Appendix H

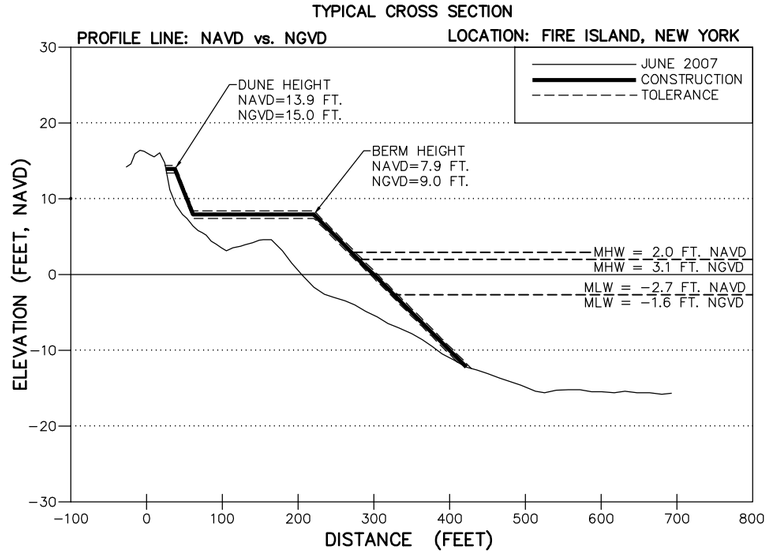
Site Plans for Alternative 2.5, Beach Nourishment with Modified Conditions, Combination Template, No Tapers on FINS Property

WESTERN FIRE ISLAND

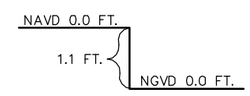
TYPICAL CROSS SECTION

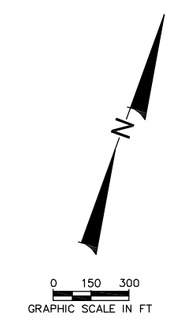
PROFILE LINE: NAVD vs. NGVD

LOCATION: FIRE ISLAND, NEW YORK



NOTE:
ALL TOPOGRAPHIC SURVEYS AND PROFILES ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988, WHICH RELATES TO NGVD AS SHOWN ABOVE.





NOTES:
1. DATE OF AERIAL PHOTOGRAPH: 12/18/2007.
2. AERIAL FLOWN BY GEOMAPS INTERNATIONAL AERIAL PHOTOGRAMMETRY.

THOMAS J CAMPBELL P.E. NO. 56457

DATE

COASTAL PLANNING & ENGINEERING OF NY PC
2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH. (561) 391-8102
FAX (561) 391-9116
www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI

Reference Files: 730032_BORDER.DWG
Designed by: SK
Drawn by: JRC
Date: 2/22/08
Plot Scale: AS NOTED
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32

WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

AERIAL PLATE

DRAWING NO.
AP

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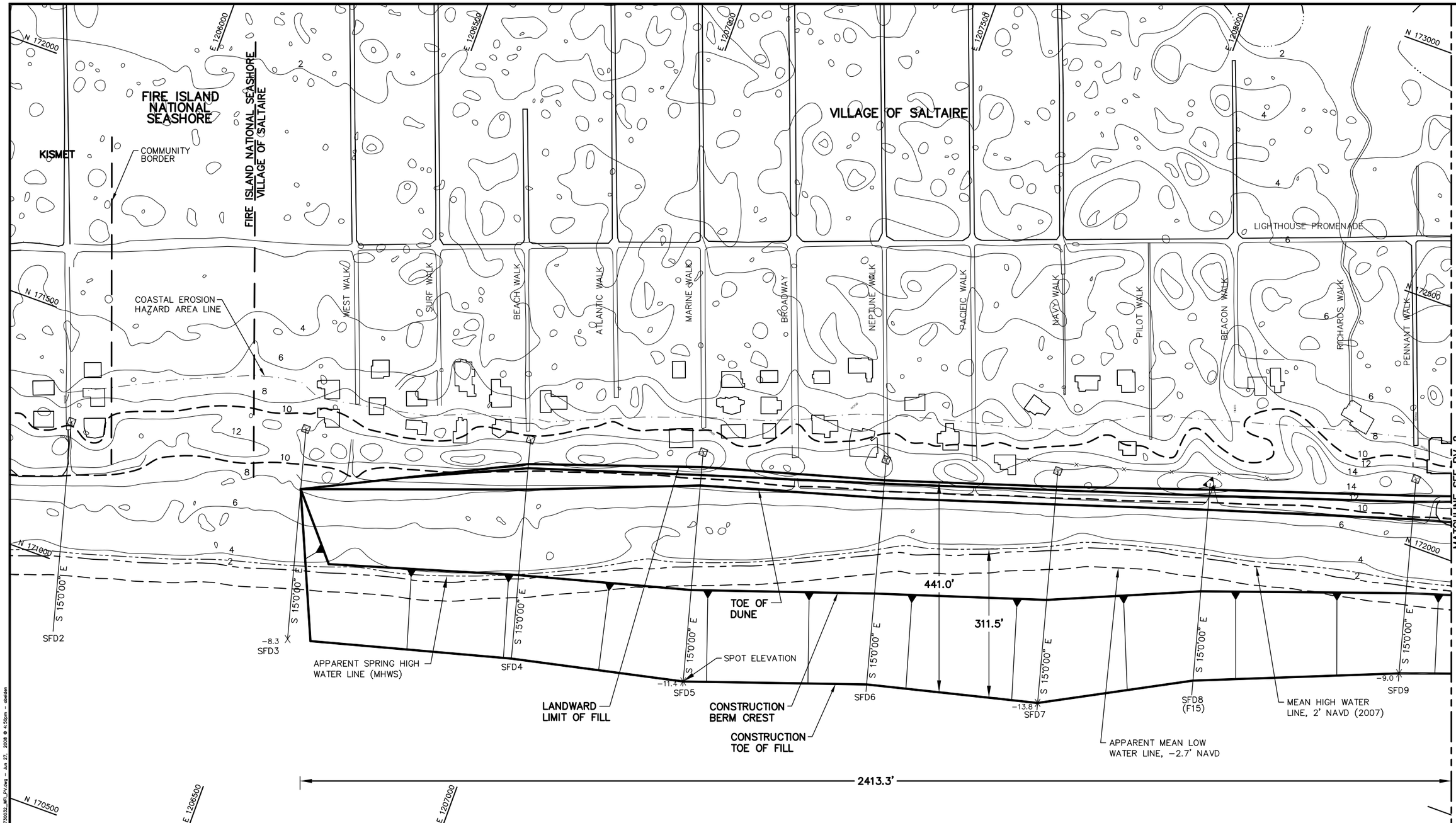

NOTES:

1. COORDINATES ARE BASED ON NEW YORK LONG ISLAND LAMBERT STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD83).
2. TOPOGRAPHIC CONTOURS SHOWN ARE IN FEET NAVD88 FROM A LIDAR SURVEY FLOWN APRIL 29, 2007 BY THE USGS EAARL SYSTEM.
3. THE PROJECT WILL DREDGE APPROXIMATELY 1.91 MILLION± CUBIC YARDS FROM AREA 2–WEST FOR THE CENTRAL AND WESTERN FIRE ISLAND SEGMENT BEACHES. A CUTTER HEAD OR HOPPER DREDGE WILL BE USED TO TAKE THE SAND FROM THE OFFSHORE BORROW AREA AND PUMP IT TO THE BEACH USING A COMBINATION OF SUBMERGED AND BEACH PIPELINES. THE BEACH/DUNE WILL BE SHAPED AND GRADED USING BULLDOZERS, FRONT END LOADERS, AND SIMILAR HEAVY CONSTRUCTION EQUIPMENT. THE FILL MATERIAL IS 96% SAND AND 4% SILT.
4. ALONG SHORE CURRENTS ARE WAVE DOMINATED IN AN EAST TO WEST DIRECTION.
5. THE BEACH VOLUME FOR WESTERN FIRE ISLAND IS APPROXIMATELY 500,000 C.Y., WITH 251,200 C.Y. SEAWARD OF THE SPRING TIDE LINE. IF TAPERS CANNOT BE PLACED ON FINS PROPERTY, THE TAPER VOLUME WILL BE PLACED WITHIN THE FIRST 1000 FEET WITHIN THE COMMUNITY.

LEGEND:

- COMMENCEMENT POINT RGE 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' CONTOUR
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- −4.7 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457

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C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Designed by: SK
Checked by: AMB
Drawn by: JRC
Reviewed by: SK
Date: 2/22/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 7300.32_BORDER.DWG

WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.
PV–1

SHEET 3 OF 16

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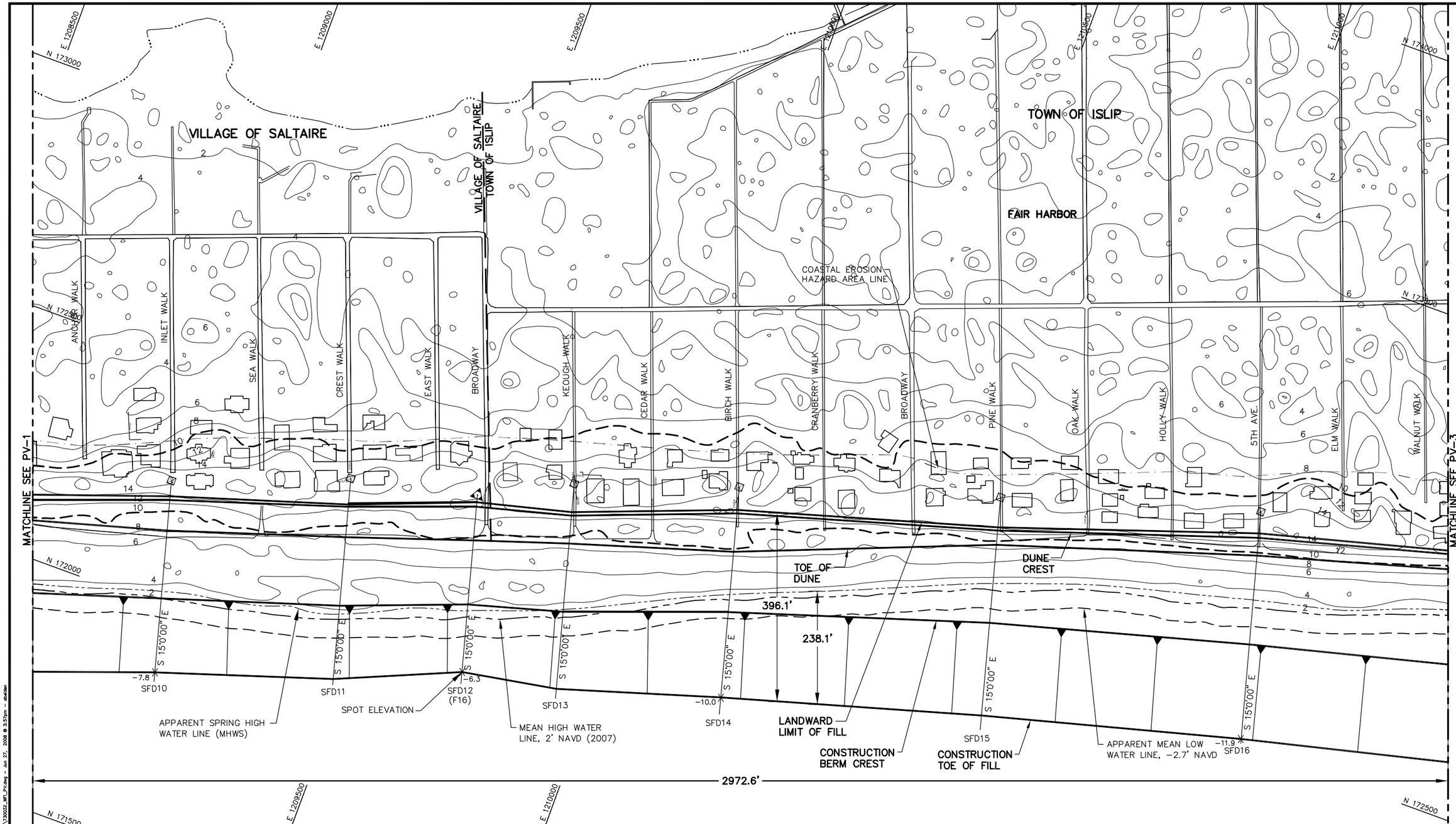

NOTES:

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LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' CONTOUR
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -4.7X SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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Submitted by: SK
Comm. No.: 7300.32

WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.
PV–2

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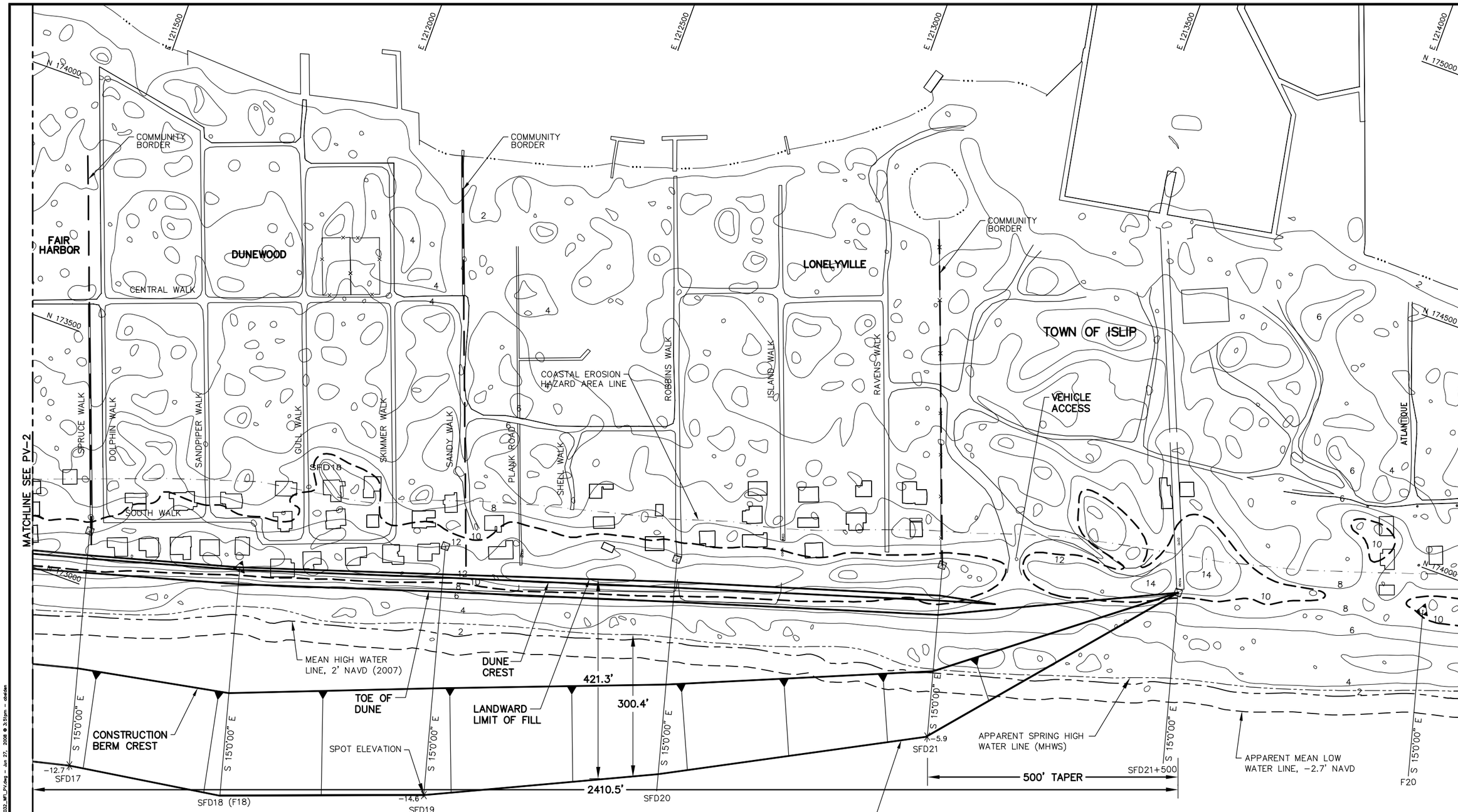

NOTES:

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LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' CONTOUR
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -4.7X SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	5/25/08	FINS EA

Reference Files: 730032_BORDER.DWG
Designed by: SK
Drawn by: JRC
Date: 2/22/08
Plot Scale: AS NOTED
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32

WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.
PV–3

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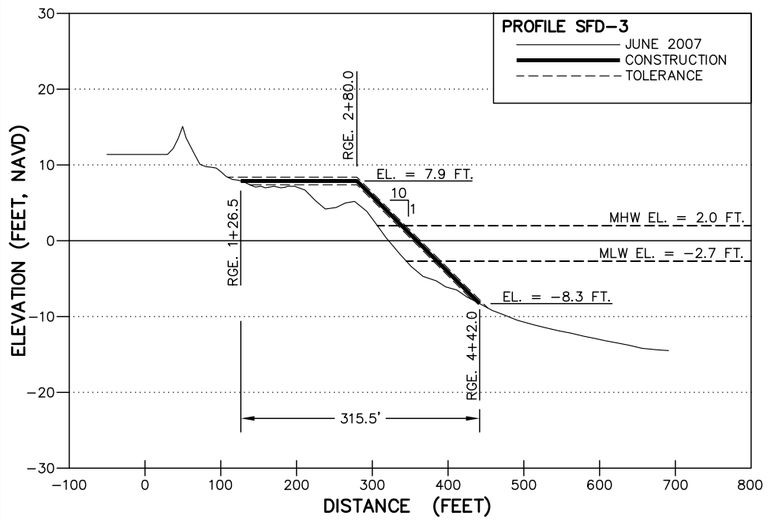

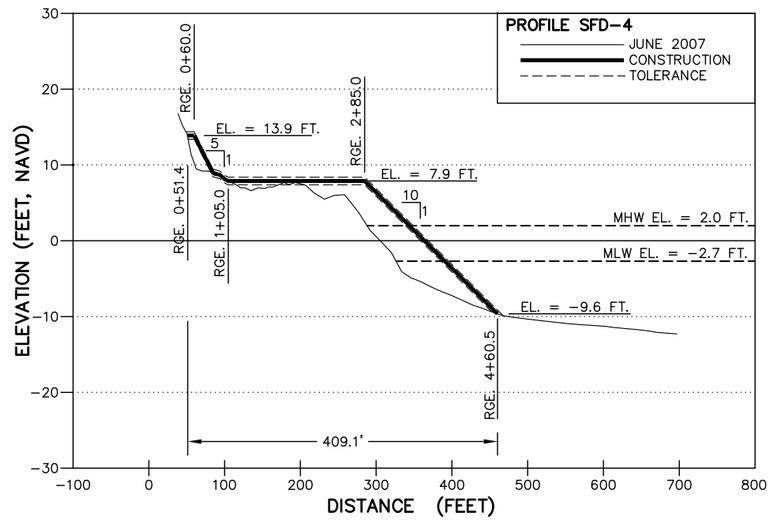

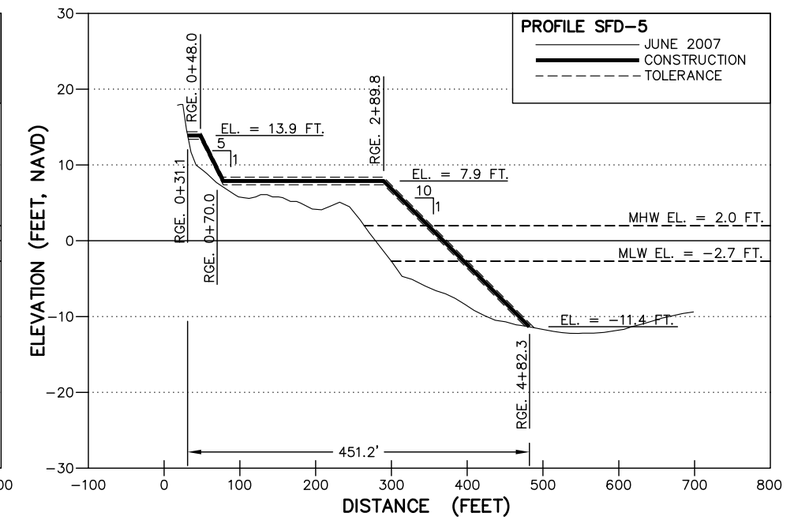

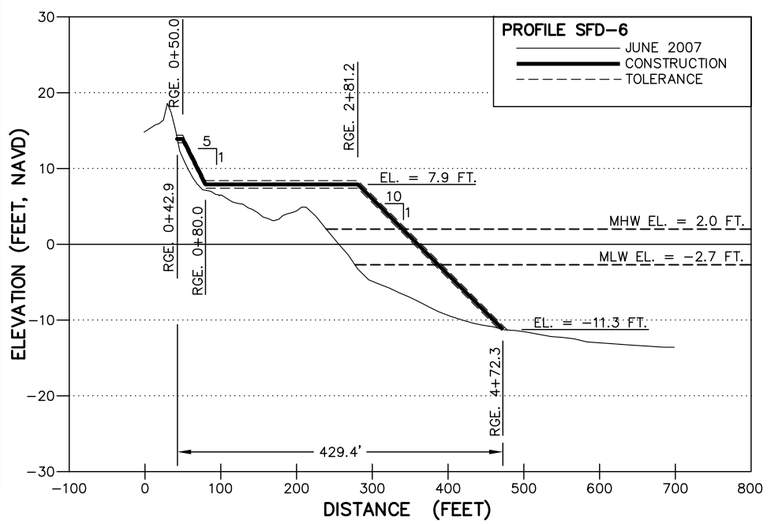

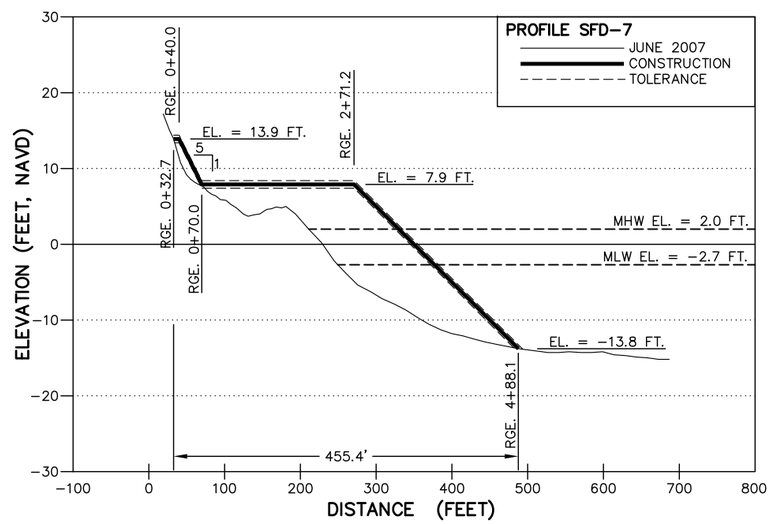

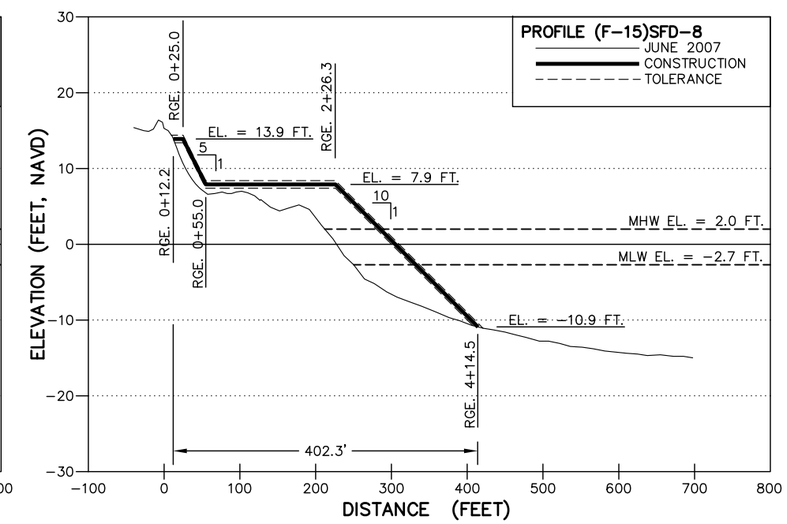

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VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

1. ELEVATIONS ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD,88).
2. TOLERANCE: ±0.5 FT.

THOMAS J CAMPBELL P.E. NO. 56457

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2	6/25/08	FINS EA

Reference Files: 730032_BORDER.DWG

Designed by: SK
Drawn by: TM
Date: 2/22/08
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Checked by: AMB
Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32

WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

WESTERN FIRE ISLAND
FILL CROSS SECTIONS

DRAWING NO.

PR-1

SHEET 6 OF 16

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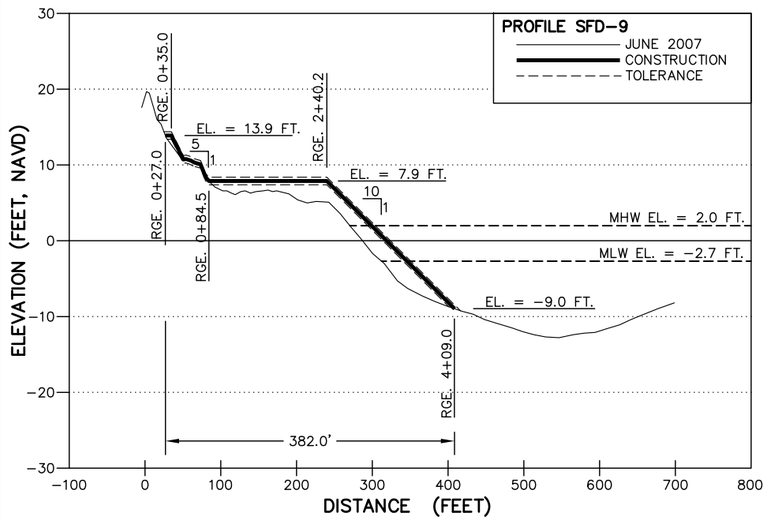

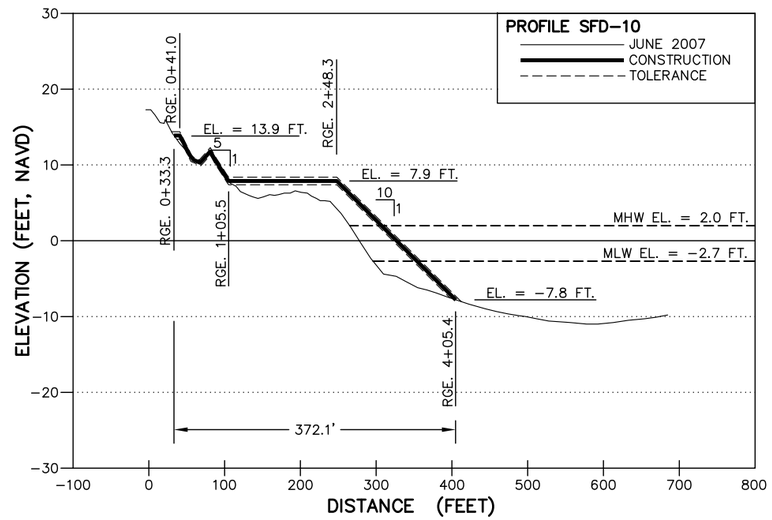

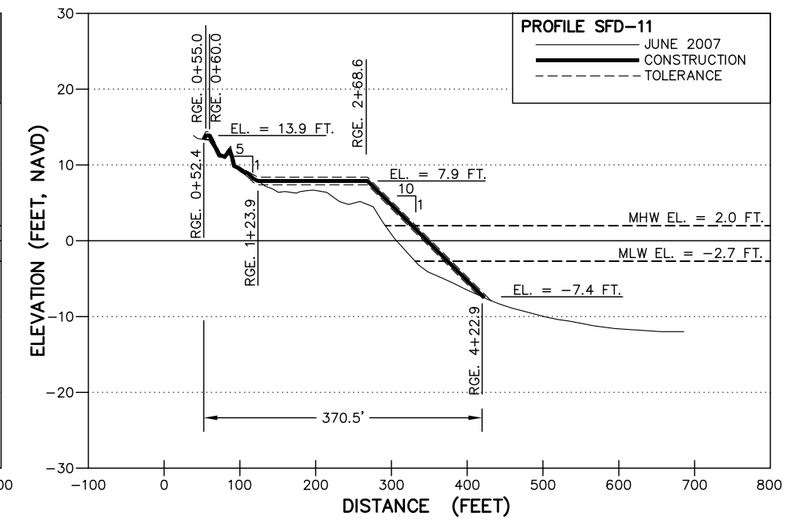

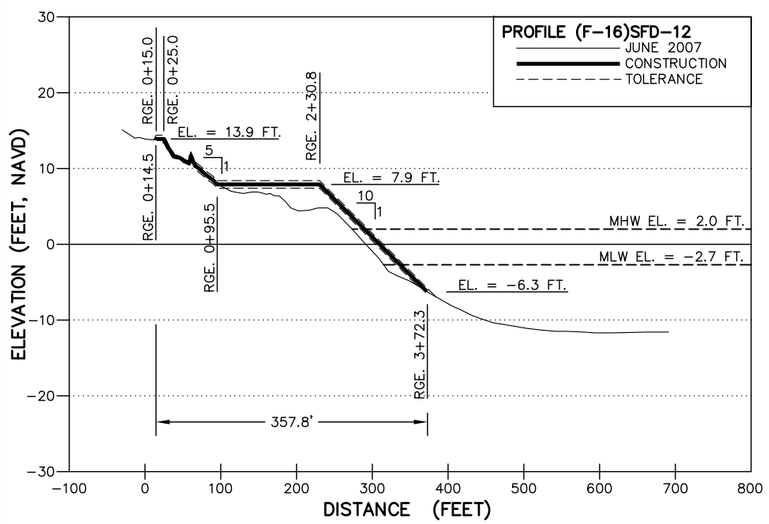

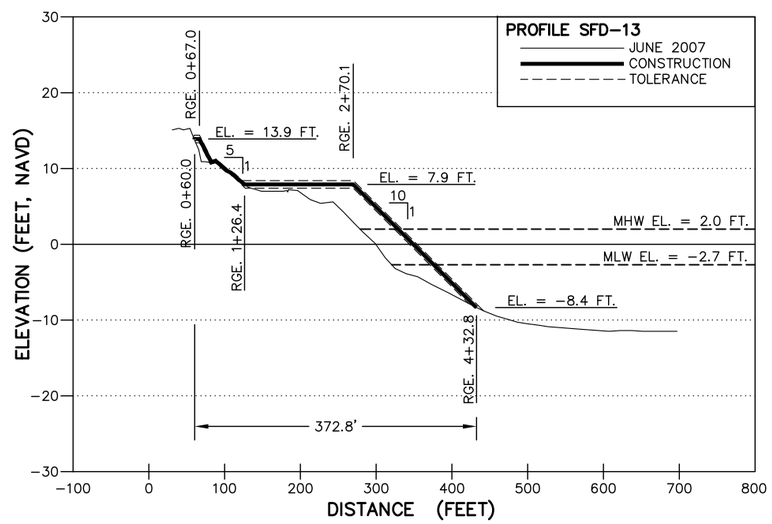

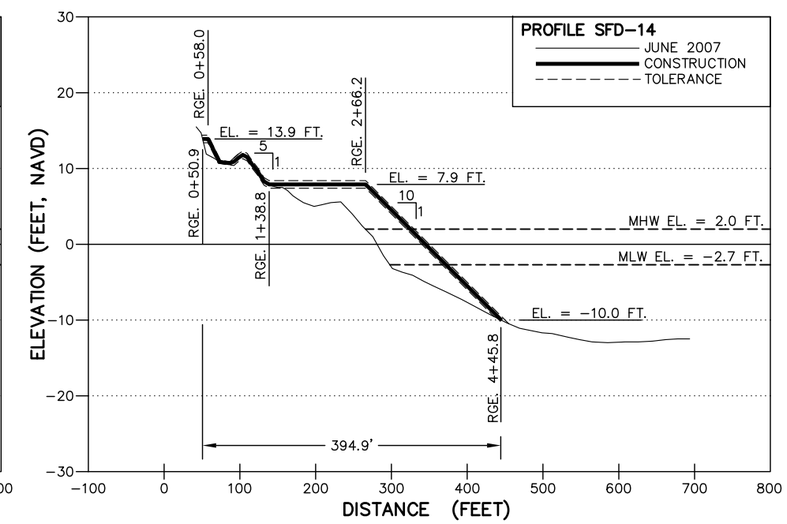

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VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

1. ELEVATIONS ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD,88).
2. TOLERANCE: ±0.5 FT.

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Designed by: SK
Checked by: AMB
Drawn by: TM
Reviewed by: SK
Date: 2/22/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 730032_BORDER.DWG

WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT
WESTERN FIRE ISLAND
BEACH PROFILES

DRAWING NO.
PR-2

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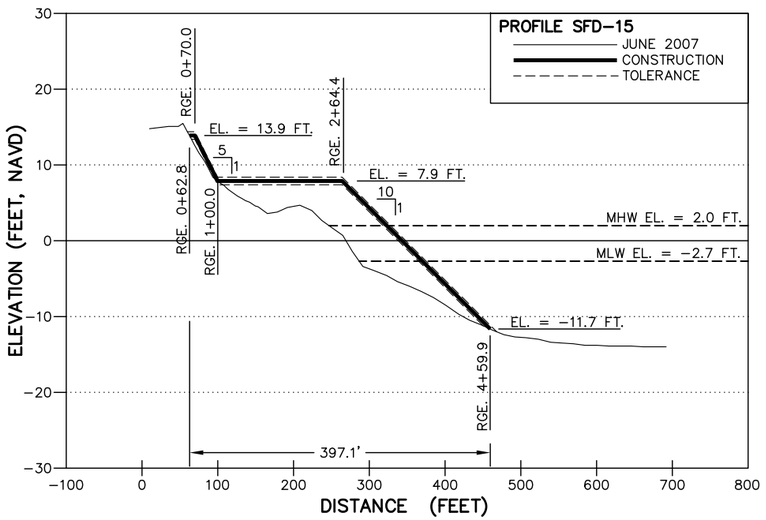

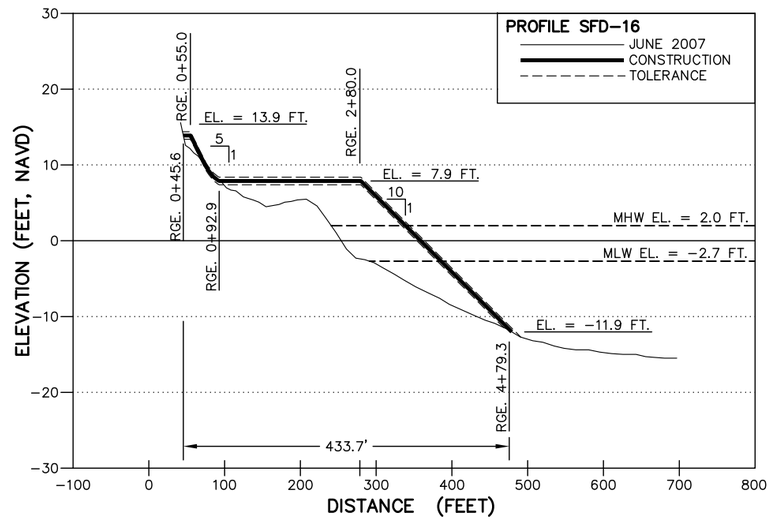

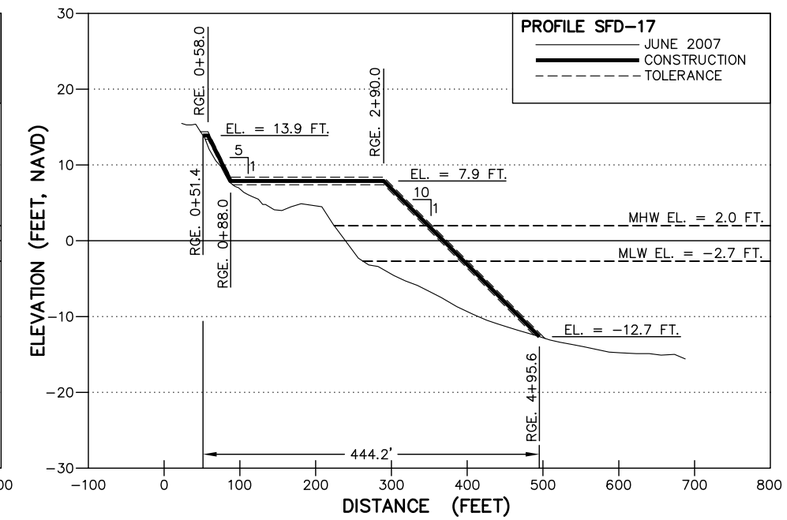

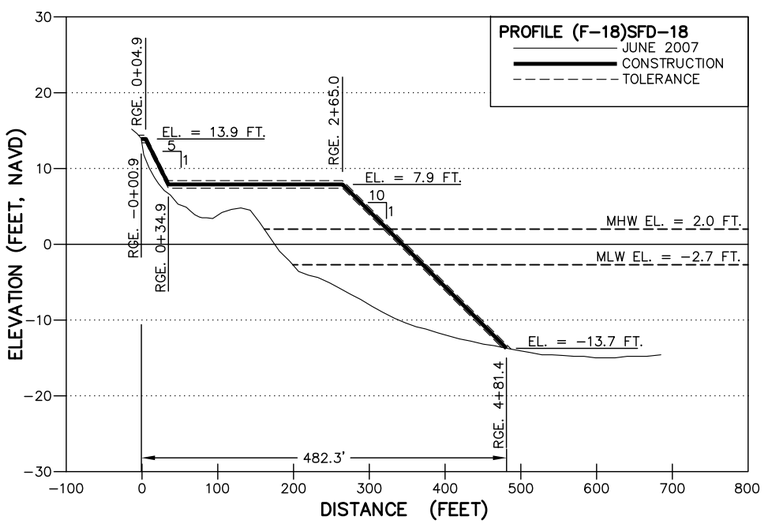

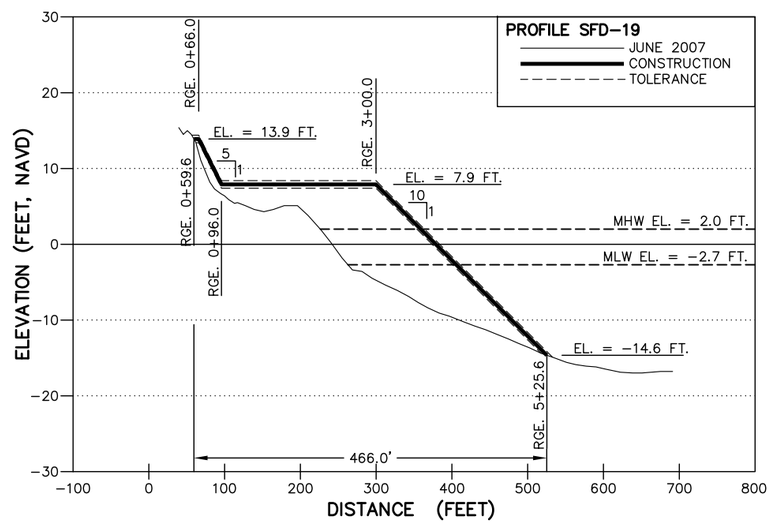

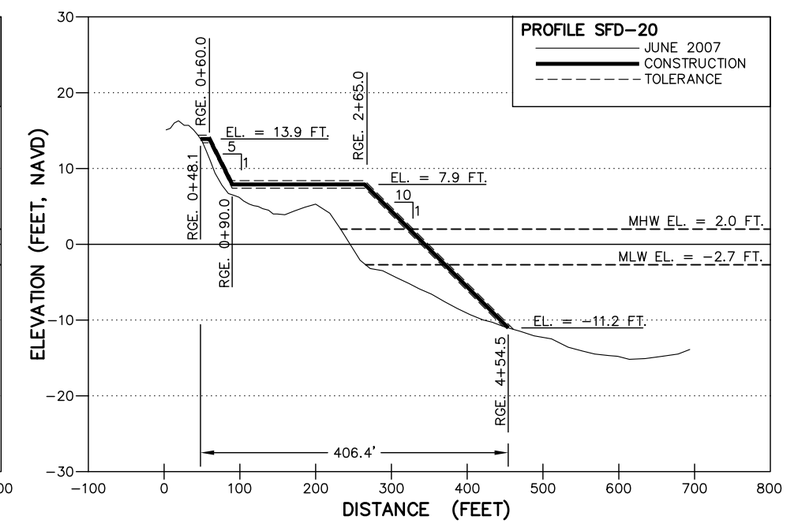

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

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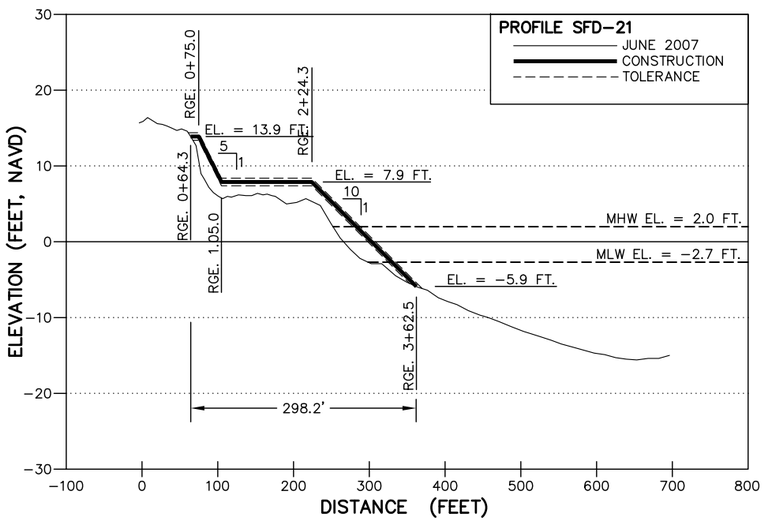
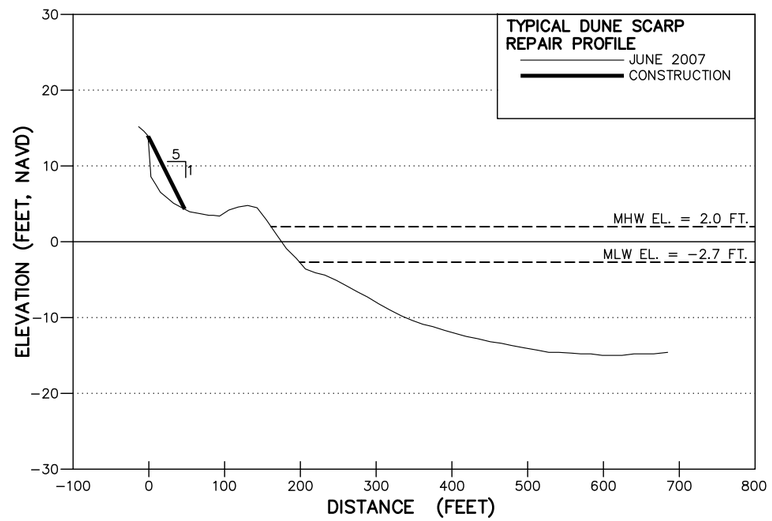
WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT
WESTERN FIRE ISLAND
BEACH PROFILES

DRAWING NO.
PR-3

H:\New York\FIREISLN\730032\CONSTRUCTION\WESTERN FIRE ISLAND\730032_WFI_Profiles.dwg - Jun 27, 2008 @ 5:04pm - abelden





TYPICAL DUNE SCARP REPAIR PROFILE:

THE SCARP WILL BE REPAIRED BY PUSHING SAND INTO A 1V:5H SLOPE TO COVER THE SCARPED FACE OF THE DUNE. THE REPAIR WILL NOT INCREASE THE DUNE WIDTH.

NOTES:

1. ELEVATIONS ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD,88).
2. TOLERANCE: ±0.5 FT.

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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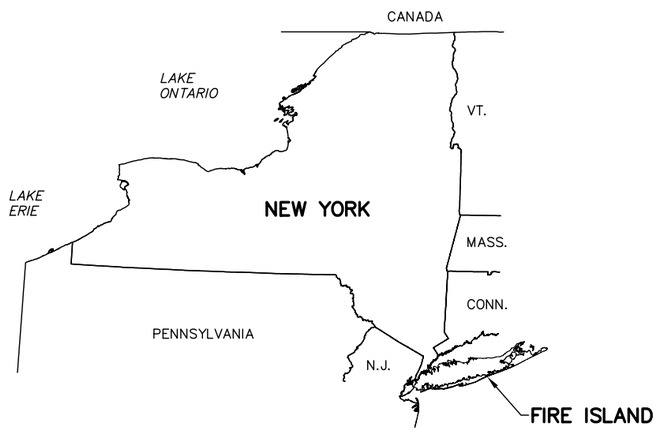
WESTERN FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

WESTERN FIRE ISLAND
FILL CROSS SECTIONS

DRAWING NO.
PR-4

H:\New York\FIREISLN\730032\CONSTRUCTION\WESTERN FIRE ISLAND\730032_WFI_Profiles.dwg - Jun 27, 2008 @ 4:01pm - abelden

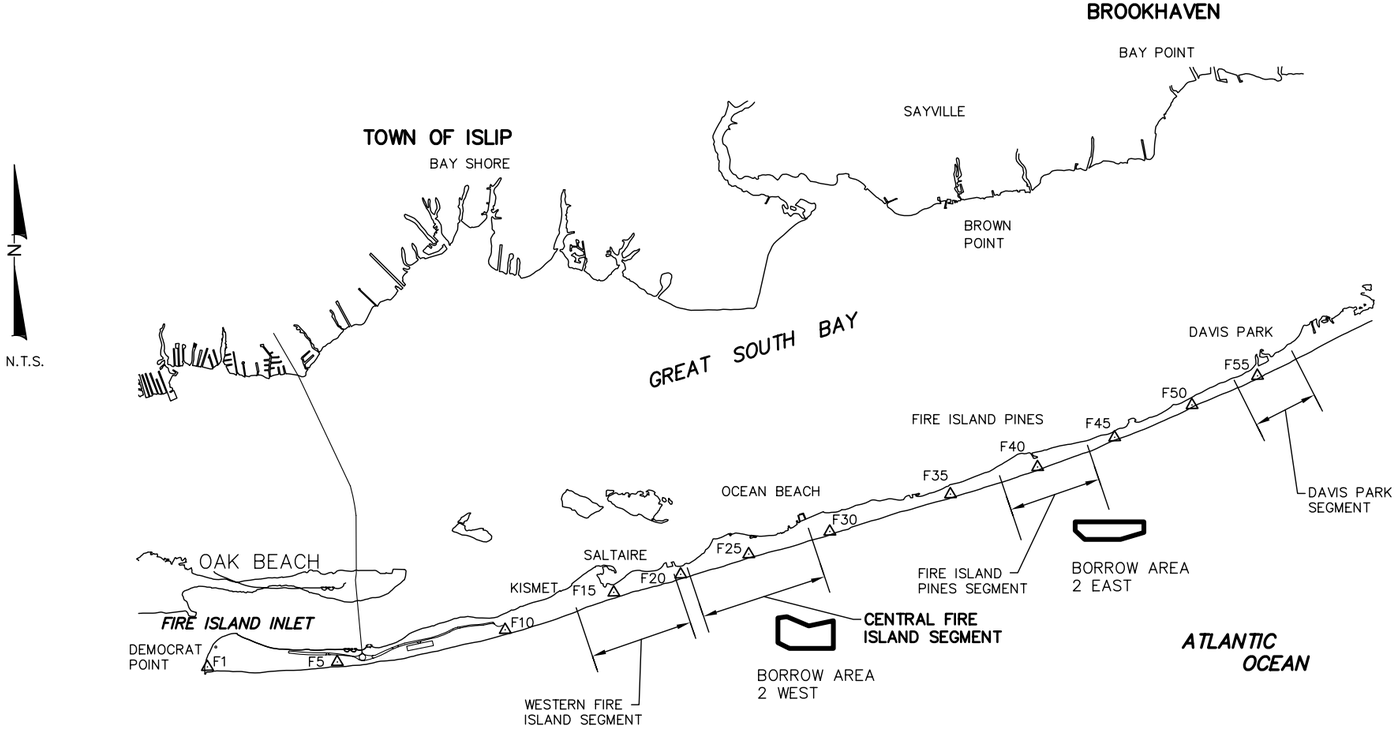
CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND 2008 BEACH RENOURISHMENT PROJECT



TOWN OF ISLIP, NEW YORK
CORNEILLE ESTATES/SUMMER CLUB
SEAVIEW

VILLAGE OF OCEAN BEACH, NEW YORK

TOWN OF BROOKHAVEN, NEW YORK
SEAVIEW
OCEAN BAY PARK



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BA–5	BORROW AREA 2 WEST BATHYMETRY
BA–6	BORROW AREA 2 WEST ISOPACH
BA–7	BORROW AREA 2 WEST CROSS SECTIONS

CENTRAL FIRE ISLAND, FIRE ISLAND , NEW YORK

PROFILE	RANGE 00 (COMMENCEMENT POINT)		
	EASTING	NORTHING	AZIMUTH
CFI-1	1216239.5	174445.8	160.0
CFI-1+195	1216403.0	174563.5	160.0
CFI-2	1216888.1	174694.7	160.0
CFI-3	1217360.4	174775.1	160.0
CFI-4	1217758.2	174876.4	160.0
CFI-5	1218133.0	174933.1	160.0
CFI-6	1218428.6	175030.1	160.0
CFI-7	1218938.2	175179.3	160.0
CFI-8	1219389.8	175398.2	160.0
CFI-9	1219815.8	175395.2	160.0
CFI-10	1220156.4	175427.3	160.0
CFI-11	1220518.3	175570.6	160.0
CFI-12	1220929.8	175741.2	160.0
CFI-13	1221275.7	175810.1	160.0
CFI-14	1221663.4	175949.7	160.0
CFI-15	1222061.2	176054.5	160.0
CFI-16	1222457.0	176126.6	160.0
CFI-17	1222932.5	176339.6	160.0
CFI-18	1223361.5	176427.6	160.0
CFI-19	1223792.0	176540.2	160.0
CFI-20	1224243.2	176735.1	160.0
CFI-21	1224548.3	176815.7	160.0
CFI-21+190	1224728.2	176879.1	160.0

THOMAS J CAMPBELL P.E. NO. 56457 DATE

COASTAL PLANNING & ENGINEERING OF NY PC
2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH. (561) 391-8102
FAX (561) 391-9116
www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI

Designed by: SK
Drawn by: JRC
Date: 4/1/08
Plot Scale: AS NOTED
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32

Reference Files: 7300\JPBDEFLIB.dwg

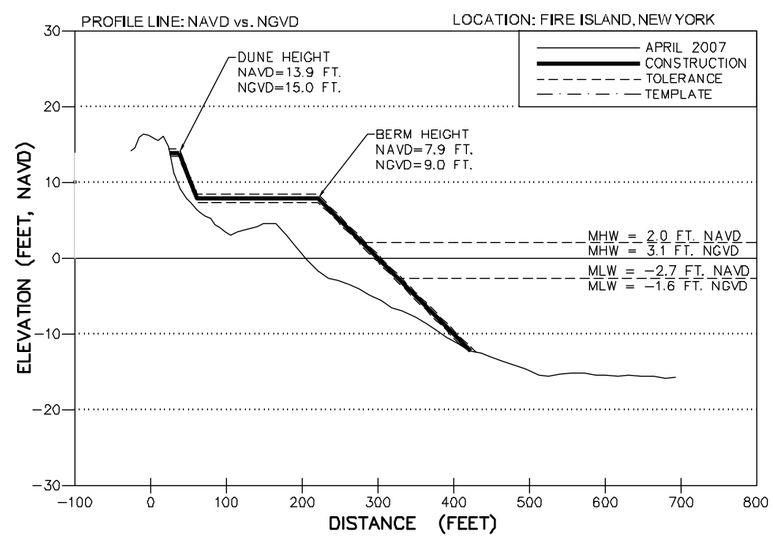
CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

COVER SHEET

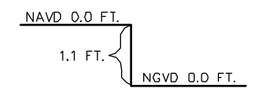
DRAWING NO.
CS

H:\New York\PROJS\7300\32\CONSTRUCTION\CENTRAL FIRE ISLAND\7300\32_CFI_CS.dwg – Jul 01, 2008 @ 4:49pm – hvollmer

CENTRAL FIRE ISLAND



NOTE:
ALL TOPOGRAPHIC SURVEYS AND PROFILES ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988, WHICH RELATES TO NGVD AS SHOWN ABOVE.



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NOTES:

1. DATE OF AERIAL PHOTOGRAPH: 12/18/2007.
2. AERIAL FLOWN BY GEOMAPS INTERNATIONAL AERIAL PHOTOGRAMMETRY.

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Designed by: SK
Checked by: AMB
Drawn by: JRC
Reviewed by: SK
Date: 4/1/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 730032_JBORDOLDWG

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

AERIAL PLATE

DRAWING NO.
AP

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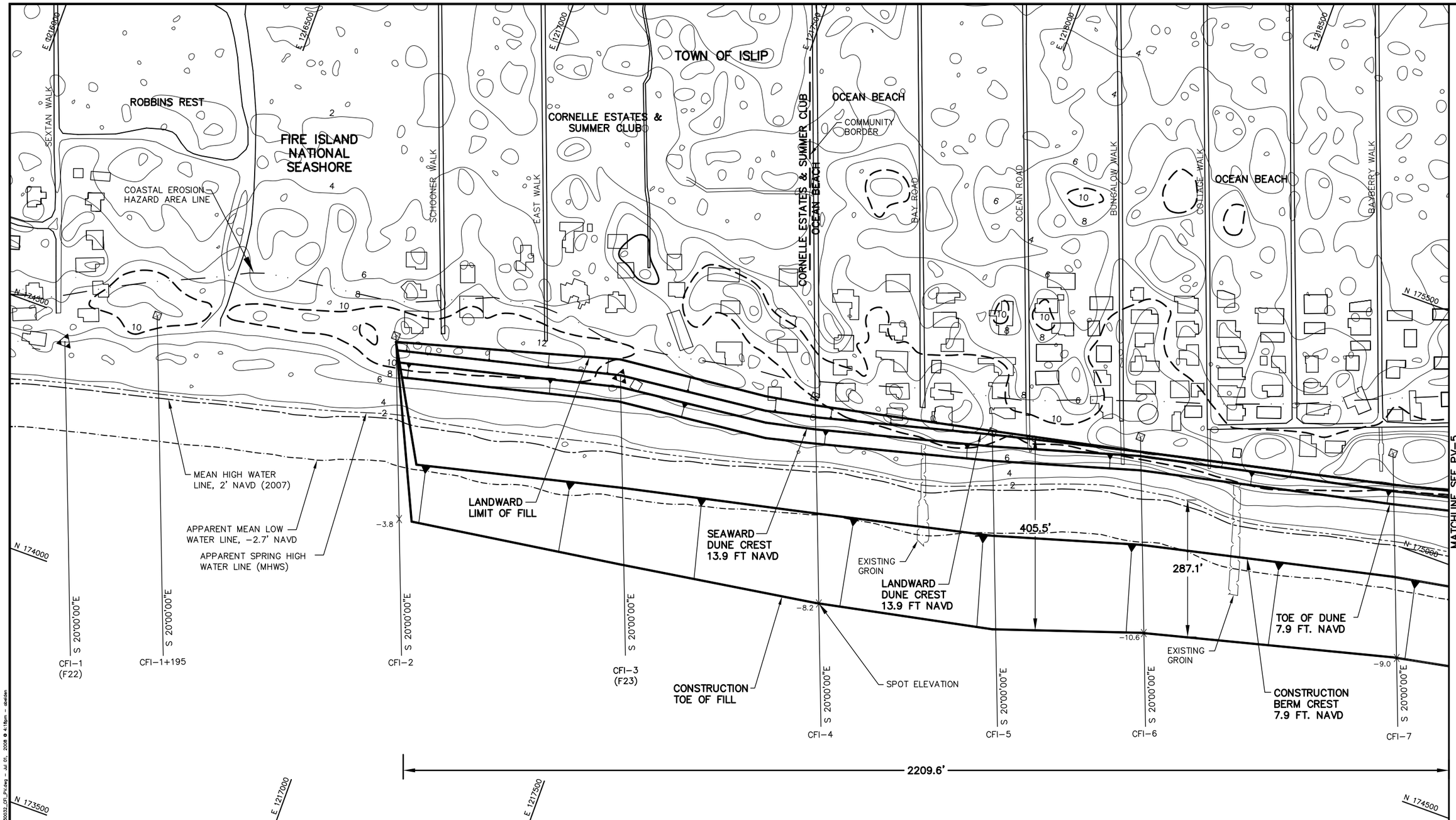

NOTES:

1. COORDINATES ARE BASED ON NEW YORK LONG ISLAND LAMBERT STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD83).
2. TOPOGRAPHIC CONTOURS SHOWN ARE IN FEET NAVD88 FROM A LIDAR SURVEY FLOWN APRIL 29, 2007 BY THE USGS EAARL SYSTEM.
3. THE PROJECT WILL DREDGE APPROXIMATELY 1.91 MILLION± CUBIC YARDS FROM AREA 2–WEST FOR THE CENTRAL AND WESTERN FIRE ISLAND SEGMENT BEACHES. A CUTTER HEAD OR HOPPER DREDGE WILL BE USED TO TAKE THE SAND FROM THE OFFSHORE BORROW AREA AND PUMP IT TO THE BEACH USING A COMBINATION OF SUBMERGED AND BEACH PIPELINES. THE BEACH/DUNE WILL BE SHAPED AND GRADED USING BULLDOZERS, FRONT END LOADERS, AND SIMILAR HEAVY CONSTRUCTION EQUIPMENT. THE FILL MATERIAL IS 96% SAND AND 4% SILT.
4. ALONG SHORE CURRENTS ARE WAVE DOMINATED IN AN EAST TO WEST DIRECTION.
5. THE BEACH VOLUME FOR CENTRAL FIRE ISLAND IS APPROXIMATELY 570,000 C.Y., WITH 259,500 C.Y. SEAWARD OF THE SPRING TIDE LINE. IF TAPERS CANNOT BE PLACED ON FINS PROPERTY, THE TAPER VOLUME WILL BE PLACED WITHIN THE FIRST 1000 FEET WITHIN THE COMMUNITY.

LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' CONTOUR
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- −9.0 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457

DATE

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No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Designed by: SK
Drawn by: JRC
Date: 4/1/08
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 7300bcpfeet3d.dwg

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

CENTRAL FIRE ISLAND PLAN VIEW

DRAWING NO.

PV–1

SHEET 3 OF 16

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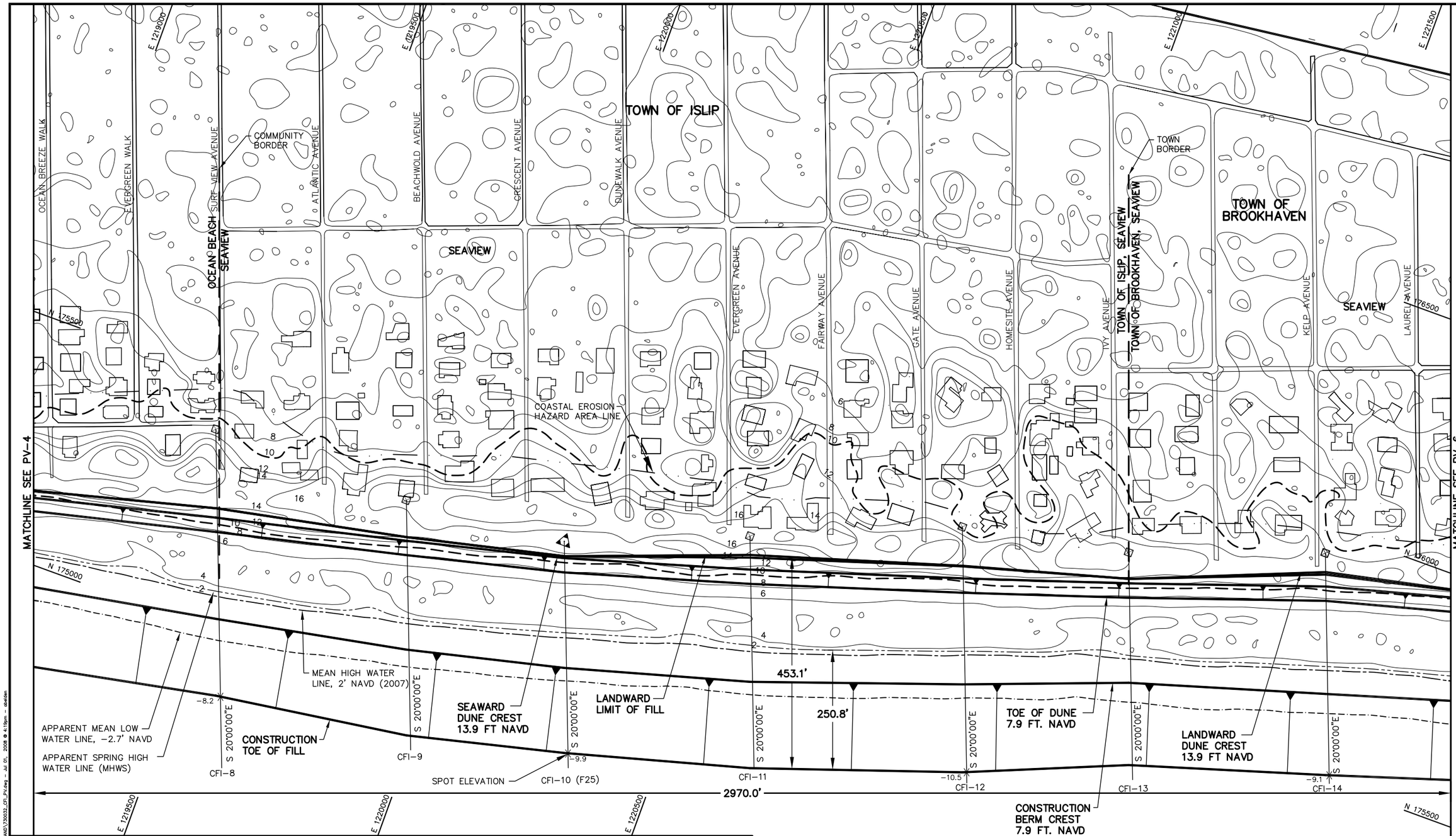

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LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' CONTOUR
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -9.0 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457

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C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FNS EA

Designed by: SK
Checked by: AMB
Drawn by: JRC
Reviewed by: SK
Date: 4/1/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32

Reference Files: 7300CLBEACH.dwg

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

CENTRAL FIRE ISLAND PLAN VIEW

DRAWING NO.

PV–2

SHEET 4 OF 16

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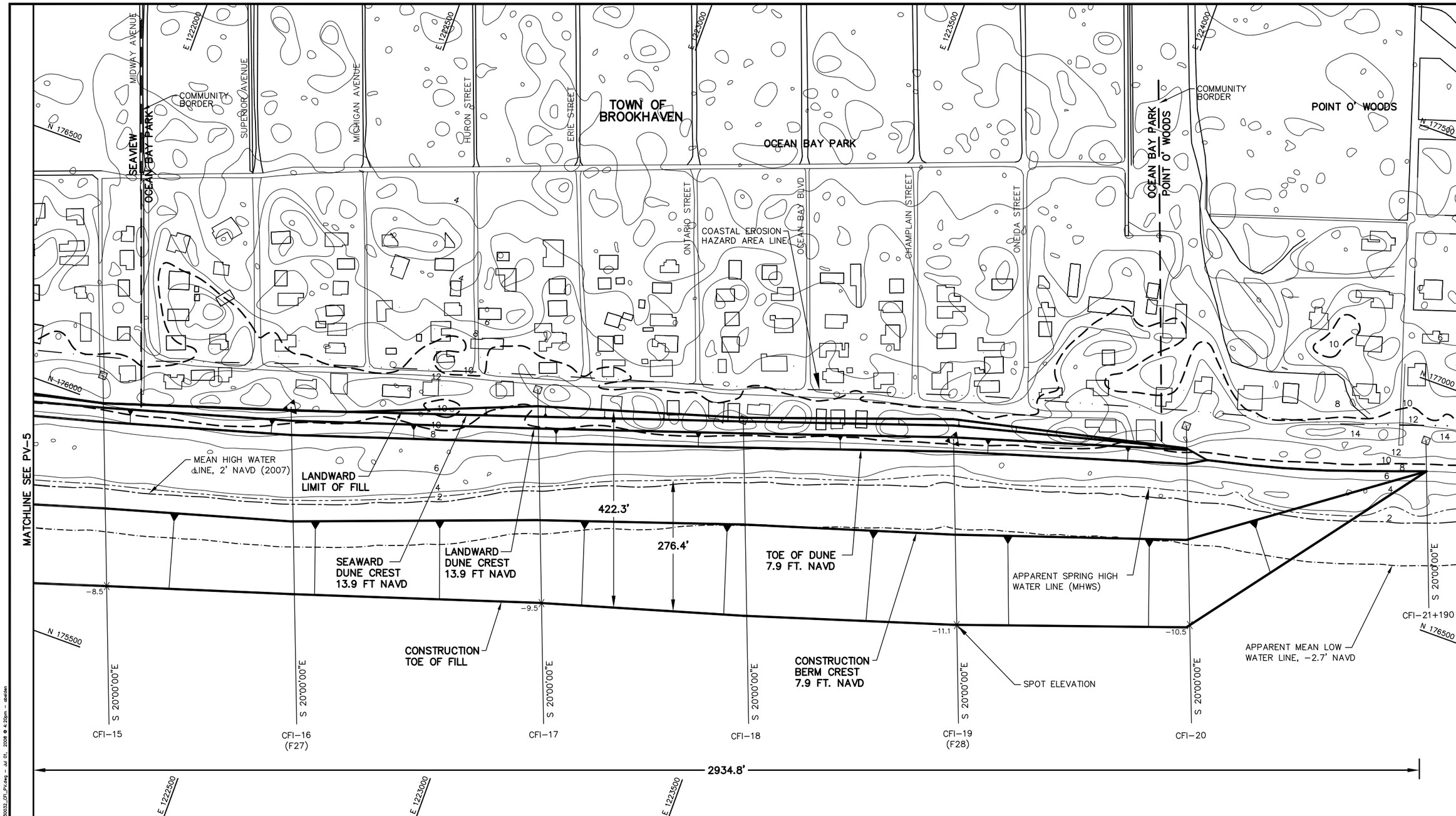

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LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' CONTOUR
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -9.0 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457

DATE

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No.	Date	Description
1.	5/20/08	RESPONSE TO USACE RAI
2.	6/25/08	FINS EA

Designed by: SK
Drawn by: JRC
Date: 4/1/08
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7.300.32
Reference Files: 7300.32dtmbrk.dwg

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

CENTRAL FIRE ISLAND
PLAN VIEW

DRAWING NO.
PV-3

SHEET 5 OF 16

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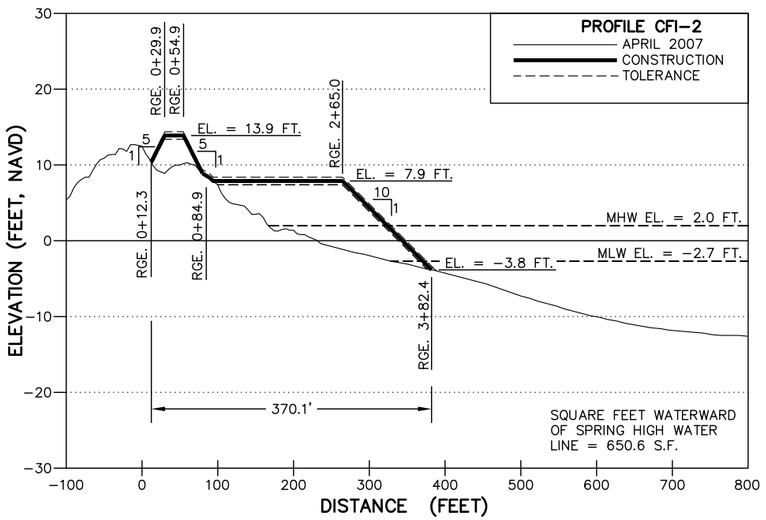

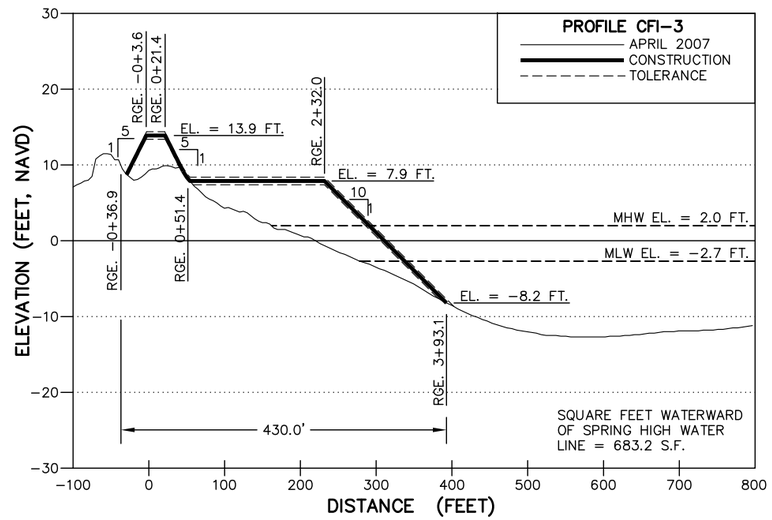

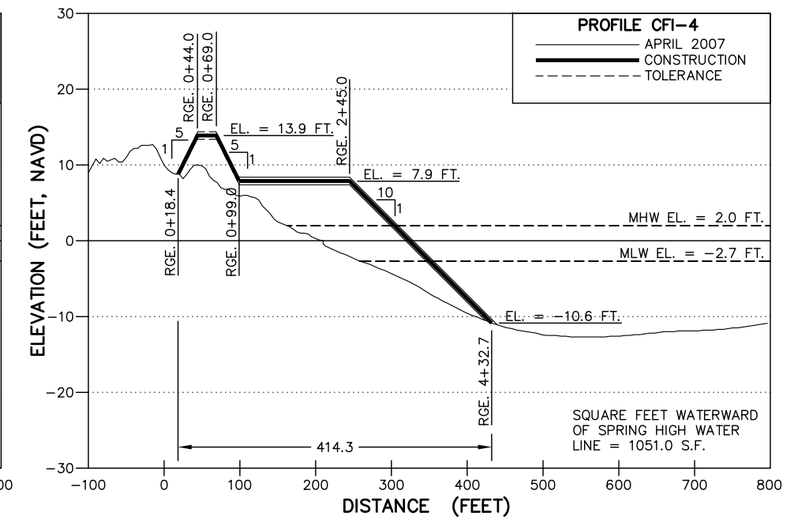

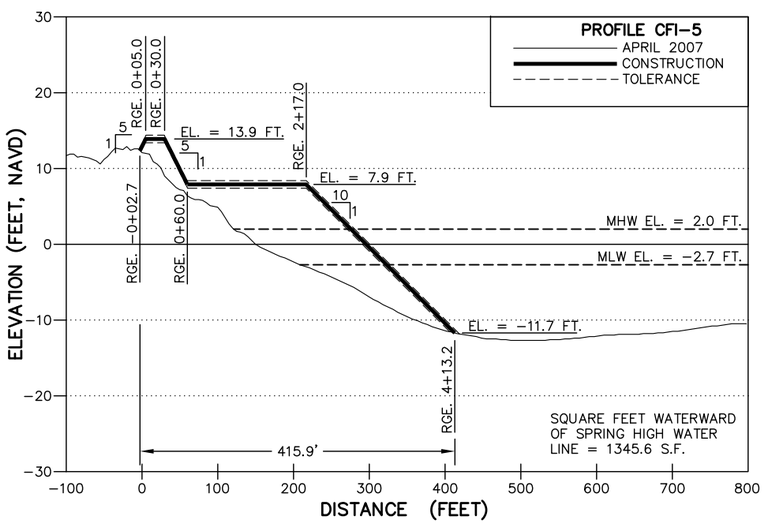

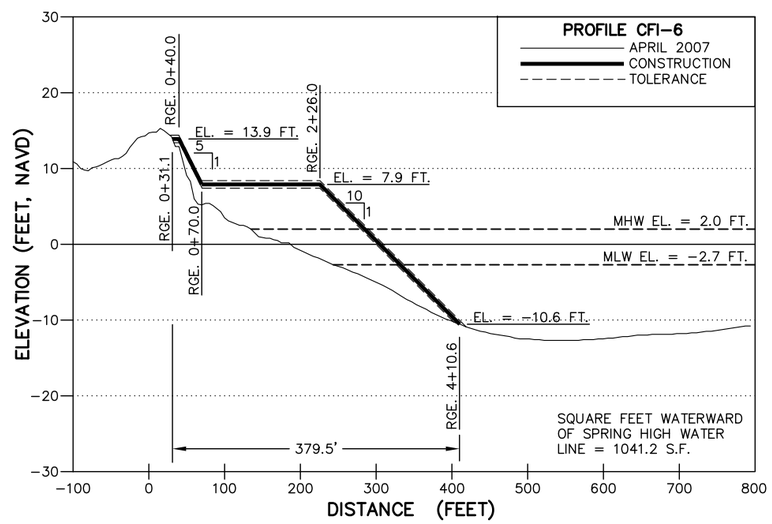

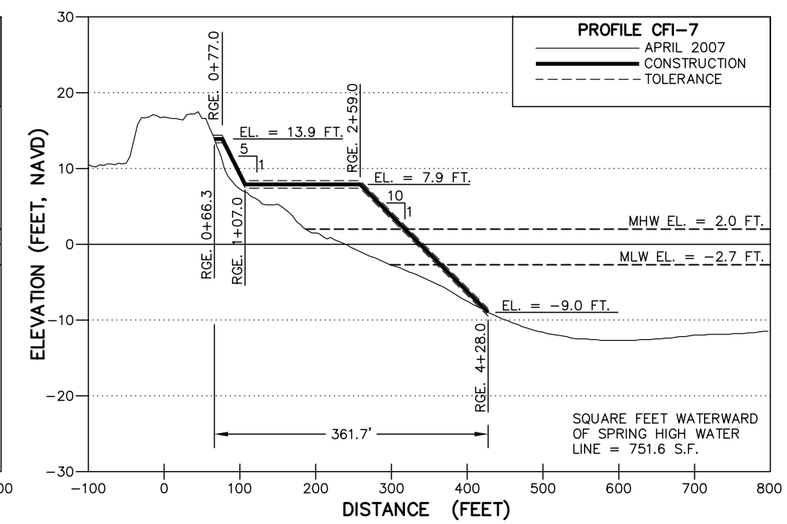

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VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

1. ELEVATIONS ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD,88).
2. TOLERANCE: ±0.5 FT.

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	6/20/08	RESPONSE TO USACE RAI
2	6/25/08	PNS EA

Designed by: SK
Checked by: AMB
Drawn by: JRC
Reviewed by: SK
Date: 4/1/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference File: 7300\Landbase.dwg

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

FILL CROSS SECTIONS

DRAWING NO.

PR-1

SHEET 6 OF 16

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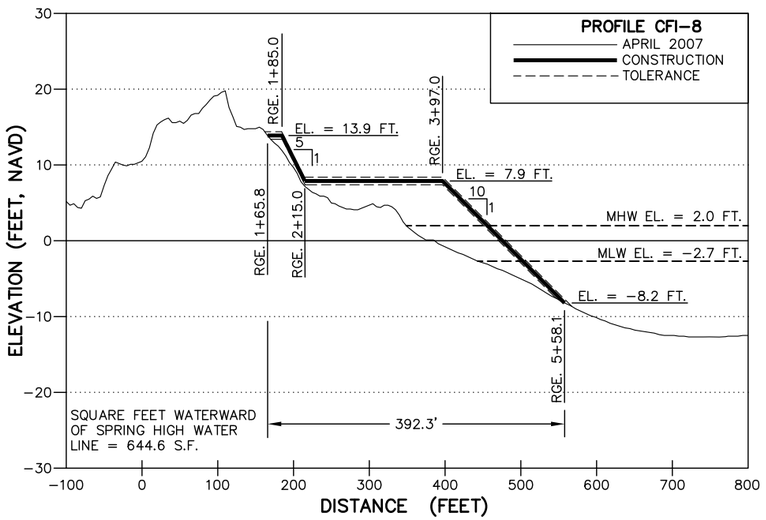

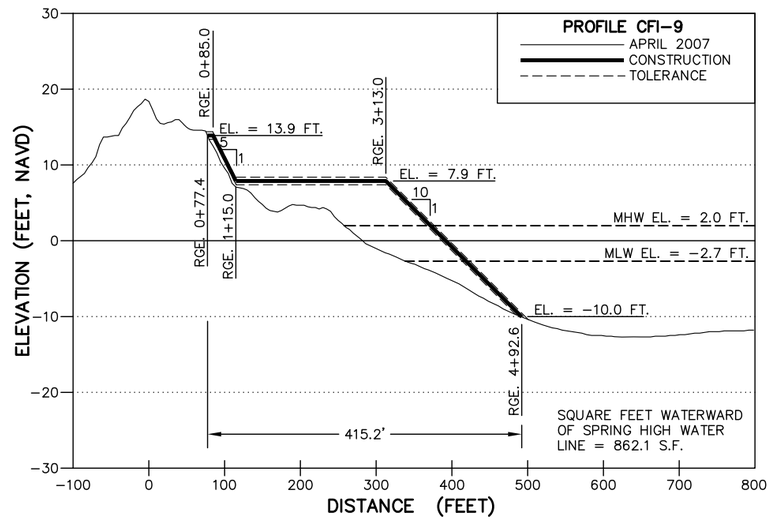

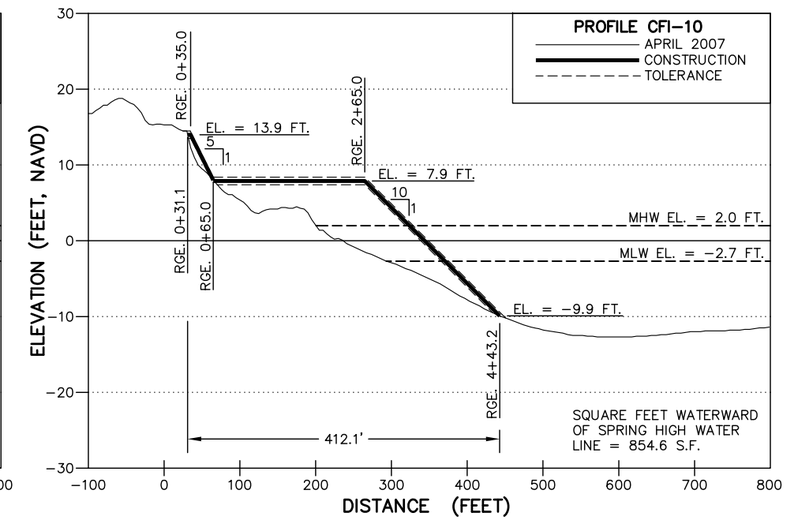

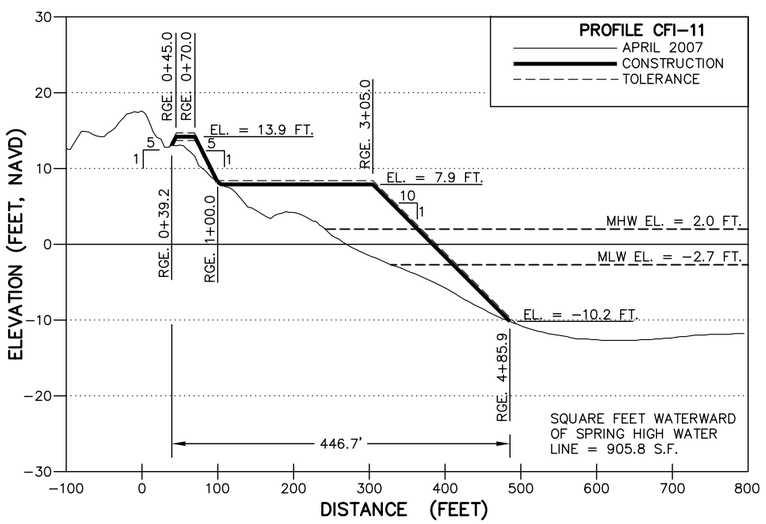

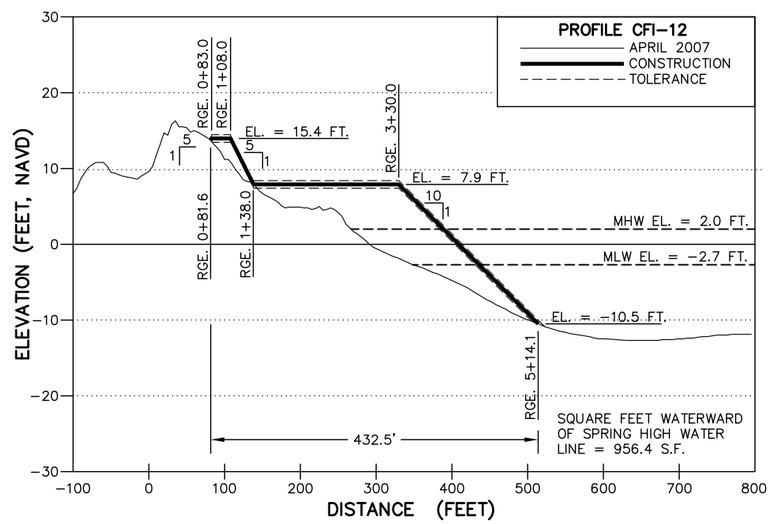

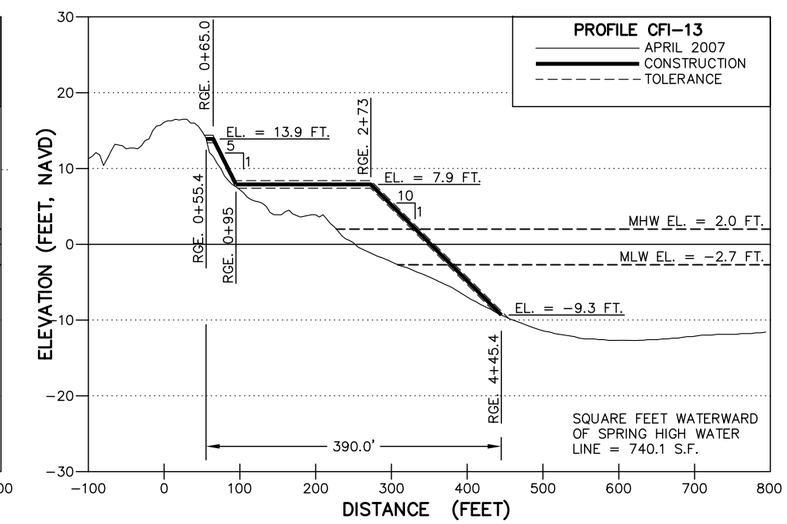

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

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THOMAS J CAMPBELL P.E. NO. 56457 DATE

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Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference File: 7300\JPROFILE.dwg

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

FILL CROSS SECTIONS

DRAWING NO.

PR-2

SHEET 7 OF 16

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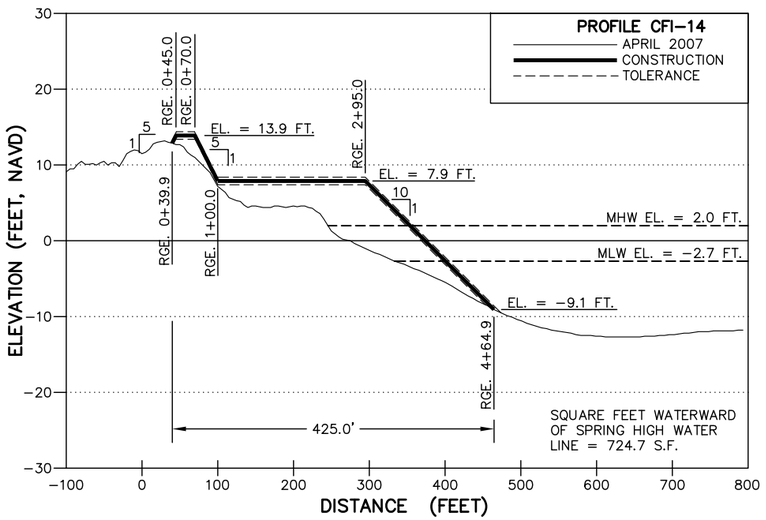

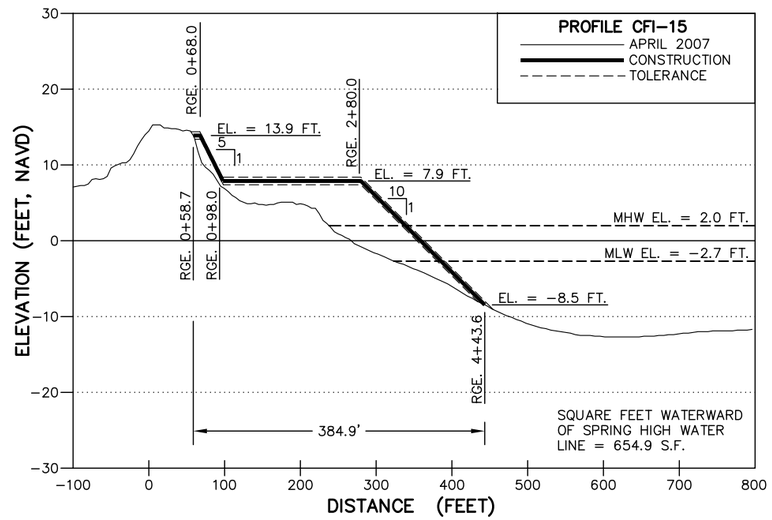

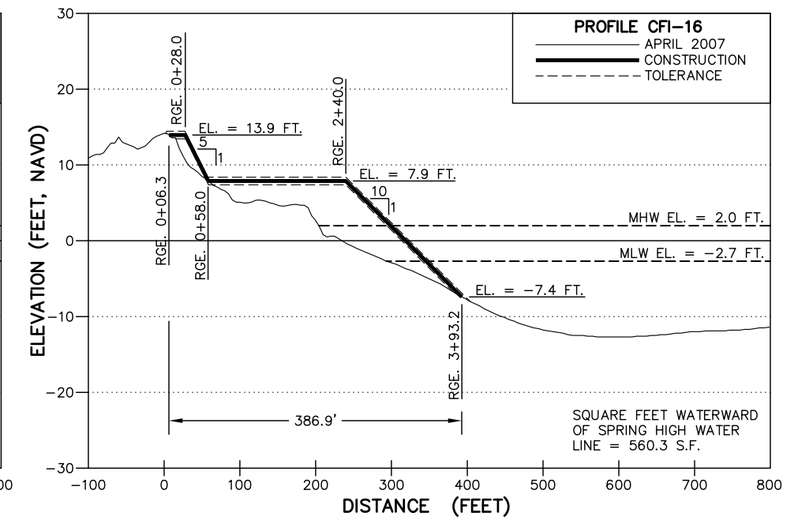

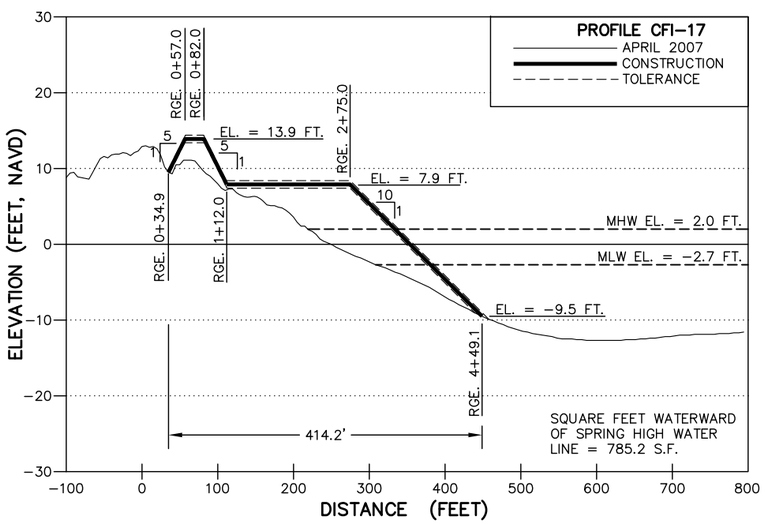

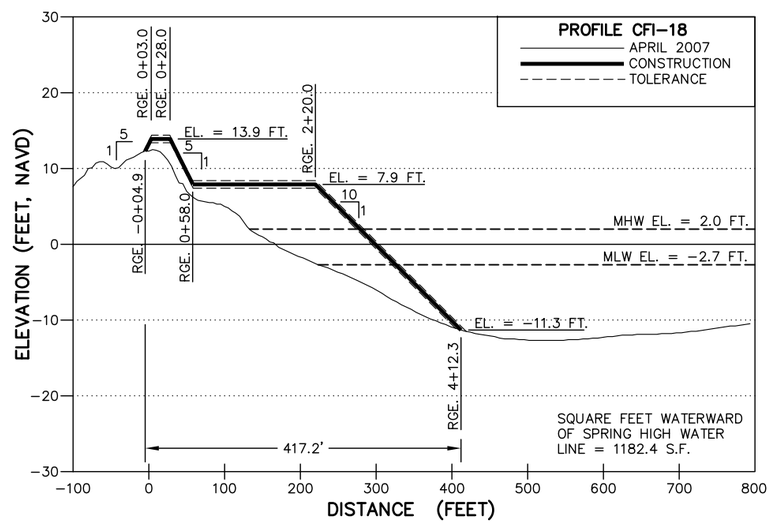

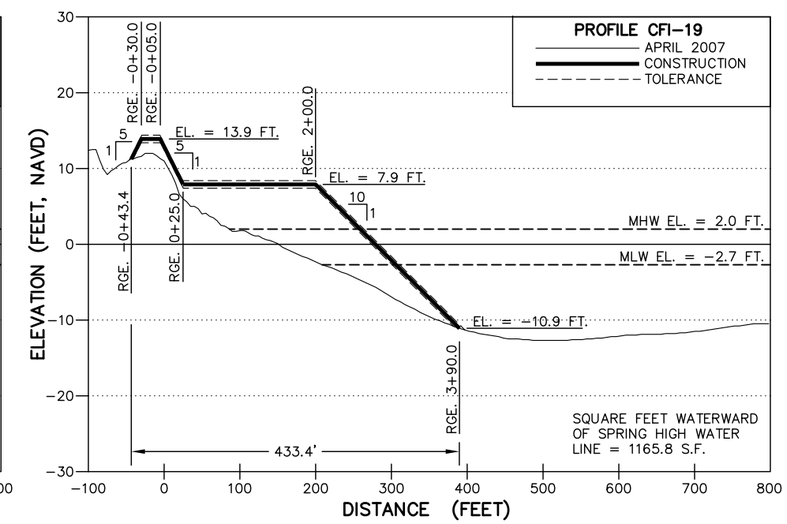

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

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C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	INKS EA

Checked by: AMB
Reviewed by: SK
Submitted by: SK
Designed by: SK
Drawn by: JRC
Date: 4/1/08
Comm. No.: 7300.32
Plot Scale: AS NOTED
Reference File: 7300\JobBase.dwg

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

FILL CROSS SECTIONS

DRAWING NO.

PR–3

SHEET 8 OF 16

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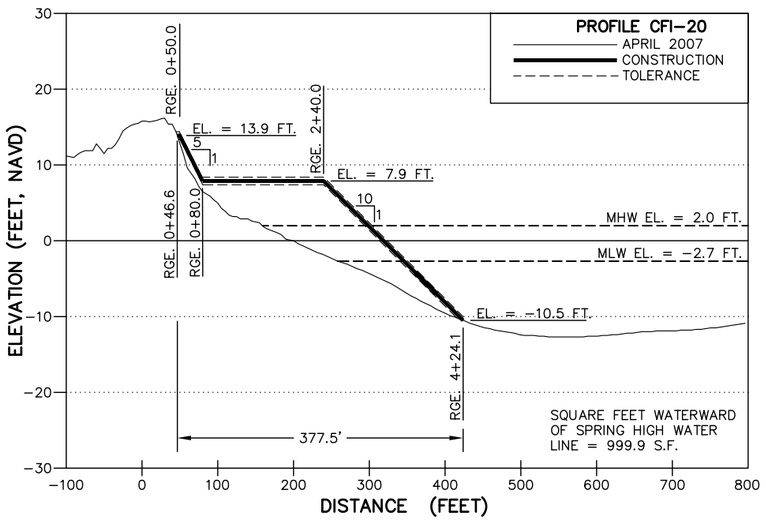

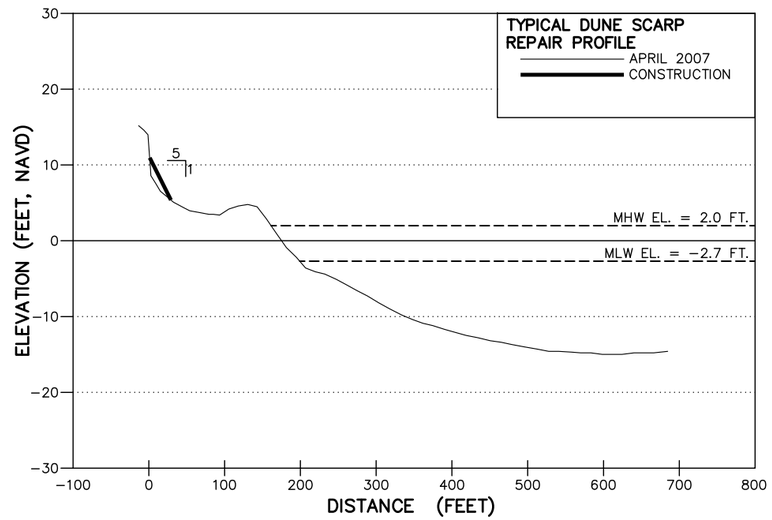

TYPICAL DUNE SCARP REPAIR PROFILE:

THE SCARP WILL BE REPAIRED BY PUSHING SAND INTO A 1V:5H SLOPE TO COVER THE SCARPED FACE OF THE DUNE. THE REPAIR WILL NOT INCREASE THE DUNE WIDTH.

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

1. ELEVATIONS ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD,88).
2. TOLERANCE: ±0.5 FT.

THOMAS J CAMPBELL P.E. NO. 56457

DATE

COASTAL PLANNING & ENGINEERING OF NY PC
2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
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www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Checked by: AMB
Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32
Designed by: SK
Drawn by: JRC
Date: 4/1/08
Plot Scale: AS NOTED
Reference Files: 7300\Cadd\Base\Base

CENTRAL FIRE ISLAND SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

FILL CROSS SECTIONS

DRAWING NO.

PR-4

SHEET 9 OF 16

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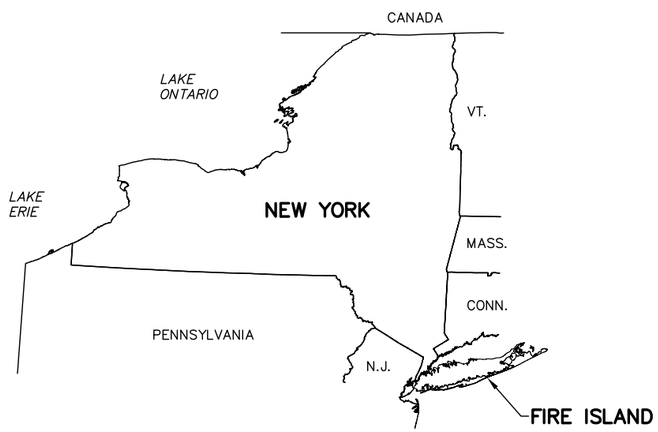
FIRE ISLAND PINES SEGMENT
FIRE ISLAND 2008 BEACH RENOURISHMENT PROJECT

TOWN OF BROOKHAVEN, NEW YORK

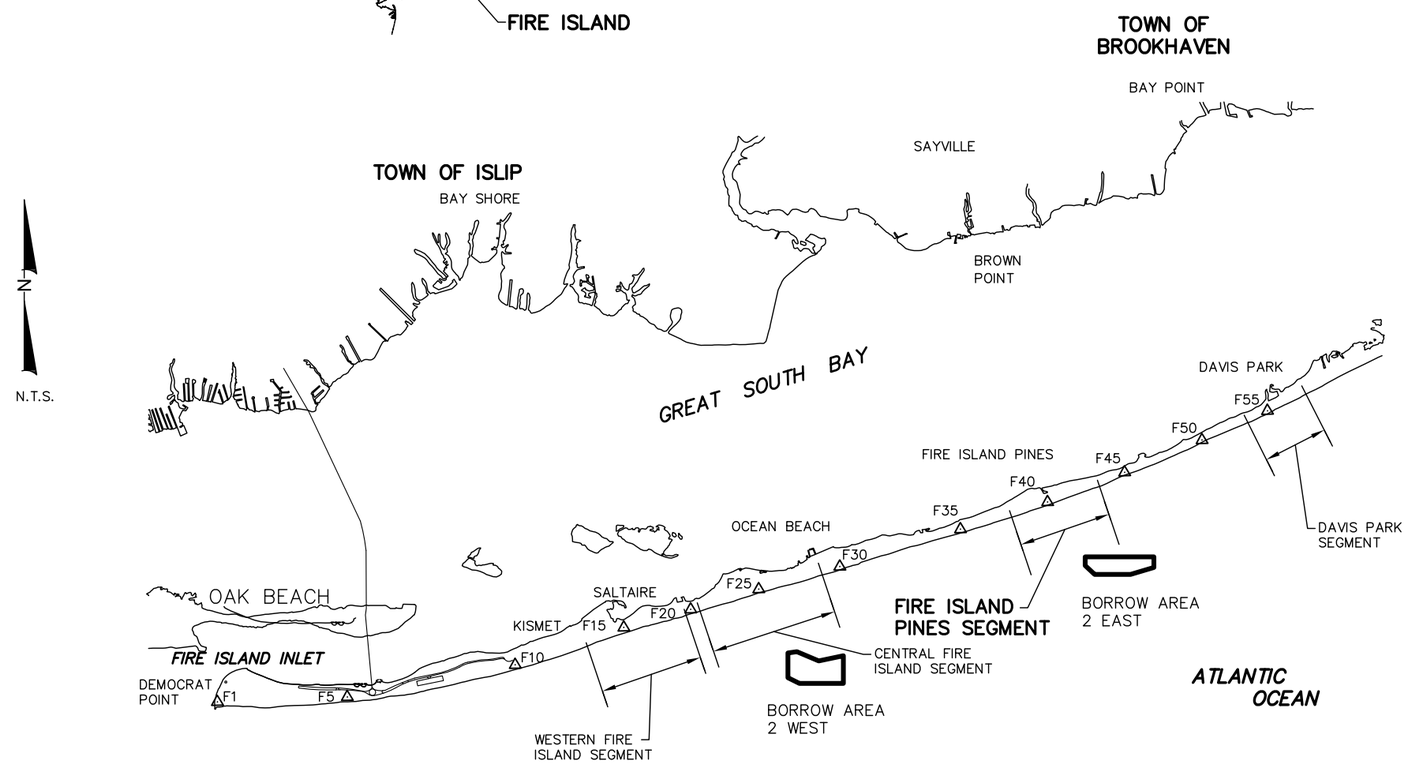


INDEX TO SHEETS

1	COVER SHEET
2	AERIAL PLATE
3–5	FIRE ISLAND PINES PLAN VIEWS
6–8	FIRE ISLAND PINES BEACH PROFILES
BA–1	BORROW AREA COVER SHEET
BA–2	BORROW AREA 2 EAST BATHYMETRY
BA–3	BORROW AREA 2 EAST ISOPACH
BA–4	BORROW AREA 2 EAST CROSS SECTIONS
BA–5	BORROW AREA 2 WEST BATHYMETRY
BA–6	BORROW AREA 2 WEST ISOPACH
BA–7	BORROW AREA 2 WEST CROSS SECTIONS

FIRE ISLAND PINES, FIRE ISLAND, NEW YORK

PROFILE	RANGE 00 (COMMENCEMENT POINT)		
	EASTING	NORTHING	AZIMUTH
FIP-1+310	1240154.9	181621.2	159.0
FIP-2	1240301.0	181663.0	159.0
FIP-3	1240795.0	181848.0	159.0
FIP-4	1241331.0	181991.0	159.0
FIP-5	1241860.0	182179.0	159.0
F-40	1242413.1	182337.2	159.0
FIP-7	1242896.0	182550.0	159.0
FIP-8	1243352.0	182672.0	159.0
FIP-9	1243771.2	182806.4	159.0
FIP-10	1244305.0	183017.0	159.0
FIP-11	1244710.0	183215.0	159.0
FIP-12	1245296.0	183331.0	159.0
FIP-13	1245761.0	183606.0	159.0
FIP-13+435	1246209.5	183651.7	159.0



THOMAS J CAMPBELL P.E. NO. 56457

DATE

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C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI

Designed by: SK
Drawn by: JRC
Date: 2/22/08
Plot Scale: AS NOTED
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32
Reference Files: 7300\BORROW.dwg

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

COVER SHEET

DRAWING NO.
CS

SHEET 1 OF 15

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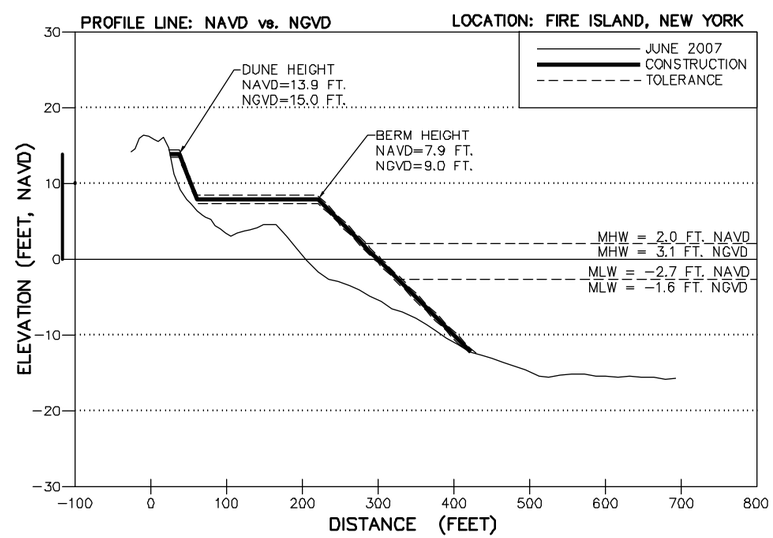
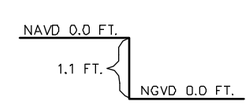
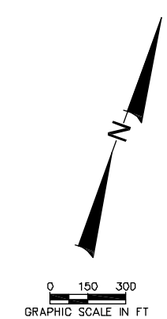
FIRE ISLAND PINES



NOTE:
ALL TOPOGRAPHIC SURVEYS AND PROFILES ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988, WHICH RELATES TO NGVD AS SHOWN ABOVE.





NOTES:
1. DATE OF AERIAL PHOTOGRAPH: 12/18/2007.
2. AERIAL FLOWN BY GEOMAPS INTERNATIONAL AERIAL PHOTOGRAMMETRY.

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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C.O.A. NY #582

No.	Date	Description
1	5/30/08	RESPONSE TO USACE RAI

Reference Files: 730032_APERSDRAWG
Designed by: SK
Drawn by: JRC
Date: 2/22/08
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Plot Scale: AS NOTED
Comm. No: 730.0.32

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

AERIAL PLATES

DRAWING NO.
AP

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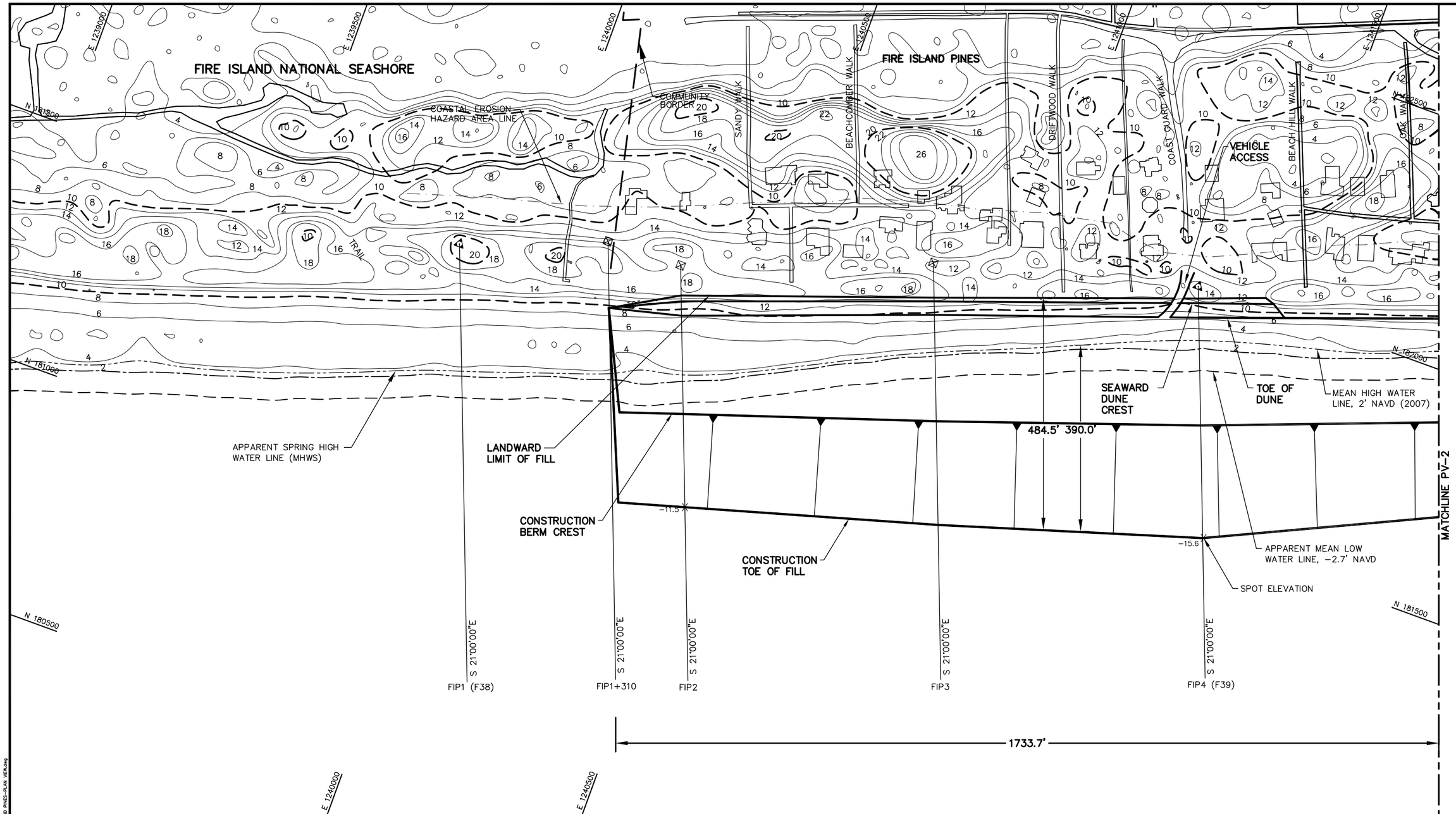

NOTES:

1. COORDINATES ARE BASED ON NEW YORK LONG ISLAND LAMBERT STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD83).
2. TOPOGRAPHIC CONTOURS SHOWN ARE IN FEET NAVD88 FROM A LIDAR SURVEY FLOWN APRIL 29, 2007 BY THE USGS EAARL SYSTEM.
3. THE PROJECT WILL DREDGE APPROXIMATELY 942,000± CUBIC YARDS FROM BORROW AREA 2–EAST FOR THE FIRE ISLAND PINES AND DAVIS PARK SEGMENT BEACHES. A CUTTER HEAD OR HOPPER DREDGE WILL BE USED TO TAKE THE SAND FROM THE OFFSHORE BORROW AREA AND PUMP IT TO THE BEACH USING A COMBINATION OF SUBMERGED AND BEACH PIPELINES. THE BEACH/DUNE WILL BE SHAPED AND GRADED USING BULLDOZERS, FRONT END LOADERS, AND SIMILAR HEAVY CONSTRUCTION EQUIPMENT. THE FILL MATERIAL IS 98% SAND AND 2% SILT.
4. ALONG SHORE CURRENTS ARE WAVE DOMINATED IN AN EAST TO WEST DIRECTION.
5. THE BEACH VOLUME FOR FIRE ISLAND PINES IS APPROXIMATELY 500,000 C.Y., WITH 189,200 C.Y. SEAWARD OF THE SPRING TIDE LINE. IF TAPERS CANNOT BE PLACED ON FINS PROPERTY, THE TAPER VOLUME WILL BE PLACED WITHIN THE FIRST 1000 FEET WITHIN THE COMMUNITY.

LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' & 20' CONTOURS
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -4.7 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457

DATE

COASTAL PLANNING & ENGINEERING OF NY PC
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BOCA RATON, FLORIDA 33431
PH. (561) 391-8102
FAX (561) 391-9116
www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	PAS EA

Designed by: SK
Checked by: AMB
Drawn by: JRC
Reviewed by: SK
Date: 2/22/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32

Reference Files: 7300SP_JBOEB.dwg

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.

PV–1

SHEET 3 OF 15

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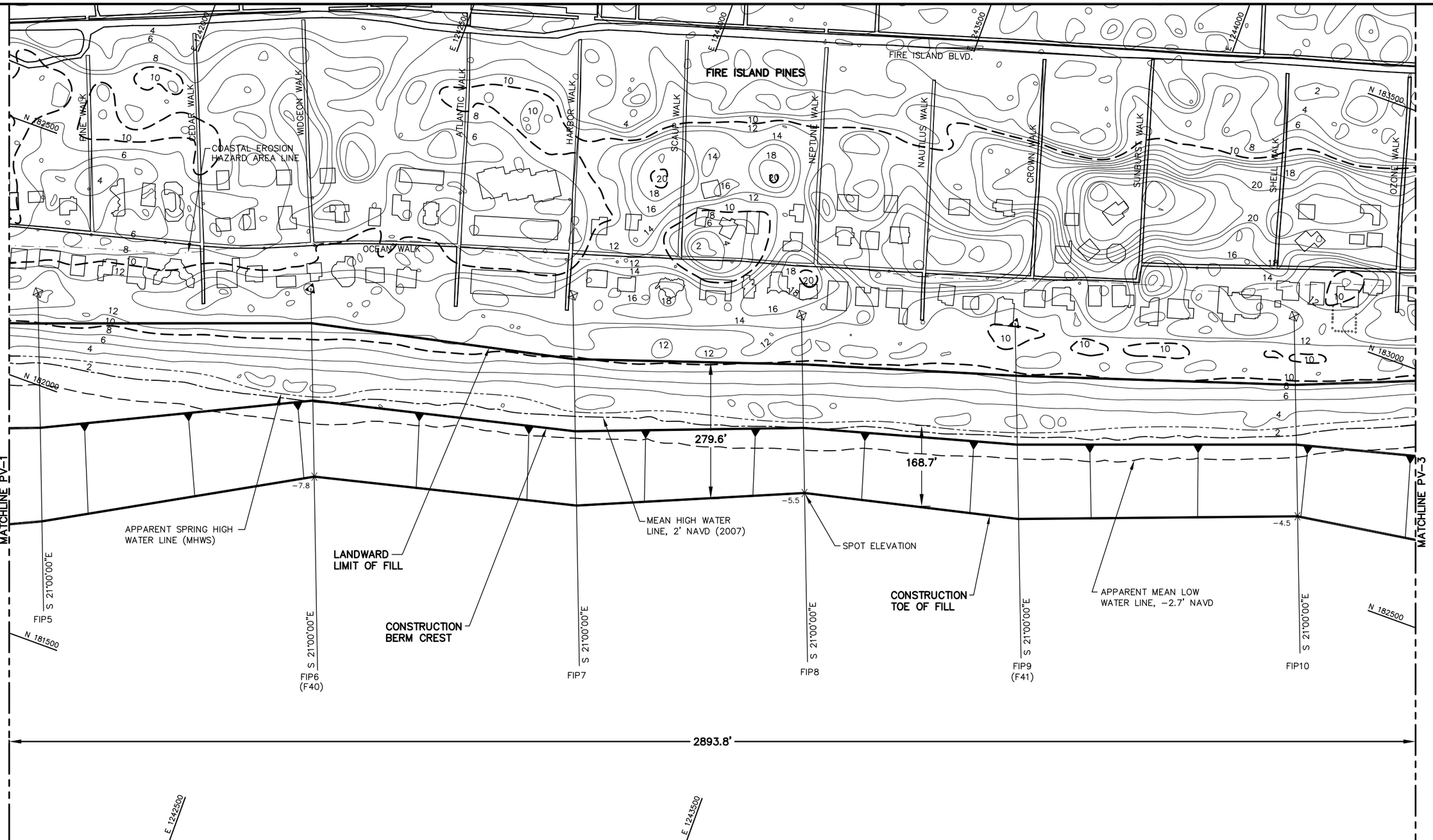

NOTES:

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LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' & 20' CONTOURS
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -4.7 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457 DATE

COASTAL PLANNING & ENGINEERING OF NY PC
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BOCA RATON, FLORIDA 33431
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www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Designed by: SK
Checked by: AMB
Drawn by: JRC
Reviewed by: SK
Date: 2/22/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 7300.32_BORDER.DWG

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.
PV–2

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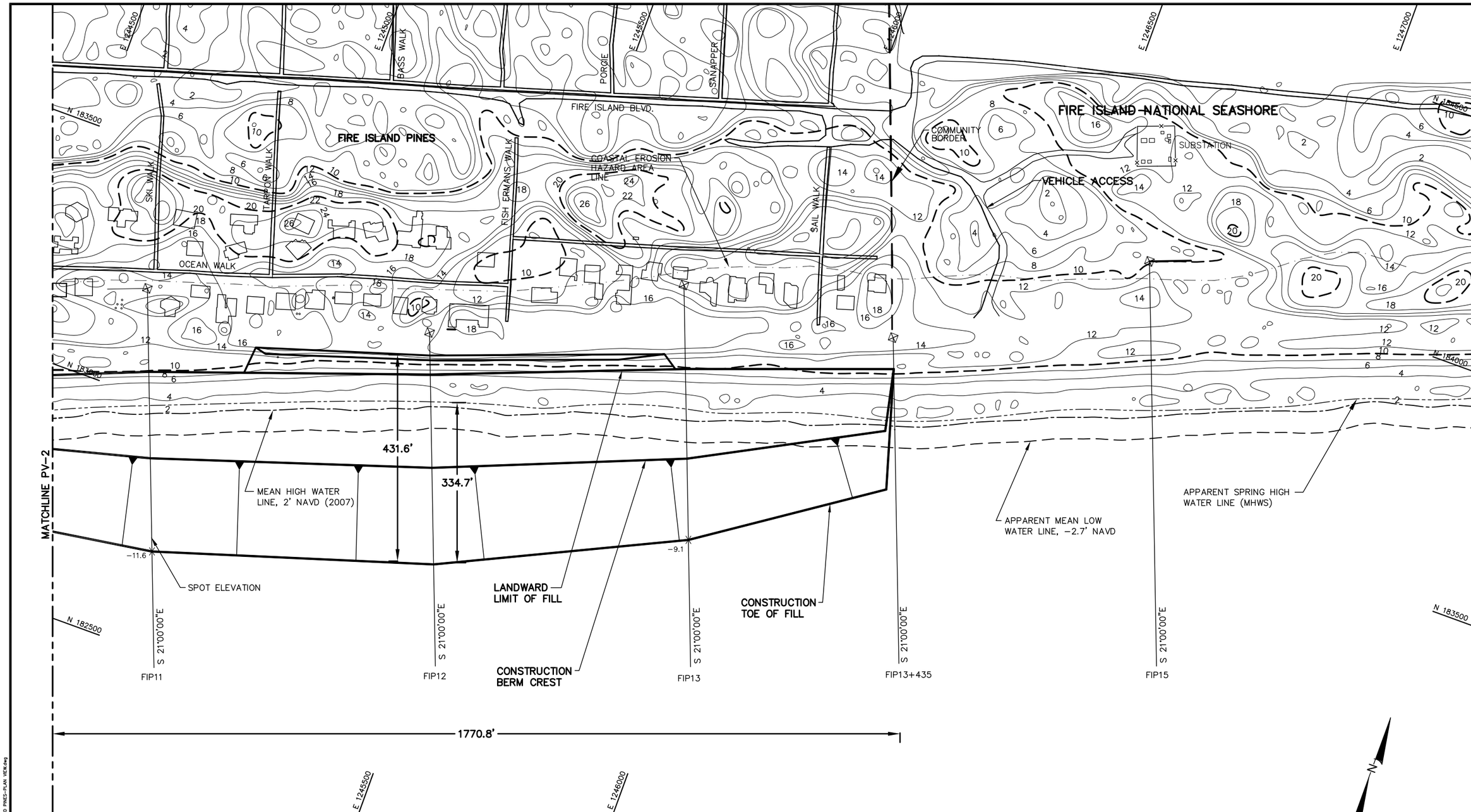

NOTES:

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LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' & 20' CONTOURS
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -4.7 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457

DATE

COASTAL PLANNING & ENGINEERING OF NY PC
2481 N.W. BOCA RATON BOULEVARD
BOCA RATON, FLORIDA 33431
PH. (561) 391-8102
FAX (561) 391-9116
C.O.A. NY #4582
www.CoastalPlanning.net

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	06/25/08	Pines Ex.

Checked by: AMB
Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32
Designed by: SK
Drawn by: JEC
Date: 2/22/08
Plot Scale: AS NOTED
Reference File: 7300.32_EIS_DEC.DWG

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.

PV–3

SHEET 5 OF 15

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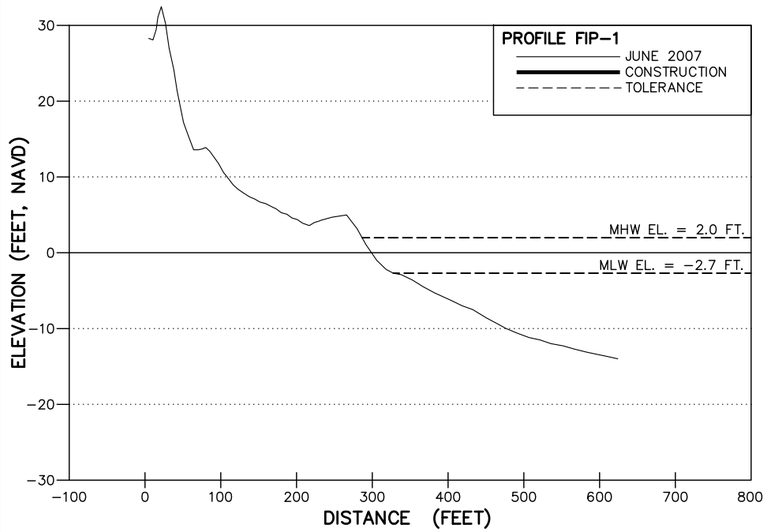

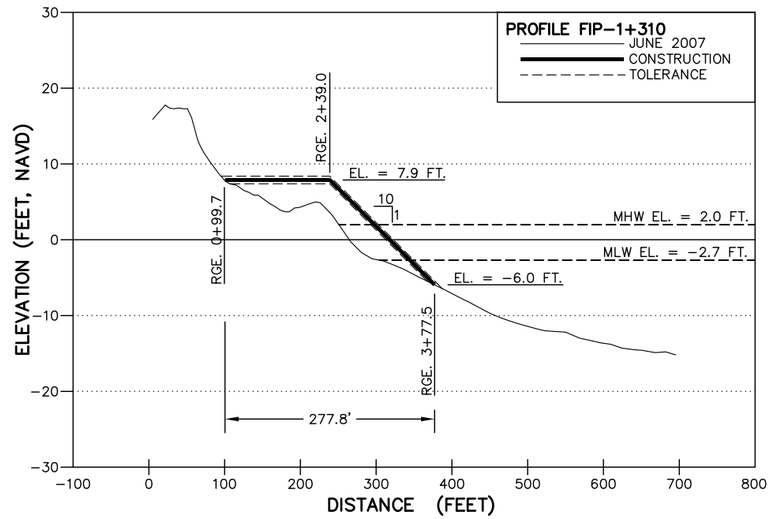

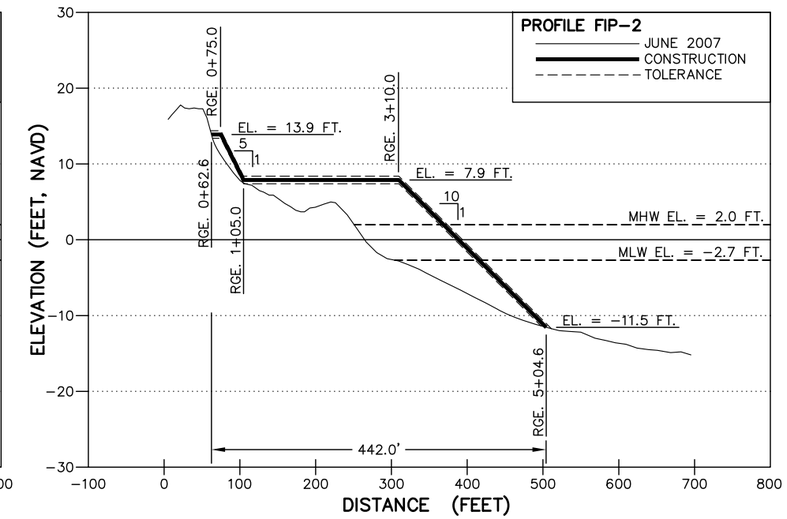

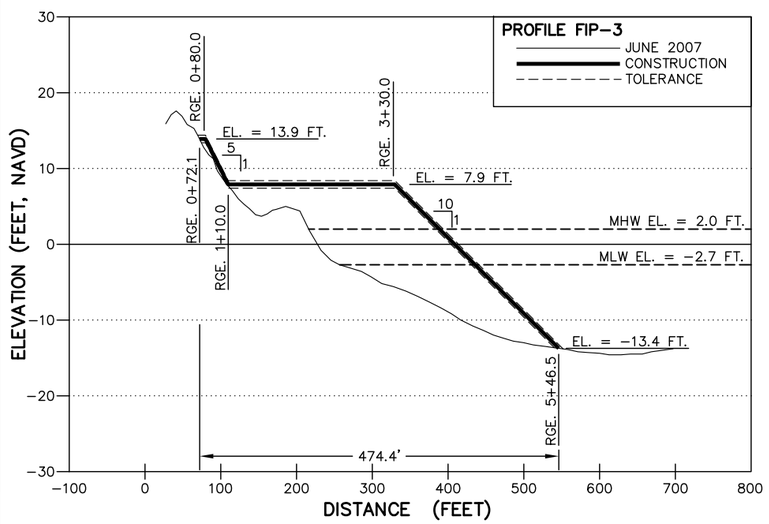

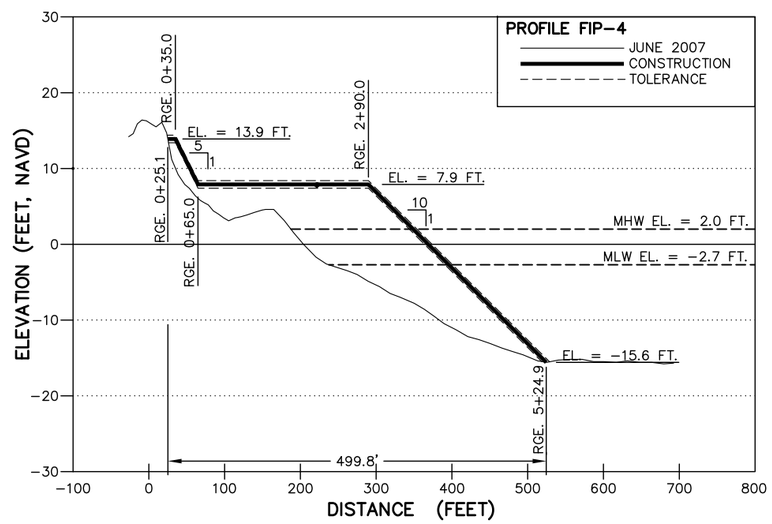

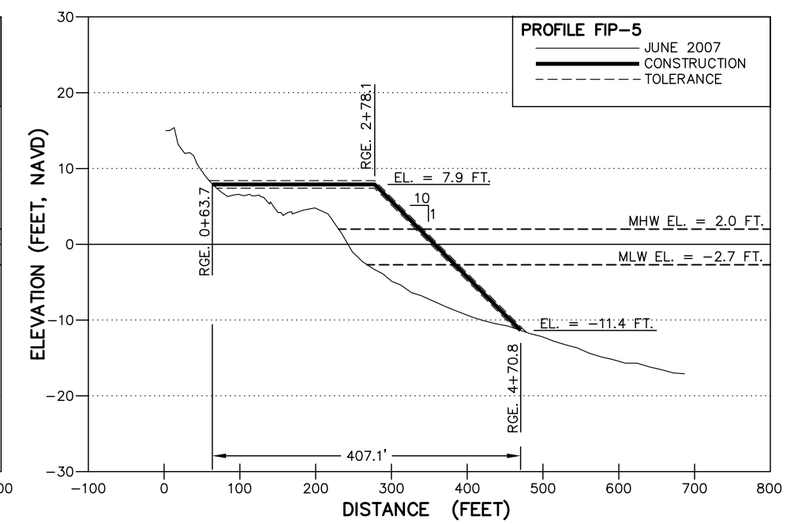

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

1. ELEVATIONS ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD,88).
2. TOLERANCE: ±0.5 FT.

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Designed by: SK
Checked by: AMB
Drawn by: TM
Reviewed by: SK
Date: 2/22/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 730032_BORDER.DWG

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

FIRE ISLAND PINES
FILL CROSS SECTIONS

DRAWING NO.
PR-1

SHEET 6 OF 15

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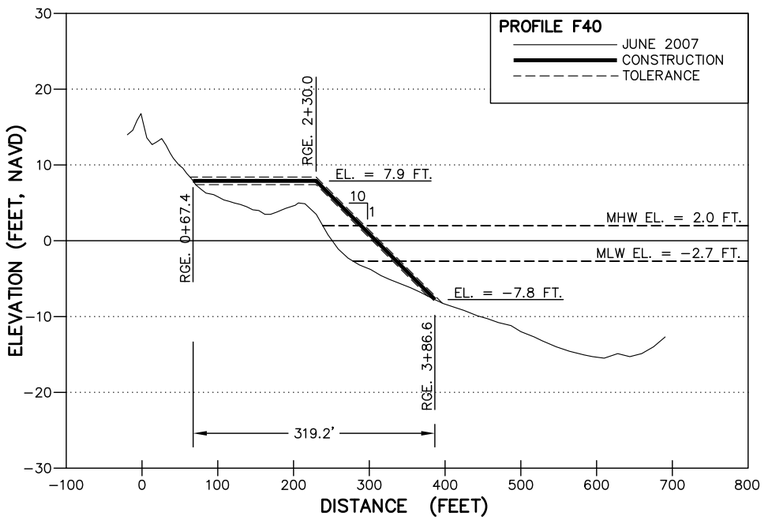

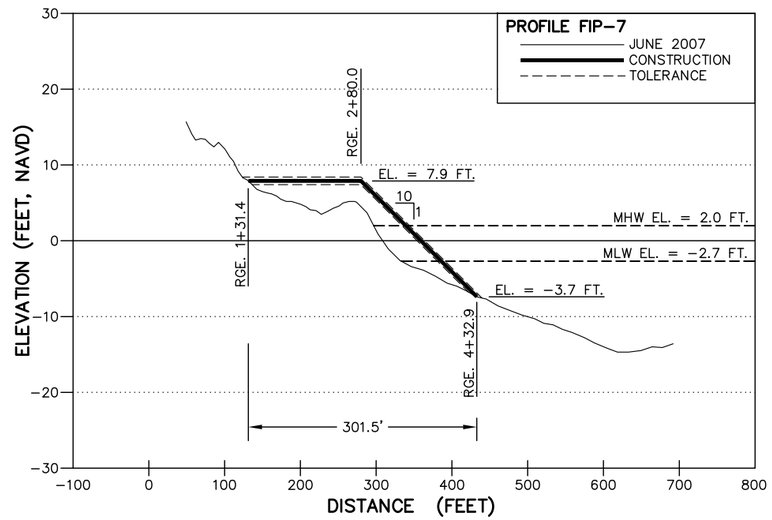

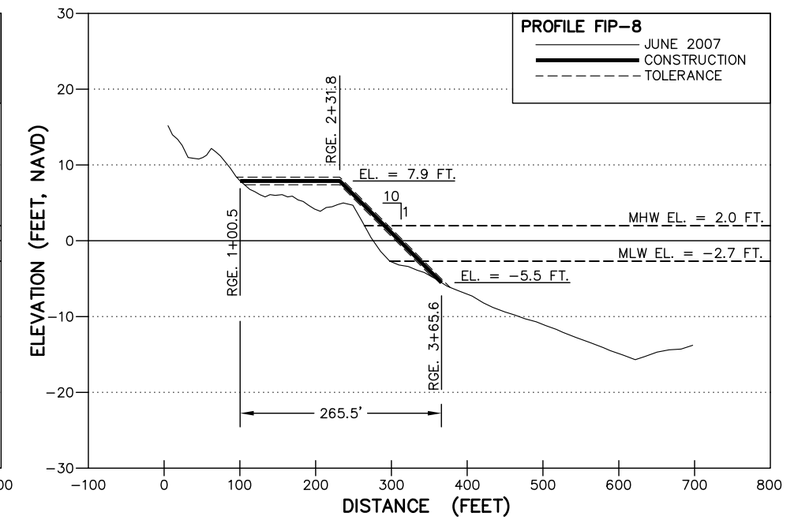

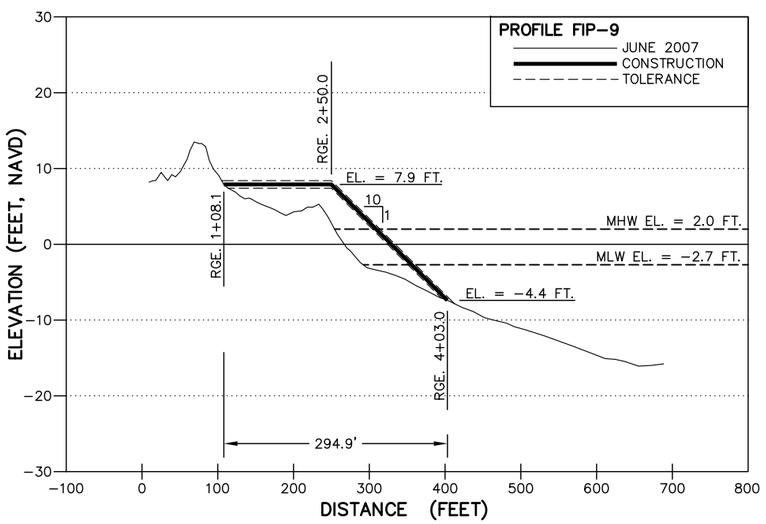

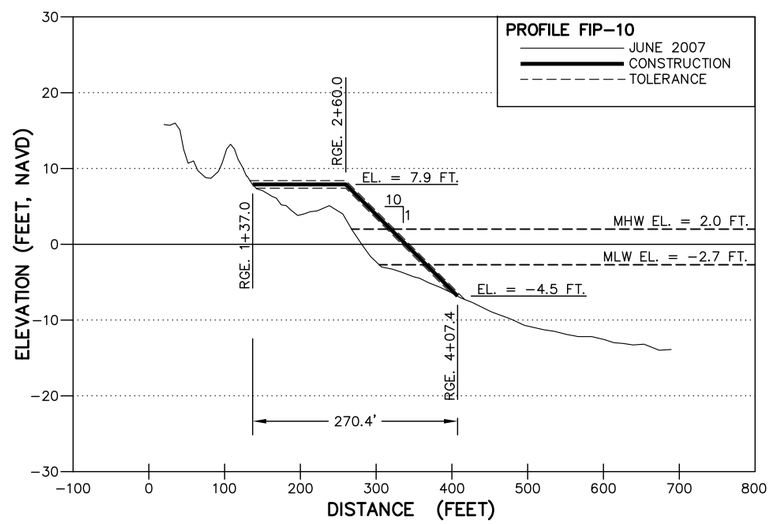

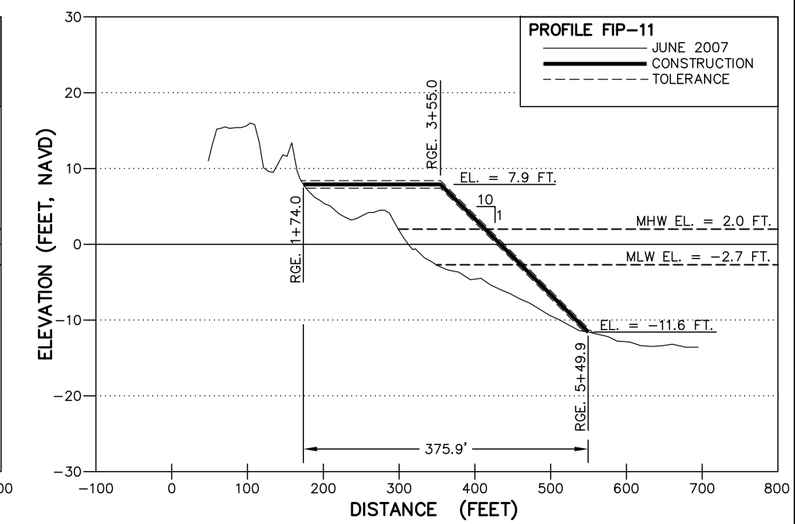

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

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THOMAS J CAMPBELL P.E. NO. 56457 DATE

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C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	FINS EA

Designed by: SK
Checked by: AMB
Drawn by: TM
Reviewed by: SK
Date: 2/22/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 730032_BORDER.DWG

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

FIRE ISLAND PINES
BEACH PROFILES

DRAWING NO.
PR−2

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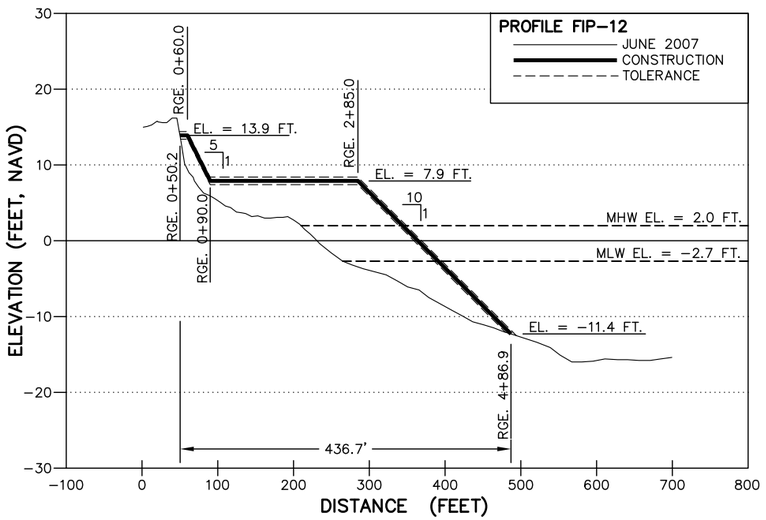

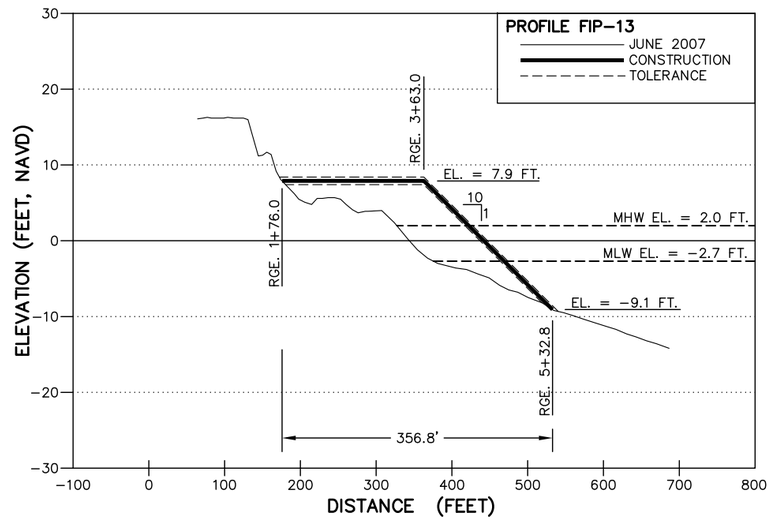

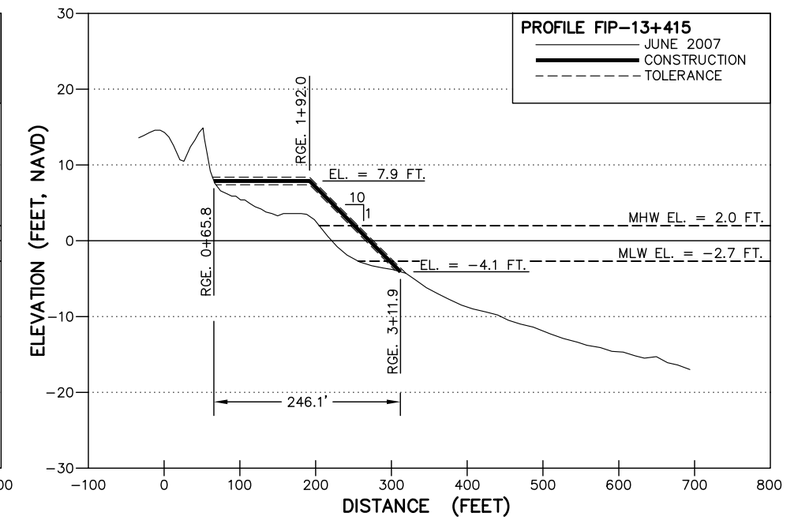

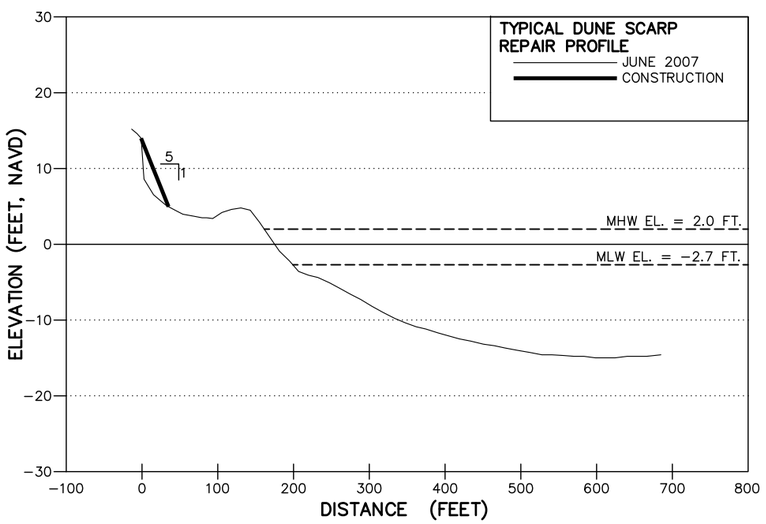

TYPICAL DUNE SCARP REPAIR PROFILE:

THE SCARP WILL BE REPAIRED BY PUSHING SAND INTO A 1V:5H SLOPE TO COVER THE SCARPED FACE OF THE DUNE. THE REPAIR WILL NOT INCREASE THE DUNE WIDTH.

NOTES:

1. ELEVATIONS ARE IN FEET BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD,88).
2. TOLERANCE: ±0.5 FT.

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

THOMAS J CAMPBELL P.E. NO. 56457 DATE

COASTAL PLANNING & ENGINEERING OF NY PC
2481 N.W. BOCA RATON BOULEVARD
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PH. (561) 391-8102
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www.CoastalPlanning.net
C.O.A. NY #4582

No.	Date	Description
1	5/20/08	RESPONSE TO USACE RAI
2	6/25/08	INKS EA

Designed by: SK
Checked by: AMB
Drawn by: TM
Reviewed by: SK
Date: 2/22/08
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 7300\Lp\Base.dwg

FIRE ISLAND PINES SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

FIRE ISLAND PINES BEACH PROFILES

DRAWING NO.

PR-3

SHEET 8 OF 15

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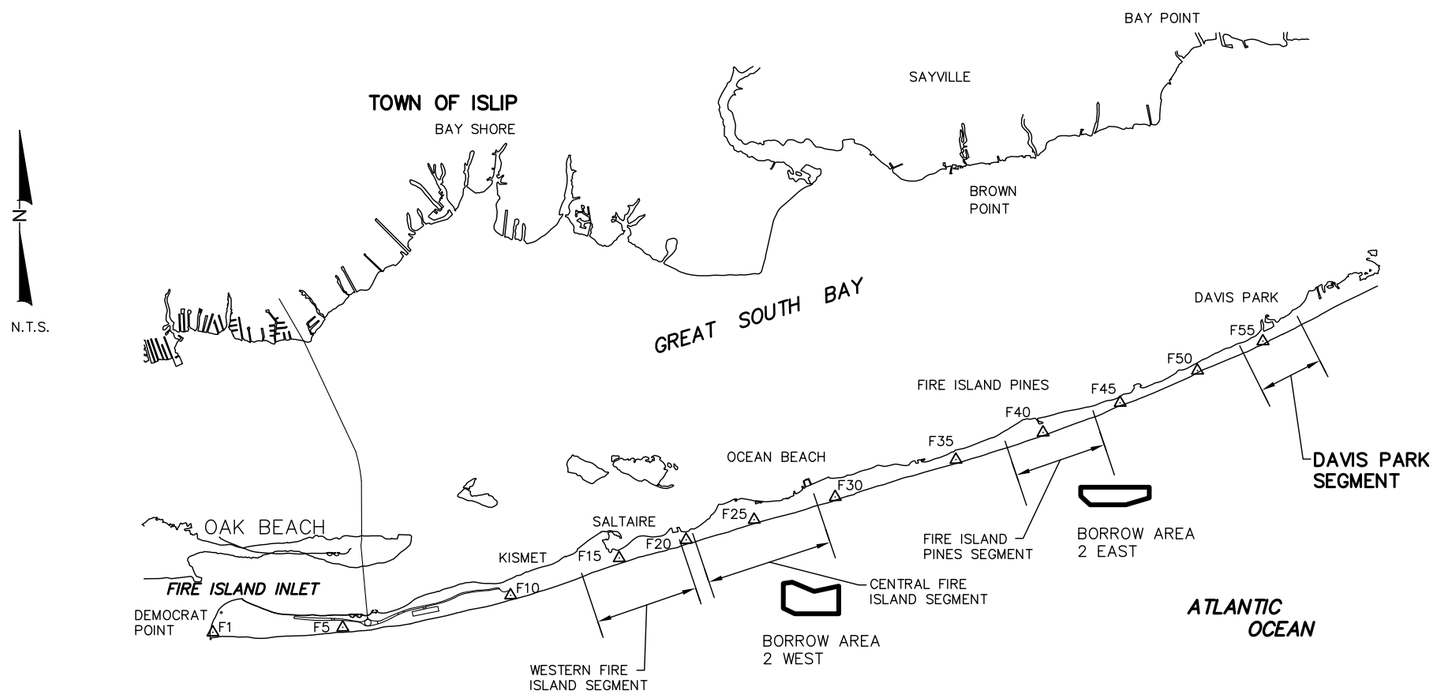
DAVIS PARK SEGMENT
FIRE ISLAND 2008 BEACH RENOURISHMENT PROJECT

TOWN OF BROOKHAVEN, NEW YORK



INDEX TO SHEETS

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2	AERIAL PLATE
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5–6	DAVIS PARK BEACH PROFILES
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BA–2	BORROW AREA 2 EAST BATHYMETRY
BA–3	BORROW AREA 2 EAST ISOPACH
BA–4	BORROW AREA 2 EAST CROSS SECTIONS
BA–5	BORROW AREA 2 WEST BATHYMETRY
BA–6	BORROW AREA 2 WEST ISOPACH
BA–7	BORROW AREA 2 WEST CROSS SECTIONS

DAVIS PARK, FIRE ISLAND, NEW YORK

PROFILE	RANGE 00 (COMMENCEMENT POINT)		
	EASTING	NORTHING	AZIMUTH
DP1	1258776.6	189060.8	159.0
DP1+80	1258833.6	189106.4	159.0
DP2	1259189.4	189262.0	159.0
DP3	1259602.2	189463.2	159.0
DP4	1260015.1	189664.4	159.0
(F55) DP5	1260422.0	189862.7	159.0
DP6	1260858.4	190090.3	159.0
DP7	1261294.4	190317.9	159.0
(F56) DP8	1261722.6	190541.1	159.0
DP9	1262049.0	190705.6	159.0
DP10	1262375.4	190870.1	159.0
DP10+184	1262540.8	190952.5	159.0
DP11	1262696.9	191032.2	159.0

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Designed by: SK
Drawn by: JRC
Date: 2/22/08
Checked by: AMB
Reviewed by: SK
Submitted by: SK
Plot Scale: AS NOTED
Comm. No.: 7300.32
Reference Files: 7300\cadfiles\dwgs\

DAVIS PARK SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

COVER SHEET

DRAWING NO.
CS

SHEET 1 OF 13

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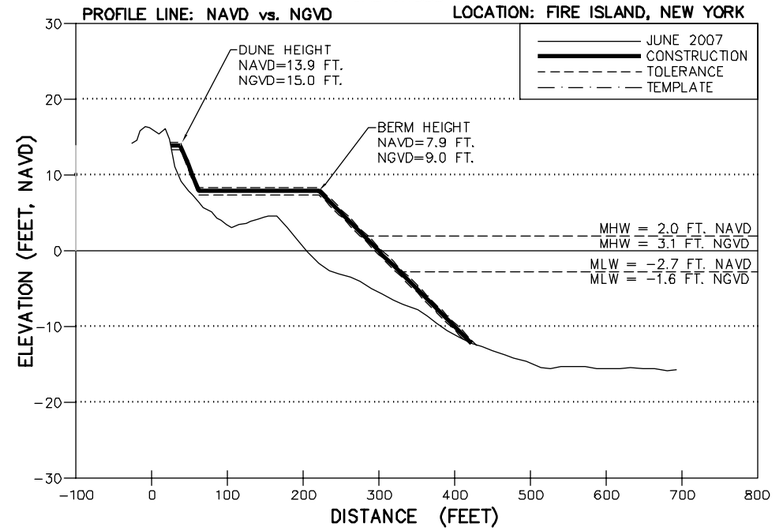
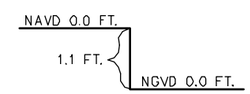
DAVIS PARK

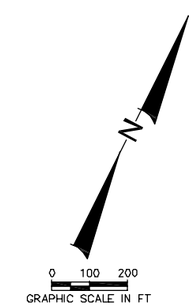
TYPICAL CROSS SECTION

PROFILE LINE: NAVD vs. NGVD LOCATION: FIRE ISLAND, NEW YORK



NOTE:
ALL TOPOGRAPHIC SURVEYS AND PROFILES ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988, WHICH RELATES TO NGVD AS SHOWN ABOVE.





NOTES:
1. DATE OF AERIAL PHOTOGRAPH: 12/18/2007.
2. AERIAL FLOWN BY GEOMAPS INTERNATIONAL AERIAL PHOTOGRAMMETRY.

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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Reference Files: 730032_BOPDE.DWG

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Reviewed by: SK
Submitted by: SK
Comm. No.: 7300.32

DAVIS PARK SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

AERIAL PLATE

DRAWING NO.
AP

SHEET 2 OF 13

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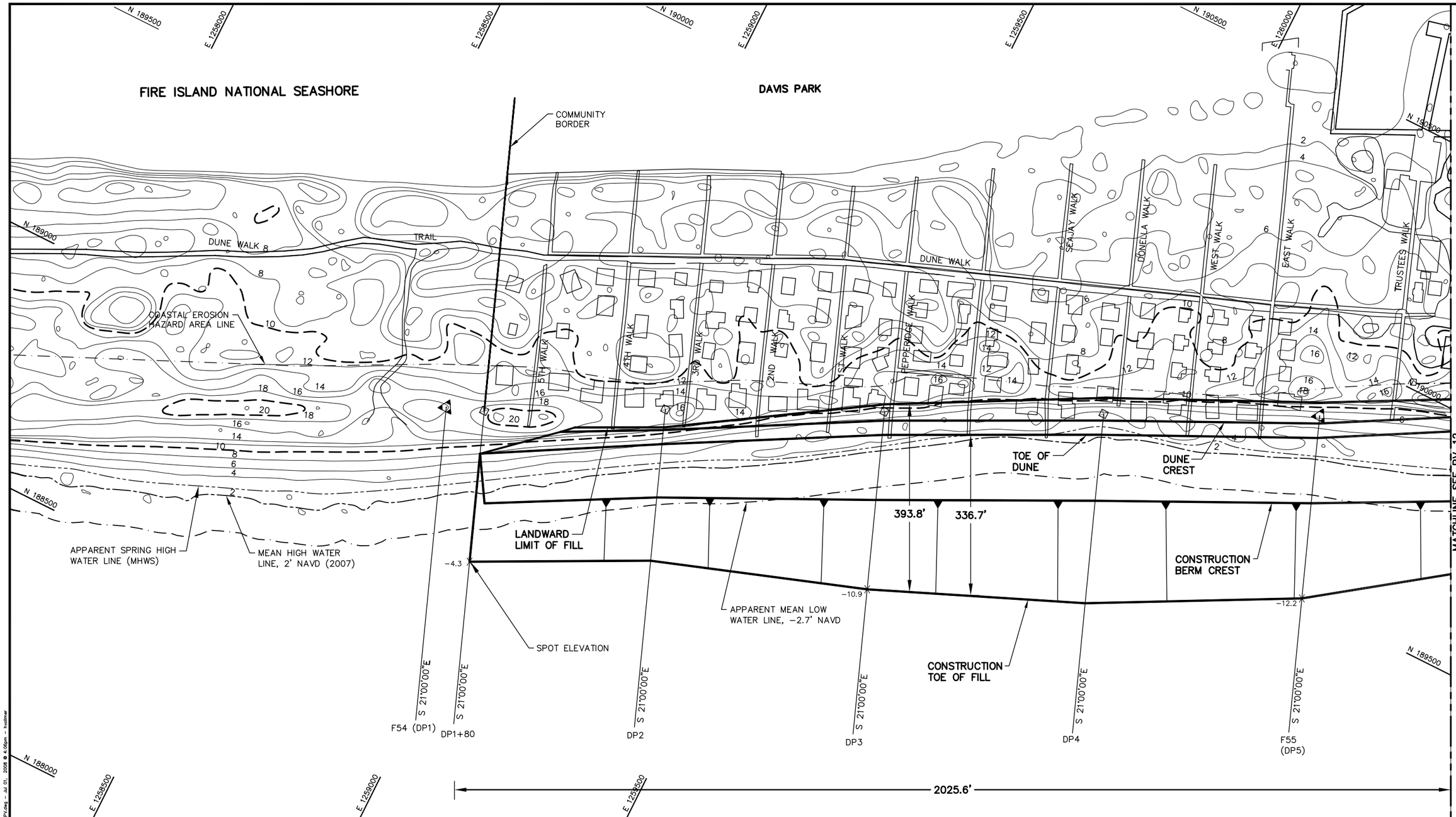

NOTES:

1. COORDINATES ARE BASED ON NEW YORK LONG ISLAND LAMBERT STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD83).
2. TOPOGRAPHIC CONTOURS SHOWN ARE IN FEET NAVD88 FROM A LIDAR SURVEY FLOWN APRIL 29, 2007 BY THE USGS EAARL SYSTEM.
3. THE PROJECT WILL DREDGE APPROXIMATELY 942,000± CUBIC YARDS FROM AREA 2–EAST FOR THE FIRE ISLAND PINES AND DAVIS PARK SEGMENT BEACHES. BORROW AREA 2–WEST WILL BE USED AS A SUPPLEMENTAL SAND SOURCE. A CUTTER HEAD OR HOPPER DREDGE WILL BE USED TO TAKE THE SAND FROM THE OFFSHORE BORROW AREA AND PUMP IT TO THE BEACH USING A COMBINATION OF SUBMERGED AND BEACH PIPELINES. THE BEACH/DUNE WILL BE SHAPED AND GRADED USING BULLDOZERS, FRONT END LOADERS, AND SIMILAR HEAVY CONSTRUCTION EQUIPMENT. THE FILL MATERIAL IS 98% SAND AND 2% SILT.
4. ALONG SHORE CURRENTS ARE WAVE DOMINATED IN AN EAST TO WEST DIRECTION.
5. THE BEACH VOLUME FOR DAVIS PARK IS APPROXIMATELY 305.000 C.Y., WITH 134,800 C.Y. SEAWARD OF THE SPRING TIDE LINE. IF TAPERS CANNOT BE PLACED ON FINS PROPERTY, THE TAPER VOLUME WILL BE PLACED WITHIN THE FIRST 1000 FEET WITHIN THE COMMUNITY.

LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' & 20' CONTOURS
- MEAN HIGH WATER LINE
- SPRING HIGH WATER LINE
- -4.7 X SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457 DATE

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DAVIS PARK SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.
PV–1
SHEET 3 OF 13

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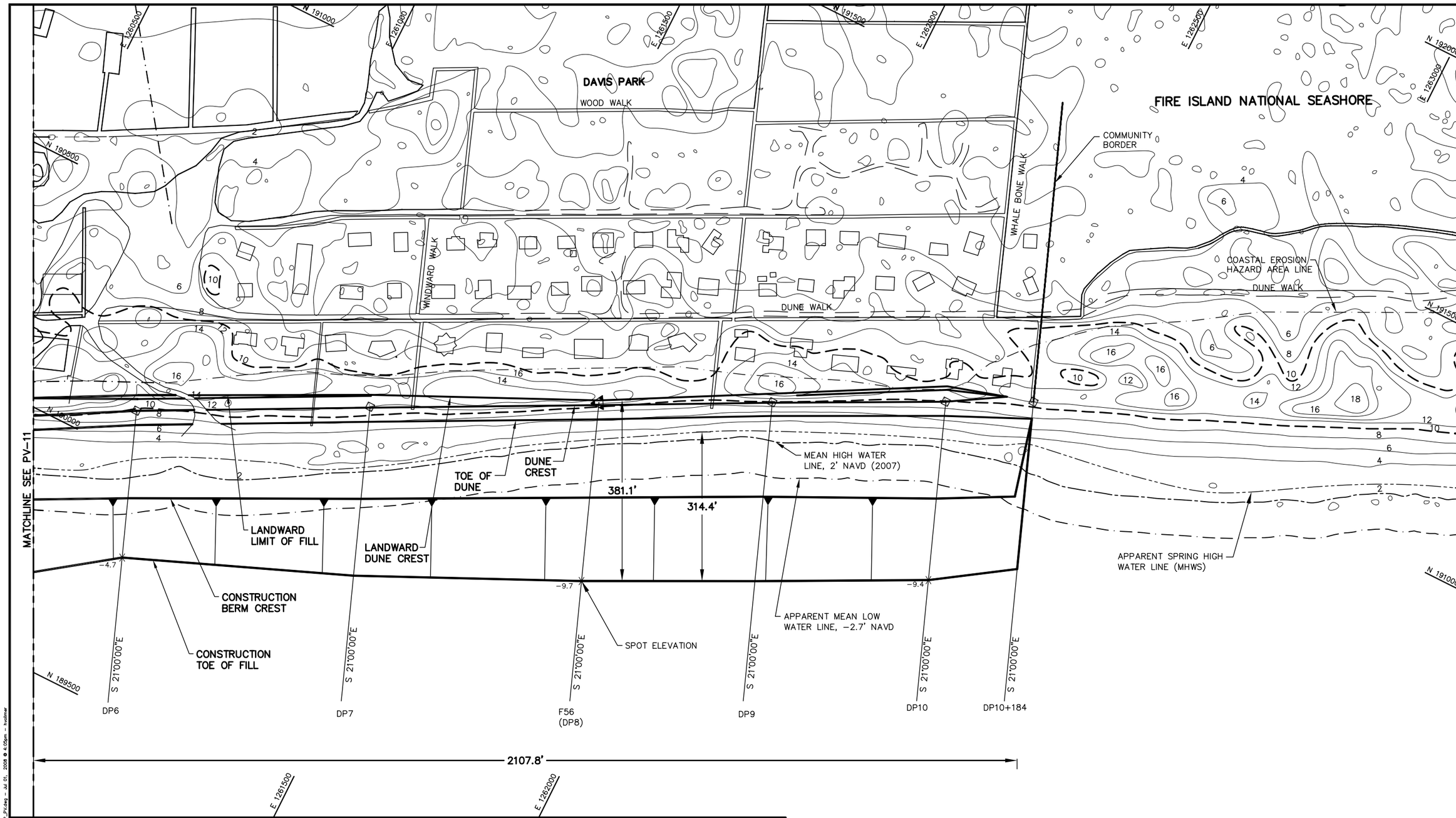

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LEGEND:

- COMMENCEMENT POINT RNG 00
- USACE SURVEY MONUMENTS
- CONTOURS
- 10' & 20' CONTOURS
- MEAN HIGH WATER LINE
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- -4.7 SPOT ELEVATION

THOMAS J CAMPBELL P.E. NO. 56457

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DAVIS PARK SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

PLAN VIEW

DRAWING NO.

PV-2

SHEET 4 OF 13

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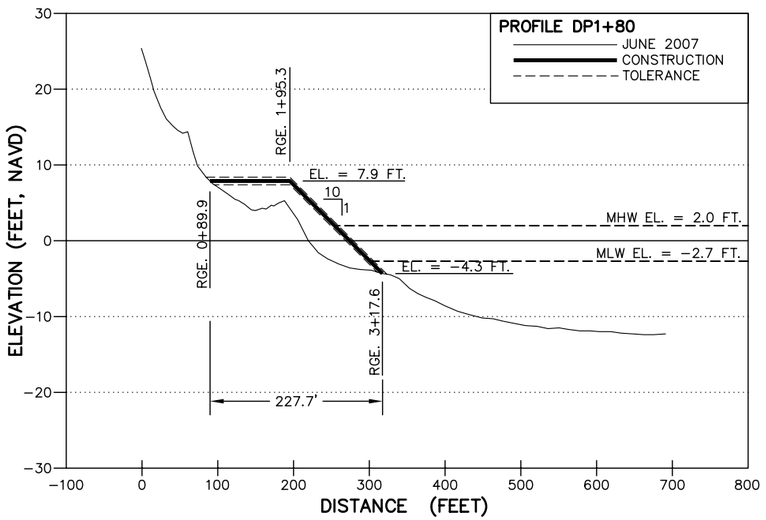

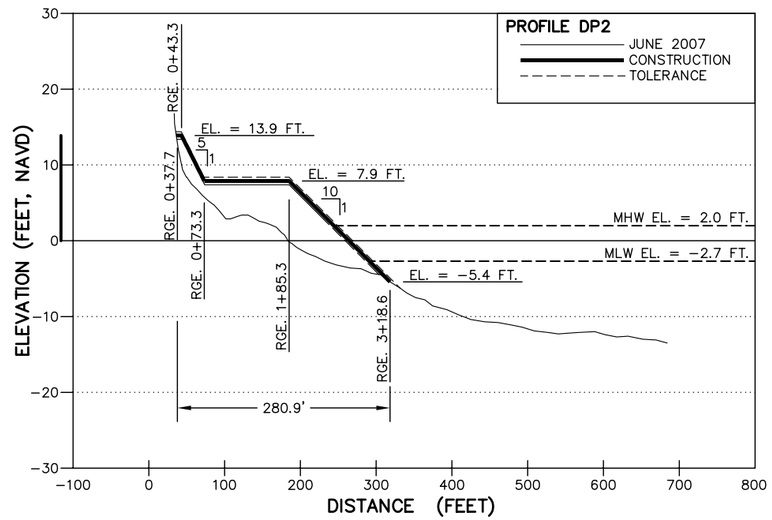

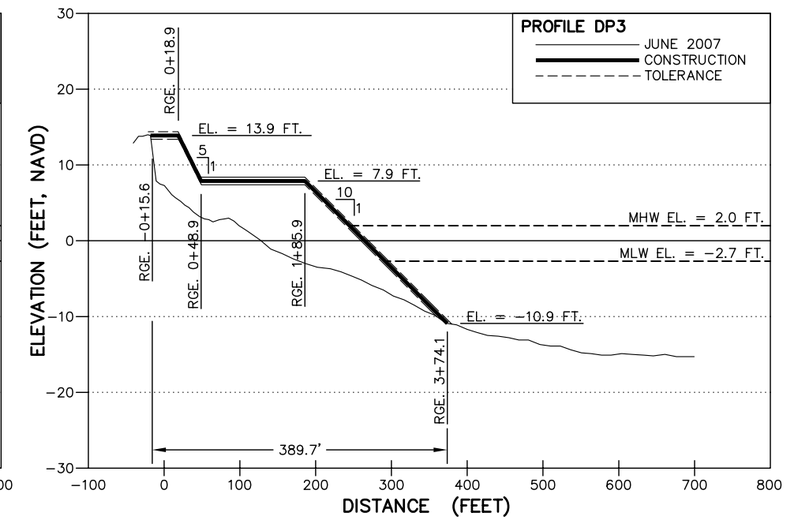

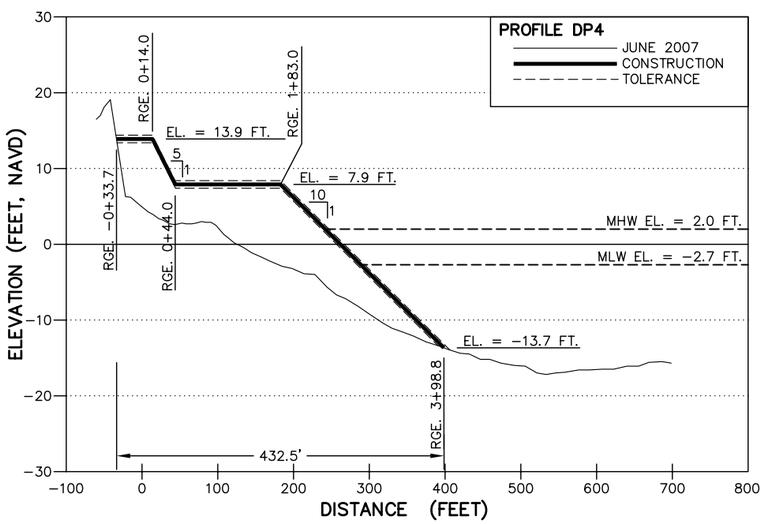

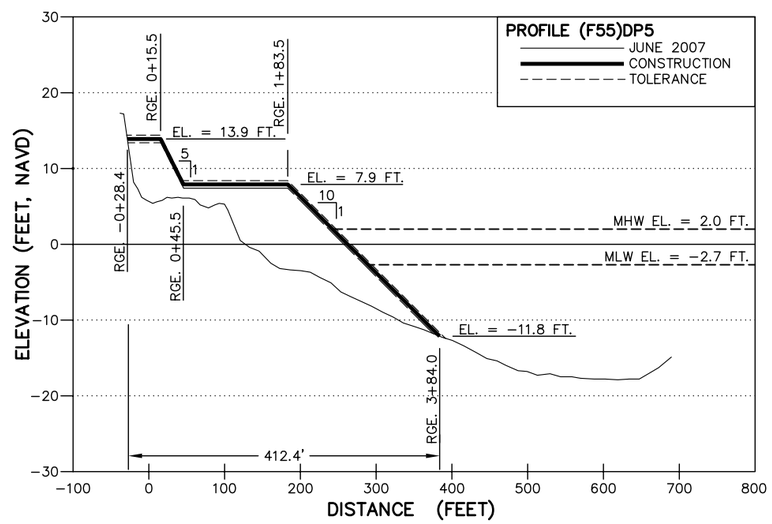

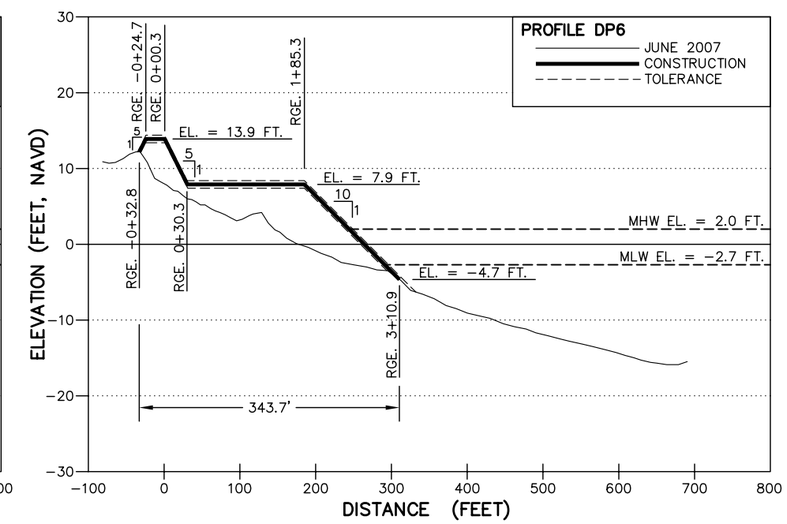

HORIZONTAL SCALE: 0 50 100 GRAPHIC SCALE IN FT

VERTICAL SCALE: 0 5 10 GRAPHIC SCALE IN FT

NOTES:

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THOMAS J CAMPBELL P.E. NO. 56457 DATE

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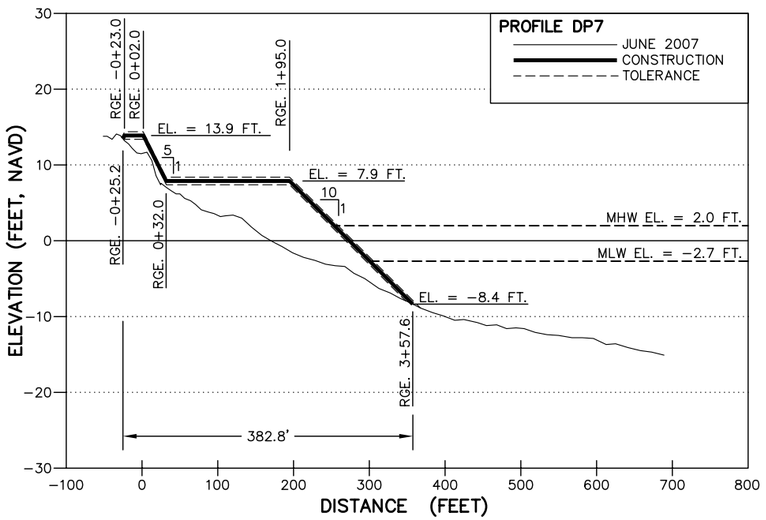
DAVIS PARK SEGMENT
FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

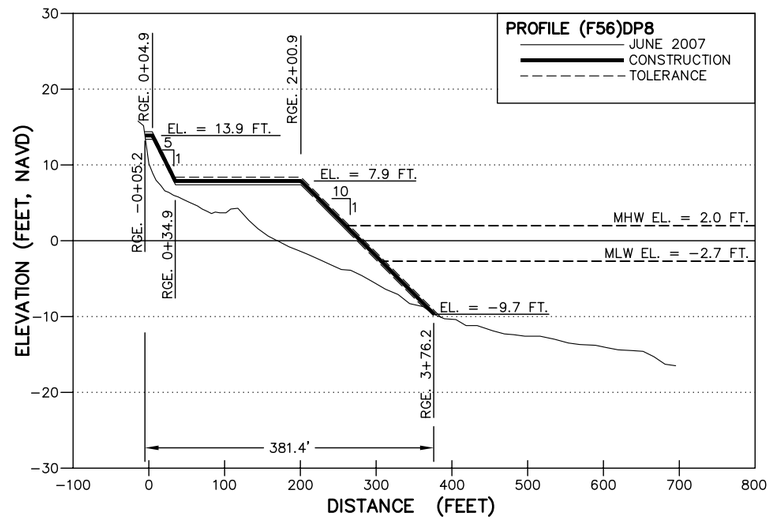
BEACH PROFILES

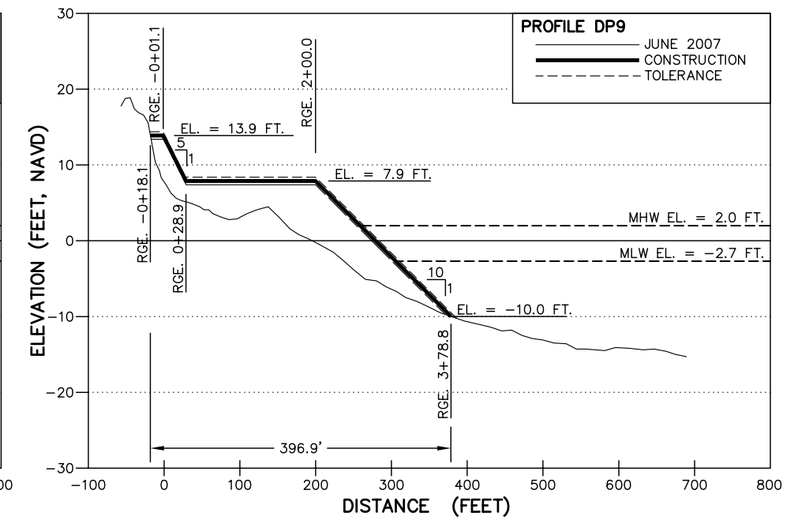
DRAWING NO.
PR−1

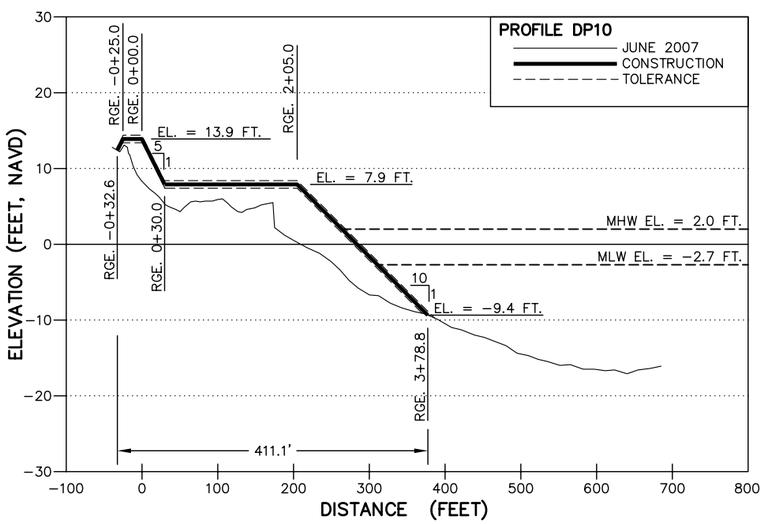
SHEET 5 OF 13

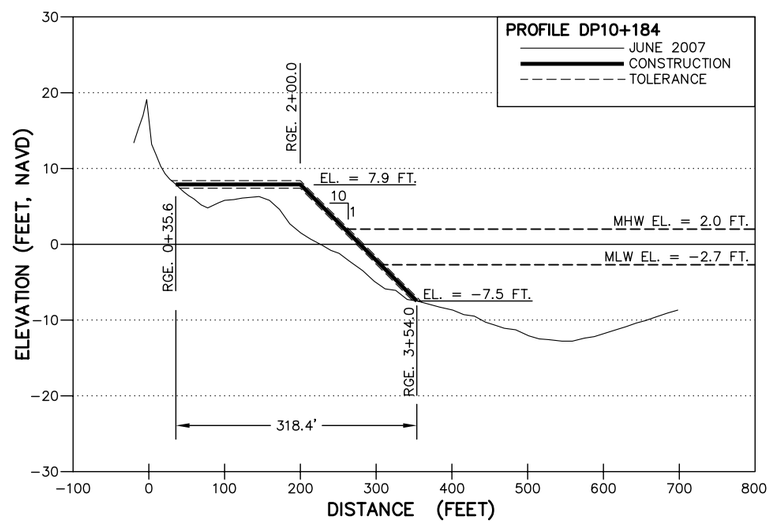
H:\New York\FIREISLN\730032\CONSTRUCTION\DAVIS PARK\730032_DP_Fill_Profiles.dwg – Jul 01, 2008 @ 3:43pm – hvollmer

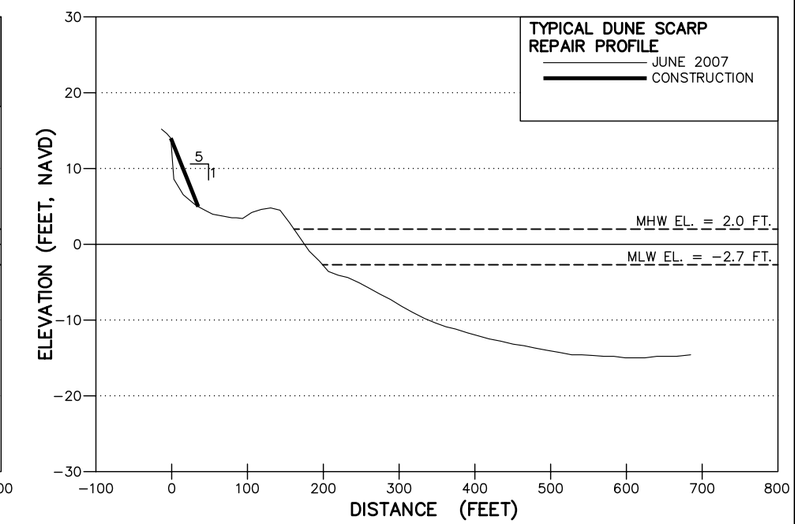












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FIRE ISLAND, NEW YORK
2008 BEACH RENOURISHMENT PROJECT

BEACH PROFILES

DRAWING NO.

PR−2

SHEET 6 OF 13

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