3 OF 22



| W = WEST REACH C = CENTRAL REACH | C&C Technologies SURVEY SERVICES <small>730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA, (337) 261-0660 LA. REGISTRATION NUMBER: 330</small> | Stantec 500 MAIN STREET BATON ROUGE, LA 70801 | <table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REV. | DATE | DESCRIPTION | BY | | | | | | | | | | | | | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft 2013 AERIAL PHOTO SCALE IN FEET | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 DRAWN BY: PBH DESIGNED BY: | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT | BREAKWATER PLAN 2 |
|--|--|---|---|------|------|-------------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|----------------------|
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| STATE PROJECT NUMBER: BA-41 FEDERAL PROJECT NUMBER: BA-41 APPROVED BY: BCH | DATE: March 25, 2015 SHEET 4 OF 22 | | | | | | | | | | | | | | | | | | | | | | |



C = CENTRAL REACH

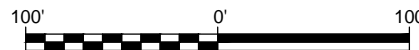
PREPARED BY
C&C Technologies
 SURVEY SERVICES
 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660
 LA. REGISTRATION NUMBER: 330

Stantec
 500 MAIN STREET
 BATON ROUGE, LA
 70801

| REV. | DATE | DESCRIPTION | BY |
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Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

2013 AERIAL PHOTO



COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF THE PEN MAINTENANCE PROJECT

STATE PROJECT NUMBER: BA-41

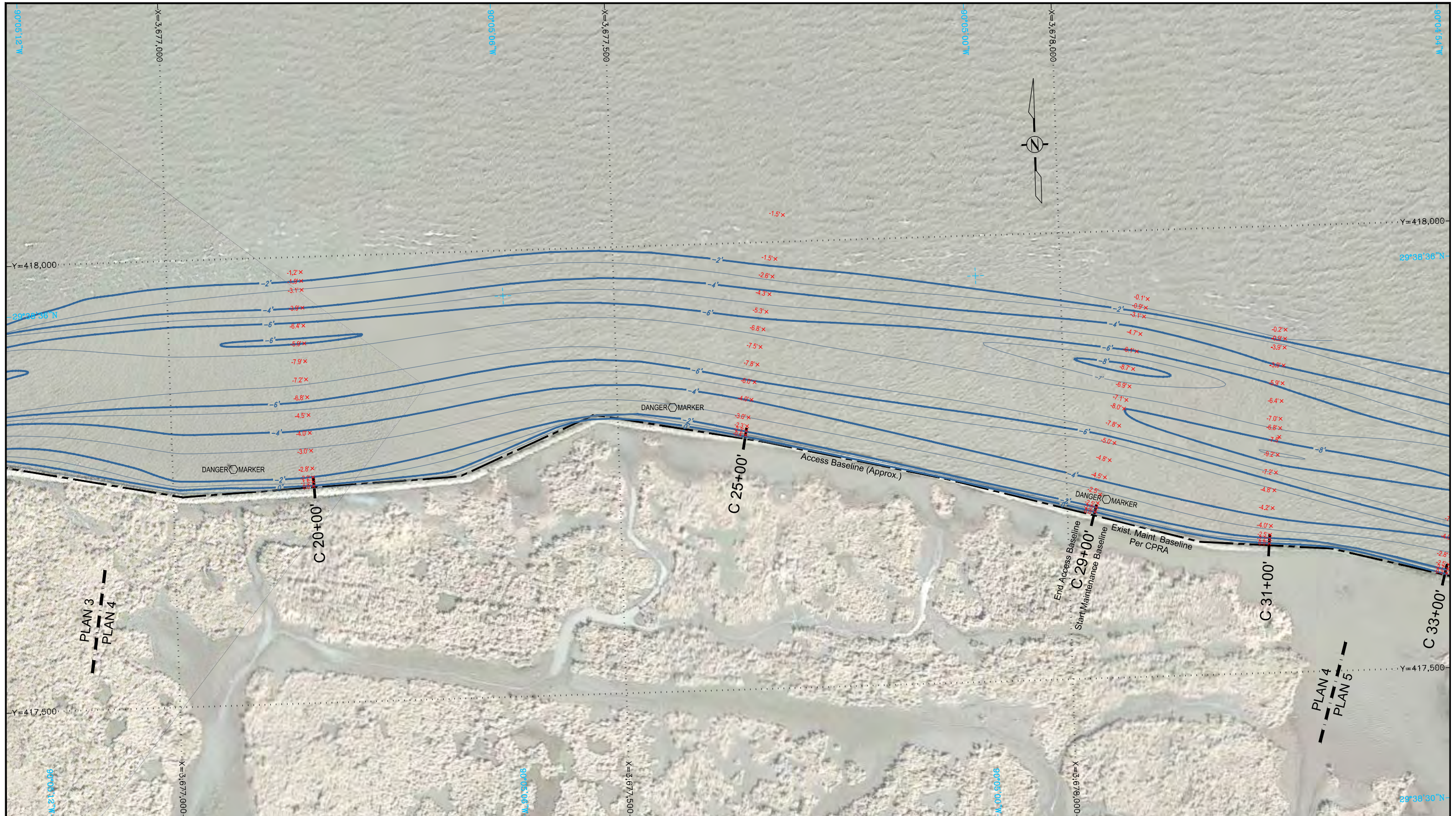
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APPROVED BY: BCH

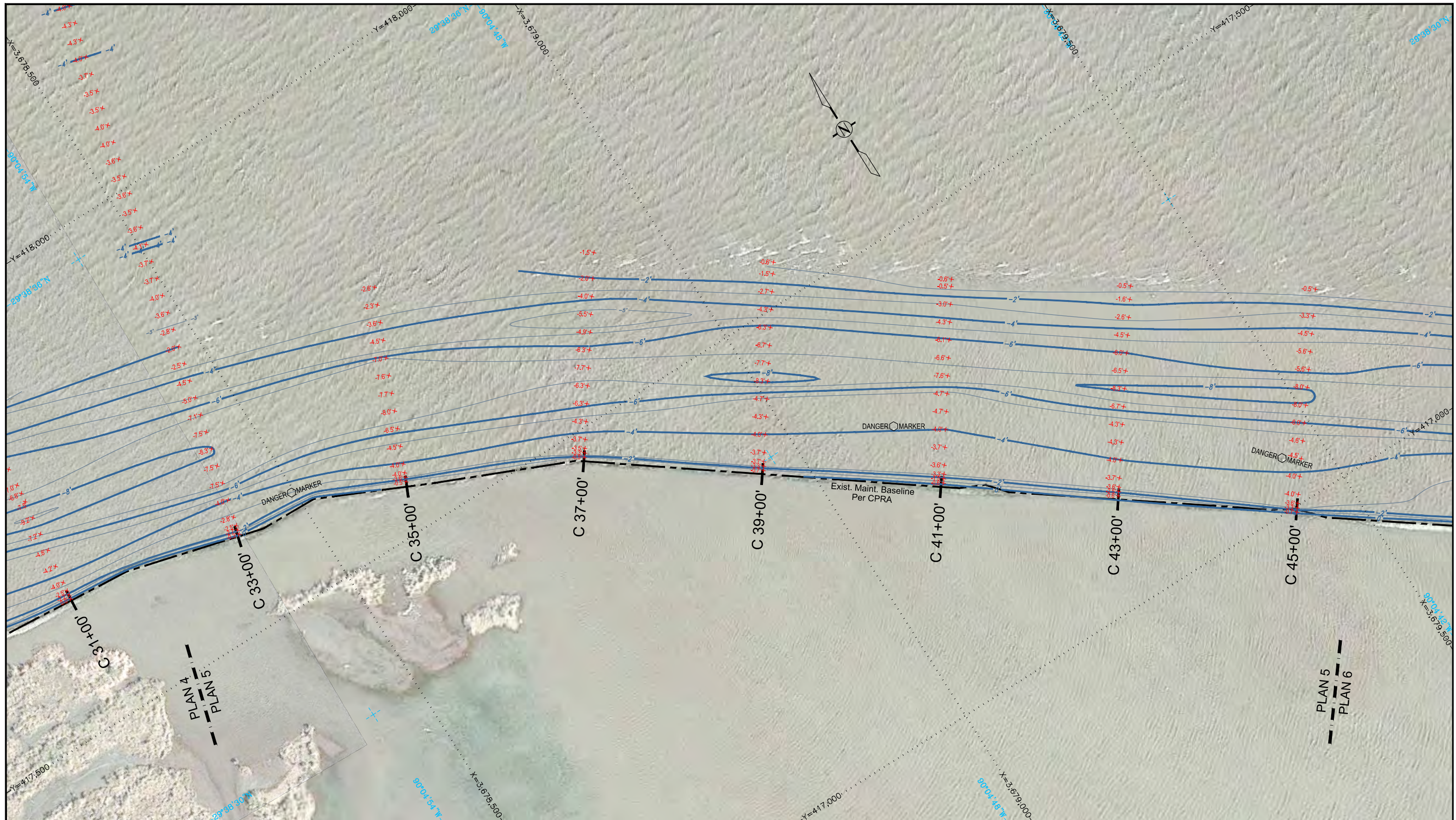
BREAKWATER
 PLAN 3

DATE: March 25, 2015

SHEET 5 OF 22



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|---|------|--|----|---|--|--|--|--|--|---|--|---|--|
| C = CENTRAL REACH | | | | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft | | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT | | BREAKWATER PLAN 4 | | | |
| <small>730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660 LA. REGISTRATION NUMBER: 330</small> | | <small>500 MAIN STREET BATON ROUGE, LA 70801</small> | | 2013 AERIAL PHOTO <small>SCALE IN FEET</small> | | <small>DRAWN BY: PBH</small> | | <small>DESIGNED BY:</small> | | <small>STATE PROJECT NUMBER: BA-41</small> <small>FEDERAL PROJECT NUMBER: BA-41</small> <small>APPROVED BY: BCH</small> | | <small>DATE: March 25, 2015</small> <small>SHEET 6 OF 22</small> | |
| REV. | DATE | DESCRIPTION | BY | | | | | | | | | | |



C = CENTRAL REACH

PREPARED BY
C&C Technologies
 SURVEY SERVICES
 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA, (337) 261-0660
 LA, REGISTRATION NUMBER: 330

Stantec
 500 MAIN STREET
 BATON ROUGE, LA
 70801

| REV. | DATE | DESCRIPTION | BY |
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Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft
2013 AERIAL PHOTO

 SCALE IN FEET

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF
 THE PEN MAINTENANCE PROJECT

STATE PROJECT NUMBER: BA-41

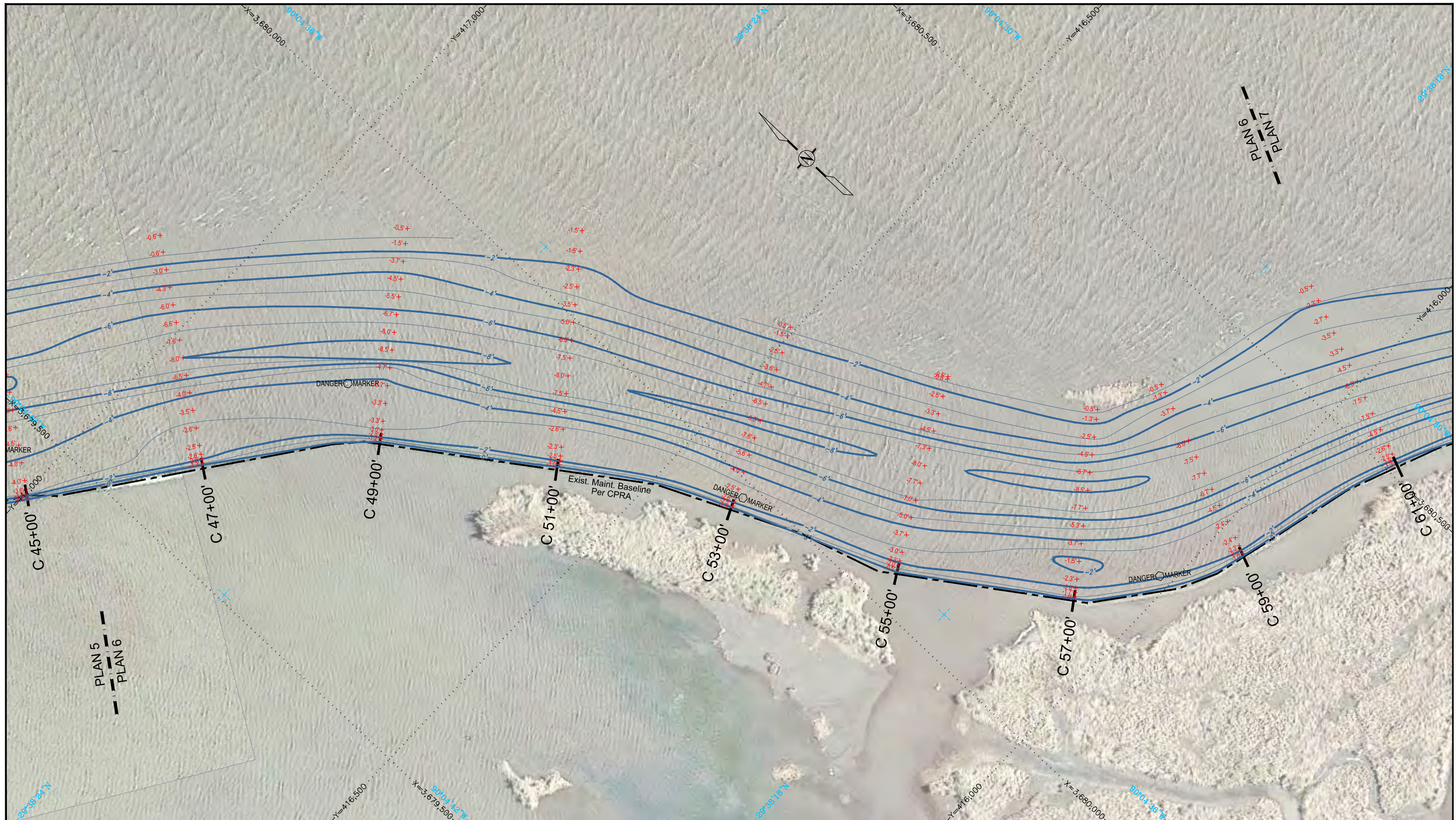
FEDERAL PROJECT NUMBER: BA-41

APPROVED BY: BCH

BREAKWATER
 PLAN 5

DATE: March 25, 2015

SHEET 7 OF 22



C = CENTRAL REACH

PREPARED BY
C&C Technologies
 SURVEY SERVICES
 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660
 LA. REGISTRATION NUMBER: 330

Stantec
 500 MAIN STREET
 BATON ROUGE, LA
 70801

| REV. | DATE | DESCRIPTION | BY |
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Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

2013 AERIAL PHOTO

SCALE IN FEET

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF
 THE PEN MAINTENANACE PROJECT

STATE PROJECT NUMBER: BA-41

FEDERAL PROJECT NUMBER: BA-41

APPROVED BY: BCH

BREAKWATER
 PLAN 6

DATE: March 25, 2015

SHEET 8 OF 22



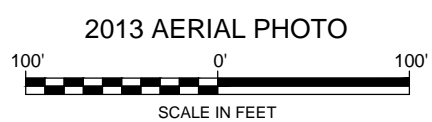
C = CENTRAL REACH
E = EAST REACH

PREPARED BY
C&C Technologies
SURVEY SERVICES
730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660
LA. REGISTRATION NUMBER: 330

Stantec
500 MAIN STREET
BATON ROUGE, LA
70801

| REV. | DATE | DESCRIPTION | BY |
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Horizontal Datum NAD83(2011) LSZ(1702)Ft
Vertical Datum NAVD88 Height (Geoid 12a) Ft



COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF THE PEN MAINTENANCE PROJECT

STATE PROJECT NUMBER: BA-41

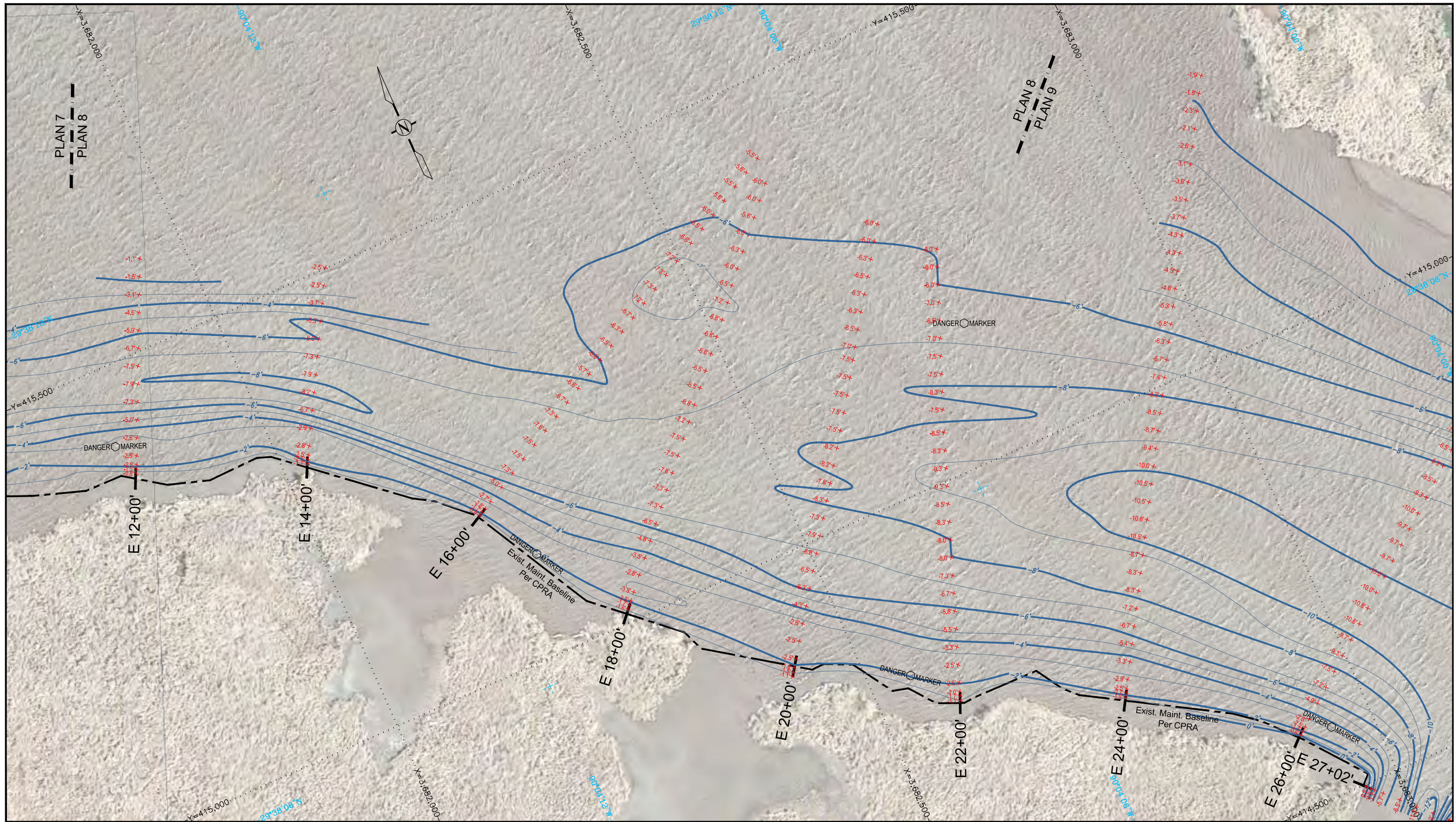
FEDERAL PROJECT NUMBER: BA-41

APPROVED BY: BCH

BREAKWATER PLAN 7

DATE: March 25, 2015

SHEET 9 OF 22



E = EAST REACH

PREPARED BY
C&C Technologies
 SURVEY SERVICES
 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660
 LA. REGISTRATION NUMBER: 330

Stantec
 500 MAIN STREET
 BATON ROUGE, LA
 70801

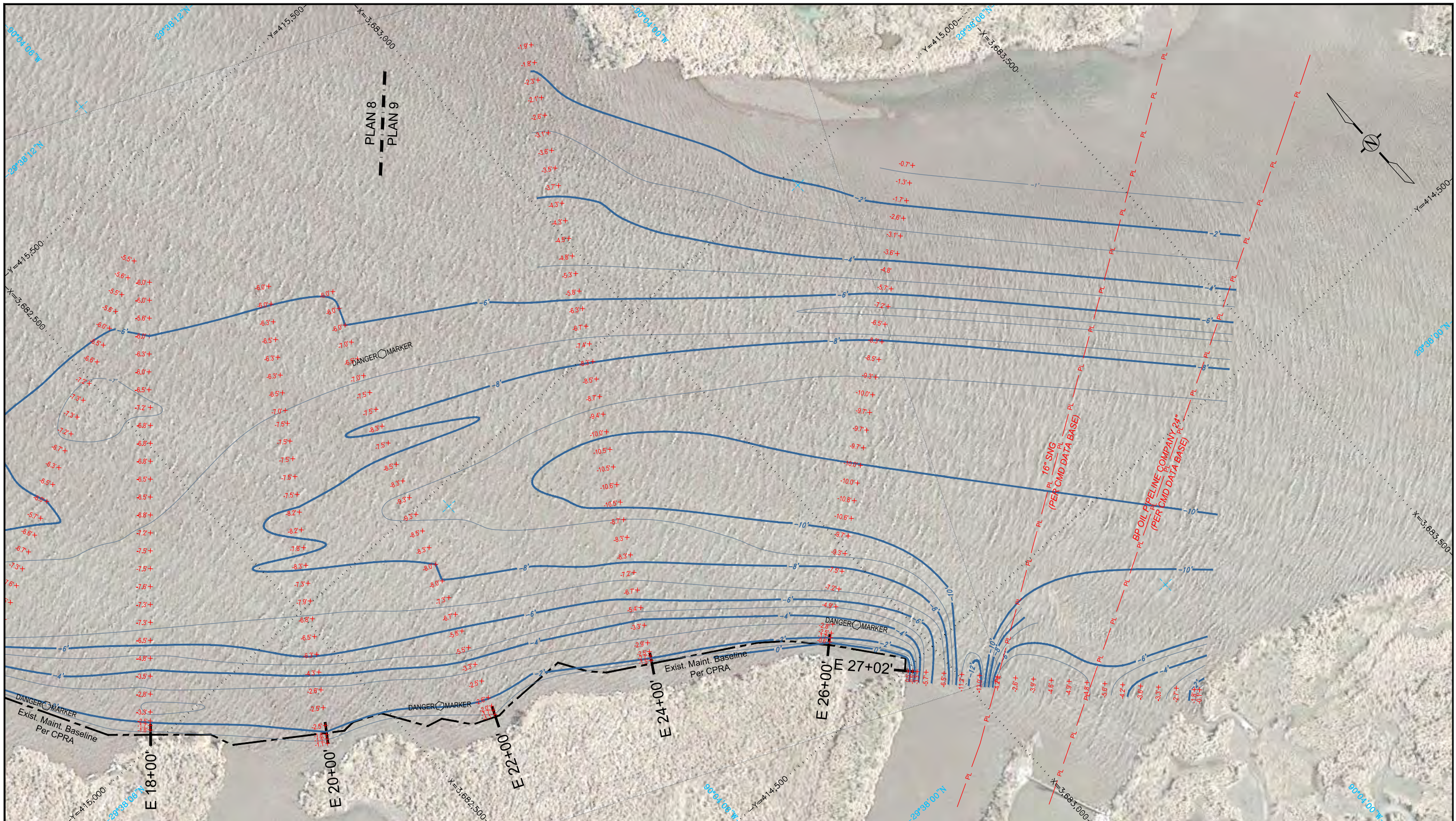
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Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft
 2013 AERIAL PHOTO
 SCALE IN FEET

COASTAL PROTECTION AND RESTORATION AUTHORITY
 450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801
 DRAWN BY: PBH DESIGNED BY:


SOUTH SHORE OF THE PEN MAINTENANCE PROJECT
 STATE PROJECT NUMBER: BA-41
 FEDERAL PROJECT NUMBER: BA-41
 APPROVED BY: BCH

BREAKWATER PLAN 8
 DATE: March 25, 2015
 SHEET 10 OF 22



E = EAST REACH


| REV. | DATE | DESCRIPTION | BY |
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 PREPARED BY **C&C Technologies** SURVEY SERVICES

 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660

 LA. REGISTRATION NUMBER: 330



Stantec

 500 MAIN STREET

 BATON ROUGE, LA

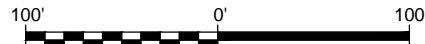
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Horizontal Datum NAD83(2011) LSZ(1702)Ft

 Vertical Datum NAVD88 Height (Geoid 12a) Ft

2013 AERIAL PHOTO



 SCALE IN FEET

COASTAL PROTECTION AND RESTORATION AUTHORITY

 450 LAUREL STREET

 BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH DESIGNED BY:

SOUTH SHORE OF THE PEN MAINTENANCE PROJECT

 STATE PROJECT NUMBER: BA-41

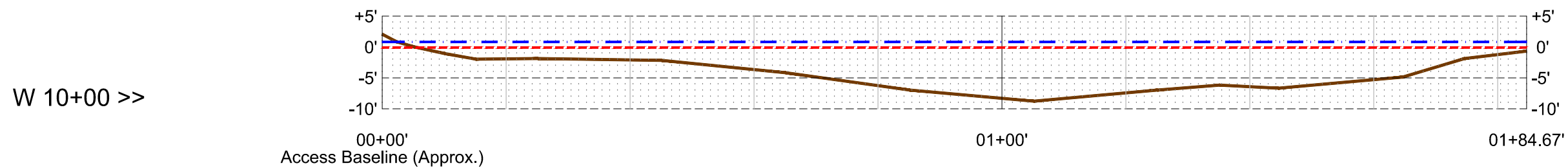
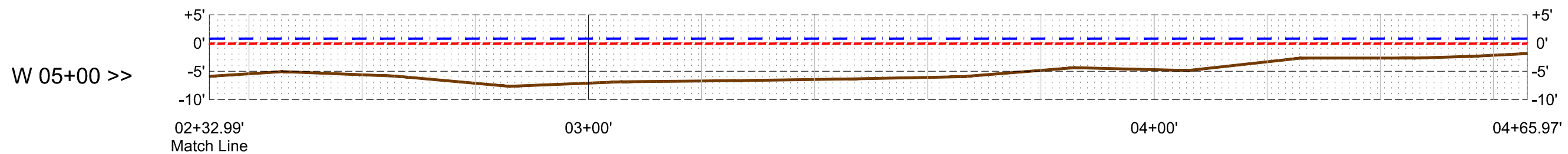
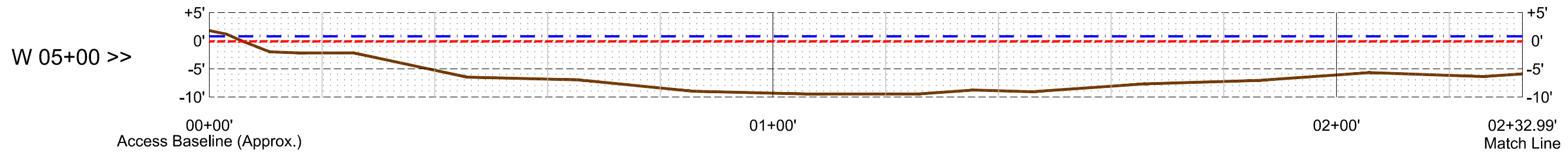
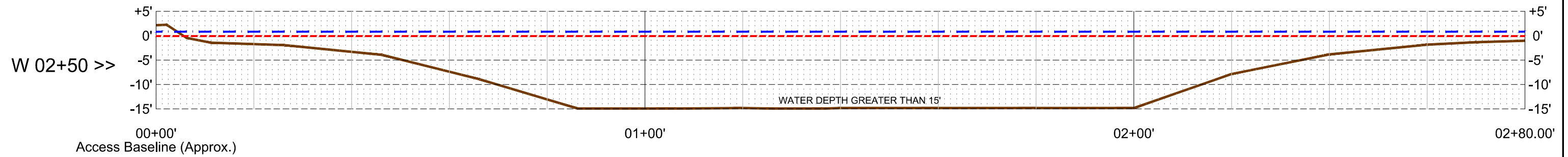
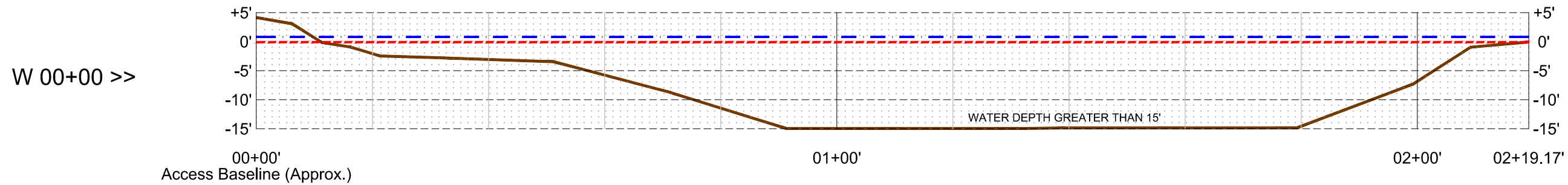
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 APPROVED BY: BCH

BREAKWATER PLAN 9

 DATE: March 25, 2015

 SHEET 11 OF 22



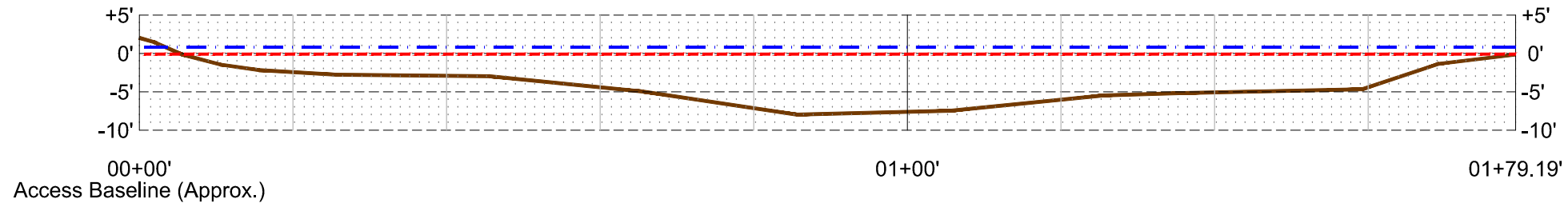
NOTES:
 1. ALL MEASUREMENTS ARE IN FEET.
 2. SURVEY DATES: 02/24/2015, 02/26/2015 & 03/02/2015.

--- High Water Line +0.8' (During Survey)
 --- Low Water Line -0.1' (During Survey)
 — Mud Line

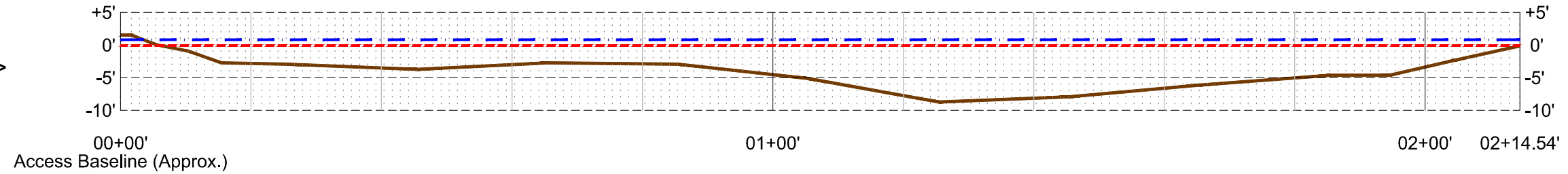
W = WEST REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

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|---|---|-----------------------------------|--|---|---|---|
| PREPARED BY SURVEY SERVICES 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA, (337) 261-0660 LA, REGISTRATION NUMBER: 330 | 500 MAIN STREET BATON ROUGE, LA 70801 | REV. DATE DESCRIPTION BY | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft ALL X-SECTIONS HORIZONTAL & VERTICAL SCALES SCALE IN FEET | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 DRAWN BY: PBH DESIGNED BY: | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT STATE PROJECT NUMBER: BA-41 FEDERAL PROJECT NUMBER: BA-41 | BREAKWATER TRANSECT I DATE: March 25, 2015 |
| | | APPROVED BY: BCH | | | SHEET 12 OF 22 | |

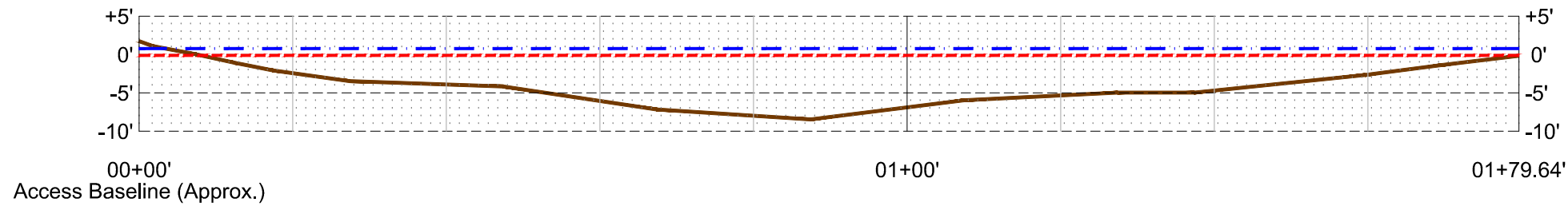
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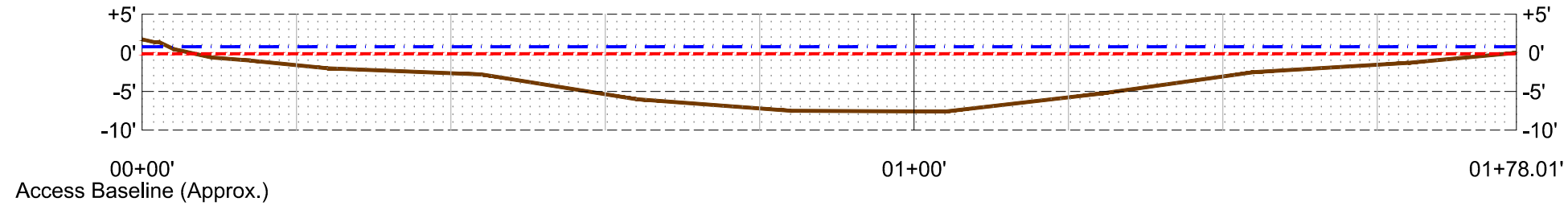
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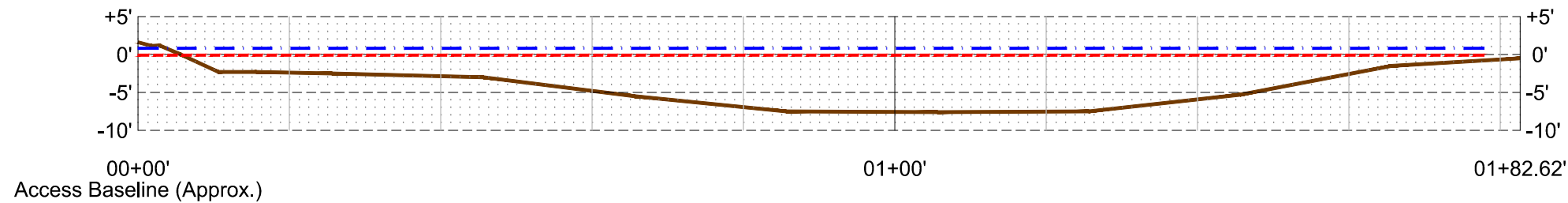
C 00+58 >>



C 05+00 >>



C 10+00 >>



NOTES:

- 1. ALL MEASUREMENTS ARE IN FEET.
- 2. SURVEY DATES: 02/24/2015, 02/26/2015 & 03/02/2015.

- - - - - High Water Line +0.8' (During Survey)
- - - - - Low Water Line -0.1' (During Survey)
————— Mud Line

C = CENTRAL REACH
W = WEST REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft



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Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

ALL X-SECTIONS
 HORIZONTAL & VERTICAL SCALES

SCALE IN FEET

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF
 THE PEN MAINTENANCE PROJECT

STATE PROJECT NUMBER: BA-41

FEDERAL PROJECT NUMBER: BA-41

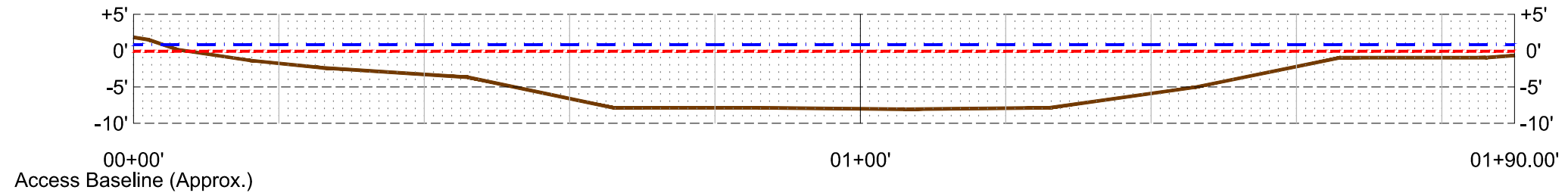
APPROVED BY: BCH

BREAKWATER
 TRANSECT 2

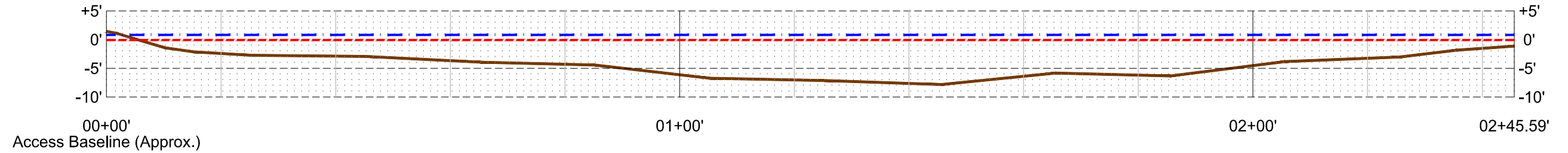
DATE: March 25, 2015

SHEET 13 OF 22

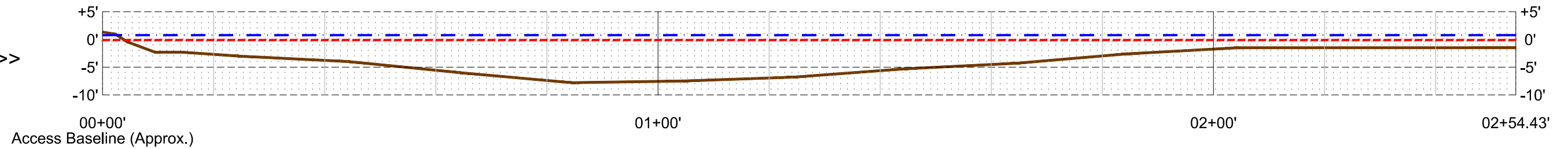
C 15+00 >>



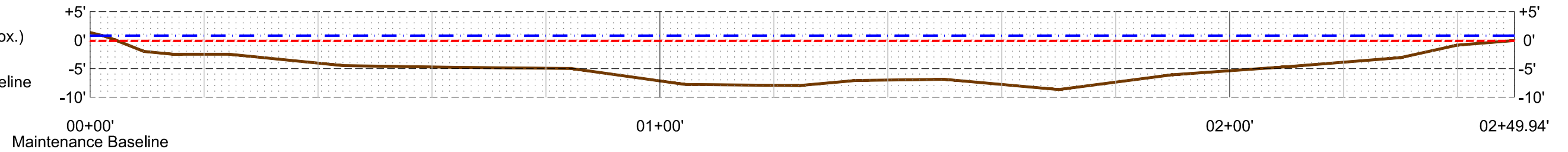
C 20+00 >>



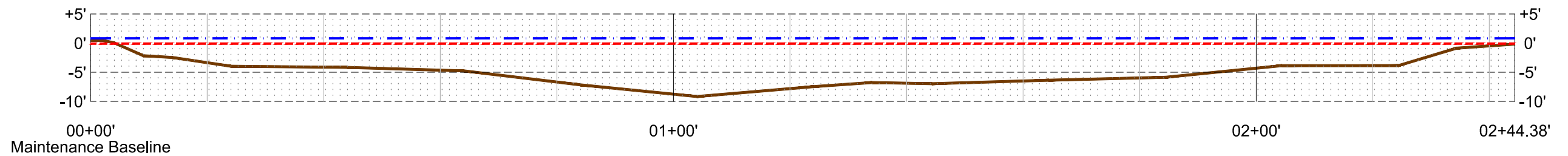
C 25+00 >>



Access Baseline (Approx.)
C 29+00 >>
Start Maintenance Baseline



C 31+00 >>



NOTES:

1. ALL MEASUREMENTS ARE IN FEET.
2. SURVEY DATES: 02/24/2015, 02/26/2015 & 03/02/2015.

--- High Water Line +0.8' (During Survey)
 --- Low Water Line -0.1' (During Survey)
 — Mud Line

C = CENTRAL REACH

Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft



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Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

ALL X-SECTIONS
 HORIZONTAL & VERTICAL SCALES

SCALE IN FEET

COASTAL PROTECTION AND RESTORATION AUTHORITY

450 LAUREL STREET
 BATON ROUGE, LOUISIANA 70801

DRAWN BY: PBH

DESIGNED BY:

SOUTH SHORE OF THE PEN MAINTENANCE PROJECT

STATE PROJECT NUMBER: BA-41

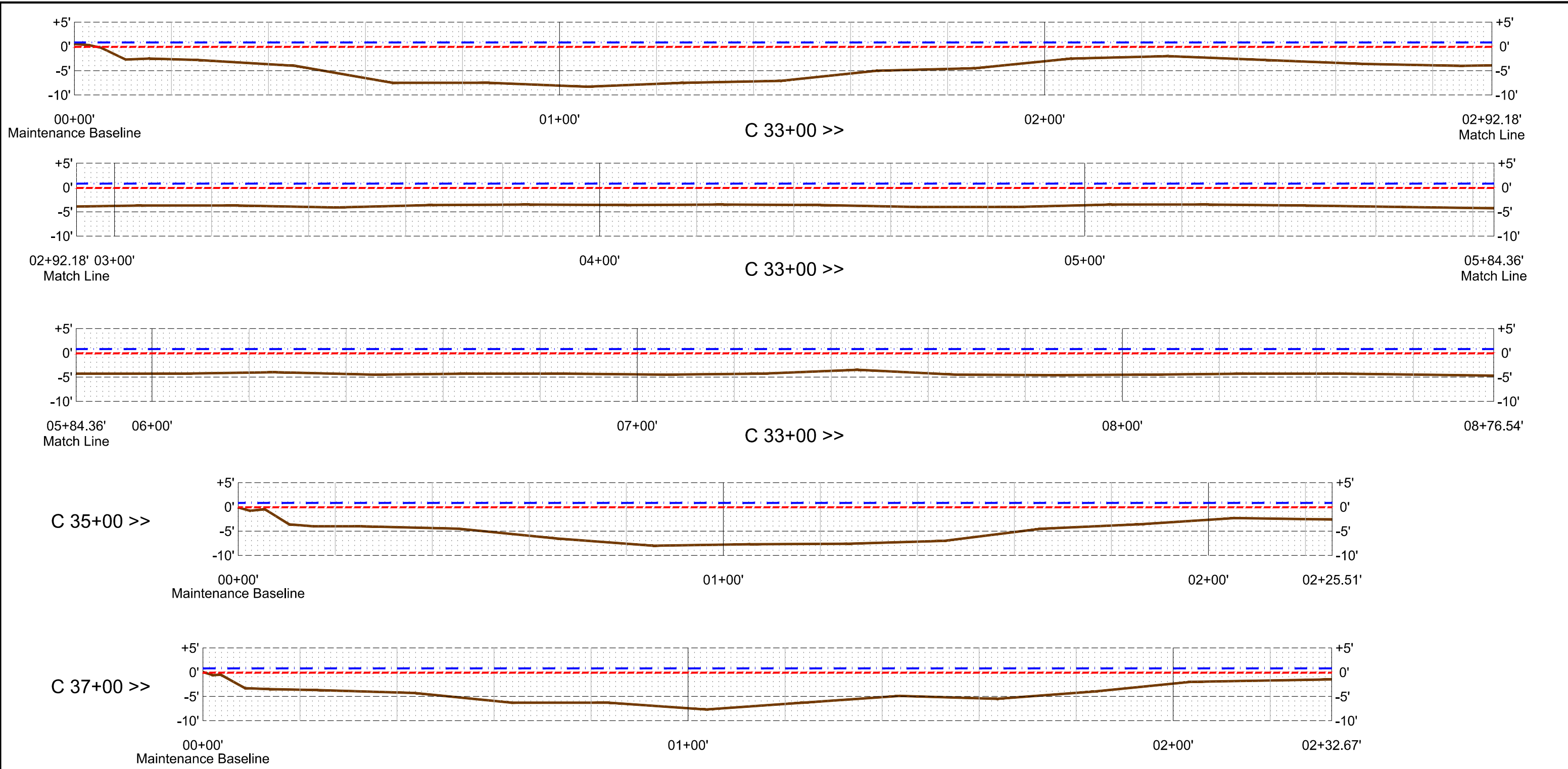
FEDERAL PROJECT NUMBER: BA-41

APPROVED BY: BCH

BREAKWATER TRANSECT 3

DATE: March 25, 2015

SHEET 14 OF 22

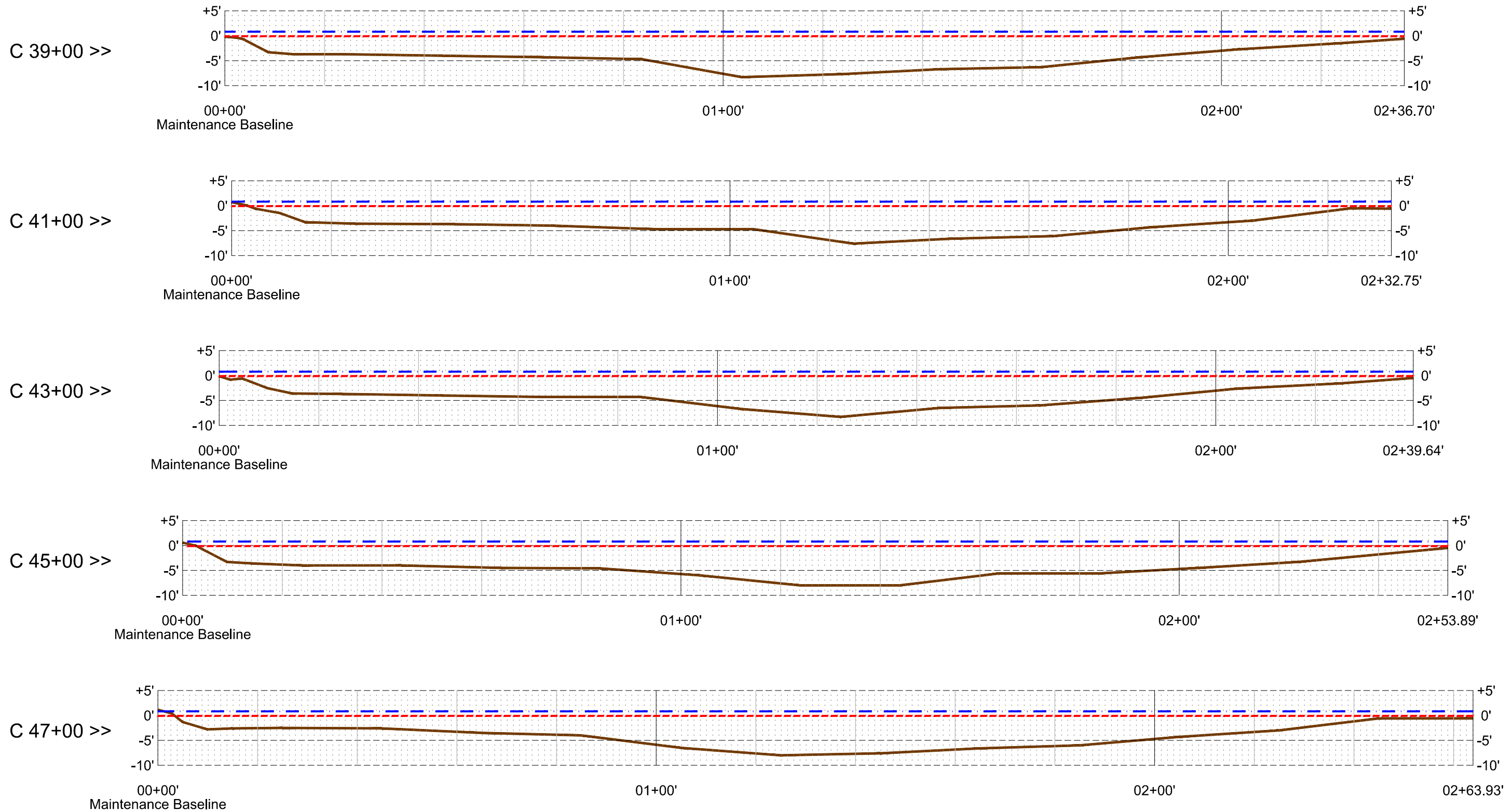


NOTES:
 1. ALL MEASUREMENTS ARE IN FEET.
 2. SURVEY DATES: 02/24/2015, 02/26/2015 & 03/02/2015.

--- High Water Line +0.8' (During Survey)
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 ——— Mud Line

C = CENTRAL REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

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|---|---|---|--|---|-------------------------------|-----------------------|
| PREPARED BY SURVEY SERVICES 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660 LA. REGISTRATION NUMBER: 330 | 500 MAIN STREET BATON ROUGE, LA 70801 | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT | | BREAKWATER TRANSECT 4 |
| | | ALL X-SECTIONS HORIZONTAL & VERTICAL SCALES SCALE IN FEET | | STATE PROJECT NUMBER: BA-41 | FEDERAL PROJECT NUMBER: BA-41 | |
| REV. DATE DESCRIPTION BY | | | DRAWN BY: PBH | DESIGNED BY: | APPROVED BY: BCH | SHEET 15 OF 22 |

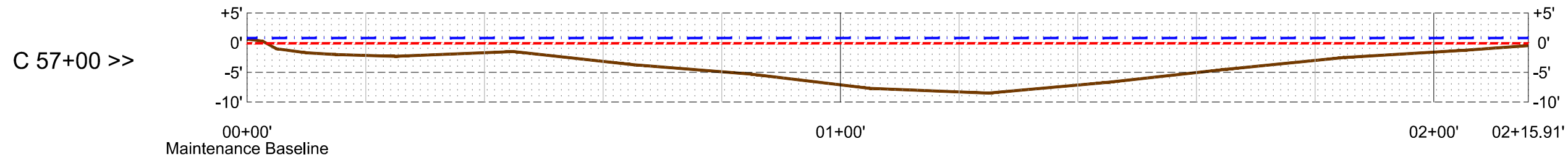
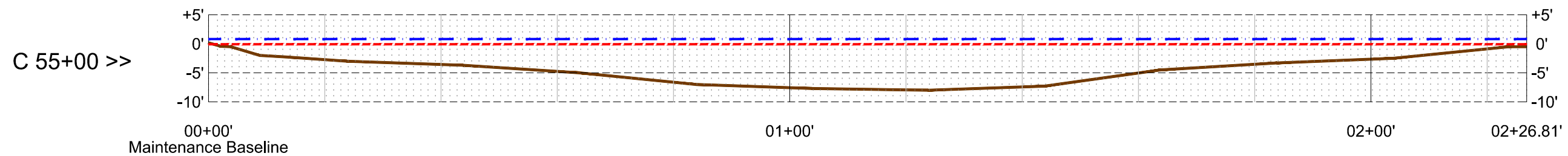
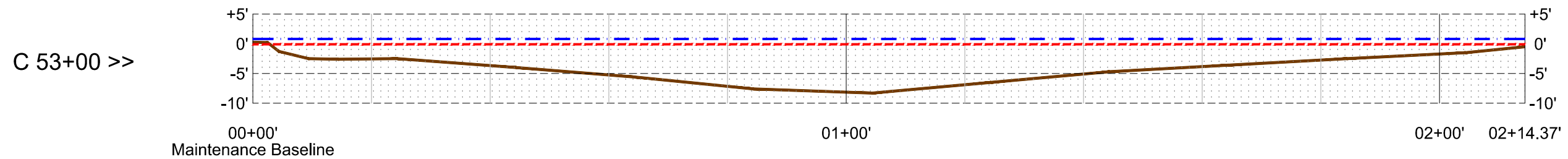
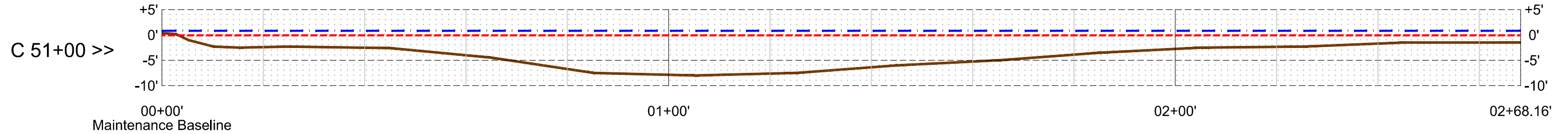
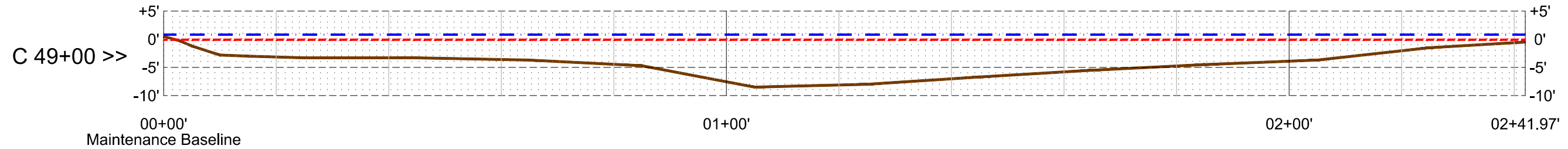


- NOTES:
 1. ALL MEASUREMENTS ARE IN FEET.
 2. SURVEY DATES: 02/24/2015, 02/26/2015 & 03/02/2015.

--- High Water Line +0.8' (During Survey)
 --- Low Water Line -0.1' (During Survey)
 ——— Mud Line

C = CENTRAL REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

| PREPARED BY C&C Technologies SURVEY SERVICES <small>730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA, (337) 261-0660 LA. REGISTRATION NUMBER: 330</small> | Stantec 500 MAIN STREET BATON ROUGE, LA 70801 | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REV. | DATE | DESCRIPTION | BY | | | | | | | | | | | | | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft ALL X-SECTIONS HORIZONTAL & VERTICAL SCALES SCALE IN FEET | COASTAL PROTECTION AND RESTORATION AUTHORITY <small>450 LAUREL STREET BATON ROUGE, LOUISIANA 70801</small> | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT STATE PROJECT NUMBER: BA-41 FEDERAL PROJECT NUMBER: BA-41 APPROVED BY: BCH | BREAKWATER TRANSECT 5 DATE: March 25, 2015 SHEET 16 OF 22 |
|---|---|--|------|-------------------------------|-------------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|
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| | | | | DRAWN BY: PBH DESIGNED BY: | | | | | | | | | | | | | | | | | | |

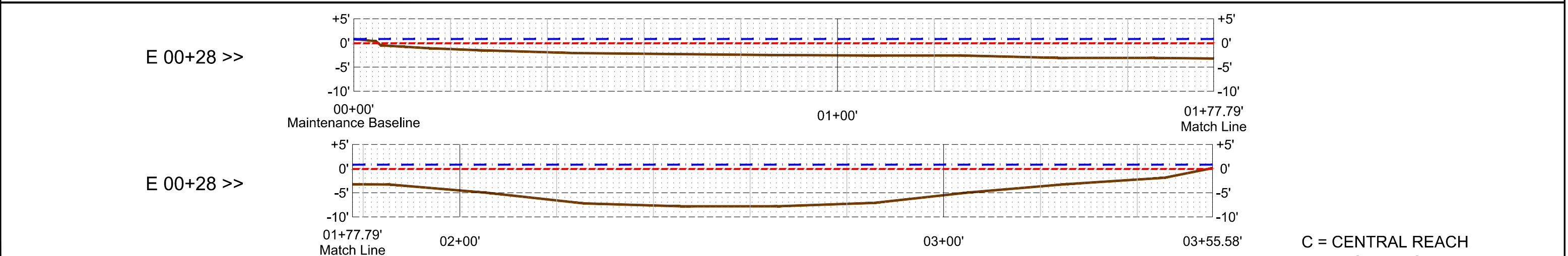
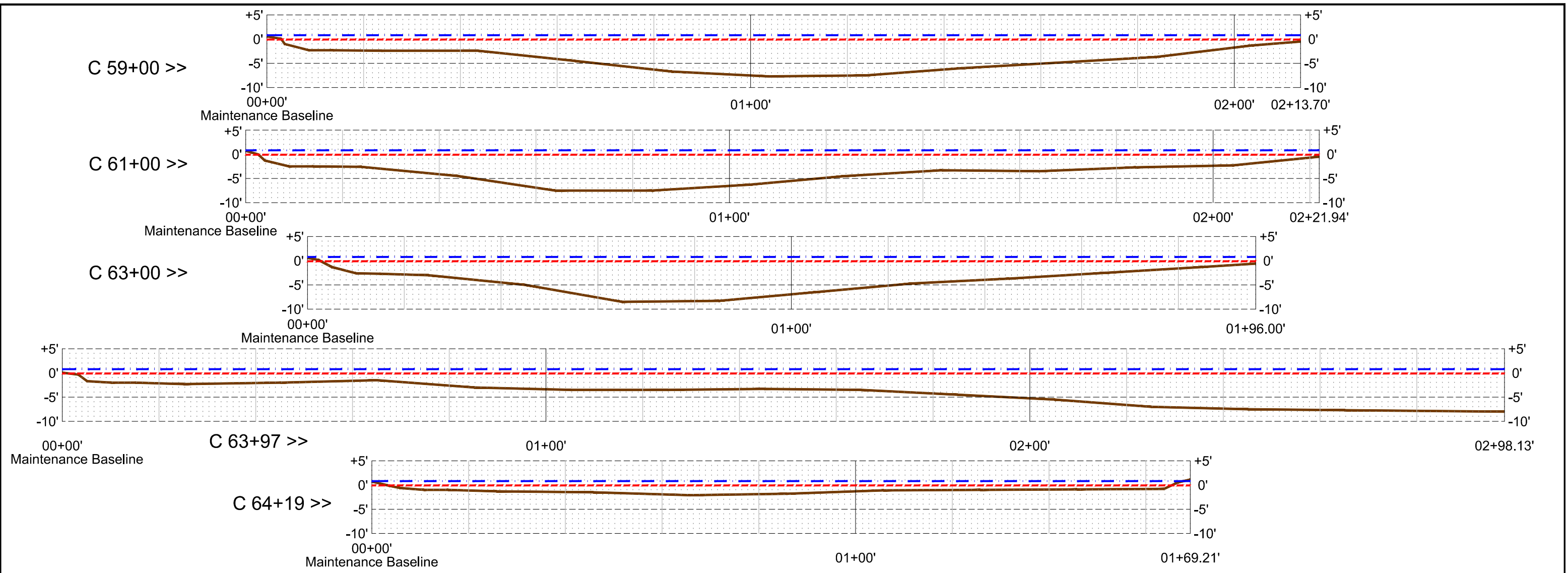


NOTES:
 1. ALL MEASUREMENTS ARE IN FEET.
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 --- Low Water Line -0.1' (During Survey)
 — Mud Line

C = CENTRAL REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

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| PREPARED BY SURVEY SERVICES 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA (337) 261-0660 LA. REGISTRATION NUMBER: 330 | 500 MAIN STREET BATON ROUGE, LA 70801 | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT | | BREAKWATER TRANSECTS 6 |
| | | ALL X-SECTIONS HORIZONTAL & VERTICAL SCALES SCALE IN FEET | | STATE PROJECT NUMBER: BA-41 | FEDERAL PROJECT NUMBER: BA-41 | |
| REV. DATE DESCRIPTION BY | | | DRAWN BY: PBH | DESIGNED BY: | APPROVED BY: BCH | SHEET 17 OF 22 |

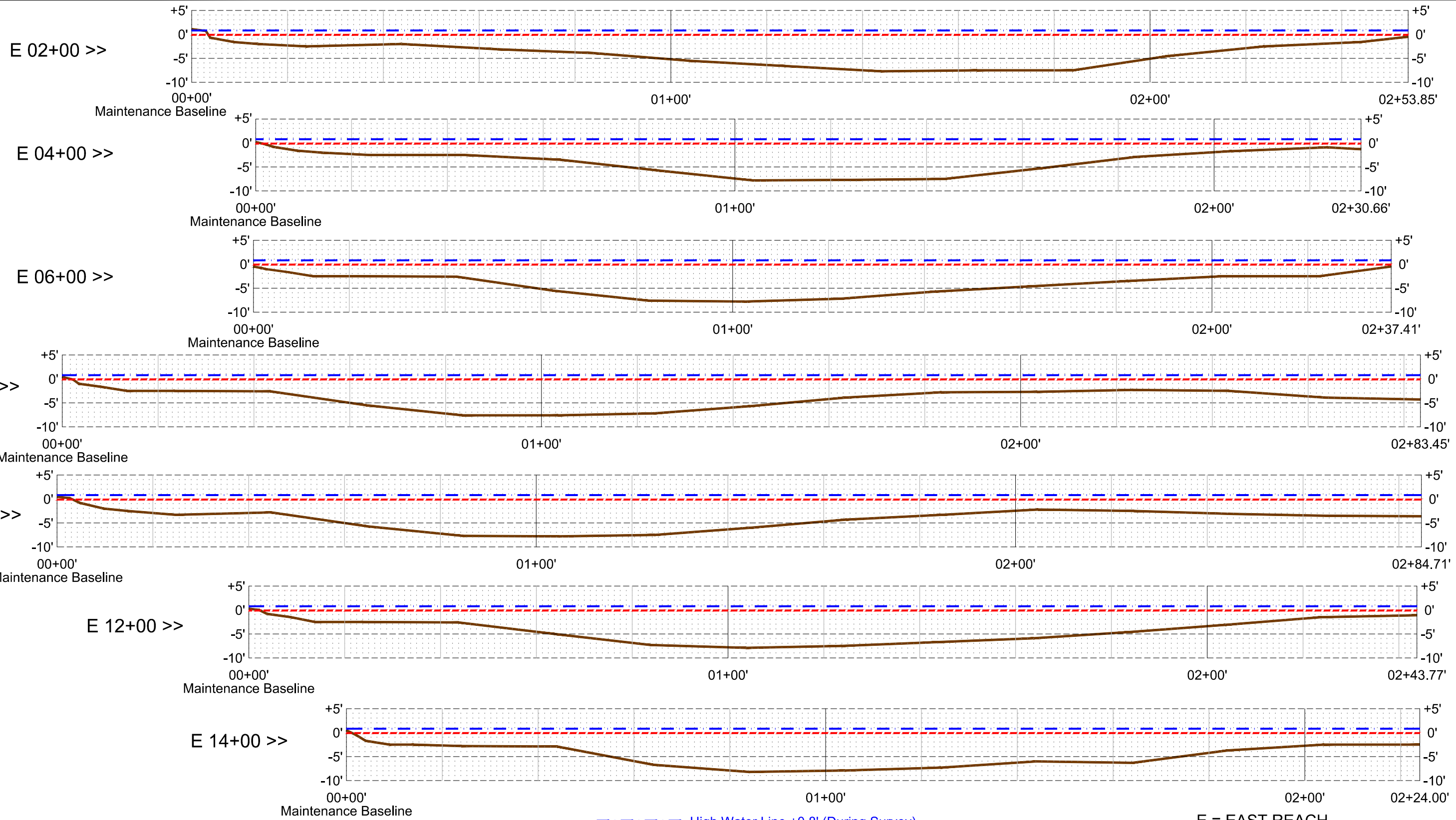


NOTES:
 1. ALL MEASUREMENTS ARE IN FEET.
 2. SURVEY DATES: 02/24/2015, 02/26/2015 & 03/02/2015.

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 - - - Low Water Line -0.1' (During Survey)
 ——— Mud Line

C = CENTRAL REACH
E = EAST REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

| PREPARED BY C&C Technologies SURVEY SERVICES <small>730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660 LA. REGISTRATION NUMBER: 330</small> | Stantec 500 MAIN STREET BATON ROUGE, LA 70801 | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REV. | DATE | DESCRIPTION | BY | | | | | | | | | | | | | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft ALL X-SECTIONS HORIZONTAL & VERTICAL SCALES SCALE IN FEET | COASTAL PROTECTION AND RESTORATION AUTHORITY <small>450 LAUREL STREET BATON ROUGE, LOUISIANA 70801</small> | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT STATE PROJECT NUMBER: BA-41 FEDERAL PROJECT NUMBER: BA-41 APPROVED BY: BCH | BREAKWATER TRANSECTS 7 DATE: March 25, 2015 SHEET 18 OF 22 |
|---|---|--|------|-------------------------------|-------------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|---|
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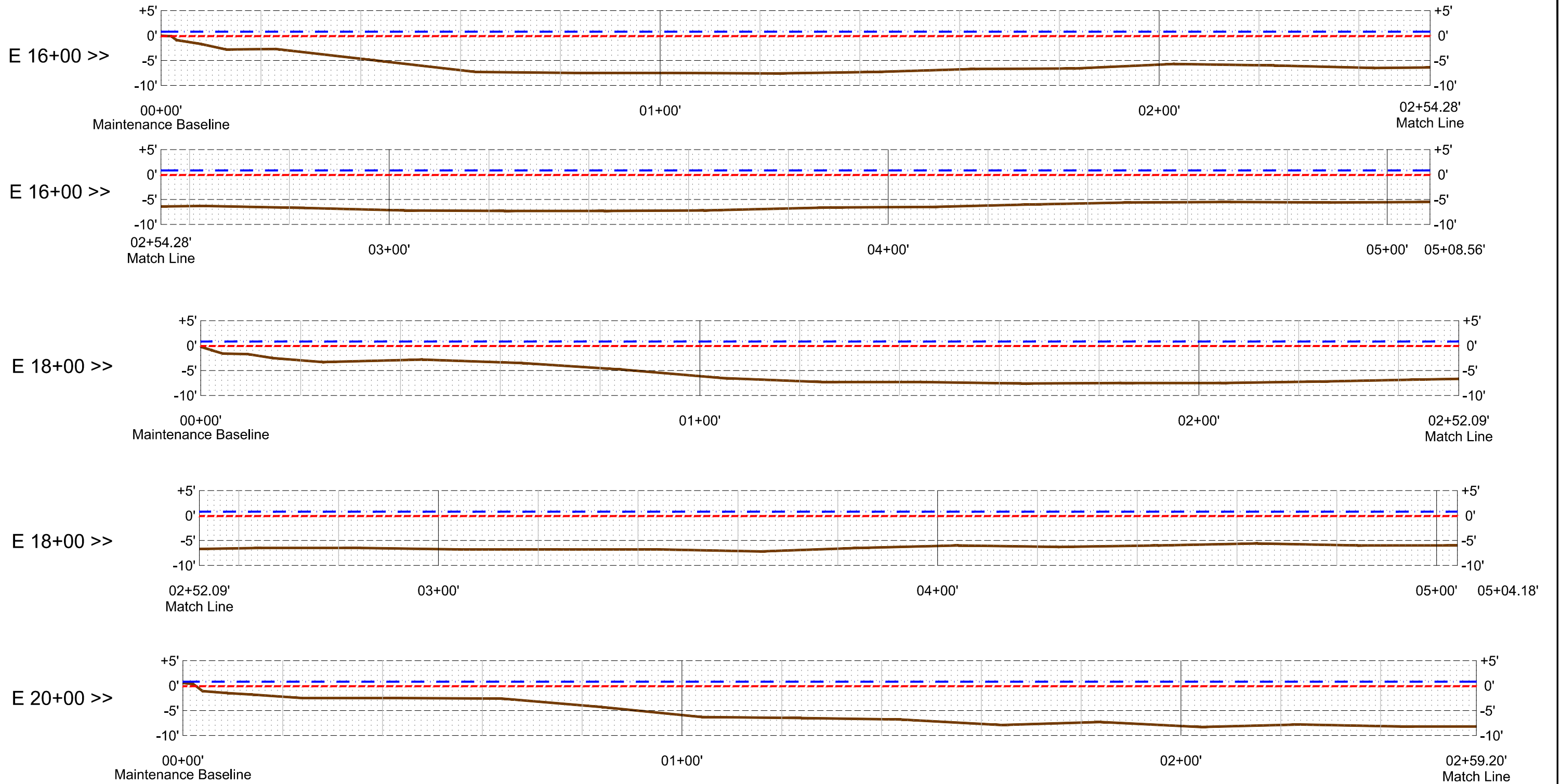


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E = EAST REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

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|---|---|---|--|--|----------------------|------------------------|
| PREPARED BY SURVEY SERVICES 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660 LA. REGISTRATION NUMBER: 330 | 500 MAIN STREET BATON ROUGE, LA 70801 | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT | | BREAKWATER TRANSECTS 8 |
| | | ALL X-SECTIONS HORIZONTAL & VERTICAL SCALES SCALE IN FEET | | STATE PROJECT NUMBER: BA-41 FEDERAL PROJECT NUMBER: BA-41 | DATE: March 25, 2015 | |
| REV. DATE DESCRIPTION BY | | | DRAWN BY: PBH DESIGNED BY: | APPROVED BY: BCH | SHEET 19 OF 22 | |

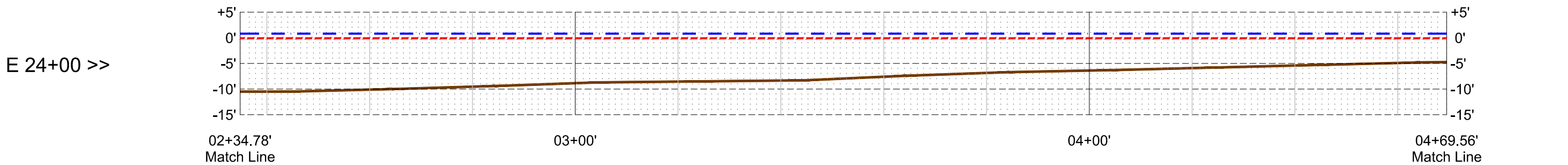
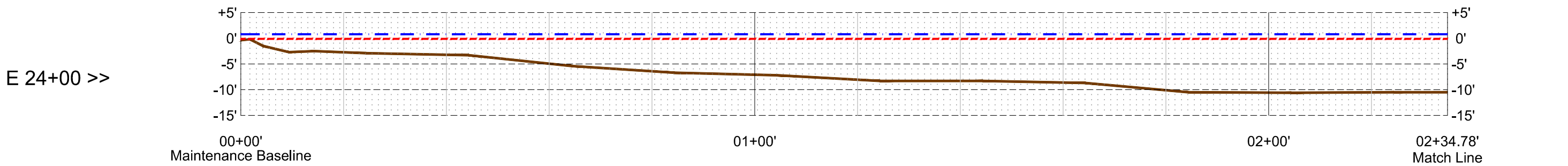
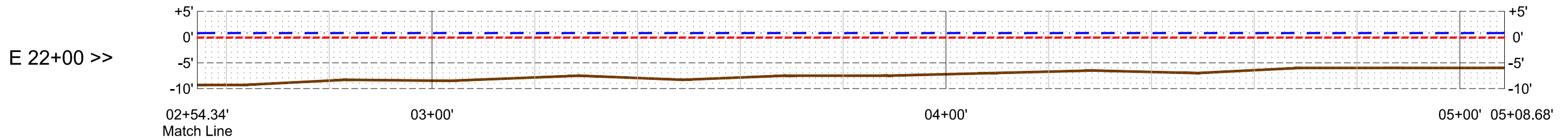
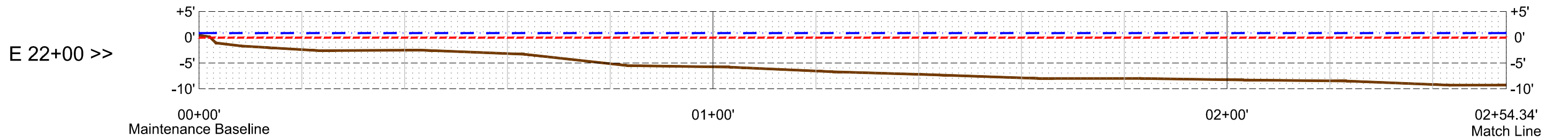
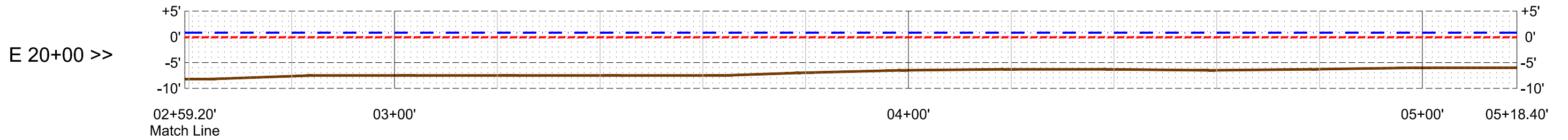


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E = EAST REACH
 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

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| PREPARED BY SURVEY SERVICES 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA, (337) 261-0660 LA. REGISTRATION NUMBER: 330 | 500 MAIN STREET BATON ROUGE, LA 70801 | REV. | DATE | DESCRIPTION | BY | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft ALL X-SECTIONS HORIZONTAL & VERTICAL SCALES SCALE IN FEET | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | SOUTH SHORE OF THE PEN MAINTENANCE PROJECT | | BREAKWATER TRANSECTS 9 |
| | | STATE PROJECT NUMBER: BA-41 | | DATE: March 25, 2015 | | | | FEDERAL PROJECT NUMBER: BA-41 | | |
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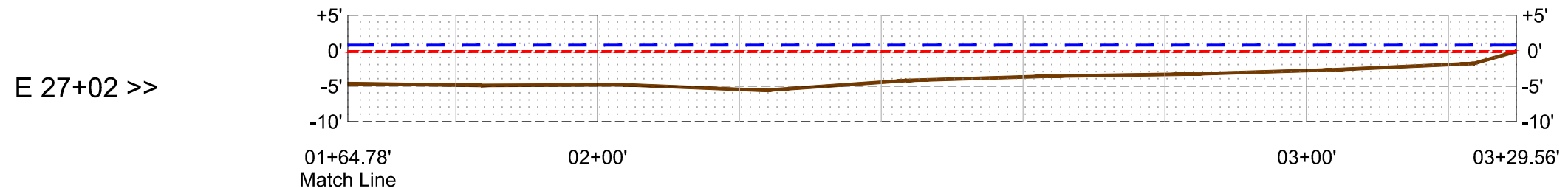
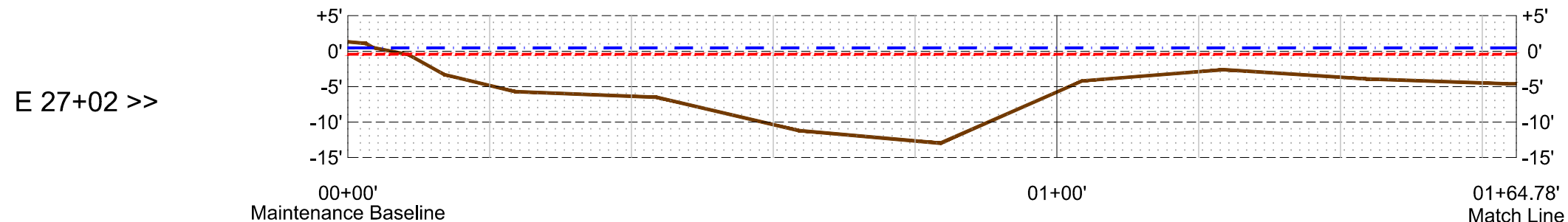
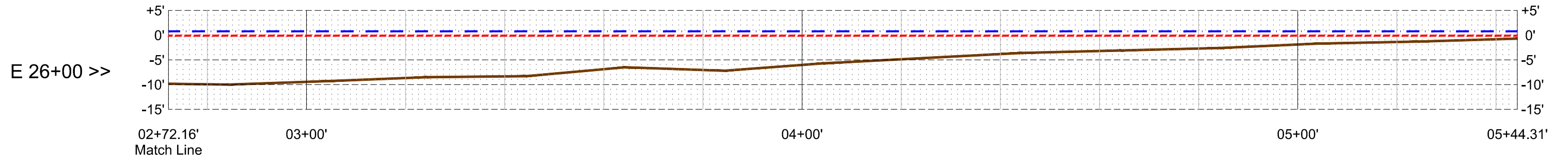
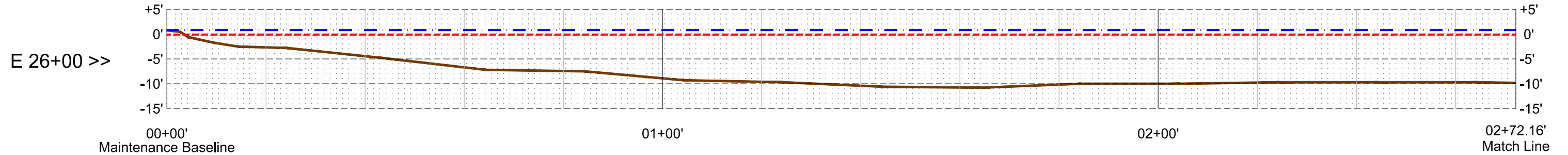
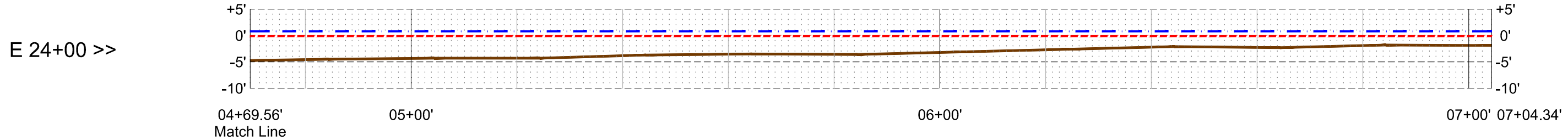


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 Horizontal Datum NAD83(2011) LSZ(1702)Ft
 Vertical Datum NAVD88 Height (Geoid 12a) Ft

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| | | APPROVED BY: BCH | | | | | |



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| PREPARED BY SURVEY SERVICES 730 E. KALISTE SALOOM ROAD, LAFAYETTE, LA. (337) 261-0660 LA. REGISTRATION NUMBER: 330 | 500 MAIN STREET BATON ROUGE, LA 70801 | Horizontal Datum NAD83(2011) LSZ(1702)Ft Vertical Datum NAVD88 Height (Geoid 12a) Ft | COASTAL PROTECTION AND RESTORATION AUTHORITY 450 LAUREL STREET BATON ROUGE, LOUISIANA 70801 | SOUTH SHORE OF THE PEN MAINTENANACE PROJECT STATE PROJECT NUMBER: BA-41 FEDERAL PROJECT NUMBER: BA-41 | | BREAKWATER TRANSECTS 11 DATE: March 25, 2015 | | | | | | | | | | | | | | | |
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| <table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | REV. | DATE | DESCRIPTION | BY | | | | | | | | | | | | | | | | | |
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